

A RECONSTRUCTION AND MORPHOPHONEMIC ANALYSIS OF  
PROTO-JAPONIC VERBAL MORPHOLOGY

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE  
UNIVERSITY OF HAWAI'I IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
IN

EAST ASIAN LANGUAGES AND LITERATURES (JAPANESE)

DECEMBER 2006

By  
Kerri L. Russell

Dissertation Committee:

Alexander V. Vovin, Chair  
Robert A. Blust  
Robert N. Huey  
Leon A. Serafim  
H. Paul Varley

We certify that we have read this dissertation and that, in our opinion, it is satisfactory in scope and quality as a dissertation for the degree of Doctor of Philosophy in East Asian Languages and Literatures (Japanese).

DISSERTATION COMMITTEE

---

Chairperson

---

---

---

---

---

## Acknowledgments

I am fortunate to have received the support of many people during my time as a graduate student at the University of Hawai'i.

I would like to thank my advisor, Alexander Vovin, for giving so much of his time to teach me the tools of the trade, for all the hours spent reading and commenting on drafts of this dissertation, and for all the time we spent debating various linguistic issues. He has taught me to be a better researcher and to better articulate my arguments and I am grateful for all he has taught me over the years.

I would like to thank the members of my committee: Bob Blust for allowing me to take his course in proto-Austronesian linguistics despite my lack of background – I learned much about linguistic methodology in his course; Bob Huey for helping me develop a deeper appreciation of Pre-Modern Japanese literature and for all the advice over the years; Leon Serafim for encouraging me early in my graduate career and guiding me towards the field of Japanese historical linguistics; and Paul Varley for improving my understanding of Early Japanese history. I would like to further thank all committee members for their patience and understanding, and for their time spent reading what turned out to be a rather long dissertation.

I would like to thank the department of East Asian Languages and Literatures, the National Foreign Language Resource Center, and the Center of Japanese Studies for funding and supporting me throughout my graduate career.

Finally, I thank my friends and family for their support and words of encouragement over the years.

## Abstract

This dissertation aims to further our understanding of the development of the Japonic language family, which consists of the languages spoken in Japan and the Ryūkyūs. More specifically, this study is concerned with the development of verbal morphology found in this language family. I first investigate the verbal morphemes found in each language, and then present a reconstruction of the verbal morphology of the parent language: proto-Japonic (PJ).

This study includes the two oldest known forms of Japonic, Western Old Japanese and Eastern Old Japanese, which were spoken in 8th century Japan and preserved in a number of texts. This study also involves three varieties of Japonic from the Ryūkyūs: Yamatoma, spoken in the northern Ryūkyūan islands; Shuri (Standard Okinawan), spoken in the central Ryūkyūan islands; and Hirara, spoken in the southern Ryūkyūan islands.

In the first chapter, I discuss the Japonic language family, the distinction between languages and dialects, the means of data collection, and other methodological issues. In Chapter 2, I present a linguistic overview of Western Old Japanese and Eastern Old Japanese. My treatment of Eastern Old Japanese is further divided into four sections: one section for each of the three dialect groups, and a fourth section consisting of data that are

not identified with any particular dialect. In Chapter 3, I describe the Ryūkyūan languages: Yamatoma, Shuri, and Hirara. These chapters include a detailed discussion of the phonology and morphophonemic rules for each language and/or dialect, an analysis of the form and function of the derivational morphemes involved in the formation of verb roots, and the form, function and morphophonemic processes found with the inflectional morphemes attested in each language. In Chapter 4, I present the reconstruction of PJ phonology and verbal morphology, by taking the data presented in the previous chapters and using the comparative method to reconstruct the oldest form possible. In some cases, a PJ form can be reconstructed, in other cases it not possible to reconstruct that far back; in cases where a PJ form cannot be reconstructed, I present the oldest reconstructable form. Finally, Chapter 5 concludes this work, highlighting the findings of the present study.

## Table of Contents

Acknowledgments .....	iii
Abstract .....	v
List of Tables .....	xxx
List of Figures .....	xxxi
List of Appendixes.....	xxxii
Abbreviations .....	xxxiii
Chapter 1. INTRODUCTION.....	1
1.1 Purpose .....	1
1.2 The Japonic Language Family .....	2
1.2.1 The Spread of Japonic.....	3
1.2.2 The Distinction Between Language and Dialect .....	9
1.2.3 The Japonic Languages and Dialects Used in this Study .....	12
1.3 Methodology and Terminology.....	13
1.3.1 Data Collection .....	13
1.3.2 Phonology and Phonetics.....	15
1.3.3 Morphology.....	16
1.3.3.1 Bound and Free Morphemes.....	17
1.3.3.2 Derivational and Inflectional Morphology.....	18
1.3.4 Morphophonemic Analysis.....	19
1.3.5 Reconstructed Languages .....	21
1.3.5.1 Internal Reconstruction.....	21
1.3.5.2 The Comparative Method .....	24
1.3.6 Linguistic Changes Due to Contact .....	27
Chapter 2. OLD JAPANESE .....	28
2.1 Background .....	28
2.2 Western Old Japanese (WOJ) .....	32
2.2.1 WOJ Primary Source Materials .....	32
2.2.1.1 <i>Kojiki</i> and <i>Kojiki kayō</i> .....	34
2.2.1.2 The <i>Nihonshoki</i> and <i>Nihonshoki kayō</i> .....	35
2.2.1.3 <i>Fudoki</i> and <i>Fudoki kayō</i> .....	36
2.2.1.4 <i>Bussoku seki ka</i> .....	38
2.2.1.5 <i>Man'yōshū</i> .....	38

2.2.1.6 <i>Shoku nihongi</i> and <i>Shoku nihongi kayō</i> .....	42
2.2.1.7 <i>Senmyō</i> .....	43
2.2.1.8 <i>Nihon ryōiki</i> .....	43
2.2.1.9 <i>Norito</i> .....	43
2.2.1.10 <i>Jōgū shōtoku hōō teisetsu</i> .....	44
2.2.2 WOJ Secondary Source Materials .....	44
2.2.3 WOJ Orthography .....	51
2.2.3.1 Writing Systems.....	51
2.2.3.2 Orthographic Traditions in WOJ Texts.....	53
2.2.3.2.1 Semantic Writing (Semantograms) .....	53
2.2.3.2.2 Phonetic Writing (Phonograms).....	55
2.2.3.2.3 <i>Gisho (Tawamuregaki)</i> or "Playful Writing" .....	55
2.2.3.2.3.1 Graphemograms.....	56
2.2.3.2.3.2 Onomatograms.....	57
2.2.3.2.3.3 Arithmograms.....	57
2.2.4 WOJ Phonology .....	58
2.2.4.1 WOJ Consonants.....	59
2.2.4.1.1 Voiceless Obstruents .....	59
2.2.4.1.2 Prenasalized voiced obstruents.....	64
2.2.4.1.3 Nasals .....	69
2.2.4.1.4 The Liquid.....	70
2.2.4.1.5 Glides .....	70
2.2.4.2 WOJ Vowels .....	70
2.2.4.2.1 /i/ and /i/ .....	71
2.2.4.2.2 /ê/ and /ë/ .....	72
2.2.4.2.3 /ô/ and /ö/.....	72
2.2.4.3 Morphophonemic rules .....	73
2.2.4.3.1 Constraints on Consonant Clusters .....	73
2.2.4.3.2 Whitman's Law.....	73
2.2.4.3.3 Constraints on Vowel Clusters.....	74
2.2.4.3.3.1 Contraction .....	75
2.2.4.3.3.2 Monophthongization.....	78
2.2.4.3.3.3 Rules to Predict Occurrence of Contraction or Monophthongization .....	81
2.2.4.3.4 Vowel Concord and Vowel Harmony.....	84
2.2.5 WOJ Verbal Morphology .....	85

2.2.5.1 The Shape of Pre-WOJ Verb Roots .....	85
2.2.5.1.1 The Traditional ( <i>Kokugogaku</i> ) Analysis .....	86
2.2.5.1.2 Earlier Analyses of Verb Root Shape .....	88
2.2.5.1.3 A New Analysis of the Shape of Verb Roots.....	94
2.2.5.1.3.1 The Role of Vowel Assimilation in Word Formation .....	94
2.2.5.1.3.2 Problems in Determining Verb Root Shapes:	
Theory Versus Data .....	101
2.2.5.1.3.2.1 Verb Roots and Derivational Morphology .....	102
2.2.5.1.3.2.1.1 Theory 1: A Verbalizer Is Involved in Word	
Formation.....	102
2.2.5.1.3.2.1.2 Theory 2: All Roots Are Vowel Final.....	104
2.2.5.1.3.2.1.3 Theory 3: Roots May Be Consonant Final or	
Vowel Final.....	106
2.2.5.1.3.2.1.4 Theory 4: An Epenthetic Vowel Is Involved	
in Word Formation.....	106
2.2.5.1.3.2.2 Verb Roots and Inflectional Morphology .....	107
2.2.5.1.3.2.3 Summary .....	108
2.2.5.2 Derivational Morphemes .....	109
2.2.5.2.1 The Shape of Verbal Derivational Suffixes.....	112
2.2.5.2.1.1 The Shape of the Transitivity Flipper.....	116
2.2.5.2.1.2 Summary.....	122
2.2.5.2.2 The Transitive Suffix <i>*-As-</i> .....	123
2.2.5.2.2.1 The Function of <i>*-As-</i> .....	123
2.2.5.2.2.2 The Use of <i>*-As-</i> With Other Derivational Suffixes.....	125
2.2.5.2.3 The Intransitive Suffix <i>*-Ar-</i> .....	126
2.2.5.2.3.1 The Function of <i>*-Ar-</i> .....	126
2.2.5.2.3.2 The Use of <i>*-Ar-</i> With Other Derivational Suffixes.....	127
2.2.5.2.4 The Verbalizer <i>*-Am-</i> .....	128
2.2.5.2.4.1 The Function of <i>*-Am-</i> .....	128
2.2.5.2.4.2 The Use of <i>*-Am-</i> With Other Derivational Suffixes .....	130
2.2.5.2.5 The Durative Suffix <i>*-Ap-</i> .....	131
2.2.5.2.5.1 The Function of <i>*-Ap-</i> .....	131
2.2.5.2.5.2 The Use of <i>*-Ap-</i> With Other Derivational Suffixes .....	133
2.2.5.2.6 The Derivational Suffix <i>-Ak-</i> .....	134
2.2.5.2.6.1 The Function of <i>*-Ak-</i> .....	134
2.2.5.2.6.2 The Use of <i>*-Ak-</i> With Other Derivational Suffixes .....	136

2.2.5.2.7 The Transitivity Flipper *-Ai-	136
2.2.5.2.7.1 The Function of *-Ai-	136
2.2.5.2.7.2 The Use of *-Ai- With Other Derivational Suffixes	139
2.2.5.2.8 Summary	140
2.2.5.3 Inflectional Morphemes	140
2.2.5.3.1 Verbal Prefixes and Preverbs	141
2.2.5.3.1.1 Verbal Prefixes	141
2.2.5.3.1.1.1 The Prefix <i>i-</i>	141
2.2.5.3.1.1.2 The Prefix <i>sa-</i>	144
2.2.5.3.1.1.3 The Prefix <i>ta-</i>	152
2.2.5.3.1.2 Preverbs	152
2.2.5.3.1.2.1 The Preverb <i>apî-</i>	152
2.2.5.3.1.2.2 The Preverb <i>ari-</i>	153
2.2.5.3.1.2.3 The Preverb <i>kakî-</i>	154
2.2.5.3.1.2.4 The Preverb <i>uti-</i>	156
2.2.5.3.2 The Verbal Circumfix	157
2.2.5.3.3 Verbal Suffixes and Auxiliaries	158
2.2.5.3.3.1 The Infinitive <i>-î</i>	162
2.2.5.3.3.2 Group I Morphemes	164
2.2.5.3.3.2.1 The Honorific Auxiliary <i>imas-</i>	165
2.2.5.3.3.2.2 The Honorific Auxiliary <i>matur-</i>	166
2.2.5.3.3.2.3 The Honorific Auxiliary <i>tamap-</i>	167
2.2.5.3.3.3 Group II Morphemes	167
2.2.5.3.3.3.1 The Durative Suffix <i>-ap-</i>	167
2.2.5.3.3.3.2 The Honorific Suffix <i>-as-</i>	169
2.2.5.3.3.3.3 The Causative Suffix <i>-asimë-</i>	170
2.2.5.3.3.3.4 The Passive Suffix <i>-aye-</i>	171
2.2.5.3.3.4 Group III Morphemes	172
2.2.5.3.3.4.1 The Progressive Auxiliary <i>-êr-</i>	173
2.2.5.3.3.4.2 The Perfective Auxiliary <i>-n-</i>	173
2.2.5.3.3.4.3 The Perfective Auxiliary <i>-t-</i>	174
2.2.5.3.3.4.4 The Perfective Progressive Auxiliary <i>-tar-</i>	175
2.2.5.3.3.5 Group IV Morphemes	176
2.2.5.3.3.5.1 The Tentative Past Auxiliary <i>-kêm-</i>	176
2.2.5.3.3.5.2 The Modal Past Auxiliary <i>-kêr-</i>	177
2.2.5.3.3.6 Group V Morphemes	178

2.2.5.3.3.6.1 The Negative Suffix <i>-an-</i> .....	179
2.2.5.3.3.6.2 The Negative Suffix <i>-aNs-</i> .....	179
2.2.5.3.3.7 Group VI Morphemes.....	180
2.2.5.3.3.7.1 The Tentative Suffix <i>-am-</i> .....	180
2.2.5.3.3.7.2 The Debitive Suffix <i>-uNpë-</i> .....	181
2.2.5.3.3.7.3 The Tentative Suffix <i>-uram-</i> .....	182
2.2.5.3.3.7.4 The Suppositional Suffix <i>-urasi-</i> .....	183
2.2.5.3.3.8 Group VII Morphemes .....	184
2.2.5.3.3.8.1 The Desiderative Suffix <i>-ana</i> .....	185
2.2.5.3.3.8.2 The Hypothetical Conditional Suffix <i>-aNpa</i> .....	186
2.2.5.3.3.8.3 The Negative Tentative Suffix <i>-aNsi</i> .....	187
2.2.5.3.3.8.4 The Imperative Suffix <i>-ê/-yö</i> .....	187
2.2.5.3.3.8.5 The Stative Final Suffix <i>-i</i> .....	189
2.2.5.3.3.8.6 The Past Auxiliary <i>-kî</i> .....	190
2.2.5.3.3.8.7 The Conjunctive Suffix <i>-Npa</i> .....	191
2.2.5.3.3.8.8 The Concessive Suffix <i>-Ntö</i> .....	192
2.2.5.3.3.8.9 The Past Auxiliary <i>-si</i> .....	192
2.2.5.3.3.8.10 The Subordinative Gerund <i>-te</i> .....	193
2.2.5.3.3.8.11 The Coordinative Auxiliary <i>-tutu</i> .....	194
2.2.5.3.3.8.12 The Active Final Suffix <i>-u</i> .....	195
2.2.5.3.3.8.13 The Attributive Suffix <i>-u/-uru</i> .....	196
2.2.5.3.3.8.14 The Evidential Suffix <i>-ë/-ure</i> .....	202
2.2.5.3.3.9 Nominalizers.....	203
2.2.5.3.3.9.1 The Nominalizer <i>-aku</i> .....	203
2.2.5.3.3.9.2 The Nominalizer <i>-î</i> .....	204
2.2.5.4 Summary .....	204
2.3 Eastern Old Japanese (EOJ) .....	207
2.3.1 EOJ Primary Source Materials.....	209
2.3.2 EOJ Secondary Source Materials.....	211
2.3.3 EOJ Orthography .....	214
2.3.4 NEOJ .....	215
2.3.4.1 NEOJ Phonology .....	215
2.3.4.1.1 NEOJ Consonants .....	216
2.3.4.1.1.1 Voiceless Obstruents .....	216
2.3.4.1.1.2 Prenasalized voiced obstruents.....	217
2.3.4.1.1.3 Nasals.....	217

2.3.4.1.1.4 Liquid.....	218
2.3.4.1.1.5 Glides.....	218
2.3.4.1.2 NEOJ Vowels.....	218
2.3.4.1.2.1 /î/, /i/, and /i/ .....	220
2.3.4.1.2.2 /ê/, /e/, and /ë/ .....	225
2.3.4.1.2.3 /ô/, /o/, and /ö/.....	227
2.3.4.1.2.4 /a/ .....	228
2.3.4.1.2.5 /u/ .....	228
2.3.4.1.3 Morphophonemic Rules .....	233
2.3.4.1.3.1 Constraints on Consonant Clusters.....	233
2.3.4.1.3.2 Constraints on Vowel Clusters .....	233
2.3.4.1.3.2.1 Vowel Sequences in Nouns .....	233
2.3.4.1.3.2.2 Vowel Sequences in Verbs .....	235
2.3.4.1.4 Vowel Assimilation.....	237
2.3.4.2 NEOJ Verbal Morphology.....	237
2.3.4.2.1 The Shape of Pre-NEOJ Verb Roots.....	237
2.3.4.2.2 Derivational Morphemes.....	238
2.3.4.2.2.1 The Derivational Suffix *-s- .....	238
2.3.4.2.2.2 The Derivational Suffix *-ör- .....	239
2.3.4.2.2.3 The Derivational Suffix *-î-/ê- .....	240
2.3.4.2.2.4 Summary.....	240
2.3.4.2.3 Inflectional Morphemes.....	241
2.3.4.2.3.1 Verbal Suffixes and Auxiliaries.....	241
2.3.4.2.3.1.1 The Infinitive -î.....	243
2.3.4.2.3.1.2 Group I Morphemes.....	244
2.3.4.2.3.1.2.1 The Tentative Suffix -am- .....	244
2.3.4.2.3.1.2.2 The Honorific Suffix -as- .....	245
2.3.4.2.3.1.2.3 The Passive Suffix -aye- .....	245
2.3.4.2.3.1.2.4 The Humble Auxiliary -matur-.....	246
2.3.4.2.3.1.3 Group II Morphemes.....	247
2.3.4.2.3.1.3.1 The Negative Suffix -an- .....	247
2.3.4.2.3.1.3.2 The Negative Suffix -aNs- .....	248
2.3.4.2.3.1.4 Group III Morphemes .....	248
2.3.4.2.3.1.4.1 The Perfective Auxiliary -n- .....	249
2.3.4.2.3.1.4.2 The Perfective Auxiliary -t- .....	249
2.3.4.2.3.1.4.3 The Perfective Progressive Auxiliary -tar-.....	250

2.3.4.2.3.1.5 Group IV Morphemes .....	250
2.3.4.2.3.1.5.1 The Durative Suffix <i>-ap-</i> .....	251
2.3.4.2.3.1.5.2 The Progressive Suffix <i>-ar-</i> .....	251
2.3.4.2.3.1.6 Group V Morphemes .....	252
2.3.4.2.3.1.6.1 The Desiderative Suffix <i>-ane</i> .....	253
2.3.4.2.3.1.6.2 The Hypothetical Conditional Suffix <i>-aNpa</i> .....	254
2.3.4.2.3.1.6.3 The Conjunctive Suffix <i>-Npa</i> .....	254
2.3.4.2.3.1.6.4 The Concessive Suffix <i>-Ntö</i> .....	255
2.3.4.2.3.1.6.5 The Past Tense Auxiliary <i>-si</i> .....	256
2.3.4.2.3.1.6.6 The Subordinative Gerund <i>-te</i> .....	257
2.3.4.2.3.1.6.7 The Coordinative Auxiliary <i>-tutu</i> .....	258
2.3.4.2.3.1.6.8 The Active Final Suffix <i>-u</i> .....	258
2.3.4.2.3.1.6.9 The Attributive Suffix <i>-ul/-ô/-uru</i> .....	259
2.3.4.2.3.1.6.10 The Evidential Suffix <i>-ë/-ure</i> .....	265
2.3.4.2.3.2 Nominalizers .....	266
2.3.4.2.3.2.1 The Nominalizer <i>-aku</i> .....	267
2.3.4.2.3.2.2 The Nominalizer <i>-i</i> .....	267
2.3.4.2.3.3 Summary .....	267
2.3.5 CEOJ .....	269
2.3.5.1 CEOJ Phonology .....	269
2.3.5.1.1 CEOJ Consonants .....	269
2.3.5.1.2 CEOJ Vowels .....	270
2.3.5.1.2.1 /î/, /i/, and /i/ .....	270
2.3.5.1.2.2 /ê/, /e/, and /ë/ .....	275
2.3.5.1.2.3 /ô/, /o/, and /ö/ .....	277
2.3.5.1.2.4 /a/ .....	279
2.3.5.1.2.5 /u/ .....	279
2.3.5.1.3 Morphophonemic Rules .....	281
2.3.5.1.3.1 Constraints on Consonant Clusters .....	281
2.3.5.1.3.2 Constraints on Vowel Clusters .....	281
2.3.5.1.3.2.1 Vowel Sequences in Nouns .....	282
2.3.5.1.3.2.2 Vowel Sequences in Verbs .....	283
2.3.5.1.4 Vowel Assimilation .....	284
2.3.5.2 CEOJ Verbal Morphology .....	284
2.3.5.2.1 The Shape of Pre-CEOJ Verb Roots .....	284
2.3.5.2.2 Derivational Morphemes .....	285

2.3.5.2.2.1 The Derivational Suffix *-s-	285
2.3.5.2.2.2 The Derivational Suffix *-Vr-	286
2.3.5.2.2.3 The Derivational Suffix *-E-	286
2.3.5.2.2.4 Summary	288
2.3.5.2.3 Inflectional Morphemes	288
2.3.5.2.3.1 Verbal Prefixes and Preverbs	288
2.3.5.2.3.1.1 The Prefix <i>sa-</i>	289
2.3.5.2.3.1.2 The Preverb <i>kakî-</i>	289
2.3.5.2.3.2 The Verbal Circumfix	290
2.3.5.2.3.3 Verbal Suffixes and Auxiliaries	291
2.3.5.2.3.3.1 The Infinitive <i>-î</i>	293
2.3.5.2.3.3.2 Group I Morphemes	294
2.3.5.2.3.3.2.1 The Honorific Suffix <i>-as-</i>	294
2.3.5.2.3.3.2.2 The Causative Suffix <i>-ase-</i>	295
2.3.5.2.3.3.2.3 The Passive Suffix <i>-aye-</i>	295
2.3.5.2.3.3.2.4 The Causative Suffix <i>-simë-</i>	296
2.3.5.2.3.3.2.5 The Respectful Honorific Auxiliary <i>tamap-</i>	296
2.3.5.2.3.3.2.6 The Tentative Suffix <i>-unam-</i>	297
2.3.5.2.3.3.2.7 The Debitive Suffix <i>-uNpê-</i>	298
2.3.5.2.3.3.3 Group II Morphemes	299
2.3.5.2.3.3.3.1 The Negative Suffix <i>-an-</i>	299
2.3.5.2.3.3.3.2 The Desiderative Suffix <i>-ana-</i>	300
2.3.5.2.3.3.3.3 The Negative Suffix <i>-aNs-</i>	301
2.3.5.2.3.3.3.4 The Perfective Auxiliary <i>-n-</i>	302
2.3.5.2.3.3.3.5 The Perfective Auxiliary <i>-t-</i>	303
2.3.5.2.3.3.4 Group III Morphemes	304
2.3.5.2.3.3.4.1 The Durative Suffix <i>-ap-</i>	304
2.3.5.2.3.3.4.2 The Tentative Past Tense Auxiliary <i>-kêm-</i>	304
2.3.5.2.3.3.4.3 The Modal Past Tense Auxiliary <i>-kar-/kEr-</i>	305
2.3.5.2.3.3.5 Group IV Morphemes	306
2.3.5.2.3.3.5.1 The Tentative Suffix <i>-am-</i>	307
2.3.5.2.3.3.5.2 The Progressive Suffix <i>-ar/-êr-</i>	307
2.3.5.2.3.3.6 Group V Morphemes	308
2.3.5.2.3.3.6.1 The Hypothetical Conditional Suffix <i>-aNpa</i>	309
2.3.5.2.3.3.6.2 The Negative Tentative Suffix <i>-aNsi</i>	310
2.3.5.2.3.3.6.3 The Imperative Suffix <i>-e/-yöl/-ërö</i>	310

2.3.5.2.3.3.6.4	The Stative Final Suffix <i>-i</i> .....	312
2.3.5.2.3.3.6.5	The Negative Infinitive Suffix <i>-anana</i> .....	312
2.3.5.2.3.3.6.6	The Conjunctive Suffix <i>-Npa</i> .....	314
2.3.5.2.3.3.6.7	The Concessive Suffix <i>-Ntö</i> .....	314
2.3.5.2.3.3.6.8	The Past Tense Auxiliary <i>-si</i> .....	315
2.3.5.2.3.3.6.9	The Subordinative Gerund <i>-te</i> .....	316
2.3.5.2.3.3.6.10	The Coordinative Auxiliary <i>-tutu</i> .....	317
2.3.5.2.3.3.6.11	The Active Final Suffix <i>-u</i> .....	318
2.3.5.2.3.3.6.12	The Attributive Suffix <i>-u/-ô/-uru</i> .....	319
2.3.5.2.3.3.6.13	The Evidential Suffix <i>-ë/-ure</i> .....	326
2.3.5.2.3.3.6.14	The Suppositional Suffix <i>-urasi</i> .....	327
2.3.5.2.3.4	Nominalizers.....	328
2.3.5.2.3.4.1	The Nominalizer <i>-aku</i> .....	328
2.3.5.2.3.4.2	The Nominalizer <i>-î</i> .....	329
2.3.5.2.3.5	Summary.....	330
2.3.6	SEOJ .....	332
2.3.6.1	SEOJ Phonology .....	332
2.3.6.1.1	SEOJ Consonants .....	333
2.3.6.1.2	SEOJ Vowels .....	333
2.3.6.1.2.0.1	/î/, /i/, and /ï/.....	334
2.3.6.1.2.0.2	/ê/, /e/, and /ë/.....	335
2.3.6.1.2.0.3	/ô/, /o/, and /ö/ .....	338
2.3.6.1.2.0.4	/a/.....	341
2.3.6.1.2.0.5	/u/ .....	342
2.3.6.1.3	Morphophonemic Rules .....	343
2.3.6.1.3.1	Constraints on Consonant Clusters.....	343
2.3.6.1.3.2	Constraints on Vowel Clusters .....	344
2.3.6.1.3.2.1	Vowel Sequences in Nouns .....	344
2.3.6.1.3.2.2	Vowel Sequences in Verbs .....	345
2.3.6.1.4	Vowel Assimilation.....	345
2.3.6.2	SEOJ Verbal Morphology.....	346
2.3.6.2.1	The Shape of Pre-EOJ Verb Roots.....	346
2.3.6.2.2	Derivational Morphemes.....	347
2.3.6.2.2.1	The Derivational Suffix <i>*-e-</i> .....	347
2.3.6.2.2.2	Summary.....	347
2.3.6.2.3	Inflectional Morphemes.....	348

2.3.6.2.3.1 Verbal Prefixes and Preverbs.....	348
2.3.6.2.3.1.1 The Preverb <i>uti-</i> .....	348
2.3.6.2.3.2 The Verbal Circumfix.....	349
2.3.6.2.3.3 Verbal Suffixes and Auxiliaries.....	350
2.3.6.2.3.3.1 The Infinitive <i>-î</i> .....	351
2.3.6.2.3.3.2 Group I Morphemes.....	353
2.3.6.2.3.3.2.1 The Negative Suffix <i>-an-</i> .....	353
2.3.6.2.3.3.2.2 The Negative Suffix <i>-aNs-</i> .....	354
2.3.6.2.3.3.2.3 The Passive Suffix <i>-are-/aye-</i> .....	355
2.3.6.2.3.3.2.4 The Honorific Suffix <i>-as-</i> .....	355
2.3.6.2.3.3.2.5 The Honorific Auxiliary <i>mas-</i> .....	356
2.3.6.2.3.3.2.6 The Tentative Suffix <i>-uram-</i> .....	357
2.3.6.2.3.3.3 Group II Morphemes.....	357
2.3.6.2.3.3.3.1 The Perfective Auxiliary <i>-n-</i> .....	357
2.3.6.2.3.3.3.2 The Perfective Auxiliary <i>-t-</i> .....	358
2.3.6.2.3.3.3.3 The Progressive Perfective Auxiliary <i>-tar-</i> .....	359
2.3.6.2.3.3.4 Group III Morphemes .....	360
2.3.6.2.3.3.4.1 The Tentative Past Tense Auxiliary <i>-kêm-</i> .....	360
2.3.6.2.3.3.4.2 The Modal Past Tense Auxiliary <i>-kêr-</i> .....	361
2.3.6.2.3.3.5 Group IV Morphemes .....	362
2.3.6.2.3.3.5.1 The Tentative Suffix <i>-am-</i> .....	362
2.3.6.2.3.3.5.2 The Progressive Auxiliary <i>-ar-/er-</i> .....	362
2.3.6.2.3.3.6 Group V Morphemes .....	363
2.3.6.2.3.3.6.1 The Desiderative Suffix <i>-ane</i> .....	364
2.3.6.2.3.3.6.2 The Hypothetical Conditional Suffix <i>-aNpa</i> .....	364
2.3.6.2.3.3.6.3 The Imperative Suffix <i>-ë</i> .....	365
2.3.6.2.3.3.6.4 The Stative Final Suffix <i>-i</i> .....	366
2.3.6.2.3.3.6.5 The Conjunctive Suffix <i>-Npa</i> .....	366
2.3.6.2.3.3.6.6 The Concessive Suffix <i>-Ntö</i> .....	367
2.3.6.2.3.3.6.7 The Past Tense Auxiliary <i>-si</i> .....	368
2.3.6.2.3.3.6.8 The Subordinative Gerund <i>-te</i> .....	369
2.3.6.2.3.3.6.9 The Coordinative Auxiliary <i>-tutu</i> .....	370
2.3.6.2.3.3.6.10 The Active Final Suffix <i>-u</i> .....	370
2.3.6.2.3.3.6.11 The Attributive Suffix <i>-u/-uru</i> .....	371
2.3.6.2.3.3.6.12 The Evidential Suffix <i>-E/-ure</i> .....	373
2.3.6.2.3.3.6.13 The Suppositional Suffix <i>-urasi</i> .....	374

2.3.6.2.3.4 Summary.....	375
2.3.7 UEOJ: EOJ Poems of Unknown Origin.....	376
2.3.7.1 UEOJ Phonology .....	377
2.3.7.1.1 UEOJ Consonants .....	378
2.3.7.1.2 UEOJ Vowels.....	378
2.3.7.1.2.1 /î/, /i/, and /i/ .....	379
2.3.7.1.2.2 /ê/, /e/, and /ë/ .....	382
2.3.7.1.2.3 /ô/, /o/, and /ö/.....	383
2.3.7.1.2.4 /a/ .....	384
2.3.7.1.2.5 /u/ .....	386
2.3.7.1.3 Morphophonemic Rules .....	388
2.3.7.1.3.1 Constraints on Consonant Clusters.....	388
2.3.7.1.3.2 Constraints on Vowel Clusters .....	388
2.3.7.1.3.2.1 Vowel Sequences in Nouns .....	388
2.3.7.1.3.2.2 Vowel Sequences in Verbs .....	390
2.3.7.1.4 Vowel Assimilation.....	391
2.3.7.2 UEOJ Verbal Morphology .....	391
2.3.7.2.1 The Shape of Pre-EOJ Verb Roots.....	391
2.3.7.2.2 Derivational Morphemes.....	392
2.3.7.2.2.1 The Derivational Suffix *-s- .....	392
2.3.7.2.2.2 The Derivational Suffix *-Vr-.....	393
2.3.7.2.2.3 The Derivational Suffix *-E-/-i- .....	394
2.3.7.2.2.4 Summary.....	396
2.3.7.2.3 Inflectional Morphemes.....	396
2.3.7.2.3.1 The Verbal Prefixes and Preverbs .....	397
2.3.7.2.3.1.1 The Prefix <i>sa-</i> .....	397
2.3.7.2.3.1.2 The Preverb <i>uti-</i> .....	398
2.3.7.2.3.2 The Verbal Circumfix.....	398
2.3.7.2.3.3 Verbal Suffixes and Auxiliaries.....	399
2.3.7.2.3.3.1 The Infinitive -î .....	401
2.3.7.2.3.3.2 Group I Morphemes.....	403
2.3.7.2.3.3.2.1 The Honorific Suffix <i>-as-</i> .....	403
2.3.7.2.3.3.2.2 The Honorific Auxiliary <i>-mas-</i> .....	404
2.3.7.2.3.3.2.3 The Conjecture Auxiliary <i>-mêr-</i> .....	405
2.3.7.2.3.3.2.4 The Perfective Auxiliary <i>-n-</i> .....	405
2.3.7.2.3.3.2.5 The Perfective Auxiliary <i>-t-</i> .....	406

2.3.7.2.3.3.2.6	The Debitive Suffix <i>-uNpë-</i> .....	407
2.3.7.2.3.3.2.7	The Passive Suffix <i>-ye-</i> .....	408
2.3.7.2.3.3.3	Group II Morphemes.....	408
2.3.7.2.3.3.3.1	The Negative Suffix <i>-an-</i> .....	409
2.3.7.2.3.3.3.2	The Negative Suffix <i>-aNs-</i> .....	409
2.3.7.2.3.3.3.3	The Progressive Auxiliary <i>-ar-/êr-</i> .....	410
2.3.7.2.3.3.3.4	The Tentative Suffix <i>-unam-</i> .....	412
2.3.7.2.3.3.3.5	The Tentative Suffix <i>-uram-</i> .....	412
2.3.7.2.3.3.4	Group III Morphemes .....	413
2.3.7.2.3.3.4.1	The Tentative Suffix <i>-am-</i> .....	413
2.3.7.2.3.3.4.2	The Durative Suffix <i>-ap-</i> .....	414
2.3.7.2.3.3.5	Group IV Morphemes .....	415
2.3.7.2.3.3.5.1	The Desiderative Suffix <i>-ane</i> .....	416
2.3.7.2.3.3.5.2	The Hypothetical Conditional Suffix <i>-aNpa</i> .....	416
2.3.7.2.3.3.5.3	The Negative Tentative Suffix <i>-aNsi</i> .....	417
2.3.7.2.3.3.5.4	The Imperative <i>-e/-rö</i> .....	418
2.3.7.2.3.3.5.5	The Stative final <i>-i</i> .....	419
2.3.7.2.3.3.5.6	The Conjunctive Suffix <i>-Npa</i> .....	420
2.3.7.2.3.3.5.7	The Concessive Suffix <i>-Ntö</i> .....	420
2.3.7.2.3.3.5.8	The Past Auxiliary <i>-si</i> .....	421
2.3.7.2.3.3.5.9	The Subordinative Gerund <i>-te</i> .....	422
2.3.7.2.3.3.5.10	The Coordinative Auxiliary <i>-tutu</i> .....	423
2.3.7.2.3.3.5.11	The Final <i>-u</i> .....	424
2.3.7.2.3.3.5.12	The Attributive <i>-u/-uru</i> .....	425
2.3.7.2.3.3.5.13	The Evidential <i>-E/-ure</i> .....	432
2.3.7.2.3.3.5.14	The Suppositional Suffix <i>-urasi</i> .....	433
2.3.7.2.3.4	Nominalizers.....	434
2.3.7.2.3.4.1	The Nominalizer <i>-aku</i> .....	434
2.3.7.2.3.4.2	The Nominalizer <i>-î</i> .....	435
2.3.7.2.3.5	Summary.....	436
Chapter 3.	RYŪKYŪAN .....	438
3.1	Background .....	438
3.2	Northern Ryūkyūan Islands: Yamatoma .....	442
3.2.1	Yamatoma Primary Source Material .....	444
3.2.2	Yamatoma Secondary Source Material .....	444

3.2.3 Yamatoma Phonology.....	445
3.2.3.1 Yamatoma Consonants .....	445
3.2.3.1.1 Voiceless Obstruents .....	446
3.2.3.1.1.1 The Historical Development of Voiceless Obstruents ....	447
3.2.3.1.2 Voiced obstruents .....	448
3.2.3.1.3 Double Consonants .....	449
3.2.3.1.4 Aspirated Consonants.....	449
3.2.3.1.5 Nasal Consonants .....	452
3.2.3.1.6 The Liquid.....	454
3.2.3.1.7 Glides .....	454
3.2.3.2 Yamatoma Vowels.....	458
3.2.3.2.1 The Historical Development of Yamatoma Vowels .....	458
3.2.4 Yamatoma Verbal Morphology .....	463
3.2.4.1 The Shape of Pre-Yamatoma Verb Roots.....	463
3.2.4.2 Derivational Morphemes .....	465
3.2.4.2.1 The Derivational Suffix <i>*-as-</i> .....	465
3.2.4.2.2 The Derivational Suffix <i>*-ar-</i> .....	466
3.2.4.2.3 The Derivational Suffix <i>*-am-</i> .....	467
3.2.4.2.4 The Derivational Suffix <i>*-i-/*-e-</i> .....	468
3.2.4.2.5 Summary .....	469
3.2.4.3 Inflectional Morphemes .....	470
3.2.4.3.1 Verbal Suffixes and Auxiliaries .....	470
3.2.4.3.1.1 The Infinitive <i>-i</i> .....	473
3.2.4.3.1.2 Group I Morphemes.....	474
3.2.4.3.1.2.1 The Causative Suffix <i>-as-</i> .....	475
3.2.4.3.1.2.2 The Passive/Potential Suffix <i>-rar-</i> .....	475
3.2.4.3.1.2.3 The Negative Suffix <i>-yan(-) &lt; -ran(-)</i> .....	476
3.2.4.3.1.3 Group II Morphemes .....	477
3.2.4.3.1.3.1 The Perfective <i>-t<sup>h</sup></i> .....	477
3.2.4.3.1.4 Group III Morphemes.....	479
3.2.4.3.1.4.1 The Past Stative Suffix <i>-ya-</i> .....	479
3.2.4.3.1.4.2 The Non-past Stative Suffix <i>-yo:-</i> .....	480
3.2.4.3.1.4.3 The Stative Suffix <i>-yu-</i> .....	480
3.2.4.3.1.5 Group IV Morphemes.....	481
3.2.4.3.1.5.1 The Volitional Suffix <i>-a/-o</i> .....	481
3.2.4.3.1.5.2 The Negative Suffix <i>-azī</i> .....	482

3.2.4.3.1.5.3	The Conjecture Suffix <i>-ba</i> .....	483
3.2.4.3.1.5.4	The Evidential Suffix <i>-i</i> .....	483
3.2.4.3.1.5.5	The Negative Imperative Suffix <i>-na</i> .....	484
3.2.4.3.1.5.6	The Attributive Suffix <i>-n/-ru</i> .....	485
3.2.4.3.1.5.7	The Stative Final Suffix <i>-ri</i> .....	486
3.2.4.3.1.5.8	The Imperative Suffix <i>-ri</i> .....	487
3.2.4.3.1.5.9	The Subordinative Gerund <i>-t<sup>h</sup>i</i> .....	488
3.2.4.3.1.5.10	The Conjecture Suffix <i>-yumi</i> .....	488
3.2.4.3.2	Nominalizers .....	489
3.2.4.4	Summary .....	490
3.3	Central Ryūkyūan Islands: Shuri.....	492
3.3.1	Shuri Primary Source Material .....	493
3.3.2	Shuri Secondary Source Material .....	494
3.3.3	Shuri Phonology .....	497
3.3.3.1	Shuri Consonants .....	497
3.3.3.1.1	Voiceless Obstruents .....	498
3.3.3.1.1.1	The Historical Development of Voiceless Obstruents ....	500
3.3.3.1.2	Voiced obstruents.....	502
3.3.3.1.2.1	The Historical Development of Voiced Obstruents .....	503
3.3.3.1.3	Double Consonants .....	503
3.3.3.1.4	Nasal Consonants .....	504
3.3.3.1.5	The Liquid.....	505
3.3.3.1.6	Glides .....	505
3.3.3.2	Shuri Vowels.....	506
3.3.3.2.1	The Historical Development of Shuri Vowels .....	508
3.3.4	Shuri Verbal Morphology .....	509
3.3.4.1	The Shape of Pre-Shuri Verb Roots.....	509
3.3.4.2	Derivational Morphemes .....	510
3.3.4.2.1	The Derivational Suffix <i>*-s-</i> .....	510
3.3.4.2.2	The Derivational Suffix <i>*-ri- &lt; *-re-</i> .....	511
3.3.4.2.3	The Derivational Suffix <i>*-m-</i> .....	512
3.3.4.2.4	The Derivational Suffix <i>*-i- &lt; *-e-</i> .....	513
3.3.4.2.5	Summary .....	514
3.3.4.3	Inflectional Morphemes .....	514
3.3.4.3.1	Verbal Suffixes and Auxiliaries .....	515
3.3.4.3.1.1	The Infinitive <i>-i</i> .....	519

3.3.4.3.1.2 Group I Morphemes.....	520
3.3.4.3.1.2.1 The Causative Suffix <i>-asimi-</i> .....	520
3.3.4.3.1.3 Group II Morphemes .....	521
3.3.4.3.1.3.1 The Passive Suffix <i>-rari-</i> .....	521
3.3.4.3.1.3.2 The Potential Auxiliary <i>-yu:s-</i> .....	522
3.3.4.3.1.4 Group VII Morphemes .....	523
3.3.4.3.1.4.1 The Negative Suffix <i>-ran(-)</i> .....	523
3.3.4.3.1.5 Group VIII Morphemes .....	525
3.3.4.3.1.5.1 The Perfective Suffix <i>-t-</i> .....	525
3.3.4.3.1.6 Group IX Morphemes.....	526
3.3.4.3.1.6.1 The Past Stative Auxiliary <i>-a-</i> .....	527
3.3.4.3.1.6.2 The Progressive Auxiliary <i>-e:-</i> .....	529
3.3.4.3.1.6.3 The Non-Past Stative Auxiliary <i>-o:-</i> .....	530
3.3.4.3.1.6.4 The Stative Auxiliary <i>-u-</i> .....	530
3.3.4.3.1.7 Group X Morphemes .....	532
3.3.4.3.1.7.1 The Negative Imperative Suffix <i>-na</i> .....	532
3.3.4.3.1.7.2 The Volitional Suffix <i>-ra</i> .....	532
3.3.4.3.1.7.3 The Conditional Suffix <i>-ra:</i> .....	533
3.3.4.3.1.7.4 The Conjunctive Suffix <i>-re:</i> .....	534
3.3.4.3.1.7.5 The Imperative Suffix <i>-ri</i> .....	535
3.3.4.3.1.7.6 The Attributive Suffix <i>-ru</i> .....	535
3.3.4.3.1.7.7 The Progressive Perfective Suffix <i>-tai</i> .....	536
3.3.4.3.1.7.8 The Gerund <i>-ti</i> .....	537
3.3.4.3.1.7.9 The Final Suffix <i>-yun</i> .....	541
3.3.4.3.2 Nominalizers .....	542
3.3.4.3.3 Summary .....	543
3.4 Southern Ryūkyūan Islands: Hirara .....	545
3.4.1 Hirara Primary Source Material.....	545
3.4.2 Hirara Secondary Source Material.....	547
3.4.3 Hirara Phonology .....	548
3.4.3.1 Hirara Consonants.....	548
3.4.3.1.1 Voiceless Obstruents .....	549
3.4.3.1.1.1 The Historical Development of Voiceless Obstruents ....	550
3.4.3.1.2 Voiced Obstruents .....	552
3.4.3.1.3 Double Consonants .....	552
3.4.3.1.4 Nasal Consonants .....	553

3.4.3.1.5 The Liquid .....	556
3.4.3.1.6 Glides .....	557
3.4.3.2 Hirara Vowels .....	557
3.4.3.2.1 The Historical Development of Hirara Vowels.....	559
3.4.4 Hirara Verbal Morphology .....	561
3.4.4.1 The Shape of Pre-Hirara Verb Roots .....	561
3.4.4.2 Derivational Morphemes .....	562
3.4.4.2.1 The Derivational Suffix <i>*-as-</i> .....	562
3.4.4.2.2 The Derivational Suffix <i>*-ar-</i> .....	562
3.4.4.2.3 The Derivational Suffix <i>*-i- &lt; *-e-</i> .....	563
3.4.4.2.4 Summary .....	564
3.4.4.3 Inflectional Morphemes .....	564
3.4.4.3.1 Verbal Suffixes and Auxiliaries .....	565
3.4.4.3.1.1 The Infinitive <i>-i</i> .....	567
3.4.4.3.1.2 Group I Morphemes.....	568
3.4.4.3.1.2.1 The Causative Suffix <i>-as-</i> .....	568
3.4.4.3.1.2.2 The Causative Suffix <i>-asimi-</i> .....	568
3.4.4.3.1.2.3 The Passive and Potential Suffix <i>-rai-</i> .....	569
3.4.4.3.1.2.4 The Perfective Suffix <i>-tt-</i> .....	570
3.4.4.3.1.3 Group II Morphemes .....	570
3.4.4.3.1.3.1 The Stative Auxiliary <i>-a-</i> .....	571
3.4.4.3.1.3.2 The Non-Past Stative Auxiliary <i>-u-</i> .....	571
3.4.4.3.1.4 Group III Morphemes.....	572
3.4.4.3.1.4.1 The Volitional Suffix <i>-a</i> .....	572
3.4.4.3.1.4.2 The Negative Suffix <i>-an</i> .....	572
3.4.4.3.1.4.3 The Conjunctive Suffix <i>-riba</i> .....	573
3.4.4.3.1.4.4 The Imperative Suffix <i>-i/-ru</i> .....	574
3.4.4.3.1.4.5 The Attributive Suffix <i>-i</i> .....	575
3.4.4.3.1.4.6 The Stative Final Suffix <i>-i</i> .....	577
3.4.4.3.1.4.7 The Final Suffix <i>-im</i> .....	578
3.4.4.3.1.4.8 The Negative Imperative Suffix <i>-na</i> .....	578
3.4.4.3.1.4.9 The Perfective Progressive Suffix <i>-tai</i> .....	579
3.4.4.3.1.4.10 The Negative Perfective Suffix <i>-ttam</i> .....	581
3.4.4.3.1.4.11 The Subordinative Gerund <i>-tti</i> .....	581
3.4.4.3.2 Nominalizers .....	582
3.4.4.3.3 Summary .....	582

Chapter 4. RECONSTRUCTION OF PROTO-JAPONIC VERBAL

MORPHOLOGY .....	584
4.1 Introduction .....	584
4.2 Proto-Japonic Phonetic Correspondences .....	584
4.2.1 Proto-Japonic Consonants.....	585
4.2.2 Proto-Japonic Vowels .....	589
4.3 Derivational Morphemes.....	592
4.3.1 The Proto-Japonic Transitivity Flipper <i>*-ai-</i> .....	592
4.3.2 The Pre-WOJ Verbalizer <i>*-Ak-</i> .....	599
4.3.3 The Proto-Japonic Verbalizer <i>*-am-</i> .....	599
4.3.4 The Pre-WOJ Durative Derivational Morpheme <i>*-Ap-</i> .....	600
4.3.5 The Proto-Japonic Intransitive Derivational Morpheme <i>*-ar-</i> .....	601
4.3.6 The Proto-Japonic Transitive Derivational Morpheme <i>*-as-</i> .....	602
4.4 Inflectional Morphemes.....	604
4.4.1 Prefixes and Preverbs .....	604
4.4.1.1 The Pre-WOJ Emphatic Preverb <i>*kaki-</i> .....	605
4.4.1.2 The Proto-OJ Prefix <i>*sa-</i> .....	606
4.4.1.3 The Proto-OJ Emphatic Preverb <i>*uti-</i> .....	607
4.4.2 The Proto-OJ Circumfix <i>*na...sə</i> .....	607
4.4.3 Suffixes and Auxiliaries .....	608
4.4.3.1 The Proto-OJ Nominalizer <i>*-aku</i> .....	611
4.4.3.2 The Proto-Japonic Tentative <i>*-am-</i> .....	611
4.4.3.3 The Proto-Japonic Negative <i>*-an-</i> .....	612
4.4.3.4 The Proto-OJ Desiderative <i>*-ana</i> .....	613
4.4.3.5 The Proto-Japonic Hypothetical Conditional <i>*-aNpa</i> .....	614
4.4.3.6 The Proto-Japonic Negative <i>*-aNs-</i> .....	614
4.4.3.7 The Pre-WOJ Negative Tentative <i>*-aNsi</i> .....	616
4.4.3.8 The Proto-Japonic Stative <i>*-<sup>?</sup>ar-</i> .....	617
4.4.3.8.1 The Past Stative Proto-RK <i>*-<sup>?</sup>a-</i> .....	617
4.4.3.8.2 The Proto-OJ Progressive <i>*-ar-</i> .....	618
4.4.3.9 The Pre-WOJ Durative <i>*-ap-</i> .....	620
4.4.3.10 The Proto-OJ Honorific <i>*-as-</i> .....	624
4.4.3.11 The Proto-Japonic Causative Suffix <i>-asimai-</i> .....	624
4.4.3.12 The Proto-Japonic Passive and Potential: Proto-OJ <i>*-aye-</i> and Proto-RK <i>*-rare-</i> .....	627
4.4.3.12.1 The Proto-OJ Passive <i>*-ayai-</i> .....	627

4.4.3.12.2 The Proto-RK Passive <i>*-rare-</i> .....	629
4.4.3.13 The Proto-Japonic Imperative <i>*-e, -rə, -re</i> .....	629
4.4.3.14 The Proto-Japonic Infinitive <i>*-i</i> .....	632
4.4.3.15 The Proto-Japonic Nominalizer <i>*-i</i> .....	632
4.4.3.16 The Proto-OJ Honorific <i>*-imas-</i> .....	633
4.4.3.17 The Pre-WOJ Past <i>*-ki</i> .....	633
4.4.3.18 The Pre-WOJ Tentative Past Auxiliary <i>*-ki-am-</i> .....	634
4.4.3.19 The Proto-OJ Modal Past <i>*-ki-ar-</i> .....	635
4.4.3.20 The Pre-WOJ Humble Auxiliary <i>*-matur-</i> .....	636
4.4.3.21 The Proto-OJ Perfective <i>*-n-</i> .....	636
4.4.3.22 The Proto-Japonic Negative Imperative <i>*-na</i> .....	637
4.4.3.23 The Proto-Japonic Conjunctive <i>*-Npa</i> .....	637
4.4.3.24 The Proto-OJ Concessive <i>*-Ntə</i> .....	638
4.4.3.25 The Proto-Japonic Evidential <i>*-rai-</i> .....	638
4.4.3.26 The Proto-Japonic Stative Final <i>*-ri</i> .....	640
4.4.3.27 The Proto-Japonic Attributive <i>*-ō</i> and <i>*-ru</i> .....	641
4.4.3.28 The Proto-OJ Attributive Past <i>*-si</i> .....	644
4.4.3.29 The Proto-Japonic Perfective <i>*-t-</i> .....	644
4.4.3.30 The Proto-Japonic Past Progressive <i>*-t<sup>?</sup>ar-</i> .....	645
4.4.3.31 The Proto-OJ Respectful Honorific <i>*-tamap-</i> .....	645
4.4.3.32 The Proto-Japonic Subordinative Gerund <i>*-te</i> .....	646
4.4.3.33 The Proto-OJ Coordinative <i>*-tutu</i> .....	647
4.4.3.34 The Proto-Japonic Non-Past Stative <i>*-<sup>?</sup>ura-</i> .....	648
4.4.3.35 The Pre-WOJ Debitive <i>*-uNpai-</i> .....	650
4.4.3.36 The Proto-OJ Tentative <i>*-ur-am-/un-am-</i> .....	651
4.4.3.37 The Proto-OJ Suppositional <i>*-ur-asi-</i> .....	652
4.4.3.38 The Proto-Japonic Stative <i>*-wo-</i> .....	653
4.4.3.39 The Proto-Japonic Final <i>*-yu-</i> .....	654
4.5 Summary .....	655
Chapter 5. CONCLUSION .....	659
5.1 Western Old Japanese .....	660
5.2 Eastern Old Japanese.....	660
5.3 Yamatoma .....	661
5.4 Shuri .....	661
5.5 Hirara .....	662

5.6 Reconstruction of Proto-Japonic Verbal Morphology .....	662
References .....	745

## List of Tables

Table 2.1: Contents of <i>Man'yōshū</i> by Book.....	39
Table 2.2: Comparison of Early Japanese Writing Systems.....	52
Table 2.3: WOJ Consonants .....	59
Table 2.4: The Phoneme /p/ Through Japanese Language History .....	61
Table 2.5: WOJ Verbal Conjugations.....	87
Table 2.6: Comparison of Traditional and Non-Traditional Analyses .....	88
Table 2.7: Number of Verb Roots by Shape.....	98
Table 2.8: The Theoretical Verb Roots and Their Inflections .....	108
Table 2.9: Derivational Suffixes from Unger (1993) and Russell (1997).....	111
Table 2.10: Revised Shape of pre-WOJ Derivational Morphemes.....	123
Table 2.11: Distribution of Transitive Derivational Suffix *-As- .....	126
Table 2.12: The Distribution of Intransitive Derivational Suffix *-Ar- .....	128
Table 2.13: The Distribution of Derivational Suffix *-Am- .....	131
Table 2.14: The Distribution of Derivational Suffix *-Ap-.....	134
Table 2.15: The Distribution of Intransitive Derivational Suffix *-Ak-.....	136
Table 2.16: The Distribution of Intransitive Derivational Suffix *-Ai- .....	139
Table 2.17: The Function of pre-WOJ Derivational Morphemes.....	140
Table 2.18: Functions of the WOJ Prefix <i>sa-</i> .....	148
Table 2.19: Classification of WOJ Morphemes Based on Verbal String Ordering .....	161
Table 2.20: Summary of WOJ Inflectional Morphemes.....	205
Table 2.21: EOJ Poems Divided by Dialect Group and Location .....	210
Table 2.22: NEOJ Consonants.....	216
Table 2.23: Summary of NEOJ Derivational Morphemes.....	241
Table 2.24: Classification of NEOJ Morphemes Based on Verbal String Ordering .....	243
Table 2.25: NEOJ Attributive Forms by Suffix and Function.....	261
Table 2.26: Summary of NEOJ Inflectional Morphemes .....	268
Table 2.27: CEOJ Consonants .....	270
Table 2.28: Summary of CEOJ Derivational Morphemes.....	288
Table 2.29: Classification of CEOJ Morphemes Based on Verbal String Ordering .....	292
Table 2.30: CEOJ Attributive Forms Ending in <i>ô/o</i> by Suffix and Function .....	321
Table 2.31: Summary of CEOJ Inflectional Morphemes.....	331

Table 2.32: SEOJ Consonants.....	333
Table 2.33: Summary of SEOJ Derivational Morphemes .....	347
Table 2.34: Classification of SEOJ Morphemes Based on Verbal String Ordering .....	351
Table 2.35: Summary of SEOJ Inflectional Morphemes .....	375
Table 2.36: UEOJ Consonants.....	378
Table 2.37: Summary of UEOJ Derivational Morphemes.....	396
Table 2.38: Classification of UEOJ Morphemes Based on Verbal String Ordering .....	401
Table 2.39: UEOJ Attributive Forms by Suffix and Function .....	427
Table 2.40: Summary of UEOJ Inflectional Morphemes .....	436
Table 3.1: The Yamatoma Consonant Inventory .....	445
Table 3.2: Phonetic Values and Allophones for Voiceless Obstruents in Yamatoma .....	446
Table 3.3: Phonetic Values and Allophones for Voiced Obstruents in Yamatoma .....	448
Table 3.4: Phonetic Values and Allophones for Nasal Consonants in Yamatoma .....	452
Table 3.5: Distribution of Glides in Yamatoma.....	457
Table 3.6: Summary of Yamatoma Derivational Morphemes.....	470
Table 3.7: Classification of Yamatoma Morphemes Based on Verbal String Ordering .....	472
Table 3.8: Summary of Yamatoma Inflectional Morphemes.....	491
Table 3.9: The Shuri Consonant Inventory.....	498
Table 3.10: Phonetic Values and Allophones for Voiceless Obstruents in Shuri .....	499
Table 3.11: Phonetic Values and Allophones for Voiced Obstruents in Shuri....	502
Table 3.12: Phonetic Values and Allophones for Nasal Consonants in Shuri.....	504
Table 3.13: Summary of Shuri Derivational Morphemes.....	514
Table 3.14: Classification of Shuri Morphemes Based on Verbal String Ordering .....	517
Table 3.15: Summary of Shuri Inflectional Morphemes .....	544
Table 3.16: The Hirara Consonant Inventory .....	549
Table 3.17: Phonetic Values and Allophones for Voiceless Obstruents in Hirara .....	550
Table 3.18: Phonetic Values and Allophones for Voiced Obstruents in Hirara ..	552

Table 3.19: Phonetic Values and Allophones for Nasal Consonants in Hirara ...	554
Table 3.20: Proto-RK Sequences Involving *r and Their Reflexes in Hirara .....	557
Table 3.21: Correspondences Between Long /o:/ and /au/ in Miyako Dialects...	558
Table 3.22: Summary of Hirara Derivational Morphemes .....	564
Table 3.23: Classification of Hirara Morphemes Based on Verbal String Ordering .....	566
Table 3.24: Summary of Hirara Inflectional Morphemes.....	583
Table 4.1: Proto-Japonic Consonants in the Japonic Languages and Dialects ....	586
Table 4.2: Proto-Japonic Vowels in the Japonic Languages and Dialects .....	589
Table 4.3: The Transitivity Flipper in Japonic.....	593
Table 4.4: The Verbalizer in Japonic.....	599
Table 4.5: The Intransitive Morpheme in Japonic .....	601
Table 4.6: The Transitive Morpheme in Japonic .....	603
Table 4.7: The Proto-Japonic Tentative Suffix *-am- .....	611
Table 4.8: The Negative *-an- in Japonic.....	612
Table 4.9: The Proto-OJ Desiderative *-ana .....	613
Table 4.10: The Proto-Japonic Hypothetical Conditional *-aNpa .....	614
Table 4.11: The Proto-Japonic Negative *-aNs-.....	615
Table 4.12: The Proto-RK Past Stative *- <sup>?</sup> a- .....	617
Table 4.13: The Progressive *-ar- in Japonic.....	618
Table 4.14: The Durative *-ap- in OJ.....	620
Table 4.15: The Honorific *-as- in OJ.....	624
Table 4.16: The Causative *-asimai- in Japonic.....	625
Table 4.17: The Passive and Potential *-aye-/rare- in Japonic.....	627
Table 4.18: The Imperative *-e, -rə, -re in Japonic .....	630
Table 4.19: The Infinitive *-i in Japonic.....	632
Table 4.20: The Nominalizer *-i in Japonic .....	632
Table 4.21: The Proto-OJ Modal Past *-ki-ar- in OJ.....	635
Table 4.22: The Negative Imperative *-na in Japonic.....	637
Table 4.23: The Conjunctive *-Npa in Japonic .....	637
Table 4.24: The Evidential *-rai- in Japonic .....	639
Table 4.25: The Stative Final *-ri in Japonic .....	640
Table 4.26: The Attributive *-ru in Japonic .....	641
Table 4.27: The Perfective *-t- in Japonic.....	644
Table 4.28: The Progressive Perfective *-t- <sup>?</sup> ar- in Japonic .....	645
Table 4.29: The Subordinative Gerund *-te in Japonic .....	646

Table 4.30: The Proto-OJ Coordinative <i>*-tutu</i> .....	648
Table 4.31: The Non-Past Stative <i>*-<sup>?</sup>ura-</i> in Japonic .....	648
Table 4.32: The Proto-OJ Tentative <i>*-u-ram-</i> .....	651
Table 4.33: The Proto-Japonic <i>*-wo-</i> in Ryūkyūan .....	653
Table 4.34: The Final <i>*-yu-</i> in Japonic .....	654
Table 4.35: Proto-Japonic and Pre-WOJ Derivational Morphemes .....	655
Table 4.36: Proto-Japonic Inflectional Morphemes.....	656
Table 4.37: Proto-OJ Inflectional Morphemes.....	657
Table 4.38: Proto-RK Inflectional Morphemes .....	657
Table 4.39: Pre-WOJ Inflectional Morphemes .....	658

## List of Figures

Figure 1.1: Map of Japan and the Ryūkyūs .....	2
Figure 1.2: The Split of PJ Proposed by Hattori (1959) .....	3
Figure 1.3: The Split of PJ Proposed by Uemura (1972).....	4
Figure 1.4: The Split of PJ Proposed by Thorpe (1983).....	5
Figure 1.5: Map of Japan Showing Location of Kyūshū, WOJ, and EOJ .....	6
Figure 2.1: Map of Japan .....	29
Figure 2.2: Possible Split of proto-OJ into Two Branches .....	30
Figure 2.3: OJ as a Dialect Continuum.....	30
Figure 2.4: Map of Provinces of the Best Preserved <i>Fudoki</i> .....	37
Figure 2.5: WOJ Vowels.....	71
Figure 2.6: Map of EOJ Dialect Areas.....	208
Figure 3.1: Map of the Ryūkyū Islands .....	439
Figure 3.2: Map of the Amami Islands .....	442
Figure 3.3: Yamatoma Vowels .....	458
Figure 3.4: Proto-RK Vowels and Their Correspondences in Yamatoma.....	459
Figure 3.5: Map of the Central Ryūkyūan Islands.....	493
Figure 3.6: Shuri Vowels .....	506
Figure 3.7: Map of the Miyako Islands.....	545
Figure 3.8: Hirara Vowels.....	558
Figure 3.9: Proto-RK Vowels and Their Correspondences in Hirara.....	560
Figure 4.1: The Development of the proto-Japonic Transitivity Flipper.....	598

## List of Appendixes

Appendix A: WOJ Verb Root Data .....	663
Appendix B: EOJ Syllables by Dialect .....	688
Appendix C: EOJ Verb Root Data.....	695
Appendix D: EOJ Attributive Form Data .....	701
Appendix E: Yamatoma Verb Root Data .....	713
Appendix F: Yamatoma Inflectional Suffixes not Included in the Present Study .....	729
Appendix G: Shuri Verb Root Data .....	731
Appendix H: Hirara Verb Root Data.....	741

## Abbreviations

### Grammatical Terms

ABL	ablative
APP	apparentive
ATT	attributive
CL	classifier
COM	commutative
COMP	comparative
CONC	concessive
COND	conditional
CONJ	conjunctive
CONJC	conjecture
CONT	continuative
COOR	coordinative
DAT	dative
DEB	debitive
DES	desiderative
DIM	diminutive
DUR	durative
DV	defective verb
EVD	evidential
HES	hesitation, filler
HON	respectful honorifics
HUMB	humble honorifics
IMP	imperative
INF	infinitive
INT	interjection
ITER	iterative
KH	the <i>kahen</i> verb; traditional term for the irregular verb <i>kö-</i> 'to come'
KI	<i>kami ichidan</i> verbs; traditional term for monosyllabic verbs with stems usually ending in /i/, but sometimes in /i/
KN	<i>kami nidan</i> verbs; traditional term for verbs with vowel final stems ending in /i/
ND	<i>nidan</i> verbs; traditional term for verbs with vowel final stems; see KN and SN
NH	<i>nahen</i> verbs; traditional term for irregular verbs with stems ending in /n/

NML	nominalizer
NPS	non-past stative
NOM	nominative
PART	particle
PAST	past tense
PERF	perfective
PL	plural
POL	polite
POT	potential
PST	past stative
PREF	prefix
PREV	preverb
PROG	progressive
QUOT	quotative
QP	question particle
REC	reciprocal
RESP	respectful honorific
RET	retrospective
RH	<i>rahen</i> verbs; traditional term for irregular verbs ending in /r/
SH	the <i>sahen</i> verb; traditional term for the irregular verb <i>sö-/se-</i> 'to do'
SN	<i>shimo nidan</i> verbs; traditional term for verbs with stems ending in /ë/
STAT	stative
SUB	subordinative
SUBJ	subjunctive
SUP	suppositional
TAG	tag question
TENT	tentative
TERM	terminative
UNB	unbinding morpheme
UNK	unknown
v.i.	intransitive verb
VOL	volitional
v.t.	transitive verb
YD	<i>yodan</i> verbs; traditional term for verbs with consonant final stems

## Languages

AJ	Archaic Japanese (a hypothetical stage of Japanese)
CEOJ	Central Eastern Old Japanese (Area B)
EMC	Early Middle Chinese
EMJ	Early Middle Japanese (800-1200)
EMdJ	Early Modern Japanese (1600-1867)
EOJ	Eastern Old Japanese; Azuma (8th century, language of Eastern Japan)
EWOJ	Early Western Old Japanese (date?)
LMC	Chang'an Late Middle Chinese
LMJ	Late Middle Japanese (1200-1600)
LOC	Late Old Chinese
MJ	Middle Japanese
MdJ	Modern Japanese (1867-present)
NEOJ	Northern Eastern Old Japanese (Area A)
OJ	Old Japanese (8th century)
RK	Ryūkyūan
SEOJ	Southern Eastern Old Japanese (Area C)
UEOJ	Eastern Old Japanese Language of Unknown Origin
WOJ	Western Old Japanese (8th century, language of Western/Central Japan)

## Symbols

-	morpheme boundary
*	non-attested or reconstructed form
//	phonemic transcription
[ ]	phonetic transcription
A	a vowel that is either *a or *ō
C	any consonant (including Ø)
Ø	a non-existent phoneme
V	any vowel
:	corresponds with

## Texts

BK	<i>Bussoku kayō</i>
K	<i>Kojiki</i> "The Records of Ancient Matters"
KK	<i>Kojiki kayō</i> "Songs of the Kojiki"
MYS	<i>Man'yōshū</i> "Collection of Ten Thousand Leaves"

NS	<i>Nihonshoki</i> "The Annals of Japan"
NSK	<i>Nihonshoki kayō</i> "Songs of the Nihonshoki"
NR	<i>Nihonryōiki</i>
RM	<i>Ruijūmyōgishō</i>
SSJK	<i>Shinsenjikyō</i>
WM	<i>Wamyōruijushō</i>

# CHAPTER 1. INTRODUCTION

## 1.1 Purpose

This study aims to further our understanding of the development of the Japonic language family, and, more specifically, it is concerned with the development of verbal morphology, first investigating the verbal morphemes found in each Japonic language and then presenting a reconstruction of proto-Japonic (PJ) verbal morphology. This study is not intended as a complete reconstruction of PJ verbal morphology, but rather as the first step in its reconstruction – a complete reconstruction would require the inclusion of more languages and dialects than possible in the present study.

In this chapter, I discuss the Japonic language family (Section 1.2) and methodology and terminology (Section 1.3). In Chapters 2 and 3, I present a linguistic overview of Old Japanese (Chapter 2) and Ryūkyūan (Chapter 3). In Chapter 4, I present the reconstruction of PJ phonology and verbal morphology. Finally, Chapter 5 concludes this work, highlighting the findings of the present study. Rather than including a separate literature review chapter, I have chosen to instead discuss primary and secondary sources related to each language and dialect within the appropriate section.

## 1.2 The Japonic Language Family

"Japonic" is a term coined by Leon Serafim to refer to the languages spoken in Japan and the Ryūkyūs, as shown in Figure 1.1.

Figure 1.1: Map of Japan and the Ryūkyūs<sup>1</sup>



The term proto-Japonic (PJ) is used to describe a reconstructed language representing the parent language of Japanese and Ryūkyūan (RK).<sup>2</sup> The term "Japanese" is used to refer

---

1. Image modified from satellite map from <http://maps.google.com/maps?f=q&hl=en&q=japan&ie=UTF8&t=k&om=1>

2. The methodology for reconstructing a proto-Language is described in Section 1.3.5.2.

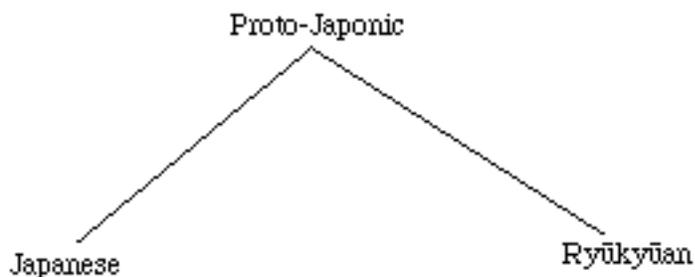
to the varieties of Japonic spoken on mainland Japan, and "Ryūkyūan" (RK) is used to refer to the varieties of Japonic spoken in the Ryūkyūan island chain.<sup>3</sup>

At this time there are issues that have yet to be resolved about the development and spread of Japonic. Below I discuss two main issues: first, it is not known exactly how and when PJ split into Japanese and RK (Section 1.2.1); and second, the distinction between "language" and "dialect" is not always clear (Section 1.2.2).

### *1.2.1 The Spread of Japonic*

The view presented by Hattori (1959) is that Japonic speakers moved from the Korean peninsula to Kyūshū around 300 BCE, and that RK speakers had split off by 300 CE. His proposal, then, is a split of PJ into two branches, as shown in Figure 1.2:

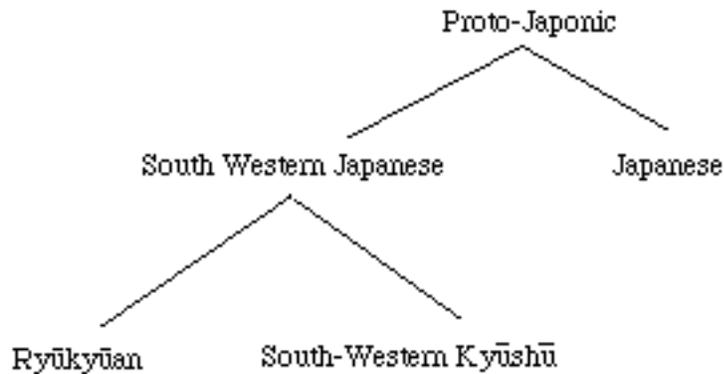
Figure 1.2: The Split of PJ Proposed by Hattori (1959)<sup>4</sup>



- 
3. More detail about the possible divisions of languages in the Ryūkyūan branch of Japonic is presented in Section 3.1.
  4. Hattori (1959) does not use the term "Japonic" and instead describes this as the parent language of Japanese and Ryūkyūan; I use Japonic for Hattori and for other authors for the sake of consistency.

Uemura (1972, 1977) also proposes that PJ splits into two branches, but in his view the split is not between Japanese and RK but between South Western and "other" Japanese.

Figure 1.3: The Split of PJ Proposed by Uemura (1972)



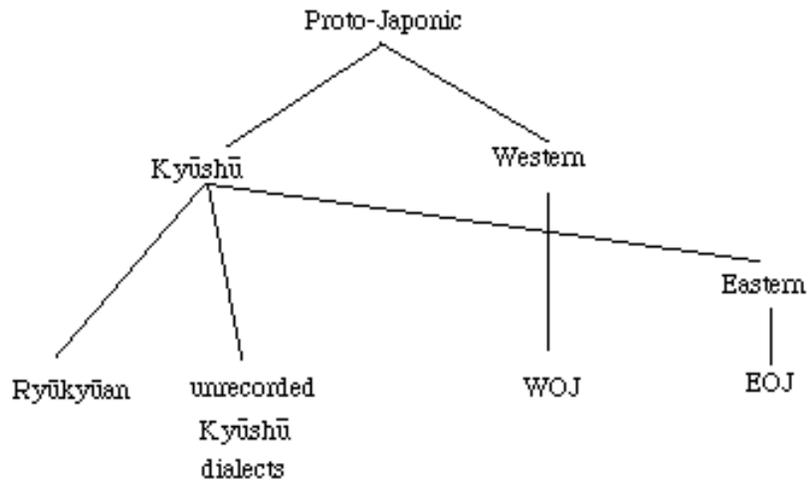
He claims, therefore, that South Western Kyūshū is closer to RK than it is to mainland Japanese dialects. This view is primarily based on the general claim that Kyūshū dialects share some features with Ryūkyūan dialects.

Thorpe (1983) also considers RK to be more closely related to Kyūshū dialects than to other varieties of Japanese. However, he has a more complicated view of the split of PJ to Japanese and Ryūkyūan, as shown in Figure 1.4:<sup>5</sup>

---

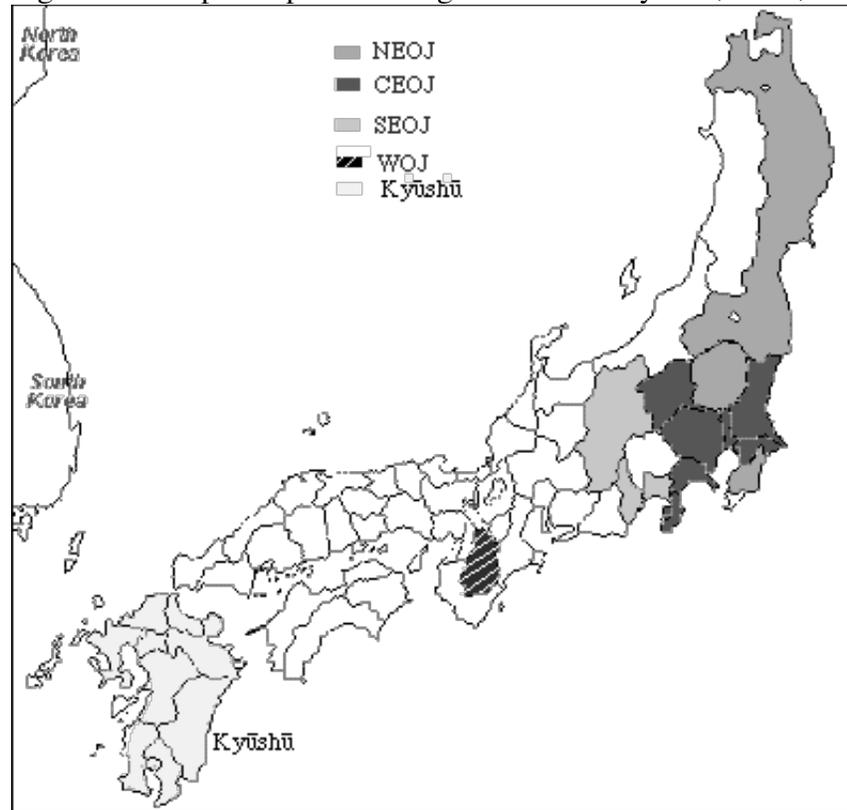
5. Modified from Thorpe (1983: 236). I have changed Thorpe's language names to be consistent with the names used in the present study: OJ has been changed to WOJ; ED to EOJ, Kansai to Western, and Kantō to Eastern.

Figure 1.4: The Split of PJ Proposed by Thorpe (1983)



This view, as Thorpe himself admits (1983: 236), is awkward geographically. It implies that the variety of Japonic spoken in the Eastern region of Japan is more closely related to Kyūshū than it is to the variety of Japonic spoken in the Western region, when in fact, the Western region is much closer geographically to Kyūshū, as shown on the map in Figure 1.5 below:

Figure 1.5: Map of Japan Showing Location of Kyūshū, WOJ, and EOJ



Such a situation is not impossible, particularly if we assume waves of migration where settlers from Kyūshū first moved to the north east regions of Japan and later settlers moved only as far as the western plains.<sup>6</sup> However, Thorpe does not present linguistic data to support his claim that the dialects of EOJ are an offshoot of Kyūshū or even that they are more closely related to Kyūshū than to WOJ.

---

6. Although not discussed by Thorpe (1983), there is also the possibility that contact between EOJ speakers, particularly members of the warrior class who were stationed in Kyūshū, and speakers of Kyūshū dialects played a role in linguistic development; shared features may be the result of contact and not of linguistic retention. This issue has not yet been studied and will be set aside for further research.

Serafim (2003) uses both linguistic and archaeological evidence to build on Uemura's (1972) claim that RK is more closely related to Kyūshū.<sup>7</sup> He suggests that there were two waves of migration from Kyūshū into the Ryūkyūs, and the second group may have moved as late as 900 CE mixing with earlier settlers in the Ryūkyūs (Serafim 2003: 464-468, 474).<sup>8</sup> Further, Serafim (2003: 471-473) presents linguistic data arguing RK shares features with Northern Kyūshū dialects, and not South Western Kyūshū (as proposed by Uemura 1972, 1977) or Western Kyūshū (as proposed by Asato and Doi 1999).

Although Serafim's (2003) claims are supported by linguistic and archeological evidence, some problems remain. First, it is geographically awkward to claim RK is more closely related to a more remote area (i.e., Northern Kyūshū) than it is to a geographically closer area (i.e., South Western Kyūshū); this is also mentioned by Serafim (2003: 474). Geographic awkwardness is not a criteria to either prove or disprove claims about linguistic relationships, however, an explanation is needed to account for RK being more closely related to a remote area than to a geographically closer area.

---

7. Serafim (2003) does not discuss the relationship of the EOJ dialects to Kyūshū dialects.

8. Serafim's date of 900 CE as a second wave of migration is based on the findings of Asato and Doi (1999) who demonstrate that agriculture entered the Ryūkyūs no earlier than 900 CE, and that jars and other goods traded by merchants appear to have entered the Ryūkyūs from Kyūshū around the same time (Serafim 2003: 465-466).

Second, it is not clear what extent contact with other Japanese dialects may have had on the development of Kyūshū dialects. Contact with speakers of other Japanese dialects may have caused features typical of Kyūshū dialects to be lost. Further, if speakers of Northern dialects had less contact with speakers of other Japanese dialects than speakers of Southern dialects, that may account for Northern Kyūshū dialects retaining older features and Southern dialects losing features, which would account for RK to be more similar to the Northern dialects than to the Southern dialects, despite the geographic awkwardness mentioned above.

Third, Serafim's (2003) main linguistic evidence for similarity of RK to Northern Kyūshū dialects hinges on two points: 1) assibilation of PJ \*/t/ to /s/ in RK and Northern Kyūshū dialects with the nominalizing particle; and 2) verbs ending in /e/ in these dialects and not /i/ (or /i/) as found elsewhere in Japonic: e.g., WOJ *oki-* 'arise', MJ *oki-* 'id.', proto-RK and proto-Northern Kyūshū *\*oke-* 'id.' These two similarities are intriguing, but to what extent can shared features found only in words involving the nominalizing particle and only in one class of verbs be used to claim that RK branched off from Northern Kyūshū dialects? In other words, Serafim's (2003) claim would be more convincing if there were more similarities, and if they weren't limited to two types

of examples, both involving morphology, that could perhaps also be explained by contact or areal features and are not necessarily the result of shared retention.

Finally, although Serafim (2003) has argued for a later migration from Kyūshū to the Ryūkyūan islands than previously thought, it is still unknown exactly why this migration occurred and there are still unanswered questions about how the Ryūkyūs were settled (Serafim 2003: 474).

This study does not attempt to answer these questions; more work is needed on each of the dialects to further our understanding of how they developed, including what role contact may have played in shaping the various forms of Japonic. I consider this study to be another step towards understanding the development of Japonic languages and dialects, which will hopefully aid future studies.

### *1.2.2 The Distinction Between Language and Dialect*

Another issue that has yet to be resolved for Japonic is the difference between languages and dialects. This dissertation is not an attempt to resolve these issues, however, since I discuss both languages and dialects it is necessary to clarify what constitutes distinct languages and what constitutes distinct dialects.

The linguistic distinction between languages and dialects is typically defined according to the criterion of mutual intelligibility; although, as I discuss below, the test of intelligibility is not always straightforward. Simply put, mutual intelligibility means that if speakers from different areas are able to understand each other then they are speaking two different dialects. If they are not able to understand each other they are said to be speaking two different languages.

However, the issue becomes more complicated in situations where speakers of one language are able to understand speakers of another, but speakers of the second language are unable to understand speakers of the first. The oft mentioned situation with Portuguese and Spanish speakers is used to demonstrate such a situation. Portuguese speakers typically understand Spanish, but Spanish speakers do not understand Portuguese. Since the criterion for defining a language versus a dialect is mutual intelligibility, and since Spanish speakers do not understand Portuguese, the two are regarded as distinct languages. The fact that Portuguese speakers understand Spanish is explained by the difference in status between the two languages, where Spanish is regarded as a prestige language and Portuguese speakers typically have exposure to it.

A similar situation is found between Japanese and RK, where Japanese speakers do not understand the various forms of RK but RK speakers understand Japanese. This

is, of course, because of the status of Japanese as the official language of the Ryūkyūs and most RK speakers being bilingual, and typically even more fluent in Japanese than in their own "native" language. However, since native Japanese speakers cannot understand RK, Japanese and RK must be considered different languages. However, the distinction between languages and dialects among the various forms of Japanese and of RK is still not clear; I discuss this point in more detail in Chapters 2 and 3.

I also raise the issue of dialect chains, where speakers of geographically distant dialects do not understand each other, but they each understand neighboring dialects, and speakers of those neighboring dialects understand each other, forming a chain of dialects between the geographically distant dialects. In other words, imagine a situation with dialects A-B-C-D where A and D are geographically distant and mutually unintelligible. Speakers of dialects A and B understand each other, speakers of B and C understand each other, and speakers of C and D understand each other. Although speakers of A and D do not understand each other, A and D are still considered related dialects and not separate languages because of the chain of mutual intelligibility.

### *1.2.3 The Japonic Languages and Dialects Used in this Study*

As discussed above, there are still questions concerning both the spread of Japonic and the distinction between languages and dialects. It is clear that there are at least two main branches of Japonic: Japanese and Ryūkyūan (see Figure 1.2). However, it is not yet clear whether RK is an offshoot of some Kyūshū dialect (as in Figures 1.3 and 1.4, and as discussed in Serafim 2003), or whether Japanese and RK are sister languages branching from the same parent language (i.e., PJ).<sup>9</sup>

For this study I have chosen the oldest attested forms of Japanese, Western Old Japanese (WOJ) and Eastern Old Japanese (EOJ), to represent languages spoken on mainland Japan.<sup>10</sup> For the RK branch of Japonic, I have chosen one language or dialect from each geographic area to represent the forms of RK spoken in that area. I have selected the following languages: Yamatoma, a language spoken in the Amami islands, to represent the languages of the northern Ryūkyūan islands; Shuri, an Okinawan

- 
9. Although I treat Japanese and RK as two branches of Japonic, this does not mean I adopt Hattori's (1959) version of the split of Japonic and reject Uemura's (1972), Thorpe's (1983), or Serafim's (2003) claim that RK and Kyūshū form a branch of PJ. As stated above, there are still unsolved problems concerning how and when RK split from PJ. I am setting aside this issue for the purpose of this study, as the relationship of RK to Kyūshū, and more specifically to which Kyūshū dialect, has not yet been determined. I am not using Kyūshū dialects in this study simply because I have decided to use the oldest known forms of the languages spoken in Japan, and sufficient data are not available for early Kyūshū dialects. At this time we can only be reasonably certain that Japanese and Ryūkyūan are related languages and not dialects of the same language.
10. EOJ is further divided into four dialects: Northern (NEOJ), Central (CEOJ), Southern (SEOJ), and "unknown" (UEOJ) for linguistic data which cannot be attributed to other dialects (see Section 2.3).

language,<sup>11</sup> to represent the languages of the central Ryūkyūan islands; and finally Hirara, spoken in the Miyako islands, to represent the languages of the southern Ryūkyūan islands. More details about each language or dialect and why they were selected are presented in Chapters 2 and 3.

### **1.3 Methodology and Terminology**

Below I discuss the various methodologies and terminology used in this study. I discuss how data were collected in Section 1.3.1, phonology and phonetics in Section 1.3.2, morphology in Section 1.3.3, morphophonemic analysis in Section 1.3.4, reconstructed languages in Section 1.3.5, and contact linguistics in Section 1.3.6.

#### *1.3.1 Data Collection*

While preparing to conduct this study, I found that many examples presented in previous studies contained data that were not actually attested in the language, and appear to have come from dictionary citations or were based on forms in later stages of the language.<sup>12</sup> To ensure that data used in this study are reliable, I only use data that are

---

11. Often considered to be Standard Okinawan.

12. This is particularly true of WOJ data, where words were recorded both phonetically and logographically. In cases where words were only presented logographically (i.e., characters used semantically, see Section 2.2.3) readings from Middle Japanese (MJ) or later stages of Japanese were often attributed to those words. Also, many examples cited as WOJ examples come from EOJ

either written in a phonetic script or transcribed from recorded conversations. The specific primary sources for each language or dialect presented in this study are given in the section corresponding to that language or dialect.

When discussing a particular form, I present a full sentence or clause illustrating how it is used in the language. WOJ and EOJ data are presented in five lines; RK data do not have the first line, which contains the data as presented in the text where it was attested.<sup>13</sup> The examples are presented as follows:

- Line 1: 春鳥之 佐麻欲比奴礼者
- Line 2: PARUTÖRI-NÖ sa-mayôp-î-n-ure-Npa
- Line 3: spring bird-NOM PREF-confuse-INF-PERF-EVD-CONJ
- Line 4: Since the spring birds were confused...
- Line 5: (MYS II: 199)

Line 1 presents the orthography as recorded in the text. Line 2 shows both transliteration of the characters presented in Line 1 and a grammatical analysis of the text showing

---

texts. As I discuss below, I only use WOJ data that are attested phonetically in WOJ texts. When citing examples from secondary sources where the data presented were not phonetically attested in WOJ, I make a note of this and cite other examples where possible. Where data are used in secondary sources but the text where the data were presented is not given, I provide the attestation to show that the data were presented phonetically in WOJ.

13. This is only an issue for WOJ and EOJ data, as the RK data is recorded in a romanized script. My transliteration of the data is faithful to the text, even when misspellings occur. In other words, I do not alter spellings to be consistent with how words are spelled in other texts, and where relevant I comment on the misspelling. In the example presented here, the capitalized words indicate that the characters denoting those words were written logographically and not phonetically. Although there are cases of words spelled logographically in the examples presented below, only phonetic data are used as proof of its phonology and/or morphology.

morpheme boundaries indicated with a dash between morphemes.<sup>14</sup> Line 3 is a grammatical translation of Line 2, glossing the meaning of words and function of morphemes, and Line 4 a standard translation of the text. Last, Line 5 provides the attestation or source for the example. In this case, MYS is an abbreviation for *Man'yōshū*, the Roman numeral indicates that this sample came from Book II, and 199 is the poem number.<sup>15</sup> In addition, underlining is used to indicate the morpheme being discussed, in this case the conjunctive suffix *-Npa*. Its occurrence is underlined in each line of the example.

### 1.3.2 Phonology and Phonetics

The fields of phonology and phonetics are concerned with the sounds that occur in a language. Simply put, phonetics is the study of speech sounds and is concerned with how sounds are produced or perceived, while phonology is concerned how the sounds, and more precisely phonemes, are arranged in a language.<sup>16</sup> The description for each language or dialect presented in this study contains a discussion of its phonology, i.e., the

---

14. In Section 1.3.4 I discuss how morpheme boundaries are determined.

15. For the *Man'yōshū*, I am using the numbers presented in the *Nihon koten bungaku taikei* (Takagi, Gomi, and Ōno 1958-1962). The primary sources for each language and dialect are presented in the discussion for that language or dialect.

16. This is obviously a simplistic explanation of the two fields. There are also subfields of both, which involve different aspects of both fields. For a more detailed description of these fields, see e.g., Vance (1987), Ladefoged (1993), Lass (1993), Clark and Yallop (1996).

sounds that occur in the language and how they change synchronically and diachronically.

### 1.3.3 Morphology

Morphology, the study of word structure, examines language in terms of morphemes that either create words or that attach to existing words. Morphemes are defined as the smallest meaning bearing units in a language. A morpheme can be a full word, as in *cat*, or it can be a suffix, as in plural *-s*. Thus, the word "cats" consists of two morphemes *cat + -s*.<sup>17</sup>

There are different types of morphemes in Japonic languages. First, there are "roots" which are the smallest units common to related words, and which contain the meaning for those related words. Next, there are stems, which in some cases are identical to the root and in other cases consist of a root plus derivational morpheme(s). Finally, there are affixes. Affixes are bound units which can occur before or after stems or roots. The types of affixes found in Japonic are: prefixes, suffixes, auxiliaries, and a circumfix.<sup>18</sup>

---

17. In English, the plural *-s* has allomorphs, meaning that it sounds different in various environments; the plural following *cat* sounds different than it does following *dog*. I discuss similar processes throughout Japonic where relevant.

18. A circumfix surrounds the stem. There is only one circumfix found in Japonic, and it only occurs in OJ: *na...sö* 'NEG IMP' "do not [do]."

In Section 1.3.3.1, I discuss bound and free morphemes and in Section 1.3.3.2, I discuss the distinction between derivational and inflectional morphology.

### 1.3.3.1 Bound and Free Morphemes

Morphemes can be either bound or free. Bound morphemes only occur attached to a root or stem, but cannot occur independently. The example of plural *-s* mentioned above is a bound morpheme; it occurs attached to words but does not occur in isolation. Those units which can occur in isolation are known as free forms.

When analyzing morphemes, a dash (-) is used to indicate that a bound form must attach to something: English plural *-s* must suffix to a stem; English *re-* 'again' must prefix to a stem. In this study, for example, verb stems are bound forms and are therefore always written with a dash: e.g., *sak-* 'bloom'. Suffixes that cannot end a verb string are presented with a dash before and after the suffix, e.g., *-an-*, showing that it must suffix to another morpheme and must also be followed by another morpheme. In the case of the circumfix *na...so*, the symbol ... is used to indicate where the verb stem occurs, e.g., the verb root *se-* is used with the circumfix as *nasesö* 'do not do'.

### 1.3.3.2 Derivational and Inflectional Morphology

As stated above, the purpose of this study is to reconstruct PJ verbal morphology, and I analyze both derivational and inflectional morphology. The description of each language or dialect used in this study contains a discussion of both derivational and inflectional morphemes found in that language.

Derivational morphemes are used in word formation. They change the function of a root, for example, from an adjective to a verb or from a transitive verb to an intransitive one. Affixing a derivational morpheme to a root results in a new lexicalized word. In order to determine the derivational morphemes in Japonic languages, I compared a number of verb stems and applied the method of internal reconstruction on the data (see Section 1.3.5.1).

Inflectional morphemes affix to stems, but unlike derivational morphemes, do not create a new lexicalized form. Inflectional morphemes indicate various grammatical categories, i.e., aspect, tense, mood, honorification, etc. The inflectional morphemes are determined by a morphophonemic analysis on the data, as described in the next section.

### 1.3.4 Morphophonemic Analysis

A morphophonemic analysis is a type of analysis that deals with alternating forms of morphemes found in a language. These alternating forms, or allomorphs, exist because of morphophonemic changes which occur when morphemes are affixed to stems. The inflectional morphemes presented in this study are found by comparing verbs used with a given affix in order to determine what part constitutes the verb stem and what part constitutes the affix. I illustrate this with two WOJ verbs in two inflected forms:<sup>19</sup>

	'join (v.t.)'	'join (v.i.)'
negative	<i>apaNsu</i> <sup>20</sup>	<i>apëNsu</i>
infinitive	<i>apî</i>	<i>apë</i>

The first step is to separate the verb stem from the suffixes. First, we determine the verb root by finding the longest part common to all forms. For the transitive verb, *ap-* is common to both forms and is therefore reconstructed as the verb stem, and for the intransitive verb, *apë-* is common to both. Thus, we have a consonant final stem and a vowel final stem. Now it is possible to separate the verb stem from the suffixes:

---

19. I am only using two forms here to keep the explanation simple. A more detailed presentation of the various WOJ morphemes requires an explanation of WOJ phonology and morphophonemic rules, which I include in Section 2.2.

20. Here /Ns/ is used to indicate a prenasalized voiceless obstruent (Section 2.2.4.1.2).

	'join (v.t.)'	'join (v.i.)'
negative	<i>ap-aNsu</i>	<i>apë-Nsu</i>
infinitive	<i>ap-î</i>	<i>apë</i>

Following the consonant final stem (i.e., the transitive verb), the negative suffix is *-aNsu* and following the vowel final stem it is *-Nsu*.

As I discuss below (Section 2.2.4.3.3.1), there are no vowel clusters in WOJ. If two vowels come together as a result of suffixation then one of the two vowels is deleted; in this case the vowel of the suffix is deleted.<sup>21</sup> In other words, *\*apë-aNsu* cannot become WOJ *\*apëaNsu*<sup>22</sup> since WOJ does not allow vowel sequences, so the vowel of the suffix is deleted and this form in WOJ is realized as *apëNsu* (*apë-Nsu*). Thus, instead of treating the negative suffix as having two forms, namely *-aNsu* and *-Nsu*, the negative suffix can now be analyzed as *-aNsu*, with a morphophonemic rule deleting the initial vowel of the suffix when it attaches to vowel final verb stems.

---

21. See Section 2.2.4.3.3.1 for data and an explanation of which vowel gets deleted.

22. The symbol \* is used to indicate a non-attested form. When used for a word in a pre- or proto-language, it indicates a reconstructed form. When used for a word or sentence in a non-reconstructed language, it indicates something that does not occur and/or is ungrammatical.

Similarly, the suffix of the infinitive is  $-î$  following the consonant final stem and is deleted following the vowel final stem.<sup>23</sup> Thus,  $ap-î$  is realized as  $apî$ , while  $apë-î$  is realized as  $apë$ .

### *1.3.5 Reconstructed Languages*

In this study I describe pre-languages and/or proto-languages, e.g., pre-WOJ, pre-Shuri, proto-Ryūkyūan (proto-RK), or proto-Japonic (PJ). A pre-language is a language that is reconstructed from one language or dialect to determine how that language developed. Pre-languages are reconstructed by means of internal reconstruction (see Section 1.3.5.1). A proto-language is a language reconstructed by comparing more than one related language or dialect. Proto-languages are reconstructed with the comparative method (see Section 1.3.5.2).

#### 1.3.5.1 Internal Reconstruction

One method used by historical linguists to analyze how languages develop over time is internal reconstruction. The discussion of this method presented below is based

---

23. Those readers familiar with WOJ may question why the infinitive  $-î$  is deleted following a vowel final stem while the final  $*-u$  is not. These forms are discussed in more detail in Sections 2.2.5.3.3.1 (the WOJ infinitive) and 2.2.5.3.3.8.10 (the WOJ active final).

mainly on the descriptions presented in Jeffers and Lehiste (1984), Fox (1995), Crowley (1997), and Campbell (1999).

Internal reconstruction is used to analyze alternating forms within a language in order to determine the underlying form. It is important to remember that this method is applied to one – and only one – language or dialect at one stage of its development, i.e., this is a type of analysis involving only one language and does not also consider the language at later stages.

This method of analysis is similar to the morphophonemic analysis presented above, except that it goes one step further. For the inflectional morphemes it was possible to determine the morphemes and all alternating forms with a synchronic analysis, but for the derivational morphemes that occur in Japonic this is not always the case.

After determining the various allomorphs for each morpheme, an older form for the morpheme is reconstructed by comparing the forms and determining the underlying form. I have chosen some verb stems from Yamatoma formed with the transitive suffix \*-as- to illustrate this:<sup>24</sup>

---

24. I have chosen this suffix in Yamatoma because it is straightforward and can be used to easily illustrate the methodology used here. A discussion on this derivational suffix in Yamatoma is presented in Section 3.2.4.2.1.

forms with *-as-		without *-as-	
<i>hogas-</i>	'rip, tear (v.t.)'	<i>hoge-</i>	'rip, tear (v.i.)'
<i>k<sup>h</sup>akus-</i>	'hide (v.t.)'	<i>k<sup>h</sup>akuri-</i>	'hide (v.i.)'
<i>nusi-</i>	'ride (v.t.)'	<i>nur-</i>	'ride (v.i.)'

The first step is to separate the suffix from the verb root by comparing related verbs formed with the same root.

forms with *-as-		without *-as-	
<i>hog-as-</i>	'rip, tear (v.t.)'	<i>hog-e-</i>	'rip, tear (v.i.)'
<i>k<sup>h</sup>aku-s-</i>	'hide (v.t.)'	<i>k<sup>h</sup>aku-r-ï-</i>	'hide (v.i.)'
<i>nu-s-ï-</i>	'ride (v.t.)'	<i>nu-r-</i>	'ride (v.i.)'

The examples above show that the transitivizing suffix in Yamatoma can be either *-as-* or *-s-*. Examining the data we find that *-as-* follows consonant final verb roots and *-s-* follows vowel final verb roots. For this morpheme I reconstruct pre-Yamatoma *\*-as-*, indicating that historically this form comes from a suffix that is vowel initial and the vowel is deleted when this form is affixed to verb roots ending in a vowel. The reconstructed form is considered to be older than non-reconstructed or synchronic forms, although sometimes they have the same shape.

### 1.3.5.2 The Comparative Method

The comparative method is used to analyze data from more than one related language.<sup>25</sup> It involves an analysis of semantically related forms, or cognates,<sup>26</sup> which provide insight into how related languages developed after branching off from a parent language, and in turn can be used to reconstruct the parent language. Initially, this method was used to determine as much as possible about the ancestor language of genetically related languages and was used to date and/or indicate the time depth of changes which occur within a language family. This method has also come to be used to demonstrate that languages are genetically related by demonstrating that these languages have regular productive and predictable phonetic correspondences which can be traced back to a common source.

I use the comparative method to reconstruct the phonology and morphology of the Japonic languages and dialects in this study.<sup>27</sup> The goal here is to reconstruct the verbal morphemes found in the ancestor language by comparing the morphemes as they are

---

25. The discussion of this method is based mainly on the descriptions presented in Jeffers and Lehiste (1984), Fox (1995), Crowley (1997), and Campbell (1999).

26. These forms do not have to have identical semantics; sometimes a semantic shift occurs in one language, e.g., German *hund* 'dog' and English *hound* 'a type of dog' are cognates but are not identical in meaning.

27. The reconstruction is presented in Chapter 4. As discussed below, much of the phonetic correspondences for RK languages are based on the reconstructions presented in Thorpe (1983) and are not my own.

found in the various branches of Japonic.<sup>28</sup> To illustrate this, I use the subordinative gerund which occurs in the various languages as follows:<sup>29</sup>

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>-te</i>	<i>-te</i>	<i>-te</i>	<i>-te</i>	<i>-te</i>	<i>-tʰi</i>	<i>-ti</i>	<i>-tti</i>

The PJ form is reconstructed by comparing these forms and finding what is common in all languages and accounting for the differences (where possible).

The PJ consonant system is easy to reconstruct. We find reflexes of the phoneme /t/ in all languages; in Yamatoma the /t/ is aspirated, in Hirara it is a double consonant /tt/ , and elsewhere it is a plain voiceless stop /t/.<sup>30</sup> In Yamatoma, the phoneme /t/ becomes aspirated when it is followed by a non-high vowel (Section 3.2.3.1.4). At this time, it is not clear why there is double consonant in Hirara, but I assume it also comes from /t/.<sup>31</sup>

Thus, I reconstruct PJ \*/t/ here, which is realized as /t/ in all languages.

---

28. In some cases it is not possible to reconstruct morphemes for PJ, as the morphemes are not found in all daughter languages. In these cases I reconstruct as far back as possible; some suffixes can only be reconstructed for proto-OJ (i.e., mainland Japan) and some only for pre-WOJ (i.e., suffixes that are only found in WOJ). This is discussed in more detail in Chapter 4.

29. This is also presented below (Section 4.4.3.30).

30. Aspirated consonants are indicated by a superscript "h", thus /t/ is a plain voiceless consonant and /tʰ/ is aspirated.

31. As discussed in Section 3.4.3.1.3, double consonants in Hirara are from the result of a lost vowel between two consonants or from the shortening of a CVC sequence involving the phoneme /r/. Neither of those conditions is present here.

As for the vowel, we find /e/ in the OJ dialects, /i/ in Yamatoma, and /i/ in Shuri and Hirara. In fact, we find that the vowels in the RK languages must also come from an earlier \*/e/; if the vowel came from an earlier \*/i/ then this form would be an unaspirated \*-tʰi in Yamatoma, a palatalized \*-čʰi in Shuri, and \*-tʰi in Hirara.<sup>32</sup> Since those forms do not occur, the vowel here can only come from an earlier \*/e/ and PJ \*/e/ is reconstructed here.

Thus, after comparing the various forms of this morpheme as it occurs in Japonic languages/dialects and examining the phonetic correspondences, the subjunctive gerund is reconstructed as PJ \*-te.

The earlier forms of the other verbal morphemes found in Japonic languages and dialects are also reconstructed in this way (Chapter 4). The forms reconstructed for PJ as discussed above are forms that changed over time in the daughter languages after they split off from each other. In other words, PJ \*-te remains -te in WOJ and EOJ dialects, and becomes Yamatoma -tʰi, Shuri -ti, and Hirara -tti. This comparison and reconstruction provides insight to the forms present in the parent language and the development of those forms in the daughter languages.

---

32. Evidence and further discussion on this is presented both in the phonology sections for each language and in Section 4.4.3.30.

### *1.3.6 Linguistic Changes Due to Contact*

Another way languages change is through contact with other languages.

Thomason and Kaufman (1992) and Thomason (2001) explore the types of language changes that can occur due to contact. They describe phonological and lexical changes that can occur when speakers of different languages or dialects interact or changes that occur due to bilingualism.

The issue of borrowing is raised a number of times in this study, and particularly in Chapter 4, where the distribution of certain morphemes suggests that the morpheme was not present in PJ, i.e., these morphemes are found only in WOJ and one or two dialects of EOJ but not in any RK language.

## CHAPTER 2. OLD JAPANESE

### 2.1 Background

Old Japanese (OJ) is the oldest attested form of the Japanese language. The two main OJ branches recorded in the texts are Western Old Japanese (WOJ) and Eastern Old Japanese (EOJ).<sup>33</sup> WOJ texts are from the 7th and 8th centuries, and EOJ texts are from the 8th century.<sup>34</sup> EOJ can be divided into three distinct groups by area, each having phonological and lexical differences: Northern Eastern Old Japanese (NEOJ or Area A); Central Eastern Old Japanese (CEOJ or Area B); and Southern Eastern Old Japanese (SEOJ or Area C).<sup>35</sup> The areas where these forms of OJ were spoken are shown on the map below:

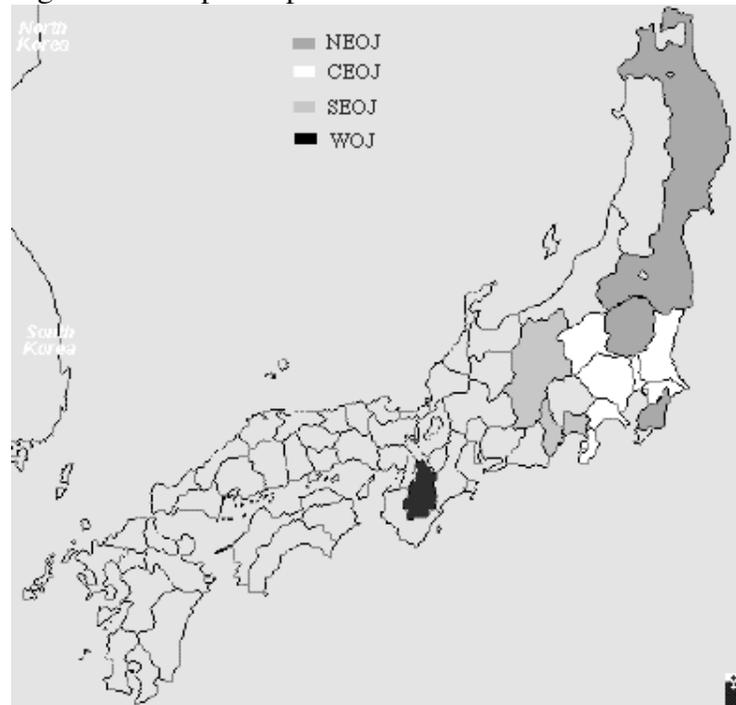
---

33. EOJ is also known as Azuma.

34. Primary sources for both are presented in detail below.

35. This study also presents a discussion on UEOJ, where U stands for "unknown", referring to forms found in EOJ poems of unknown origin.

Figure 2.1: Map of Japan<sup>36</sup>



The common assumption in the field is that WOJ and EOJ are related dialects.

However, a complete comparative study of these two branches of OJ has yet to be presented. It is, therefore, not clear whether WOJ and EOJ should be considered separate languages or separate dialects.

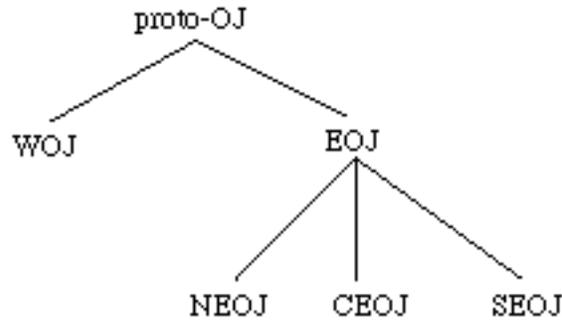
There are a number of possibilities for how these branches split from a common ancestor. One possibility is that WOJ and EOJ form two main branches, and then EOJ splits again into three groups, as shown below in Figure 2.2.<sup>37</sup>

---

36. Map modified from [http://flagspot.net/flags/jp\(k.html#map](http://flagspot.net/flags/jp(k.html#map)

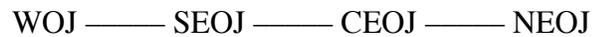
37. Although this diagram implies that NEOJ, CEOJ, and SEOJ split from EOJ at the same time, it is also possible that, say, NEOJ and CEOJ comprise one branch and SEOJ another. Further research is needed here to determine how these branches may have split off from the same parent language.

Figure 2.2: Possible Split of proto-OJ into Two Branches



Another possibility is that WOJ, NEOJ, CEOJ, and SEOJ, form a dialect continuum, as shown in Figure 2.3:

Figure 2.3: OJ as a Dialect Continuum



The implication here is that WOJ is more closely related to SEOJ than to CEOJ and NEOJ. This has some merit as SEOJ, which is geographically closer to WOJ than the other EOJ dialects, appears to have more WOJ features than CEOJ and NEOJ do.

However, more research is needed to determine how these dialects (or languages) developed and the nature of their relationship to each other; unfortunately, this is beyond the scope of the present study. For the time being I am following the standard assumption in the field, that WOJ and EOJ are two separate branches of OJ and that EOJ

can be further divided into three dialect groups. Below I present a description of the phonology and morphology of both branches: WOJ in Section 2.2 and EOJ in Section 2.3.

## 2.2 Western Old Japanese (WOJ)

WOJ is the language of 7th-8th century Japan, spoken in the Asuka and Nara regions. Although there are cases where the author's identity is unknown, WOJ texts are typically attributed to authors of the highest ranking aristocratic classes.<sup>38</sup>

WOJ can be further divided into Early Old Japanese (EWOJ) and Late Old Japanese (LWOJ)<sup>39</sup> based on several factors, with phonology being the most significant. Phonological differences are indicated by orthographic conventions and spelling errors found in the texts (Bentley 2001).<sup>40</sup> I use WOJ to refer to both EWOJ and LWOJ, and make a distinction only when necessary.

### 2.2.1 WOJ Primary Source Materials

Our knowledge of WOJ is based on historical and poetic texts including: *Kojiki* 古事記 and *Kojiki kayō* 古事記歌謡 (compiled 712<sup>41</sup>), *Nihonshoki* 日本書紀 and *Nihonshoki kayō* 日本書紀歌謡<sup>42</sup> (compiled 720), *Fudoki* 風土記 and *Fudoki kayō* 風土

---

38. EOJ texts are attributed to authors of lower social status; some EOJ poems were composed by border guards, others by unknown authors. I discuss this in more detail in Section 2.3 below.

39. Bentley (2001) uses EOJ to refer to Early Old Japanese. However, since I use EOJ to refer to Eastern Old Japanese, I use EWOJ (Early Western Old Japanese) and LWOJ (Late Western Old Japanese).

40. Bentley (2001) does not give specific dates, but indicates that EWOJ is pre-Nara. The Nara period is traditionally dated 710-794 CE.

41. The compilation of *Kojiki* possibly started in the Emperor Temmu's reign (7th century).

42. The *Nihonshoki* is also referred to as the *Nihongi* 日本紀.

記歌謡 (compiled 737), *Bussoku seki ka*<sup>43</sup> 仏足石歌 (compiled around 756), *Man'yōshū* 万葉集 (the exact compilation date is unknown, but the last poem was composed in 759), *Shoku nihongi* 続日本紀 and *Shoku nihongi kayō* 続日本紀歌謡 (compiled 797), *Senmyō* 宣命 (compiled no later than 797), *Nihonryōiki* 日本靈異記 (compiled early 9th century), *Norito* 祝詞 (compiled around 927),<sup>44</sup> *Jōgū shōtoku hōō teisetsu* 上宮聖德法王帝説 (compilation date unknown, apparently early Heian period).<sup>45</sup> More information for these texts is presented below.<sup>46</sup>

One issue when working with ancient texts is that there were often several versions of a text in existence before one version was canonized as the official version. In some cases, one version of a text contains different characters than other versions. For the purpose of this study, I am only concerned with cases where variant texts indicate different spellings or meanings, and note the differences in such cases. In cases where the textual variants have different characters, but indicate the same spelling, I do not note the variant in the interest of space.

---

43. Also read "*Bussoku seki no uta*".

44. *Norito* is Book VIII of the *Engishiki* 延喜式.

45. Although both *Jōgū shōtoku hōō teisetsu* and *Nihonryōiki* were compiled during the Heian period, the language is archaic and considered to be WOJ.

46. Most of the information on WOJ texts comes from Ariyoshi (1982), Vovin (2005b), and personal communication and/or class notes from courses taught by Robert Huey and Alexander Vovin.

### 2.2.1.1 Kojiki and Kojiki kayō

The *Kojiki kayō*, or "Songs of the *Kojiki*", are the poems found in the *Kojiki*, or "The Records of Ancient Matters". There are either 112 or 113 poems in the *Kojiki kayō*, depending on whether the third poem is counted as one poem or two (Vovin 2005b: 2-3). The main text of the *Kojiki* is written in *hentai kanbun*, a "Japanized" version of Classical Chinese.<sup>47</sup> The poems of the *Kojiki kayō*, Japanese personal and place names, and a few other Japanese words, however, are written in characters used for their phonetic value (see Section 2.2.3).<sup>48</sup>

In 711 the Empress Genmei (661-721 CE, r. 707-715 CE) ordered Ō no Yasumaro to compile the *Kojiki*. His work was based on *Teiō hitsugi* 帝王日繼 ("The Imperial Genealogies") and *Sendai Kuji* 先代旧辞 ("Ancient Traditions"), texts composed from the recitations of Hieda no Are (dates unknown) under imperial orders from the Emperor Tenmu (d. 686 CE, r. 673-686 CE) and possibly other historical sources of the seventh century, such as the *Tennōki* 天皇記 ("The History of the Imperial Family"), the *Kokuki* 国記 ("The History of the State"), and the *Hongi* 本記

---

47. *Hentai kanbun* is based on Classical Chinese: it uses Chinese characters for meaning and for the most part follows Chinese grammatical rules. *Hentai kanbun* has been modified to incorporate features common in Japanese that are lacking in Chinese grammar; for example, a variety of characters used to indicate honorific speech are used in *hentai kanbun* texts and are not found with those functions in Classical Chinese texts.

48. For this study I am only interested in words that are spelled phonetically; for lexical items attested only semantically, we cannot be sure of how WOJ speakers would have pronounced them.

("The Official History") – texts which no longer exist today.<sup>49</sup> The oldest extant text of *Kojiki* is the *Shinpukeji* text (1371-1372 CE) which was based on a lost version of *Kojiki* from 1282 CE (Miyake 1999: 47).<sup>50</sup>

My main sources for *Kojiki* and *Kojiki kayō* and commentaries on the texts are from Kurano and Takeda (1958), Takagi and Fukuyama (1974a, 1974b, and 1977), and Tsuchihashi and Konishi (1957).

#### 2.2.1.2 The Nihonshoki and Nihonshoki kayō

The next text, chronologically speaking, is the *Nihonshoki*, or "The Annals of Japan". The poems found in the *Nihonshoki* are referred to as the *Nihonshoki kayō*, or "Songs of the *Nihonshoki*". Most of this text is written in Classical Chinese, except for some personal and place names and the 128 poems of the *Nihonshoki kayō* which are written phonetically. The phonetic values for the characters used in the *Nihonshoki kayō* differ from other WOJ texts; the phonetic values for these characters are based on Chang'an Late Middle Chinese (LMC) while the values for characters found in other WOJ texts are based on Early Middle Chinese (EMC) values; this is discussed in more

---

49. See Bentley (1998: 20-23) for speculation on other non-extant 7th century texts and the possible role they played in influencing the *Kojiki*.

50. When citing attestations for words found in these texts, I use KK to refer to the poems of the *Kojiki kayō* and K to refer to the *Kojiki*.

detail in Section 2.2.3 below. The main compiler of the *Nihonshoki* is believed to be Prince Toneri<sup>51</sup> (676?-735 CE), with the assistance of others, including Ō no Yasumaro, the compiler of the *Kojiki*. In fact, some poems are found in both *Nihonshoki kayō* and *Kojiki kayō*. The earliest extant fragment of the *Nihonshoki* is from the tenth or eleventh century, and it is not clear which surviving manuscript is the "best" (Bentley p.c., cited in Miyake 1999: 66).<sup>52</sup>

There are few *Nihonshoki kayō* examples presented here. They are adapted from Tsuchihashi and Konishi (1957) unless otherwise stated.

### 2.2.1.3 Fudoki and Fudoki kayō

The *Fudoki*, or "Gazetteers", and *Fudoki kayō*, or "Songs of the *Fudoki*", contain geographical descriptions of various Japanese provinces (*kuni*). The best preserved *Fudoki* are: *Harima fudoki* (714 CE); *Hitachi fudoki* (721 CE); *Izumo fudoki* (733 CE); *Hizen fudoki* (early 8th century CE); and *Bungo fudoki* (early 8th century CE). Only the *Izumo fudoki* is fully preserved, the *Harima* and *Hitachi fudoki* are somewhat complete, and the *Hizen* and *Bungo fudoki* are the least preserved (Vovin 2005b: 5). In addition

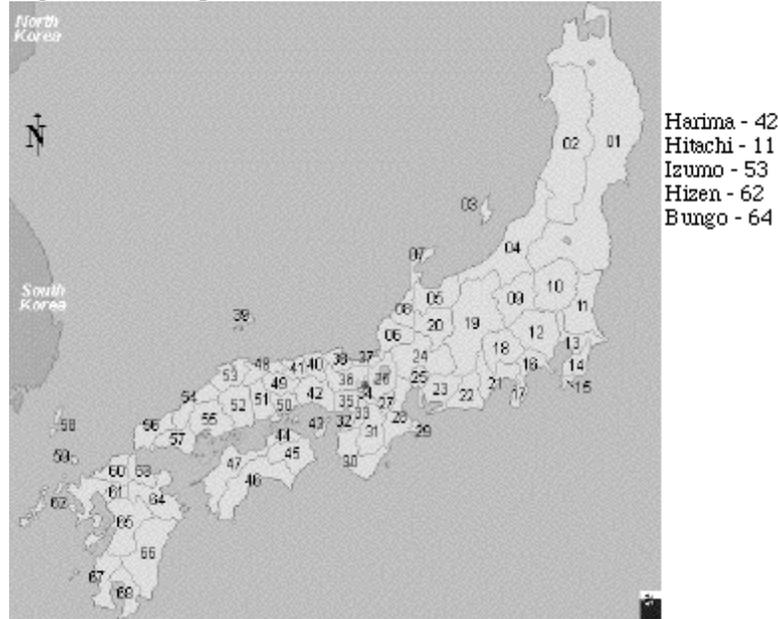
---

51. Prince Toneri is the third son of the Emperor Temmu.

52. I use the abbreviation NS to refer to the narrative text of the *Nihonshoki*, and NSK to refer to the poems of the *Nihonshoki kayō*.

there are forty other fragments from various provinces. The provinces for the main *Fudoki* texts are shown on the following map:<sup>53</sup>

Figure 2.4: Map of Provinces of the Best Preserved Fudoki



Some portions of the text are in Classical Chinese and others in *hentai kanbun*, and the twenty poems of the *Fudoki kayō* are written in phonetic script. Two of the nine poems found in the *Hitachi fudoki* are in EOJ, and the rest are in WOJ (Vovin 2005b: 5).

---

53. Map modified from the map found at [http://flagspot.net/flags/jp\(k.html#map](http://flagspot.net/flags/jp(k.html#map)

#### 2.2.1.4 Bussoku seki ka

*Bussoku seki ka*, or "Songs about the Stone with the Buddha's Footprints", is a collection of 21 poems inscribed in a stone presented next to a second stone with a representation of the Buddha's footprint.<sup>54</sup> The poems were engraved by order of Prince Chinu, who might be the author of these poems. They are recorded entirely in phonetic script. The *Bussoku seki ka* examples presented here are adapted from Tsuchihashi and Konishi (1957), unless otherwise stated.<sup>55</sup>

#### 2.2.1.5 Man'yōshū

The *Man'yōshū*, or "Collection of Ten Thousand Leaves", is a collection of twenty scrolls (or books) containing 4,516 poems. Table 2.1 presents the contents and orthographic conventions found in each book.

---

54. The poems and Buddha's footprint are kept at the Yakushi temple in Nara.

55. Miller (1975) has presented an English translation of this text.

Table 2.1: Contents of Man'yōshū by Book

<b>Book</b>	<b>Poems</b>	<b>Contents</b>	<b>Orthography<sup>56</sup></b>
I	1-84	Most poems in this chapter are attributed to emperors and empresses, from the reign of Yūryaku to the Nara Period. <sup>57</sup>	semantographic and phonetic
II	85-234	Poems on love and affection ( <i>sōmon</i> ) and elegies ( <i>banka</i> ), written by various authors, and arranged in chronological order. <sup>58</sup>	largely semantographic with few phonetic spellings
III	235-483	Poems by courtiers from the 600s to mid-700s.	largely semantographic with few phonetic spellings
IV	484-792	Many love poems by Ōtomo no Tabito and his son Ōtomo no Yakamochi.	largely semantographic with few phonetic spellings
V	793-906	Perhaps the most important book for the study of the WOJ language. The poems are classified as "miscellaneous" poems, mostly written by Yamanoue no Okura. <sup>59</sup> Poems in this book were composed between 724-734 CE.	mostly phonetic <sup>60</sup>

---

56. Orthographic conventions are described below in Section 2.2.3.

57. Traditional sources date this book from the reign of Yūryaku (r. 457-473 CE) to the Nara Period (710-784 CE). Vovin (2005b: 6), however, claims the earliest poems are from the 7th century.

58. Traditional sources date this book from the reign of Emperor Nintoku (r. 313-393), Vovin (2005b: 7) dates these poems as no earlier than the 7th century.

59. Okura may have been either an immigrant from Kudara (Paekche) or descended from Kudara immigrants (Vovin 2005b: 8).

60. Bentley (1998) convincingly argues that the language (or at least the spelling conventions) found in Book V can be classified as EWOJ.

VI	907-1067	Various authors. Many poems focus on love, travel, and poems for public occasions. These poems were composed between 723-744 CE.	mostly semantographic
VII	1068-1417	Love poems from Kakinomoto no Hitomaro's collection written by various authors, believed to be early 8th century.	mostly semantographic
VIII	1418-1663	Love and miscellaneous poems from the 7th-8th centuries. Various authors. Organized by topic.	mostly semantographic
IX	1664-1811	Poems by various authors on the categories of miscellaneous, love, and elegies.	mostly semantographic
X	1812-2350	Many anonymous authors with a focus on nature poems. Late 7th-8th centuries.	mostly semantographic
XI	2351-2840	Mostly anonymous authors with a focus on love poems. Late 7th-8th centuries.	mostly semantographic
XII	2841-3220	Mostly love, some travel and parting poems. Late 7th-8th centuries.	mostly semantographic
XIII	3221-3347	Poems by anonymous authors with a wide range of themes. Probably not later than the end of the 7th century.	mostly semantographic
XIV	3348-3577	Poems written by unknown authors, written in WOJ or EOJ on a variety of themes. It is not clear when these poems were written. <sup>61</sup>	phonetic, with rare exceptions

---

61. The EOJ poems found in Book XIV and Book XX are discussed in more detail in Section 2.3.1.

XV	3578-3785	Mostly poems written by emissaries to Silla. <sup>62</sup> The language here is LWOJ. This book does not have a reliable transmission history.	mostly phonetic
XVI	3786-3889	Poems written by various authors for specific occasions, some humor poems. Dated probably no earlier than early 8th century.	mostly semantographic
XVII	3890-4031	Most poems were composed by Yakamochi between 730-748 CE. These poems have various themes.	largely phonetic, some semantographic
XVIII	4032-4138	Poems on various themes, composed or collected by Yakamochi around 748-750 CE. The language here is LWOJ.	largely phonetic, some semantographic
XIX	4139-4292	Most poems composed by Yakamochi between 750-753 CE. These poems were written on various themes.	mostly semantic, with long strings of phonetic spellings
XX	4293-4516	This book is a collection of border guard poems written from 753-759 CE. Poems 4321-4330, 4337-4359, 4363-4394, 4401-4407, 4413-4432, and 4436 are written in EOJ, and the remaining poems are WOJ.	phonetic, with rare exceptions

---

62. Book XIV contains 208 poems, 145 written during a diplomatic mission to Silla (*Siragi*) in 736 CE, and the remaining 63 poems a poetic exchange between lovers Nakatomi no Yakamori and Sano no otogami no wotome, while Yakamori was in exile in Echizen around 741 CE (Vovin: 2005b: 10-11).

The *Man'yōshū* is believed to have been compiled by Ōtomo no Yakamochi (717?-785 CE). Although the exact compilation date is unknown, the last poem was written in 759 CE. The earliest extant text is the Katsura text from the mid-Heian period, however, this is not a complete manuscript. The earliest complete manuscript is the *Nishi Honganji* text from the late Kamakura period (1185-1333 CE).<sup>63</sup>

I have mainly relied on the textual examples and commentaries of the *Man'yōshū* presented in Omodaka (1984) and Takagi, Gomi, and Ōno (1958-1962).

#### 2.2.1.6 Shoku nihongi and Shoku nihongi kayō

*Shoku nihongi*, or "The Continued Annals of Japan" and *Shoku nihongi kayō*, "Songs of the Continued Annals of Japan" consists of chronicles of Japan from 697 to 791 CE. The text of the *Shoku nihongi* is written in *kanbun* and the poems are written in phonetic script. The main compiler of the *Shoku nihongi* was Sugano no Mamichi, and it was completed around 797 CE.

---

63. I use MYS to refer to the *Man'yōshū*.

#### 2.2.1.7 Senmyō

*Senmyō*, "The Imperial Edicts", is written mostly semantographically, with some grammatical markers, lexical items, and proper names written phonetically. This text contains archaic language and provides insight into EWOJ prose. The imperial edicts are dated between 697 and 789 CE.

#### 2.2.1.8 Nihon ryōiki

*Nihon ryōiki*, also known as *Nihon reiiki*, "Japanese Tales of Wonder", is a Buddhist inspired collection of stories and legends, compiled by Keikai, a Yakushi temple monk. The text is mainly written in *hentai kanbun*, but contains some LWOJ words and sentences which are written phonetically.

#### 2.2.1.9 Norito

*Norito*, or "Liturgies", is an EWOJ prose text that uses a mixed semantic and phonetic script.<sup>64</sup> The oldest *Norito* are found in the *Engi shiki*, "The Ceremonies of the *Engi* (years)" (Bentley 2001: 6), and it is through careful study of these twenty-seven texts that Bentley (2001) is able to compile a grammar of EWOJ.

---

64. *Norito* is described in great detail in Bentley's (2001) grammar of Early Old Japanese texts.

#### 2.2.1.10 Jōgū shōtoku hōō teisetsu

The *Jōgū shōtoku hōō teisetsu*, "A biography of Prince Shōtoku, King of Law", is a biography of Prince Shōtoku written in the Heian period, but probably based on 7th century sources (Vovin 2005b: 3). The text is written in *kanbun* but there are four poems, probably from the Asuka period, and a number of proper nouns written with phonetic spellings.

#### 2.2.2 WOJ Secondary Source Materials

In addition to these primary sources, there are numerous linguistic studies on WOJ, particularly on its phonology and morphology, including but certainly not limited to: Arisaka (1955); Bentley (1997, 2001); Hattori (1959, 1976a, 1976b, 1978-1979); Mabuchi (1970, 1999); Martin (1987); Miller (1967, 1971, 1980); Miyake (1995, 1999, 2003a, 2003b); Murayama (1974); Murayama and Ōbayashi (1973); Omodaka et al. (1967); Ōno (1953a, 1953b, 1982); Ōno et al (1994); Russell (1997, 2004, 2005); Saeki (1972); Sakakura (1990); Serafim and Shinzato (2000); Shinzato and Serafim (2003); Shirafuji (1987); Unger (1993); Vovin (2005b, forthcoming); Whitman (1985, 1990); Yamada (1954); and Yamaguchi (1978).

Many of these studies are grammars describing the language of WOJ, e.g., Mabuchi (1970); Murayama (1974); Murayama and Ōbayashi (1973); Saeki (1972); Sakakura (1990); Shirafuji (1987); Vovin (2005b, forthcoming); Yamada (1954); Yamaguchi (1978).<sup>65</sup> These studies typically discuss orthography, phonology, and syntax of WOJ. With the exception of Vovin (2005b, forthcoming), verbal suffixes in these grammars are treated as particles which follow different verbal forms; i.e., the negative particle *nai* is described as following the *mizenkei* 'imperfective' form of the verb.<sup>66</sup> Vovin (2005b), is the first of two volumes presenting the grammar of WOJ, focusing on phonology, orthography, and nominals; Vovin (forthcoming) will present a treatment of WOJ verbs and verbal morphology.<sup>67</sup> The remaining studies, those which have to do with the language of WOJ but are not necessarily grammars, are described below in alphabetical order.

First, Arisaka (1955) presents a description of the phonology of WOJ. One of the most significant contributions from this study is what is known as "Arisaka's Law" which

---

65. Saeki (1972), Yamada (1954), and Vovin (2005b) focus mainly on WOJ but also present discussion on EOJ. I also discuss these studies for their contribution to EOJ research below (Section 2.3.2).

66. I discuss the traditional analysis and problems with this approach below (Section 2.2.5.1.1).

67. Although Vovin (2005b) does not focus on verbs *per se*, verbs appear in the examples used to illustrate other facets of WOJ grammar, and it is clear that the analysis of verbs and verbal suffixes does not follow the "traditional" analysis claiming that particles attach to various verb bases.

is a tendency to avoid certain vowel combinations within the same morpheme. I discuss this in Section 2.2.4.3.4.

Next, Bentley (1997, 2001) contributes two studies that advance our understanding of WOJ phonology. The first, Bentley (1997), presents evidence for the distinction between the syllables *pô* and *pö*, preserved in *Kojiki* spellings, and between the syllables *mô* and *mö*, preserved in *Kojiki* and *Man'yôshû* V spellings. This is significant, as prior to this study it was believed that the vowel of these syllables was pronounced the same.<sup>68</sup> Bentley's (2001) study, which I mentioned above, is significant for being the first grammar to make a distinction between the phonological, morphological, and lexical differences between EWOJ and LWOJ.

Next, Hattori (1959, 1976a, 1976b, 1978-1979), one of the most influential scholars in the field of Japanese linguistics, presents a number of studies which have greatly furthered our knowledge of Japonic. Hattori 1959 and 1978-1979 in particular present discussion on Japonic and are good sources of linguistic data and analysis. Hattori presents two articles, (Hattori 1976a, 1976b), which describe the vowel system of WOJ in detail.

---

68. I discuss this in more detail in my treatment of WOJ phonology below (Section 2.2.4).

Next, Martin (1987) presents what is undoubtedly the most complete study of the Japanese language and how it developed over time. His monograph is a diachronic study which includes treatment of the various languages and dialects spoken in Japan and in the Ryūkyūs, with discussion on orthography, phonology, morphology, syntax, accent, etc. This is often regarded as one of the most influential studies on Japanese linguistics thus far.

Another oft-cited author is Miller, who has written several articles and books on the subject of the Japanese language (e.g., Miller 1967, 1980), and/or the Japanese language as it relates to other Altaic languages (e.g., Miller 1971, 1991).<sup>69</sup> Although these studies are well known, it should be noted that there are, at times, problems with Miller's interpretation of the data; I return to this point where relevant below.

Our understanding of WOJ phonology and orthography has been vastly improved thanks to Miyake (1995, 1999, 2003a, 2003b). In these studies, Miyake reconstructs the phonetic values for the characters used to record WOJ through careful examination of these characters' readings in Early Middle Chinese (EMC) and Late Middle Chinese (LMC). These works are discussed in detail below (Sections 2.2.3 and 2.2.4).

---

69. These studies, along with numerous others (see e.g., Fukuda 1982; Kiyose 1991; Poppe 1965; Ramstedt 1952; Starostin 1991, 1995, 1997; Vovin 2001a, 2001b) assume that Japanese is a member of the Altaic language family. More recent studies, however, question the status of Japanese as an Altaic language indicating serious problems with data used to establish the genetic relationship (see e.g., Vovin 2005a).

Omodaka et al. (1967) compiled the most complete dictionary of OJ, which includes examples from various OJ texts, so that the reader may see the word used in context. However, it does not consider whether a word was attested phonetically or semantically. Thus, words that were only recorded semantically are treated as if they had been written phonetically. The pronunciation of such words is presumably based either on glosses that were later added to OJ texts or on MJ readings. Also, it presents both WOJ and EOJ examples to illustrate the usage of a word, but it only indicates that a given source is EOJ when a word is attested in EOJ and is not found in WOJ; the reader must note which dialect is being used to illustrate an example.<sup>70</sup> This is a problem at times when the WOJ examples preserve the word semantically, and the only phonetic spellings for the word are found in EOJ. In such cases, the editors of this dictionary present the EOJ form of the word as if the form were the same in both dialects.

Next, Ōno presents a number of studies relevant to the present topic (e.g., Ōno 1953a, 1953b, 1957, 1982). The first of these studies, Ōno (1953a), investigates the origins of Japanese verbal conjugations. In two separate studies, Ōno (1953b, 1982)

---

70. Omodaka et al. (1967) indicates where the text is from, so the reader can see if an example is from Book XIV or XX of the MYS and is, therefore, likely to be an EOJ example, but such examples are not clearly labeled as EOJ; EOJ and WOJ examples are mixed.

discusses WOJ orthography. Finally, Ōno (1957) presents his theories on the origin and development of the Japanese language.

Next, Russell (1997) investigates the origin of pre-OJ verbal morphology. This study is essentially a reworking of Unger (1993), attempting to correct some of the inconsistencies in Unger's study. As discussed below (Section 2.2.5.1) there are remaining problems with both Unger (1993) and Russell (1997). Russell (2004) describes the processes that occur in pre-WOJ to prevent vowel clusters (see Section 2.2.4.3.3). And, Russell (2005), which developed as part of the present study, argues that pre-WOJ did not have vowel harmony or vowel concord as previous scholars have suggested, but had another system of vowel assimilation involving only the vowels of the verb root and derivational suffixes, but not extending to the vowels of the affixes (see Section 2.2.5.1.3).

Next, Serafim and Shinzato present two articles which further our understanding of *kakari musubi* structures found in Japonic (Serafim and Shinzato 2000; Shinzato and Serafim 2003).<sup>71</sup> These articles discuss the grammatical structures found in WOJ and in Ryūkyūan languages in the hopes of determining the origin of such structures.

---

71. *Kakari musubui* are grammatical patterns where an emphatic particle effects the structure of the final verb in a clause. This is discussed in more detail below (Section 2.2.5.3.3.8.12).

As mentioned above, Unger (1993) presents a reconstruction of early OJ verbal morphology. In this study, Unger reconstructs nearly two thousand verbs, dividing each verb into root and verbal formant (see Section 2.2.5).

Finally, Whitman (1985) conducts a comparative study of Japanese and Korean in order to establish their genetic relationship. His subsequent article (Whitman 1990) expands on some of his findings, in particular the rule of medial /r/ loss (Section 2.2.4.3.2).

In addition to these WOJ sources, there are two grammars of MJ that sometimes describe WOJ features and are mentioned here when relevant. The first, Ikeda (1980) is a grammar of MJ illustrated with examples from a variety of MJ texts. The second, Vovin (2003), also presents a grammar of MJ, but, while this study uses only three MJ texts,<sup>72</sup> it is a far more complete grammar than Ikeda (1980) as it presents a thorough discussion of MJ phonology, morphology and syntax; Ikeda's grammar is concerned mainly with syntax. There is also a dictionary of MJ (Ōno et al. 1994), which also presents some OJ examples. This dictionary is helpful sometimes for WOJ, but not as complete or as accurate a source as Omodaka et al. (1967) mentioned above.

---

72. The texts on which Vovin's (2003) study is based are: *Taketori Monogatari* (late 9th-early 10th century); *Ise monogatari* (early tenth century); and *Hamamatsu chūnagon monogatari* (approximately 1064).

### 2.2.3 *WOJ Orthography*

#### 2.2.3.1 Writing Systems

A number of different orthographic conventions were employed throughout Japanese history. Traditional dates for the different writing systems are usually defined as being pre-, post- or during the Suiko Period, the time of the reign of Empress Suiko (r. 592-628). These systems are divided according to the source of the characters. Table 2.2 summarizes the differences among these writing systems.<sup>73</sup>

---

73. Much of the information presented here is adapted from Miyake (1999: 7-87, 2003b: 5-41).

Table 2.2: Comparison of Early Japanese Writing Systems

System	When used	Language pronunciation is based on	Characteristics
A	pre-Suiko (3rd c. CE)	Late Old Chinese (LOC)	Phonetic writing of Japanese found in the <i>Wei zhi</i> <sup>74</sup>
B	pre-Suiko (5th c. CE)	unclear	Phonetic writing found on artifacts such as swords, mirrors, etc.
C	Suiko Era	Early Middle Chinese (EMC)	Phonetic writing found on artifacts such as swords, mirrors, etc.
D	Post-Suiko	Late-EMC	phonetic writing in texts such as the <i>Kojiki (kayō)</i> and <i>Man'yōshū</i>
E	Post-Suiko	Chang'an Late Middle Chinese (LMC)	Phonetic writing system found in the <i>Nihon shoki (kayō)</i>

This study is primarily concerned with the orthography and pronunciation of characters found in Systems D and E.<sup>75</sup> System D is the writing system used for most of

---

74. The *Wei zhi* ("Chronicles of Wei") is a history of the Wei state (220-265 CE). The earliest known Japanese is written in a section of this text known as the *Wo ren zhuan* "Account of the People of Wa", where Japanese words are written in characters used for their phonetic values. See Miyake (1999: 10-12, 2003b: 8-9) for more discussion on Japanese transcriptions in the *Wei zhi*.

75. System A reflects Japanese as it was recorded in 3rd century China, using the language of the Chinese aristocratic class. System B is the first known writing of Japanese found in Japan, and was most likely introduced through Paekche; it is not clear how characters should be pronounced. The pronunciation system for System B is unknown. Miyake (1999: 26, 2003b: 11-12) suggests the pronunciation may be based on LOC, Sino-Paekche, or "something in between". The pronunciation

the WOJ texts; the pronunciation for this system is based on late-EMC. System E is the writing system used in the *Nihonshoki* and *Nihonshoki kayō*, and reflects the pronunciation of Chang'an Late Middle Chinese (LMC). The shift from late-EMC readings for System D to LMC readings for System E is due to the shift in power and seat of government in China; the Japanese appear to have elected to revise their writing system in order to build relations with the new Chinese government.

#### 2.2.3.2 Orthographic Traditions in WOJ Texts

WOJ scribes used Chinese characters in a number of ways to represent the Japanese language. Characters could be used for their semantic values, phonetic values, or as *gisho* "playful writing". These styles are often mixed within a text and can even be mixed within a sentence or word. The different writing traditions are explained below.

##### 2.2.3.2.1 Semantic Writing (*Semantograms*)

In this writing system, characters are chosen for their meaning and not for their phonetic representation. Although glosses have often been written next to these characters to indicate pronunciation, these glosses are often added after the Nara period,

---

of System C orthography is based on Early Middle Chinese (EMC).

and may not represent correct WOJ phonology. For the purpose of this study, if a word or morpheme is attested only in semantic writing, then it is not considered reliable data; I am only interested in words or morphemes which are attested phonetically.

It is possible, and quite common, to mix semantic and phonetic writing. It is often the case with verbs that the stem of the verb is written semantically and is followed by a phonetic character indicating a verbal suffix. For example:

告目

NORA më

NOR-Am-ë

tell-TENT-EVD

Please tell me.

(MYS I: 1)

有等

ARE Ntö

AR-E-Ntö

exist-EVD-CONC

Although [it] exists

(MYS I: 2)

The first characters in the above examples are used semantically, the second characters are used phonetically.<sup>76</sup>

---

76. Following convention, uppercase letters in the transcription indicate that a character was used for semantic rather than phonetic value.

#### 2.2.3.2.2 Phonetic Writing (Phonograms)

Characters used for their phonetic value which appear in the *Man'yōshū* are called *Man'yōgana*. This term however is slightly misleading, since the *Man'yōshū* is not the only text which uses these characters: all text which use phonetic characters use *Man'yōgana*.<sup>77</sup> There are different varieties of *Man'yōgana*: they can be either *ongana* or *kungana*. *Ongana* phonograms are characters that are read according to their Chinese pronunciation, though the variety of Chinese varies depending on the text (see Section 2.2.3.1 above). These characters are the most important for the study of WOJ phonology.

*Kungana* phonograms are read according to their Japanese (WOJ) pronunciation, however, these characters are not used for meaning. Instead, they are used to indicate a homophone. For example, the character 村 WOJ *mura* 'village' would be read *mura* but instead of meaning 'village' would mean 'many' (WOJ *mura*). For more discussion on *kungana* phonograms, see Miyake (1999: 61-63, 2003b: 25-26).<sup>78</sup>

#### 2.2.3.2.3 Gisho (Tawamuregaki) or "Playful Writing"

Another style of writing found in the *Man'yōshū* is "*gisho*" or "playful writing" (also called *tawamuregaki*). This style of writing is not straightforward: characters are

---

77. The pronunciation for *Man'yōgana* in *Nihonshoki* is different, as explained in Section 2.2.3.1 above.

78. The example of *mura* is from MYS I: 2, adapted from Miyake (1999: 60, 2003b: 26).

not chosen simply to represent meaning or sounds, but are often doing something different and unexpected. I adopt Miyake's (1999: 63-64, 2003b: 26-27) names for the three major types of *gisho* as defined by Ōmori et al. (1982: 41).

#### 2.2.3.2.3.1 Graphemograms

In this style of writing, a short sentence in Classical Chinese is used to describe a single semantogram, as in the following example:<sup>79</sup>

山            上    復    有    山  
mountain    top    again   exist   mountain  
On the mountain, there is another mountain.  
(MYS IX: 1787)

This short sentence is describing the character 出 "to go out" which shows a mountain (山) on top of another mountain (山). This phrase of five characters, then, is used to represent one character (出), and this whole phrase simply means "to go out".

---

79. Adapted from the example presented in Miyake (1999: 64, 2003b: 26).

#### 2.2.3.2.3.2 Onomatograms

In this style of writing, characters are combined in short Classical Chinese phrases which describe the sound that they represent. Miyake (1999: 64, 2003b: 27) presents the following example of the tentative and final verbal suffixes (WOJ *-[a]m-u*) written as 牛鳴 \**ɲuw miyaŋ* 'a cow cry'. The sound a cow makes (or so we assume) was *mu* in WOJ, and, therefore, these characters were read as *mu*.

猶八戍牛鳴

NAPO YA MAMORA MU

NAPO YA MAMOR-AM-U<sup>80</sup>

Moreover QP protect-TENT-ATT

Moreover, will [they] protect [it]?

(MYS XI: 2839)

#### 2.2.3.2.3.3 Arithmograms

To interpret this playful writing style, the reader is expected to do math and then deduce the proper reading from sum. An example from Miyake (1999: 64, 2003b: 27) illustrates this. In this example taken from MYS XIII: 3318, the number two is used

---

80. The first line here presents a transliteration of the poem while the second line presents a morphophonemic analysis. I include the first line here and in the example in Section 2.2.3.2.3.3 to illustrate that orthography does not necessarily reflect morphology; elsewhere the first line is omitted.

twice, the reader adds those numbers and gets four, the Chinese reading for the number four is *si*, and WOJ *-si* is the attributive form of the past tense marker *-ki*.

君者聞之二二  
KIMI PA KIKO SI SI  
KIMI PA KIKOS-I-SI  
lord TOP hear-INF-PAST/ATT<sup>81</sup>  
As for the lord having heard [it]...  
(MYS XIII: 3318)

#### 2.2.4 WOJ Phonology

The description of WOJ phonology below is based mainly on Miyake's (1999, 2003b) research. In his study, Miyake conducts statistical analyses on the characters used to write the syllables in *Kojiki kayō* and *Nihonshoki kayō*. Then, based on the characters' readings in Early Middle Chinese (EMC) for *Kojiki kayō* and Chang'an Late Middle Chinese (LMC) for *Nihonshoki kayō*, he determines the approximate phonetic value for WOJ phonemes. The discussion on WOJ phonology is presented in the following order: consonants, vowels, and morphophonemic rules.

---

81. The verb is in the attributive form here because of the emphatic particle *Nsō* in the previous line.

### 2.2.4.1 WOJ Consonants

The WOJ consonant inventory is as follows:<sup>82</sup>

Table 2.3: WOJ Consonants

		Labial	Dental	Palatal	Velar
Stops	Voiceless	p	t		k
	Prenasalized voiced	Np [ᵐb]	Nt [ᵐd]		Nk [ᵐg]
Fricatives	Voiceless		s		
	Prenasalized voiced		Ns [ᵐz]		
Nasals		m	n		
Liquid			r [r]		
Glides		w		y	

#### 2.2.4.1.1 Voiceless Obstruents

The voiceless obstruents in WOJ are /p/, /t/, /k/, and /s/. They can appear word initially and word internally, but never in final position.<sup>83</sup> The phonetic values of these phonemes as reconstructed by Miyake (1999, 2003b) are as follows:

---

82. This chart is adapted from Miyake (1999: 458, 2003b: 196).

83. This is at least true for native vocabulary of WOJ. It is not clear how speakers of WOJ pronounced loans from Chinese and Korean, and it is possible that loans ending in a consonant were pronounced as consonant final. We have no way of knowing how such loans were pronounced.

/p/ – voiceless unaspirated bilabial stop

/t/ – voiceless unaspirated dental stop

/k/ – voiceless unaspirated velar stop

/s/ – voiceless dental fricative

There has been little debate in previous studies on WOJ phonology regarding the pronunciation of the phonemes /t/ and /k/; they appear to have been phonetically [t], and [k] in all environments. On the other hand, scholars have questioned the status of /p/ and /s/.

In the case of the phoneme /p/, previous arguments focus on two main factors: 1) the status of this phoneme in later (i.e., post-OJ) stages of Japanese; and 2) a few characters used to record /p/ in *Nihonshoki* indicate a fricative [f] rather than a stop. I present counter-arguments for both these claims below.

As for the first factor, by Early Middle Japanese (EMJ) this phoneme is a bilabial fricative in word initial position, and a /w/ in word medial position in front of all vowels except /u/ – since the sequence \*/wu/ is not possible, it is reduced to /u/. Table 2.4 shows how the WOJ phoneme /p/ has changed over time.

Table 2.4: The Phoneme /p/ Through Japanese Language History<sup>84</sup>

	WOJ (8th c.)	EMJ (10-12th c.)	LMJ (14th c.)	EMdJ (1600-1867)	MdJ (1867- present)
initial	/p/	/F/	/F/	/F/ before /u/ /h/ elsewhere <sup>85</sup>	
medial	/p/	Ø before /i, u/ /y/ before /e/ /w/ elsewhere <sup>86</sup>		/w/ before /a/ Ø elsewhere <sup>87</sup>	/w/ before /a/ Ø elsewhere

Because of the development of this phoneme over time, Martin (1987) and Miller (1967; 1971; and 1980) reconstruct \*F for OJ (WOJ and EOJ), representing bilabial

- 
84. Our knowledge of EMJ phonology is mainly based on dictionaries such as the *Ruiju myōgishō* (compiled in 1081) and on spelling errors found in the texts. Most of our knowledge of LMJ phonology comes from a Japanese-Portuguese dictionary published by João Rodriguez in 1603, as well as Japanese texts that the Portuguese romanized. Our knowledge of EMdJ phonology comes from spelling errors in the Japanese texts and two Korean texts: the *Chep-hay sin-e* (written in 1676) and the *Waye 'yuhay* (written around 1700), and also numerous texts that have been romanized by Dutch scholars and traders.
85. The shift of /F/ > /h/ occurred in the 18th c.
86. The change described here must be explained in stages occurring over a period of time. First, medial /p/ became /F/ and then by the 11th century medial /F/ had become /w/. Since the syllable /wu/ was not possible, /w/ was deleted here, resulting in /u/. Vovin (2003: 18) notes that *tagau* (*taga-u* < *tagaw-u* < *tagaf-u* < WOJ *tagap-u*) 'differ-FIN' is attested in *Hamamatsu chūnagon monogatari*, which means that the change of medial /p/ > /F/ > /w/ > /Ø/ before /u/ had occurred by the middle of the 11th century when this text was completed. In the next stage, /w/ was deleted when followed by /i/; this happened whether /w/ came from medial /F/ or from original /w/ (initial or medial). This change began in the Heian period, and was widespread by the Kamakura period. Also, /w/ merged with /y/ before /e/; Tsukishima (1969: 360-363) claims this happened in the Kamakura period, however Vovin (2003: 18) claims there are examples showing this change began earlier.
87. In the Portuguese dictionary published by João Rodriguez in 1603, earlier /ye/ and /e/ were both written as /ye/, and /wo/ and /o/ were written as /wo/. By the late 18th century, /ye/ > /e/ and /wo/ > /o/ (Martin 1987: 79). Thus, /F/ became /w/ which merged with /y/ preceding /e/ (/we/ > /ye/) was deleted, and /F/ which became /w/ was also lost preceding /o/.

fricative [ϕ], though Martin (1987: 11) claims that both \*/F/ and initial \*/p/ probably existed throughout Japanese language history in "mimetic and marginal words".<sup>88</sup>

As for the second argument that is often raised when discussing the status of WOJ /p/, that the LMC readings of the characters in *Nihonshoki* (including *Nihonshoki kayō*) sometimes show a fricative (\*f, \*fh, or \*ffh) instead of \*p, Miyake (1999: 385-389, 2003b: 165-166) carefully evaluates the data, and convincingly argues against the reconstruction of WOJ /p/ as a fricative noting that: 1) WOJ /p/ is not recorded in *Kojiki* with a phonogram with an initial fricative; 2) occurrences of WOJ /p/ written with LMC fricatives are relatively low frequency 11.8% or 57/482 (Miyake 1999: 388, 2003b: 165-166) and that most of these examples involve the WOJ syllable /pu/; and 3) the variety of Chinese used to record *Nihonshoki* (Chang'an Late Middle Chinese) did not have a syllable that could have been used to record \*/pu/, so scribes would have been faced with the choice of writing this syllable as either beginning with a fricative, or, as having a vowel of a different quality (e.g., \*/po/). Thus, Miyake concludes that the examples of characters with LMC fricatives being used to record WOJ /p/ represent the lack of a bilabial stop in LMC and not the existence of a bilabial fricative in WOJ.

Following Miyake, I treat WOJ /p/ as phonetically [p], a bilabial stop.

---

88. It is not clear what words Martin considers to be "marginal".

The phonetic value of WOJ /s/ has also been a source of debate, though Miyake (1995, 1999: 419-433, 2003b: 177-183) has presented ample evidence to effectively end the discussion. The main problem with determining the phonetic value of WOJ /s/ hinges on the range of phonemes used to record it. Miyake (1999: 419, 2003b: 182) notes the following distribution for /s/:

- \*ts before /a/ and /ö/
- \*c and/or \*s before /i/
- \*s before /u/ and /ô/
- \*ç before /e/

The implication here is one phoneme with four allophones, which, as Miyake (1999: 419, 2003b: 182) points out, is highly unlikely. Miyake also considers EMC and LMC phonology, and what choices scribes had when selecting characters to record Japanese, and concludes that the range of phonemes corresponding to WOJ /s/ may be explained by both what phonemes were available in EMC and LMC, and also speaker's perceptions. He concludes that WOJ /s/ is phonetically a dental fricative [s], and allows for the possibility that /s/ had an allophone [ç] before the front vowels /i/ and /e/.<sup>89</sup>

---

89. In the Japanese-Portuguese dictionary of 1603, syllables beginning with /s/ are written as follows:

romanization:	sa	xi	su	xe	so
phonetic value:	[sa]	[çi]	[su]	[çe]	[so]

This romanization provides good evidence that /s/ had an allophone /ç/ before the front vowels /i/ and /e/ before the 1600s, although /s/ may have been palatalized in this environment already in OJ (Miyake 1999: 432) or in proto-Japanese (Martin 1987: 18).

#### 2.2.4.1.2 Prenasalized voiced obstruents

The prenasalized voiced obstruents, /Np/, /Nt/, /Nk/, and /Ns/, are the prenasalized versions of the voiceless obstruents described above.

/Np/ (<sup>m</sup>b/) – prenasalized unaspirated bilabial stop

/Nt/ (<sup>n</sup>d/) – prenasalized unaspirated dental stop

/Nk/ (<sup>ŋ</sup>g/) – prenasalized unaspirated velar stop

/Ns/ (<sup>n</sup>z) – prenasalized dental fricative

The forms in parenthesis are as Miyake (1999, 2003b) writes them, whereas I prefer to use "N" to represent a nasal which assimilates to the voiceless obstruent that it proceeds, so N is [m] before /p/, [ŋ] before /k/, and [n] before /t/ and /s/. In addition to the nasal assimilating to the point of articulation of the voiceless obstruent, it also causes the voiceless obstruent to become voiced. Miyake's interpretation of these phonemes and my own are the same; the only difference is orthographic.

For WOJ native vocabulary the prenasalized voiceless obstruents occur only in medial position. They can also occur morpheme initially, but not word initially.

Examples of prenasalized voiced obstruents are often found in what is called *rendaku* or "sequential voicing", where the initial obstruent of the second member of a compound is prenasalized (voiced), even though the initial obstruent is voiceless when the word is used independently. For example, *paNpîrö* 'broad-leaved' (KK 57) comes

from *pa* 'leaf' (MYS XX: 4494) plus *pîrö* 'wide' (MYS V: 892); although *pîrö* is voiceless in isolation, it becomes voiced (*Npîrö*) as the second member of a compound.

In many cases of *rendaku*, the voicing appears to be a result of the loss of the vowel of the nominative/genitive particle *-nö* or the copula *-n-*, either in its attributive form *-n-ö-* or its infinitive form *-n-i-*, where the particle or copula is used between the two members of a compound. First the vowel of the particle or copula is lost, creating a prenasalized consonant cluster (NC) which is then realized as a voiced consonant. The above example *paNpîrö* would be analyzed as: *pa* 'leaf' + *-n-ö-* COP-ATT + *pîrö* 'wide' > *pa-n-ö-pîrö* > *pa-n-pîrö* > *paNpîrö*.

Whitman (1985: 9) also gives examples of *rendaku* in compounds that do not appear to have had the genitive particle or the copula:

*aNkô* 'fisherman' [not phonetic] < *amî* 'net' (MYS XVII: 3917) + *kô*  
 'child' (MYS V: 803)  
*aNpîkî* 'fishing' [not phonetic]<sup>90</sup> < *amî* (MYS XVII: 3917) + *pîk-î*  
 'pulling (pull + NML)' (KK 2)  
*yuNtuka* 'bow grip' (Shinsenjikyō)<sup>91</sup> < *yumî* 'bow' (KK 89) + *tuka*  
 'handle' (Fudoki, Shinsenjikyō)

---

90. I have found this phonetically as *apîkî* but not as *aNpîki*. All other attestations are logographic.

91. All other phonetic attestations are found in EOJ sections of the MYS, and the *Shinsenjikyō* is a Heian period text.

Whitman claims it is the loss of the last vowel of the first word of the compound that results in a prenasalized consonant. Thus, in these examples, like those mentioned above involving *-nō* and *-n-*, voicing of the obstruent is the result of a sequence of a nasal element plus voiceless obstruent. The nasal consonant is lost, but leaves a trace by marking the obstruent for voicing.

In theory, Whitman's explanation is plausible, however the examples presented are questionable: *aNkō* and *aNpikī* are not phonetically attested in WOJ, leaving us with only the third example, which is not phonetically attested until the Heian period. We do have examples in later stages of Japanese where the loss of a vowel between a nasal and a voiceless consonant results in a voiced consonant. This is easily seen in the infinitive form of verbs, as in the following example:

WOJ	>	EMdJ
* <i>yom-i-te</i> 'read-INF-PERF'	>	<i>yomite</i> > <i>yoNde</i>

Given this, it is quite plausible that Whitman's analysis is correct; we just do not have proof that the words existed in WOJ as presented above.

In addition, Vovin (2005: 50) presents several examples showing that prenasalization (and subsequent voicing) of the initial consonant of a compound does not always occur following the genitive *-nō* or copula *-n-*, as discussed above. He proposes

that in some cases, the initial element of a compound ends in a nasal, resulting in prenasalization of the initial consonant of the second member of the compound, as in the following examples (from Vovin 2005: 50):

*woNpune* 'small boat' (KK 52) < *woN-* [see discussion below]  
'small' + *pune* 'boat' (MYS XV: 3594)  
*woNtani* 'little valley' (KK 111) < *woN-* 'small' + *tani* 'valley' (KK  
6)  
*woNti* 'old man' (MYS XVII: 4014) < *woN-* 'small' + *ti* 'father' (K  
II: 62)  
*waNtöri* 'my bird' (KK 3) < *wa-N-töri* [see discussion below]  
*naNtöri* 'your bird' (KK 3) < *na-N-töri* [see discussion below]  
*aNkô* 'my children' (NK 8) < *a-N-kô* [see discussion below]

As for the last three examples, Vovin (2005: 50) presents them as *wa-N-töri*, *na-N-töri*, and *a-N-kô*. Although he does not gloss these examples, I assume he analyzes *-N-* here as coming from the genitive *-nö*, which is consistent with other analyses found throughout his study and also fits these examples semantically. It is, therefore, unclear why he presents these examples as supporting his claim that the first element of a compound ends in a nasal, as it is more likely that the nasalization here is the result of loss of the vowel of the genitive *-nö*.

This leaves us with the first three examples, all involving the prefix which Vovin (2005: 50) presents as *woN-*. However, there are two examples of this prefix which contradict Vovin's claim that this prefix ends in a nasal:<sup>92</sup>

*woya* 'little house' < 'wo-' 'small' + *ya* 'house' (K II: 69)  
*wosapo* 'little Sapo' (NSK 94)<sup>93</sup> < *wo-* 'small' + *sapo* [place name]  
(MYS VI: 979)

If this prefix ended in a nasal, as Vovin claims, then we would expect a nasal in these examples as well; the first example would be \**woNya* and the second \**woNsapo*. Yet, the first example is written as 袁夜 (*woya*) and the second as 鳴佐保 (*wosapo*); neither indicates a nasal.

Rather than suggesting a final nasal consonant for the three examples presented by Vovin, it is possible to analyze these examples as having the attributive form of the copula, thus:

*woNpune* 'small boat' < *wo-n-ö* 'small-COP-ATT' + *pune* 'boat'  
*woNtani* 'little valley' < *wo-n-ö* 'small-COP-ATT' + *tani* 'valley'  
*woNti* 'old man' < *wo-n-ö* 'small-COP-ATT' + *ti* 'father'

---

92. There are additional examples of this prefix where the prefix is written phonetically as "wo" but the following noun is written semantically, and so it is not possible to ascertain whether the initial consonant of the second member of the compound is voiced or voiceless.

93. Tsuchihashi and Konishi (1957: 187) gloss *wosapo* as an area near the Sapo river in the northern part of Nara city. I treat *wo* 'small' here as a diminutive prefix.

This leaves the question of why the copula plus attributive structure is missing from *woya* 'little house' and *wosapo* 'little Sapo'. This can be explained by treating it as an example of bare stem modification, which is common in WOJ where adjectives sometimes occur before the noun they modify with no attributive suffix, and sometimes occur with the copula:

bare stem modification

*siratama* 'pearl' (K I: 58) < *sira-* 'white' + *tama* 'gem'

modification with copula

*akaNtama* 'amber, red jewel' (K II: 66) < *aka-* 'red' -*n-* 'COP' +  
*tama* 'gem'

#### 2.2.4.1.3 Nasals

WOJ has two nasals, which are reconstructed by Miyake (1999, 2003b) as

follows:

/m/ – bilabial nasal

/n/ – dental nasal

Miyake (1999: 417, 2003b: 176) notes that /n/ may have had a palatal allophone before /i/

#### 2.2.4.1.4 The Liquid

WOJ has one liquid, /r/, which is phonetically a flap. Discussion on /r/ and *r*-loss (Whitman's law) is presented below in Section 2.2.4.3.2.

#### 2.2.4.1.5 Glides

WOJ has two glides, /w/ and /y/ reconstructed by Miyake (1999, 2003b) as:

/w/ – labial glide

/y/ – palatal glide

#### 2.2.4.2 WOJ Vowels

WOJ has seven distinct vowels and one diphthong. The vowels /i/, /e/, and /o/ are traditionally divided into two "types": *kōruī* (Type A) vowels, which I write with a ^ over the vowel: *î*, *ê*, and *ô*; and *otsurui* (Type B) vowels, written with a ¨ over the vowel: *ï*, *ë*, and *ö*. No diacritic markers are used when the vowel is in a neutral or merged position (described below). The reason these vowels are divided in to two types, is because *kōruī* and *otsurui* vowels merge into one vowel, e.g., *kōruī* /î/ and *otsurui* /ï/ merge to /i/ in some environments in OJ and in all environments after approximately 920 CE in MJ. The two types, therefore, refer to the two sources for each vowel from the perspective of MJ and later varieties of Japanese. However, the traditional terminology is misleading:

*/î/* and */i/* are not two types of the same vowel, as the terms *kōrui* and *otsuri* imply, but rather they are two distinct vowels that later merge. The OJ vowels are as follows; the phonetic value for each vowel is based on Miyake (1999, 2003a, 2003b):

Figure 2.5: WOJ Vowels

î [i]	ï [+]	u [u]
ê [e]	ö [ə]	ô [o]
	a [a]	
diphthong	ë [əy]	

#### 2.2.4.2.1 /î/ and /i/

The difference between *kōrui* */î/* and *otsurui* */i/* is that */î/* is front and */i/* is central.

These vowels merged after the coronal consonants: */t/*, */s/*, */n/*, */r/*, and palatal glide */y/*.

The merged, or neutral, vowel is written without diacritics as */i/* to indicate that the vowel

is in an environment where there is no *kō-otsu* distinction. In addition, */i/* is a

monophthong created when the vowels *ö+î* or *u+î* monophthongize as is discussed in

Section 2.2.4.3.3.2 below.

#### 2.2.4.2.2 /ê/ and /ë/

*Kōrui* /ê/ is a mid front vowel, and *otsurui* /ë/ is a diphthong, phonetically reconstructed by Miyake (1999, 2003a, 2003b) as [əy]. In WOJ, these vowels merged after the coronal consonants: /t/, /s/, /n/, /r/, and palatal glide /y/. The merged, or neutral, vowel is written without diacritics as /e/ to indicate that the vowel is in an environment where there is no *kō-otsu* distinction.

*Kōrui* /ê/ is the result of monophthongization of *î+a* and possibly *î+ö*. *Otsurui* /ë/ is the result of monophthongization of *a+î* and *ö+î*. This is discussed in more detail in Section 2.2.4.3.3.2 below.

#### 2.2.4.2.3 /ô/ and /ö/

The difference between *kōrui* /ô/ and *otsurui* /ö/ is that *kōrui* /ô/ is a mid round back vowel, and *otsurui* /ö/ is a mid central vowel. These vowels are traditionally believed to have merged after the labial consonants: /p/ and /m/ and the labial glide /w/. However, Bentley (1997) demonstrates that *Kojiki* spellings preserve the distinction between the syllables *pô* and *pö*, and *Kojiki* and *Man'yōshū* V spellings preserve the distinction between *mô* and *mö*. This shows that the vowels did merge, after /p/ and /m/ but later than traditionally believed.

*Kōru* /ô/ is the result of monophthongization of *u+a* and *a+u* as discussed in Section 2.2.4.3.3.2 below.

### 2.2.4.3 Morphophonemic rules

#### 2.2.4.3.1 Constraints on Consonant Clusters

WOJ does not allow consonant clusters.<sup>94</sup> When two consonants come together at a morpheme boundary the second of the two consonants is deleted.

#### 2.2.4.3.2 Whitman's Law

Whitman outlines some of the conditions for \*/r/ and \*/m/ loss, and these conditions have come to be known as "Whitman's Law".<sup>95</sup>

The hypothesis that I propose here is that \*m and \*r loss in pre-Old Japanese was conditioned by the length of the preceding vowel: \*m and \*r loss occurred only after a short vowel, while a preceding long vowel blocked the loss of these segments (Whitman 1990: 528).<sup>96</sup>

---

94. I do not treat prenasalized consonants as consonant clusters; phonetically they are analyzed as a segment although can often be understood as morphologically complex.

95. The term "Whitman's Law" was coined by Alexander Vovin.

96. As for \*/m/ loss, the original thinking was that medial \*/m/ loss only occurs when \*/m/ occurs after short \*/u/ (Whitman 1990: 524), however, the data simply do not support this claim, and the idea of medial \*/m/ loss has been rejected.

An addition to this rule is that morpheme boundaries block \*/r/ loss (p.c., Leon Serafim as cited in Russell 1997: 66). This blocking plays a role in the analysis of the reconstruction of many of the verb roots and suffixes. Serafim proposed that morpheme boundaries blocked \*/r/ loss to account for occurrences of /r/ in verbs such as *amar-* 'be in excess' reconstructed in Russell (1997) as \**ama-ra-* (K III: 12), *utur-* 'move' < \**utu-ra-* (Bussoku 10).<sup>97</sup>

#### 2.2.4.3.3 Constraints on Vowel Clusters

In WOJ there are two processes which prevented vowel clusters: 1) contraction, where one of the two vowels is deleted; and 2) monophthongization, where the two vowels fuse. Below I discuss contraction (Section 2.2.4.3.3.1), monophthongization (Section 2.2.4.3.3.2), and rules for when contraction will occur and when monophthongization will occur (Section 2.2.4.3.3.3).

---

97. As discussed in detail below (Section 2.2.5), reconstructions of pre-OJ verbs in the present study differ from those presented in Russell (1997). One significant difference is that I now reconstruct vowel initial verb formants, thus the above examples would now be reconstructed as \**ama-Ar-* and \**utu-Ar-* respectively.

### 2.2.4.3.3.1 Contraction

The first process by which vowel sequences were reduced is contraction.<sup>98</sup>

According to Unger (1993: 40), the rule of contraction deleted the second vowel (V<sub>2</sub>)

when it was at the beginning of a polysyllabic morpheme that compounded with a

monosyllabic one. Otherwise the first vowel (V<sub>1</sub>) was deleted. Note some examples of

contraction based on Unger (1993: 42-3) and Russell (2003: 513):

#### Group I:

polysyllabic word + monosyllabic word: ...V<sub>1</sub> + V<sub>2</sub> > ...V<sub>2</sub>

polysyllabic word + polysyllabic word: ...V<sub>1</sub> + V<sub>2</sub>... > ...V<sub>2</sub>...

*apa umî* > *apumî* [place name] (MYS IX: 1757)

*ara isô* > *arisô* 'rough coast, jagged rocks' (MYS II: 181)

*ara umî* > *arumî* 'rough sea' (MYS VIII: 1453)

*kaNkëtu omo* > *kaNkëtomo* 'direction facing the sun; south'  
(MYS I: 52)

#### Group II:

monosyllabic word + polysyllabic word: (C)V<sub>1</sub> + V<sub>2</sub>... > (C)V<sub>1</sub>...

*imö Nka ipê* > *imoNkapê* 'younger sister/sweetheart's house'  
(MYS V: 844)

*wa Nka ipê* > *waNkîpê* 'my house' (KK 32)

*yama nö upë* > *yamanupë* 'on top of a mountain' (MYS V: 872)

---

98. Contraction was not an obligatory process. There are examples of words that occur in both contracted and non-contracted forms, e.g., *n-i ar-u* 'COP-INF exist-ATT' (MYS XV: 3657) cf. *n-ar-u* 'COP-exist-ATT' (BK 5); and *-te-ar-* (MYS XVIII: 4125) cf. *-tar-* < *-t-ar-* (MYS V: 802).

Russell (2003) dealt with examples of vowel sequences involving mainly free forms.<sup>99</sup> What was not considered were the processes which occur when vowel initial suffixes, which by definition are bound forms,<sup>100</sup> attach to vowel final verb roots.<sup>101</sup> In fact, we find that both derivational and inflectional suffixes lose their initial vowel when affixing to a vowel final verb stem. For example, when the infinitive *-î* (Section 2.2.5.3.3.1) or the negative suffix *-an-* (Section 2.2.5.3.3.7) are affixed to vowel final stems the vowel of the suffix is deleted:

<i>*ukë-î</i>	>	<i>ukë</i>	'floats it and...'
<i>*opï-î</i>	>	<i>opï</i>	'it grows and...'
<i>*ukë-an-</i>	>	<i>ukën-</i>	'does not float it'
<i>*opï-an-</i>	>	<i>opin-</i>	'it does not grow' <sup>102</sup>

However, when the suffix begins with the vowel /u/, the vowel of the suffix is always preserved. Note the following examples with the final suffix *-u* (Section 2.2.5.3.3.8.10) and the debitive suffix *-uNpë-* (Section 2.2.5.3.3.7.2):

- 
99. There are examples of bound nouns, e.g., *ama-* 'rain' the bound form of *amë* 'id.', however the distinction between bound versus free forms for verbs was not raised.
100. Suffixes are bound forms because they cannot occur in isolation. There are no known cases where a vowel final prefix (Section 2.2.5.3.1) affixes to a vowel initial verb stem, or where the circumfix *na...sö* (Section 2.2.5.3.2) is used with a vowel initial stem.
101. I discuss the shape of verb roots and derivational suffixes in Sections 2.2.5.1 and 2.2.5.2. Inflectional suffixes are discussed in Section 2.2.5.3.
102. The verb *ukë-* is attested phonetically in MYS XX: 4398 (a WOJ poem in Book XX of the *Man'yōshū*) and *opï-* is attested in MYS V: 804.

<i>ukë-u</i>	>	<i>uku</i>	'floats'
<i>opï-u</i>	>	<i>opu</i>	'grows'
<i>ukë-uNpë-</i>	>	<i>ukuNpë-</i>	'it probably floats'
<i>opï-uNpë-</i>	>	<i>opuNpë-</i>	'it probably grows'

Vovin (2003: 196, 324, 331) makes a distinction between strong vowel initial suffixes and weak vowel initial suffixes, where weak vowels are deleted at affixation and strong vowels are not. What is not clearly stated in this analysis is that only suffixes that begin with /u/ are treated as strong vowel initial suffixes. This may be significant. There are no derivational morphemes with initial /u/ – these morphemes have either initial /a/ or /ö/ depending on vowel assimilation (Section 2.2.5.1.3.1). There are five inflectional morphemes with initial /u/, ten with initial /a/, three with initial /i/, and finally, two with initial /ê/.<sup>103</sup> Instead of analyzing these as strong or weak vowel initial morphemes, I choose to make a new rule for bound morphemes (Group III below) which claims that the initial vowel of suffixes is deleted unless the initial vowel is an /u/, in which case the vowel of the stem is deleted.

**Group III:**

vowel final verb stem + verbal suffix: (C)V<sub>1</sub> + V<sub>2</sub>... > (C)V<sub>1</sub>...  
 unless V<sub>2</sub> is /u/, in which case : (C)V<sub>1</sub> + V<sub>2</sub>... > (C)V<sub>2</sub>...

---

103. The vowel /ê/ historically comes from monophthongization of /i+a/ as discussed in the next section.

The reason for /u/ being preserved when affixation occurs and the other vowels being deleted in this environment is not known at this time.<sup>104</sup>

#### 2.2.4.3.3.2 Monophthongization

The other process that occurred to prevent vowel sequences is monophthongization, where two vowels merge to become a new vowel. The monophthongs that occur are as follows:<sup>105</sup>

1.        \*a+î > ë  
e.g., \**naga* 'long' + *ikî* 'breath'<sup>106</sup> > *nagëkî* 'sigh' (MYS II: 199)
  
2.        \*î+a > ê  
e.g., \**sakî* 'bloom' + *ari* 'exist' > *sakêri* 'is blooming' (MYS I: 16)

---

104. In Chapter 4, I propose that the active final suffix *-u* is a stative auxiliary and that the other suffixes which begin with /u/ are built off of this active suffix. This may explain in part why the vowel is preserved, i.e., if the initial vowel is analyzed as a monosyllabic suffix it is preserved according to the rules presented above. However, the infinitive *-i* is also a monosyllabic suffix, yet it is deleted in this environment. In fact, the infinitive is the only monosyllabic suffix deleted when contraction occurs. Further, it is only deleted following the monophthongized vowels /i/ and /ë/ which are both formed with a vowel (/ö/ or /a/) plus /i/ (Section 2.2.4.3.3.2). The fact that /i/ is already part of the monophthongized vowel may account for why the infinitive is deleted following these vowels and not preserved: in other words, the /i/ is redundant. I explain this in more detail below (Section 2.2.5.3.3.1). Both suggestions should be treated as conjecture; I don't feel there is sufficient proof for either at this time.

105. Adapted from Russell (2004: 514-515), Unger (1993: 26), Whitman (1985: 41-420 which was adapted from Yamaguchi (1971) and Ōno (1974)).

106. Following tradition, the examples here of words with initial /i/ and /o/ are assumed to be *kōrui* /i/ and *otsurui* /ö/ respectively, however, WOJ spelling does not distinguish between *kōrui* and *otsurui* in this environment.

3. \*ö+î > ë

e.g., \*tönö 'palace' + iri 'enter' > \*tönëri > tönëri 'attendant' (MYS XVI: 3791)

4. \*î+ö > ê

e.g., \*pî 'day, sun' + okî 'put' > pêkî '[family name]' (MYS III: 354)

5. \*ö+î > ï

e.g., \*opö 'big' + isi 'rock' > \*opïsi 'big rock' > opïsi (KK 13)

6. \*u+î > ï

e.g., \*waku 'young' + iratukô '[term of veneration (male)]' > wakïratukô '[appellation]' (K *Ôjin*)

7. \*u+ö > ô

e.g., \*situ 'ancient type of native weaving' + ori 'weave' > sitôri '(id.)' (NS *Shindaige*)

8. \*u+a > ô

e.g., \*kaNsu 'number' + apë 'to join' > kaNsôpë 'to count' (MYS V: 890)

Regarding example #4, in Russell (2003: 514-515) I rejected the claim that *pêkî* comes from *pî* 'sun' + *okî* 'put' for two reasons. First, the characters used to represent a word are not necessarily connected to the etymology of that word, just because the family name is written with the characters for 'sun' and 'put' does not mean that is the correct etymology of this word. Another problem is that there is no proof that the *ê* of *pêkî* comes from the monophthongization of *î+ö*; it is also possible that *ê* is the result of monophthongization of *î+a*. Given these problems I have rejected this as an example of monophthongization.

There may be other evidence for  $*\hat{i}+\ddot{o} > \hat{e}$ , which can be found in the imperative form (*meireikei*) of *yodan* verbs (see Russell [1997: 51-55] for further discussion on the formation of the imperative form of verbs), if the imperative form of verbs derive as I have previously reconstructed (I discuss this further in Section 2.2.5.3.3.8.4) below. If, however, the only evidence for  $*\hat{i}+\ddot{o} > \hat{e}$  can be found in one specific verb form – a reconstruction of this verb form – then this raises serious questions about whether there is sufficient proof to claim that  $*\hat{i}+o$  did in fact monophthongize to  $\hat{e}$ .

The third example,  $*\ddot{o}+\hat{i} > \ddot{e}$ , was previously considered to be irregular, with only a few occurrences such as the example presented above,  $*tono$  'palace' + *iri* 'enter' >  $*ton\ddot{e}ri > toneri$  'attendant' (MYS XVI: 3791), and  $*se$  'back' (MYS IV: 643) which can be reconstructed as  $*so-$  'back' +  $-i$  '[unbinding morpheme]<sup>107</sup> on the basis of *sö muk-* 'turn one's back' (MYS V: 794) <  $*s\ddot{o}-$  'back' + *muk-* 'turn' (MYS XVII: 3988). However, through the course of this study, I have found that there are more cases of  $*\ddot{o}+\hat{i} > \ddot{e}$  than previously claimed, and I think the reason there have been relatively few reconstructions of  $*\ddot{o}+\hat{i} > \ddot{e}$  in the past is that scholars previously have had a tendency to reconstruct all cases of WOJ  $\ddot{e}$  as coming from  $*a+\hat{i}$ . The problem that remains is why some cases of  $*\ddot{o}+\hat{i} > \ddot{e}$ , while other cases  $*\ddot{o}+\hat{i} > \ddot{i}$ . I have ruled out environment at this time; the

---

107. The function of  $-i$  is to change a bound morpheme into a free morpheme.

consonant preceding \**ö* does not seem to be a factor, and in fact, I have found one

doublet:

<i>kömi-</i>	>	* <i>komo-Ai-</i>	'insert (v.t.)'	(K II: 45)
<i>kömë-</i>	>	* <i>komo-Ai-</i>	'insert (v.t.)'	(MYS XVII: 3998)

At this time it is not clear how or why two different vowels are created from the fusion of

\**ö+î*; this issue requires further study.

#### 2.2.4.3.3.3 Rules to Predict Occurrence of Contraction or Monophthongization

In Russell (2003) I compared examples of contraction and monophthongization to determine if it was possible to predict which process would occur. Prior studies had only discussed the processes without fully considering why contraction happened in some cases and monophthongization in others. According to Unger, monophthongization occurs where a consonant is deleted morpheme internally, and/or where a morpheme boundary is completely lost once a compound is lexicalized (Unger 1993: 26). Unger also claims there was a consonant shift in what he calls "Archaic Japanese" (AJ), and that contraction occurred both before and after the shift, while monophthongization occurred only after this shift.

There are a few problems with Unger's claims.<sup>108</sup> First, it is not possible to prove that there was a consonant shift. Second, both contraction and monophthongization are attested in WOJ texts, so we cannot prove that one process is older than the other. Third, it is possible to find both contracted forms and non-contracted forms in WOJ, in other words both *imô ga ipê* 'younger sister/sweetheart's house' and *imôgapê* 'id.' are found in WOJ texts, suggesting that contraction was a productive process in WOJ and not something that occurred in earlier stages of the language and then also occurred later, but only under certain conditions. Finally, Unger does not explain how loss or deletion of a morpheme boundary results in contraction, but when a morpheme boundary is deleted and the compound lexicalized then monophthongization occurs. Clearly in both cases there is, historically at least, a morpheme boundary present between the two words or two morphemes being compounded. Further, this morpheme boundary is obviously lost, whether the resulting form is created through contraction or through monophthongization. In order to account for this problem, it was proposed that there are two different kinds of morpheme boundaries: one that triggers contraction and one that triggers monophthongization (Russell 1997: 19; 2003: 516). However, this is a circular argument and must be rejected in favor of a more workable solution.

---

108. The discussion here is adapted from Russell (2003: 515-516).

After comparing cases of contraction and monophthongization I concluded the following (from Russell 2003: 522-533):

Contraction is triggered when:

1. the morpheme boundary between the following categories of words is lost:

- stative verb stem + noun
- stative verb infinitive + active verb
- auxiliary verb + active verb
- noun + noun
- particle + noun
- particle + active verb
- active verb + active verb

2. monophthongization cannot occur because the two vowels that come together do not monophthongize. This is true when the two vowels in question are the same (*a+a* or *i+i*), when one of the vowels is already the result of monophthongization (*ê+a*), or there is simply no known vowel that results from monophthongization of a vowel cluster, as is the case with *î+u*, *a+ö*, *ö+a*, and *ö+u* (note that in each case the same vowels in the opposite order do monophthongize).

Monophthongization is triggered when:

1. the morpheme boundary between the following categories of words is lost:

- auxiliary verb + auxiliary verb
- noun + verb

2. a consonant is lost, resulting in a vowel-vowel sequence.

#### 2.2.4.3.4 Vowel Concord and Vowel Harmony

The issue of vowel harmony and/or vowel concord<sup>109</sup> in WOJ has been raised a number of times: e.g., Arisaka (1955), Hattori (1976a, 1976b), Martin (1987), Ōno (1957), Russell (1997), Serafim (1976), Serafim and Shinzato (2005), Unger (1993), Whitman (1985), etc. Essentially, it has been observed that there was some kind of vowel concord occurring in WOJ morphemes, whereby the central vowel *ö* is "almost never" attested in the same morpheme as one of the back vowels; i.e., *u*, *ô*, or *a* (Serafim 1976: 25-26). Yet, this should be seen as a tendency and not as a rule. The only provable rule for concord is a morpheme structure condition, known as "Arisaka's Law", stating that a *kōrui ô* and an *otsurui ö* are never found within the same morpheme (Arisaka 1955; Serafim 1976: 26; Unger 1993: 24-25). Often vowel harmony is raised as a possible feature in WOJ in order to attempt to link WOJ with Korean and the Altaic languages (see, e.g., Miller 1967, 1971).

If, however, WOJ had vowel harmony, then this feature would be expected to extend from the verb roots to any and all affixes. Yet, this is clearly not the case. For

---

109. Vowel harmony and vowel concord are types of vowel assimilation where a vowel (or vowels) change to match features of a vowel (or vowels) in neighboring environments. The difference between vowel harmony and concord is scope: harmony applies to the vowels in a root plus all affixes, while concord applies only to vowels within in a morpheme and does not extend to any affixes.

example, when the negative suffix *-aNs-* is attached to a root, vowel harmony does not apply; when attached to a root with /*ö*/ the vowel of the negative remains an /*a*/:

*\*ömöpö-aNs-u > ömöpaNsu* (KK 7)

If WOJ had vowel harmony we would find *\*ömöpöNsu* here. Similarly, if WOJ had vowel concord, we would find a type of vowel harmony that occurs only in the verb root and would not extend to the verbal formants.

Russell (2005) argues that WOJ had neither vowel concord nor vowel harmony, but that pre-WOJ had a type of vowel assimilation that occurs only in derivational morphology, that is, only where lexicalization occurs, and that this process does not occur in inflectional morphology. I discuss this in detail below (Section 2.2.5.1.3.1).

## 2.2.5 WOJ Verbal Morphology

### 2.2.5.1 The Shape of Pre-WOJ Verb Roots<sup>110</sup>

In order to reconstruct the shape of WOJ morphemes, it is first necessary to consider the shape of the pre-WOJ verb roots to which the morphemes attach. There have been various analyses, as discussed below.

---

110. Some of the discussion on the shape of the pre-WOJ verb root presented here is adapted from Russell (1997: 56-62).

### 2.2.5.1.1 The Traditional (Kokugogaku) Analysis

In the traditional analysis verbs are categorized into eight verb classes which conjugate into six forms. The eight verb classes are: 1) *yodan* (YD) or quadrigrade; 2) *shimo nidan* (SN) or lower bigrade; 3) *kami nidan* (KN) or upper bigrade; 4) *kami ichidan* (KI) or upper monograde; 5) *kahen* (KH), an irregular verb class consisting of one verb *kō*- 'to come'; 6) *sahen* (SH), an irregular verb class consisting of one verb *sō*- 'to do' and verbs and morphemes that are derived from *sō*-; 7) *nahen* (NH), an irregular verb class consisting of two verbs (*sin*- 'to die' and *in*- 'to go, depart, die') and the perfective auxiliary *-n*-; and 8) *rahen* (RH), consisting of *ar*- 'to exist', *wor*- 'to sit, to be' and other verbs and morphemes derived from *ar*-.

According to this analysis the verbs have six bases: *mizenkei* 'imperfective'; *ren'yōkei* 'conjunctive'; *shūshikei* 'final'; *rentaikei* 'attributive'; *izenkei* 'perfective'; *meireikei* 'imperative'. The conjugations for the eight verb classes are presented in Table 2.5, showing only the final syllable. I use "C" to indicate the final consonant of the verb stem.

Table 2.5: WOJ Verbal Conjugations

	YD	KI <sup>111</sup>	KN	SN	KH	SH	NH	RH
<i>mizenkei</i> <sup>112</sup>	...Ca-	Ci-	...Cî-	...Cë-	kö-	se-	...na-	...ra-
<i>ren'yōkei</i>	...Cî	Ci	...Cî	...Cë	kî	si	...ni	...ri
<i>shūshikei</i>	...Cu	Ciru	...Cu	...Cu	ku	su	...nu	...ri
<i>rentaikei</i>	...Cu	Ciru	...Curu	...Curu	kuru	suru	...nuru	...ru
<i>izenkei</i>	...Cë	Cire	...Cure	...Cure	kure	sure	...nure	...re
<i>meireikei</i>	...Cê	Ciyö	...Ciyö	...Cëyö	kö	se	...ne	...re

As for morphophonemic analyses, the traditional (*kokugogaku*) style of analysis tends to be hindered by Japanese orthography, and is not helpful to the present study.

The problem that Japanese orthography introduces is that since one *kana* equals one syllable, and since morpheme boundaries often occur mid-syllable, it is not possible to indicate where morpheme boundaries are. To illustrate this point, in Table 2.6 I use the *yodan* verb \**sak-* 'bloom' in each of its six bases, and in the romanized example, I have placed a "." between each *kana*.

- 
111. Almost all *kami ichidan* verbs are monosyllabic. In Russell (1997: 23-26) I make a distinction between "original" and "derived" *kami ichidan* verbs. For original *kami ichidan* verbs, the vowel is a *kōrui* /i/ and for derived *kami ichidan* verbs the vowel is an *otsurui* /i/; I use *i* here to represent either /î/ or /i/.
112. According to the traditional analysis, the *mizenkei* is a bound form of the verb. It is the only verb class that must be followed by a suffix.

Table 2.6: Comparison of Traditional and Non-Traditional Analyses

	Traditional Analysis	Non-Traditional Analysis
<i>mizenkei</i>	さかず sa·ka·Nsu	sak-aNs-u
<i>ren'yōkei</i>	さき <sub>甲</sub> sa·kî	sak-î
<i>shūshikei</i>	さく sa·ku	sak-u
<i>rentaikei</i>	さく sa·ku	sak-u
<i>izenkei</i>	さけ <sub>乙</sub> sa·kë	sak-ë
<i>meireikei</i>	さけ <sub>甲</sub> sa·kê	sak-ê

#### 2.2.5.1.2 Earlier Analyses of Verb Root Shape

Among scholars of Japanese there is a debate about the shape of the verb roots.

For some, verb roots may be either vowel final or consonant final, while for others all verb roots are vowel final. The argument that there are consonant final verb roots is largely based on the conjugation of *yodan* and *rahen* verbs, as a synchronic analysis of WOJ shows a consonant final verb stem. Note the following examples following this style of analysis:

多古牟良爾 阿牟加岐都岐  
ta-kômura-ni amu kakî-tuk-î  
hand-flesh-LOC horse fly EMPH-attach-INF  
A horse fly landed on his hand and...  
(KK 97)

阿布知乃波那波 知利奴倍斯  
aputi-nō pana pa tir-i-n-uNpë-si  
aputi-GEN flower TOP fall-INF-PERF-DEB-FIN  
The flowers of the *aputi* tree have probably fallen.  
(MYS V: 798)

The above examples show consonant final stems with vowel initial suffixes.

Those who argue that verbs are vowel final argue that since WOJ has an open syllable constraint, meaning that all words must be (C)V in structure, it follows that verb roots must also have (C)V syllables. They argue that since no (C)VC syllables can be found elsewhere in WOJ morphology, it is unlikely that such syllable structures would be allowed only in verbal morphology.

Further, Martin (1987: 802) states that "we have found evidence to suggest that verb stems may have been independent at some prehistoric time." He goes on to propose that at some stage before OJ, verbs began requiring various suffixes, and then gradually adjectives also began to require suffixation (Martin 1987: 802). It follows then, that if pre-OJ verbs were free forms that they would be bound by the same phonological constraints as other forms in the language. Thus, in order to be pronounceable, verb roots

would have a CV structure. I find Martin's claims interesting, however there is no way to prove that verb stems were ever independent forms.

It is not surprising then, that in Martin's (1987) reconstruction of pre-OJ verb roots he reconstructs CV structure for all verb roots. The main problem with this reconstruction is that Martin has a high number of verbs ending with *\*a*. Mathias argues that even though /a/ is the most frequent vowel in WOJ, it is unlikely that such a large number of verbs would end in *\*a-*, unless this vowel is the result of a verbalizing suffix (p. c., cited in Russell 1997: 60).

Unger (1993) and Russell (1997) both present a reconstruction of "early Japanese" verb roots,<sup>113</sup> which follow Martin (1987) in reconstructing vowel final verb roots. Unger (1993) and Russell (1997) both reconstruct more variety in the final vowel of the verb root than Martin (1987). However, Unger seems to have a high number of verbs which end in *\*e* (often the result of enclitics like *\*re* and *\*ce*) which is surprising considering *e* is not that common in WOJ. One of the major differences between Unger's (1993) reconstruction and Russell's (1997) reconstruction is that Russell (1997) argues

---

113. Although these studies claim to be using WOJ as the basis for their reconstructions, they in fact have EOJ data mixed in with WOJ data, with no attempts to distinguish these dialects. There are not many examples of data which are only attested in EOJ sources in these studies, and probably not even enough to change the results of the studies. However, this raises an important methodological issue: when performing internal reconstruction on a dialect or language, data from other dialects and/or languages cannot be used. If the goal is to reconstruct an earlier form of a language by comparing two different dialects then the comparative method should be used.

for a four vowel system for OJ (\**a*, \**i*, \**u*, \**o*), while Unger (1993) proposes a five vowel system (\**a*, \**i*, \**u*, \**e*, \**o*). In most cases, Russell (1997) reconstructs Unger's \**e* as the result of monophthongization of \**a+i*, \**o+i*, or \**i+a*, depending on the value of *e* (*ê* or *ë*). Unger's verbal enclitics (e.g., \**re* and \**ce*), are reconstructed in Russell (1997) as \**ra* and \**sa* as there is no evidence for monophthongization.<sup>114</sup>

As mentioned above, one argument for reconstructing vowel final roots is the open syllable constraint for WOJ, and another argument in favor is that many verbs, including those of the *yodan* class (those analyzed by many to be consonant final), can be reconstructed as being vowel final on the basis of related verbs. Note the following examples:<sup>115</sup>

root: * <i>tuka-</i>				
<i>tuk-</i>	<	* <i>tuka-</i>	'attach (v.i.)'	MYS XV: 3688
<i>tukë-</i>	<	* <i>tuka-Ai-</i>	'attach (v.t.)'	MYS XIX: 4162
root: * <i>apa-</i>				
<i>ap-</i>	<	* <i>apa-</i>	'join (v.t.)'	MYS XVIII: 4106
<i>apë-</i>	<	* <i>apa-Ai-</i>	'join (v.i.)'	MYS XIX: 4189

---

114. There is also no evidence for Unger's \**c* here; Miyake (1995, 1999, 2003b) presents evidence that /s/ was /s/ in all environments (Section 2.2.4.1.1). These enclitics, or derivational morphemes, are discussed in detail below (Section 2.2.5.2).

115. I write the stems here as consonant final to be consistent with common analysis in the field; and to make it easy to distinguish between the classes of verbs. I discuss the shape of the derivational suffixes below.

root: * <i>opo-</i>				
<i>opi-</i>	<	* <i>opo-Ai-</i>	'grow'	MYS V: 804
<i>opos-</i>	<	* <i>opo-Asa-</i>	'cultivate'	MYS XVIII: 4113

In addition, two *yodan* verbs are attested showing the final vowel of the root.

These verbs occur in the same passage of *Kojiki kayō*:

淤曾夫良比 和何多多勢禮婆 比許豆良比

osö-N-pur-ap-î wa-Nka tat-ase-re-Npa pîkô-N-tur-ap-î

push-DV-shake-DUR-INF I-NOM stand-HON-EV-CON

pull-DV-shove-DUR-INF

As he stood there, he pushed and shook [the board which was the door of the house where the maiden slept], and he pulled and shoved [at the door]

(KK 2)

This example shows the verbs *osö-* "push" and *pîkô-* "pull" in what appears to be their root forms; neither verb shows the final vowel /*ö*/ in any other context. This example also shows an older way to connect verbs, using the defective verb (DV) *N* in the pattern [verb<sub>1</sub>]-DV-[verb<sub>2</sub>], instead of the usual way to connect verbs with the infinitive -*î*, or [verb<sub>1</sub>]-INF-[verb<sub>2</sub>].

There are many verbs for which a vowel final root cannot be reconstructed. As in the following examples:<sup>116</sup>

---

116. This is not intended to be a complete list.

<i>ar-</i>	'exist'	<i>sak-</i>	'bloom'
<i>kak-</i>	'write'	<i>saNkar-</i>	'go down'
<i>kar-</i>	'harvest'	<i>sar-</i>	'leave, go away'
<i>kar-</i>	'hunt'	<i>sas-</i>	'pierce, insert'
<i>mat-</i>	'wait'	<i>sik-</i>	'spread'
<i>mör-</i>	'guard'	<i>sik-</i>	'rule'
<i>möt-</i>	'hold'	<i>tak-</i>	'kindle'
<i>nak-</i>	'cry'	<i>tar-</i>	'suffice'
<i>nar-</i>	'become'	<i>tör-</i>	'seize'
<i>naNk-</i>	'mow'	<i>tôr-</i>	'grasp'
<i>nuk-</i>	'strip'	<i>yöm-</i>	'read, count'
<i>pur-</i>	'rain'		

The question, then, is if all verbs have open syllables, then how should these verb roots be reconstructed? One option would be to claim that they are vowel final and reconstruct a final "V" to indicate that there is a vowel present, but that it is impossible to determine its value. Another option is to claim that while most verbs can be reconstructed as being vowel final, there are some verbs that are consonant final. Neither solution is particularly appealing. The first assumes the shape of the verb roots is consistent by reconstructing a final vowel, yet it is not possible to reconstruct the final vowel. The second leaves unanswered the question of why consonant final stems are only found in verbs and not in other word classes. In order to examine this issue more fully I reexamined the verbs reconstructed in Unger (1993) and Russell (1997), questioning whether vowel concord played a role in the shape of vowel roots. This is discussed in the next section.

### 2.2.5.1.3 A New Analysis of the Shape of Verb Roots

#### 2.2.5.1.3.1 The Role of Vowel Assimilation in Word Formation<sup>117</sup>

For this study I compiled a database of 192 polysyllabic verb roots; each root has between one and seven verbs which support its reconstruction. The data were collected from Unger (1993) and Russell (1997), though many examples presented in the previous studies had to be rejected from the present study for reasons presented below.

First, verb roots were rejected if they were not attested phonetically in WOJ; verbs only attested in EOJ or only logographically in WOJ cannot provide insight to the shape of pre-WOJ verb roots. Also verb roots were removed from the study if they had a final vowel of unknowable *kōrui* or *otsurui* values; i.e., the vowels have merged in that environment. However, in some cases it is possible to determine the *kō-otsu* values even in merged environments. If, for example, the infinitive form of the verb ends in ...*si*, it is possible to tell if this final syllable is underlying \**sî* or \**sī* by checking the conjugation of the verb in question: if the verb conjugates as a *yodan* verb then the final syllable is underlying \**sî* and if it conjugates as a *kami nidan* verb then it is underlying \**sī*.<sup>118</sup> For verbs with the syllables *mo* or *po*, it is possible to tell if the *o* is *ô* or *ö* if the verb is

---

117. This section is adapted from Russell (2005), which also presents evidence for vowel assimilation if the formation of nominal morphology.

118. In addition, the /e/ of SN verbs is always underlying *ĕ*. The case for KN verbs is more complicated, typically they are *î* (original KI) but there are some cases of underlying *ī* as well (derived KI).

attested in *Kojiki* or *Man'yōshū* Book V.<sup>119</sup> Last, monosyllabic verb roots were removed from the study, as they cannot give insight as to whether vowel concord plays a role in shaping verb roots.

For this study I grouped the verb roots according to their shape *\*...VCV-* (e.g., *\*...aCa-*, *\*...aCu-*, *\*...öCö-*, etc.), paying attention to the vowel of the penultimate syllable of the root (which for the majority of verbs is also the initial syllable), and counted the number of times each verb shape occurred. Some examples of the more common verb root shapes are as follows:<sup>120</sup>

*\*...aCa-*

pre-WOJ *\*aka-*

<i>akas-</i>	<	<i>*aka-As-</i> <sup>121</sup>	let brighten	MYS XV: 3648
<i>akar-</i>	<	<i>*aka-Ar-</i>	brighten	MYS XIX: 4266
<i>akë-</i>	<	<i>*aka-Ai-</i>	brighten, clear	MYS XV: 3662
<i>akaraNp-</i>	<	<i>*aka-Ar-ANp-</i>	dawn, redden	Norito

pre-WOJ *\*aNka-*

<i>aNkamë-</i>	<	<i>*aNka-Am-Ai-</i>	honor	RM
<i>aNkar-</i>	<	<i>*aNka-Ar-</i>	rise	MYS XIV: 4292
<i>aNkë-</i>	<	<i>*aNka-Ai-</i>	give, raise	KK 55

---

119. Following Bentley (1997), who demonstrates that the distinction between *mô/mö* is preserved in *Kojiki* and *Man'yōshū* Book V, and the distinction between *pô/pö* is preserved in *Kojiki*.

120. The full catalogue of verbs is presented in Appendix A. The meanings for the suffixes are discussed below (Section 2.2.5.2).

121. I am using the symbol *A* to represent a vowel that may be either *a* or *ö*, depending on the vowel of the previous syllable.

\*...aCu-

pre-WOJ \*kaku-

<i>kakus-</i>	<	* <i>kaku-As-</i>	hide	MYS I: 18
<i>kakur-</i>	<	* <i>kaku-Ar-</i>	be hidden	KK 3

pre-WOJ \*naNku-

<i>naNki-</i>	<	* <i>naNku-Ai-</i>	get still	MYS V: 753
<i>naNkusam-</i>	<	* <i>naNku-As-Am-</i>	be at ease	MYS VI: 963

\*...iCa-

pre-WOJ \*iNta-

<i>iNtas-</i>	<	* <i>iNta-As-</i>	put out	MYS XV: 3582
<i>iNte-</i>	<	* <i>iNta-Ai-</i>	go out	MYS XVII: 4008

pre-WOJ \*kipa<sup>122</sup>

<i>kîpamar-</i>	<	* <i>kipa-Am-Ar-</i>	reach limit (v.i.)	RM
<i>kîpam-</i>	<	* <i>kipa-Am-</i>	reach limit (v.t.)	MYS V: 800 <sup>123</sup>
<i>kîpamë-</i>	<	* <i>kipa-Am-Ai-</i>	reach limit (v.t.)	RM
<i>kîpar-</i>	<	* <i>kipa-Ar-</i>	limit, end	MYS XVII: 3962

\*...uCa-

pre-WOJ \*uma-

<i>umare-</i>	<	* <i>uma-Ar-Ai-</i>	be born	NR I: 18
<i>um-</i>	<	* <i>uma-</i>	give birth	K I: 2

pre-WOJ \*uka-

<i>ukat-</i>	<	* <i>uka-At-</i>	make a hole	NR I: 4; SSJK
<i>ukë-</i>	<	* <i>uka-Ai-</i>	gape, be open	MYS V: 800

---

122. WOJ also has a noun *kîpa* 'edge' (MYS XX: 4462; a WOJ poem in Book XX of the *Man'yōshū*).

123. Phonetic only in nominalized form.

\*...uCu-

pre-WOJ \*suNku-

suNki-	<	*suNku-Ai-	pass time	K III: 5
suNkus-	<	*suNku-As-	let pass	MYS V: 804
suNkure-	<	*suNku-Ar-Ai-	excel	MYS XIII: 3309

pre-WOJ \*puru-

puri- <sup>124</sup>	<	*puru-Ai-	get old	MYS XVII: 3919
purus-	<	*puru-As-	make old	MYS VII: 1326

\*...öCö-

pre-WOJ \*öpö-

opï-	<	*opo-Ai-	grow	MYS V: 804
opos-	<	*opo-As-	cultivate	MYS XVIII: 4113

pre-WOJ \*nökö-

nökös-	<	*nökö-As-	leave	MYS XVI: 3794
nökör-	<	*nökö-Ar-	remain, leave behind	MYS V: 849

After reconstructing the verb roots, the next step was to count the number of times each shape occurred. The results are as follows (there may or may not be an initial consonant):

---

124. Since *î* and *ï* merge after *r*, it is not possible to tell if this is *pur-* (a *yodan* verb) or *puri-* (a *kami nidan* verb) because it is attested phonetically only in its infinitive form: *puri*. If this verb is *yodan* the infinitive form would be underlying *\*purî*, and if *nidan* the infinitive form would be *\*purï*. However, there are two pieces of evidence that indicate this should be a *kami nidan* verb: 1) in MJ this verb is *puri-* a *kami nidan* verb, which suggests underlying *\*purï-*; and 2) the WOJ adjective *puru* 'old' (MYS XVII: 3920) shows the root which indicates that the verb is formed by its root *\*puru-* plus the formant *\*-Ai-*, producing *\*purï-* (after monophthongization of *u* and *i* creating *ï*), which becomes *puri-* (after the */ï/* is neutralized to */i/*).

Table 2.7: Number of Verb Roots by Shape

	aC...	iC...	uC...	öC...	Total (final V)
final a	aCa = 69	iCa = 22	uCa = 32	öCa = 1	124 (64.5%)
final i	aCi = 1	iCi = 2	uCi = 1	öCi = 0	4 (2%)
final u	aCu = 14	iCu = 2	uCu = 12	öCu = 0	28 (14.5%)
final ö	aCö = 0	iCö = 4	uCö = 0	öCö = 32	36 (19%)
<b>Total</b> (penultimate vowel)	84 (44%)	30 (16%)	45 (23%)	33 (17%)	<b>192</b>

The data presented in Table 2.7 provide us with new insights. First, the cases of final *\*i* and the one case of *\*...öCa*-<sup>125</sup> in verb roots are rare and are not statistically significant.

Second, for verb roots with penultimate /u/, there seems to be a split between *\*...uCa*- (32 cases or 71%) and *\*...uCu*- (12 cases or roughly 27%), and although the majority of cases with penultimate *\*a* also have final *\*a* (*\*...aCa*- 69 cases or 82%) there are also 14 cases of *\*...aCu*- (17%). At this time it is not clear why there is such a split.

All I can prove at this time is that there are no cases of *\*...uCu*- where the consonant is a labial (*\*m*, *\*p*, *\*Np*, or *\*w*), and this distribution may be significant.<sup>126</sup> The same cannot be said for *\*...uCa*- or *\*...aCu*-; all consonants occur with these verb shapes. In Russell (2005) I suggested two reasons why both *\*...uCu*- and *\*...uCa*- shaped verb roots can be

---

125. The only case of *\*...öCa*- is *\*töma*- reconstructed on the basis of *tömar*- 'stop (v.i.) which is attested only in its nominal form *tömari* (*tomar-i*) 'a place where boats stop' (MYS II: 151) and *tömë*- 'stop (v.t.)' (MYS XV: 3627).

126. The sequence *\*wu* is not possible.

found. The first suggestion involved the possibility that there are more vowels in the pre-WOJ system than previously expected; one source of *\*u* is found in *\*...uCu-* and another in *\*...uCa-* roots. Another possibility suggested in Russell (2005) is that for some unknown reason cases of *\*...Cu-* shifted to *\*...Ca-*, though such a change in some but not all cases of *\*...Cu-* is highly unlikely. I would now like to add a third possibility, that some of these cases involve proto-OJ *\*/ô/* and not *\*/u/*. This proposal is based on correspondences such as WOJ *kaNsu* 'number' (MYS XV: 3727) : *kaNsôpë-* 'to count' (MYS V: 890),<sup>127</sup> and WOJ *suNkus-* 'let pass' (MYS V: 804) : UEOJ *suNkôs-* (MYS XIV: 3564-U). In addition, this may explain the correspondence of the attributive *-u* in WOJ to *-ô* in EOJ; I discuss the attributive forms in more detail below.<sup>128</sup> The issue of this split of *\*...uCu-* and *\*...uCa-* will be set aside for further research.

Finally, the high occurrence of both *\*...aCa-* and *\*...öCö-* and the fact that there are no cases of *\*...aCö-*, *\*...uCö-*, and *\*...öCu-* support the theory that vowel assimilation plays a role in the shape of verb roots. Further, there is evidence that this type of harmony is not only seen in verb roots, but it is seen when derivational suffixes are affixed to the verb. When there is an *\*a* in the root, then an *\*a* will also appear before

---

127. In Section 2.2.4.3.3.2, I listed this example as an example of monophthongization of */u+a/*. Since there are so few cases of monophthongization of these vowels I now wonder if a simpler rule of assimilation may be more realistic. This issue will be set aside for further research.

128. I discuss the attributive forms below in Sections 2.2.5.3.3.8.14 (WOJ), 2.3.4.2.3.1.6.9 (NEOJ), 2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ).

the derivational suffixes, and when there is an \**ö* in the root, then an \**ö* will appear.

Note the following examples:

with *a* in the root:

root: \**naNka-*

<i>naNkas-</i>	<	* <i>naNka-As-</i>	make flow	MYS XVIII: 4094
<i>naNkarapë-</i>	<	* <i>naNka-Ar-<i>Ap</i>-Ai-</i>	(rain) falls	MYS XIX: 4160
<i>naNkare-</i>	<	* <i>naNka-Ar-Ai-</i>	flow	MYS V: 822

root: *kîpa-*

<i>kîpamar-</i>	<	* <i>kîpa-Am-Ar-</i>	reach limit (v.i.)	RM
<i>kîpam-</i>	<	* <i>kîpa-Am-</i>	reach limit (v.t.)	MYS V: 800 <sup>129</sup>
<i>kîpamë-</i>	<	* <i>kîpa-Am-Ai-</i>	reach limit (v.t.)	RM
<i>kîpar-</i>	<	* <i>kîpa-Ar-</i>	limit, end	MYS XVII: 3962

with *ö* in the root:

root: \**tötönöpö-*

<i>tötönöpë-</i>	<	* <i>tötönöpö-Ai-</i>	arrange (v.t.)	MYS XIX: 4254
<i>tötönöp-</i>	<	* <i>tötönöpö-</i>	arrange	Edict 29
<i>tötönöpör-</i>	<	* <i>tötönöpö-Ar-</i>	arrange (v.i.)	<i>Nihongi shiki</i> <sup>130</sup>

root: \**töyö-*<sup>131</sup>

<i>töyök-</i>	<	* <i>töyö-Ak-</i>	be noisy'	<i>Nihongi shiki</i> <sup>132</sup>
<i>töyöm-</i>	<	* <i>töyö-Am-</i>	resound (v.i.)	K III: 31
<i>töyömë-</i>	<	* <i>töyö-Am-Ai-</i>	make a sound	MYS XV: 3680
<i>töyömös-</i>	<	* <i>töyö-Am-As-</i>	make a sound	MYS XV: 3782

---

129. Phonetic only in nominalized form.

130. As cited in Omodaka (1967).

131. The root \**töyö-* (and not \**töyöm-*) is reconstructed here on the basis of WOJ *töyök-* < \**töyö-Ak-* 'be noisy', which is attested phonetically in WOJ only in *Nihongi shiki*, which is a questionable source. The word *toyok-* is attested in MJ.

132. As cited in Omodaka (1967).

However, vowel assimilation does not apply when inflectional suffixes are affixed to verbs. For example, when the negative suffix *-an-* is attached to a verb, the vowel of the suffix remains *a* regardless whether the vowel of the preceding syllable is an *a* or an *ö*.

<i>*naNkas-an-</i>	>	<i>naNkasan-</i>	'does not flow'
<i>*töyöm-an-</i>	>	<i>töyöman-</i>	'does not resound'

Therefore, the process of vowel assimilation extends through the verb root and derivational suffixes, but does not affect inflectional suffixes.

#### 2.2.5.1.3.2 Problems in Determining Verb Root Shapes: Theory Versus Data

As previously stated, there has been debate in the field concerning whether verbs should be reconstructed as having some consonant and some vowel roots, only vowel final roots, and the suggestion that verbs may be formed with the affixation of a verbalizer to the root. I am now adding a fourth possibility, that there are epenthetic vowels which are added to prevent consonant clusters; these vowels echo the vowel of the previous syllable. I discuss these possibilities below, pointing out the problems with all four, and show how all four theories fail to account for the data.

1. verb roots are formed with a verbalizer (as suggested separately by both Mathias and Vovin p. c.) as ...C+VBL-
2. all verb roots are vowel final (...CV-)
3. verb roots can be either consonant final (...C-) or vowel final (...CV)
4. Epenthetic vowels are involved in word formation

I use the following verb roots as examples throughout my discussion:

*aka-	(WOJ <i>akas-/akar-/akë-</i> )	'brighten, redden'
*ökö-	(WOJ <i>ökï-/ökös-/ökör-</i> )	'rise, wake'
*kaku-	(WOJ <i>kakus-/kakur-</i> )	'hide'
*nö-	(WOJ <i>ni- &lt; *ni-/nör-</i> )	'resemble'
*na-	(WOJ <i>ne- &lt; *në-/nas-</i> )	'sleep'

Below I discuss how the four theories mentioned above either account for or fail to account for, derivational and inflectional morphology.

#### 2.2.5.1.3.2.1 Verb Roots and Derivational Morphology. First, I discuss word

formation and derivational morphology of verbs according to each theory.

##### *2.2.5.1.3.2.1.1 Theory 1: A Verbalizer Is Involved in Word Formation.* Adding a

verbalizer to the verb roots, assuming vowel assimilation occurs as discussed above,

would result in the following forms:

*\*ak-* + VBL > *\*aka-*  
*\*ök-* + VBL > *\*ökö-*  
 ? *\*kak-* + VBL > *\*kaku-* OR *\*kaku-* + VBL > *\*kaku-*  
 ? *\*nö-* + VBL > *\*nö-* (*n-* + the vowel of the VBL)  
 ? *\*na-* + VBL > *\*na-* (*n-* + the vowel of the VBL)

One problem with this proposal is that we have to be able to predict which vowel the verbalizer will result in: *a*, *ö*, or *u*. Why does *\*ak-VBL* result in *\*aka-* while *\*kak-VBL* results in *\*kaku*? Note that, according to our understanding of contraction (Section 2.2.4.3.3.1), if the verbalizer is suffixed to *\*kaku-*, then the *u* is deleted and the vowel of the VBL is expected to remain, since it is monosyllabic.<sup>133</sup> Another possibility is that the root is *\*kak-* (and not *\*kaku-*), and if this is the case, when the verbalizer is suffixed then there needs to be a way to predict that the verbalizer will be realized as *u* and not *a* here.

Another problem is with the monosyllabic stems. In these cases the vowel of the verbalizer would be expected to remain, so we would have to have a way to predict both *\*na-* and *\*nö-*.

---

133. The only monosyllabic suffix that is deleted when affixed to a stem is the infinitive *-i* (Section 2.2.5.3.3.1), which is only deleted following the monophthongized vowels /i/ and /ë/ both of which are formed with a vowel (/ö/ or /a/) plus /i/. The fact that /i/ is already part of the monophthongized vowel may account for why the infinitive is deleted following these vowels and not preserved: in other words, the /i/ is redundant. I explain this in more detail below (Section 2.2.5.3.3.1).

Given the problems raised here, the verbalizer solution clearly fails to account for the data.

*2.2.5.1.3.2.1.2 Theory 2: All Roots Are Vowel Final.* Russell (1997) argues that all verb roots are vowel final and that verbal derivational suffixes were consonant initial open syllables (CV).<sup>134</sup> I now have some reservations about reconstructing verbs in this way.

For the sake of argument, I reconstruct the verbs below as vowel final and with both vowel initial and consonant initial derivational suffixes. Since part of the argument for vowel final verb roots is based in the claim that all syllables must be open syllables, then all derivational morphemes must also end in a vowel. I am assuming that the vowel of the vowel initial derivational suffixes is deleted as expected when a suffix affixes to a verb stem.<sup>135</sup>

vowel initial derivational suffixes:

\**aka-AsA-* > \**akaasa-* > \**akasa-*  
\**ökö-AsA-* > \**ököösö-* > \**ökösö-*  
?\**kaku-AsA-* > \**kakuVsV-* > \**kakusV-* (V here is either *a* or *u*)  
\**nö-ArA-* > \**nöörö-* > \**nörö-*  
\**na-AsA-* > \**naasa-* > \**nasa-*

---

134. Martin (1987) and Unger (1993) also reconstruct vowel final verb roots, as discussed above in Section 2.2.5.1.2.

135. As discussed in Section 2.2.4.3.3.1 (Group III).

consonant initial derivational suffixes:

* <i>aka-sA-</i>	>	* <i>akasa-</i>	
* <i>ökö-sA-</i>	>	* <i>ökösö-</i>	
?* <i>kaku-sA-</i>	>	* <i>kakusV-</i>	(V here is either <i>a</i> or <i>u</i> )
* <i>nö-rA-</i>	>	* <i>nörö-</i>	
* <i>na-sA-</i>	>	* <i>nasa-</i>	

The problem with *kaku-* is that it is not possible to determine the shape of the final vowel, because, as stated above, there are verb roots with the shape \*...*uCa-* and \*...*uCu-* and it is not clear how assimilation works with verbs that have a /u/. Statistically speaking, an /a/ is the more common vowel in such cases so the "V" above could probably be safely reconstructed as /a/.

The result of this approach, however, is that vowels are reconstructed in cases where there is no evidence that a vowel occurred. There is no evidence that the verb stems *akas-*, *ökös-*, *kakus-*, *nör-*, and *nas-* ended in anything other than a consonant, and if there are vowels at the end of these verb stems it is impossible to reconstruct them as they never occur in surface verbal forms. Thus, the reconstruction of a final vowel in these cases is not supported by the data.

2.2.5.1.3.2.1.3 Theory 3: Roots May Be Consonant Final or Vowel Final.

Another possibility is that there is a mix of consonant final and vowel final roots.

According to this theory, suffixes must be vowel initial. Note the following examples:

\**aka-As-* or \**ak-As-* > \**akas-*  
\**ökö-As-* or \**ök-As-* > \**ökös-*  
?\**kaku-As-* or \**kak-As-* > \**kakVs-*  
\**nö-Ar-* > \**nör-*  
\**na-As-* > \**nas-*

Here we have the same problem with \**kaku-* that was raised above: if the verb has a consonant final root, it is not possible to predict that the vowel *u* will occur between the verb root and the suffix. The only way to ensure that the *u* occurs here is to reconstruct a vowel final root for verbs whose roots end in /u/, i.e., \**kaku-* and not \**kak-*.

2.2.5.1.3.2.1.4 Theory 4: An Epenthetic Vowel Is Involved in Word Formation. In

this scenario we propose verb roots which can be either vowel or consonant final, all suffixes are consonants, and consonant clusters (CC) are prevented by the insertion of an "echo vowel" (shown below as *A*) which will assimilate to the vowel of the previous syllable:

*\*aka-s-* (or *\*ak-s-* > *\*ak-A-s-*) > *\*akas-*  
*\*ökö-s-* (or *\*ök-s-* > *\*ök-A-s-*) > *\*ökös-*  
*\*kaku-s-* (or *\*kak-s-* > *\*kak-A-s-*) > *\*kakus-*  
*\*nö-r-* > *\*nör-*  
*\*na-s-* > *\*nas-*

One advantage to this proposal is that it explains why the final vowels in verb roots can only be reconstructed when followed by a consonant initial suffix. However, if the vowel before the consonant cluster is an *a*, then an *a* will be inserted between the two consonants. If the vowel is *ö*, then an *ö* will be inserted. But, if the vowel of the previous syllable is an *u*, then it is not clear what will be inserted, *u* or *a*.

2.2.5.1.3.2.2 Verb Roots and Inflectional Morphology. To further test the four theories discussed above, I show what happens when inflectional verbal suffixes are attached to the verb in Table 2.8. Italicized forms are those forms where root formation is problematic (as discussed above). If the root cannot be formed properly then its inflected form also cannot have been formed properly. Other than that, I do not feel that inflectional morphology can help us to choose one of the four theories over any of the others.<sup>136</sup>

---

136. The functions of the inflectional suffixes are presented below (Section 2.2.5.3).

Table 2.8: The Theoretical Verb Roots and Their Inflections

	root	-i (INF)	-u (FIN)	-ur- (ATT)	-an- (NEG)	-am- (TENT)
VBL	ak+VBL-	akî	aku	akur-	akan-	akam-
	ök+VBL-As-	ökösi	ökösu	ökösur-	ökösan-	ökösam-
	?kak+VBL-As-	<i>kakusi</i>	<i>kakusu</i>	<i>kakusur-</i>	<i>kakusan-</i>	<i>kakusam-</i>
	?nö+VBL-Ar-	<i>nöri</i>	<i>nöru</i>	<i>nöru</i>	<i>nöran-</i>	<i>nöram-</i>
	?na+VBL-Ai-	<i>në</i>	<i>nu</i>	<i>nuru</i>	<i>nen-</i>	<i>nem-</i>
all roots are V final	aka-	akî	aku	akur-	akan-	akam-
	ökö-AsA- >	ökösi	ökösu	ökösur-	ökösan-	ökösam-
	ökösö-					
	?kaku-AsA- >	<i>kakusi</i>	<i>kakusu</i>	<i>kakusur-</i>	<i>kakusan-</i>	<i>kakusam-</i>
	kakVsV-					
	nö-ArA-> nö- na-Ai- > ne-	<i>nöri</i> <i>në</i>	<i>nöru</i> <i>nu</i>	<i>nöru</i> <i>nuru</i>	<i>nöran-</i> <i>nen-</i>	<i>nöram-</i> <i>nem-</i>
some C final some V final	aka-	akî	aku	akur-	akan-	akam-
	ökö-As- > ökö-	ökösi	ökösu	ökösur-	ökösan-	ökösam-
	<i>kaku-As- &gt;</i> <i>kakus-</i>	<i>kakusi</i>	<i>kakusu</i>	<i>kakusur-</i>	<i>kakusan-</i>	<i>kakusam-</i>
	nö-Ar- > nö-	<i>nöri</i>	<i>nöru</i>	<i>nöru</i>	<i>nöran-</i>	<i>nöram-</i>
	na-Ai- > në-	<i>në</i>	<i>nu</i>	<i>nuru</i>	<i>nen-</i>	<i>nem-</i>
echo vowel	ak(a)-	akî	aku	akur-	akan-	akam-
	ök(ö)-	ökösi	ökösu	ökösur-	ökösan-	ökösam-
	kaku-	kakusi	kakusu	kakusur-	kakusan-	kakusam-
	nö-Ar-	nöri	nöru	nöru	nöran-	nöram-
	na-Ai-	në	nu	nuru	nen-	nem-

2.2.5.1.3.2.3 Summary. Unfortunately the discussion presented above raises more problems than it solves. At this time it is not possible to choose one theory of reconstruction over the others. And so, for the purpose of this study, I present verb roots as they can be reconstructed, some will be consonant final and some will be vowel final.

### 2.2.5.2 Derivational Morphemes

WOJ verbs are formed in one of two ways: 1) the verb root is used as a verb; or 2) derivational morphemes are suffixed to a verb to change the meaning of the verb. For cases where the verb root is used as a verb stem, pre-WOJ verb roots ending in /a/ or /ö/ and consonant final verb roots are all analyzed as having consonant final vowel stems in WOJ. For cases where derivational morphemes are involved in the formation of a verb stem, when \*-Ai- is used, the result is a vowel final verb stem, and when other morphemes are used, the result is a consonant final verb stem.

#### The verb root is used as verb stem

pre-WOJ	>	WOJ		
* <i>apa-</i>	>	<i>ap-</i>	'join (v.i.)'	MYS XVIII: 4106
[root]	>	[stem]		
* <i>ira-</i>	>	<i>ir-</i>	'go in'	KK 10
[root]	>	[stem]		
* <i>uma-</i>	>	<i>um-</i>	'give birth'	K I: 2
[root]	>	[stem]		

The verb root combines with suffix(es) to create a new verb

\**apa-Ai-* > *apë-* 'join (v.t.)' MYS XIX: 4189  
[root]-[suffix] > [stem]

\**ira-Ai-* > *ire-* 'put in' MYS XVI: 3827  
[root]-[suffix] > [stem]

\**uma-Ar-Ai-* > *umare-* 'be born' NR I: 18  
[root]-[suffix]-[suffix] > [stem]

\**kaku-As-* > *kakus-* 'hide (v.t.)' MYS I: 18  
[root]-[suffix] > [stem]

It should also be noted that whenever the derivational suffix \*-Ai- is the final formant, the verb class according to the traditional classification discussed above will be either *shimo nidan* (when the final vowel of the verb is an *ë*) or *kami nidan* (when the final vowel is an *i*).<sup>137</sup> When any of the other suffixes are the final suffix used in word formation or when the root of the verb is used, then the verb will most likely be *yodan* (i.e., consonant final) and will not be *shimo* or *kami nidan* (i.e., vowel final).<sup>138</sup>

There are several morphemes used in pre-WOJ verb formation. The most common are presented in Table 2.9 below, following the reconstructions presented in Unger (1993) and Russell (1997).

---

137. It is because of this that Unger (1993) and Whitman (2003) say that *shimo* and *kami nidan* verbs are derived. However, I do not see how verbs formed with -Ai- are any more or less derived than verbs formed with other formants, e.g., the *yodan* verb *akas-* < \**aka-As-*, formed with the formant -As-.

138. Verbs that are not *yodan* fall into the irregular category of verbs: *kahen*, *rahen*, and *nahen*.

Table 2.9: Derivational Suffixes from Unger (1993) and Russell (1997)<sup>139</sup>

Unger (1993)	Russell (1997)	Meanings (based on Unger 1993)
* <u>ce</u>	*sa	to do; cause (object) to do (preceding root) <sup>140</sup>
* <u>re</u>	*ra	indicates spontaneous action, endo-activity <sup>141</sup>
* <u>me</u>	*ma	indicates seemingness or attempt to achieve
* <u>pe</u>	*pa	indicates intensive sense
* <u>ke</u>	*ka	indicates punctual or iterative action
* <u>gi</u>	*Ci <sub>1</sub>	changes endo-active verbs into exo-active and vice versa (i.e., a transitivity switcher)

There are problems with the suffixes as reconstructed in Unger (1993) and Russell (1997), which I address below. First, the meanings presented by Unger are rather vague and confusing; he does not state how he arrived at these meanings. Second, neither study paid much attention to the distribution of these formants noting which morphemes can or cannot be combined or when more than one enclitic is used in the formation of a word, i.e., is there a set order or is the order free? Last, the shape of the morphemes needs to be

---

139. Unger (1993) uses underlining to indicate that a morpheme does not occur word initially.

140. Unger (1993) also reconstructs \**ta* as another formant which is close in function to his \**ce* and proposes that these two enclitics may be variants of each other and may have derived from the same source. Russell (1997: 65) points out that there are nine occurrences of \**ta* and 121 of \**ce* in Unger's reconstructions, and suggests that they were competing forms, with \**ta* falling out of use by OJ. However, at this point I am not convinced that there are enough examples of \**ta* to say anything conclusively.

141. Unger (1993) also reconstructs an enclitic \**de* which indicates passive, and he relates it to \**re*. While it is possible that these two morphemes are related, I do not feel that they are variants of the same morpheme. First, according to Unger, their distribution is different, \**de* (which is reflected as -*ye*- in WOJ) is only followed by the transitivity flipper while \**re* can be combined with a number of formants. And second, -*ye*- is a productive inflectional suffix in WOJ whereas the enclitic \**re* is used only in word formation.

reconsidered: can a final vowel really be reconstructed, and if so, what vowel? In order to answer these questions, I first discuss the shape of the derivational suffixes. I then discuss each separately, considering its function(s) and distribution in order to clarify its meaning.

#### 2.2.5.2.1 The Shape of Verbal Derivational Suffixes

As noted above, there is evidence that some sort of vowel assimilation is not only found in verb roots, but is also found when derivational suffixes are affixed to the verb. It is necessary then, to reconstruct the derivational morphemes in a way that will account for this. Using the following verbs I first discuss the problems with morpheme shape as reconstructed in Unger (1993) and Russell (1997) and then present two alternate solutions.<sup>142</sup>

with *a* in the root:

root: \**naNka-*

WOJ forms: *naNkas-/naNkarapë-/naNkare-*

root: *kîpa-*

WOJ forms: *kîpamar-/kîpam-/kîpamë-/kîpar-*

---

142. The meanings for these verbs and attestations can be found in Section 2.2.5.1.3.1 above.

with ö in the root:

root: \*tötönöpö-

WOJ forms: tötönöpë-/tötönöp-/tötönöpör-

root: \*töyö-

WOJ forms: töyök-/töyöm-/töyömë-/töyömös-

If we follow Unger's (1993) and Russell's (1997) reconstructions, we would reconstruct these verbs as follows, with problematic forms in bold text.

<u>WOJ</u>	<u>pre-WOJ</u>	<u>Unger (1993)</u>	<u>Russell (1997)</u>
<b>with a in the root:</b>			
<i>naNkas-</i>	* <i>naNkasa-</i>	* <b><i>naNka-ce-</i></b>	* <i>naNka-sa-</i>
<i>naNkarapë-</i>	* <i>naNkarapë-</i>	* <b><i>naNka-re-pe-</i></b>	* <i>naNka-ra-pa-Ci<sub>1</sub>-</i>
<i>naNkare-</i>	* <i>naNkare-</i>	* <b><i>naNka-re-</i></b>	* <i>naNka-ra-Ci<sub>1</sub>-</i>
<i>kîpamar-</i>	* <i>kîpamara-</i>	* <b><i>kîpa-me-re-</i></b>	* <i>kîpa-ma-ra-</i>
<i>kîpam-</i>	* <i>kîpama-</i>	* <b><i>kîpa-me-</i></b>	* <i>kîpa-ma-</i>
<i>kîpamë-</i>	* <i>kîpamë-</i>	* <b><i>kîpa-me-</i></b>	* <i>kîpa-ma-Ci<sub>1</sub>-</i>
<i>kîpar-</i>	* <i>kîpara-</i>	* <b><i>kîpa-re-</i></b>	* <i>kîpa-ra-</i>
<b>with ö in the root:</b>			
<i>tötönöpë-</i>	* <i>tötönöpë-</i>	* <b><i>tötönöpö-gi-</i></b>	* <i>tötönöpö-Ci<sub>1</sub>-</i>
<i>tötönöp-</i>	* <i>tötönöpö-</i>	* <i>tötönöpö-</i>	* <i>tötönöpö-</i>
<i>tötönöpör-</i>	* <i>tötönöpörö-</i>	* <b><i>tötönöpö-re-</i></b>	* <b><i>tötönöpö-ra-</i></b>
<i>töyök-</i>	* <i>töyökö-</i>	* <b><i>töyö-ke-</i></b>	* <b><i>töyö-ka-</i></b>
<i>töyöm-</i>	* <i>töyömö-</i>	* <b><i>töyö-me-</i></b>	* <b><i>töyö-ma-</i></b>
<i>töyömë-</i>	* <i>töyömë-</i>	* <b><i>töyö-me-</i></b>	* <i>töyö-ma-Ci<sub>1</sub>-</i>
<i>töyömös-</i>	* <i>töyömösö-</i>	* <b><i>töyö-me-ce-</i></b>	* <b><i>töyö-ma-sa-</i></b>

The main problem with Unger's reconstructions is that different verbs will be formed with the same morphemes.<sup>143</sup> For example, *\*kîpam-* and *\*kîpamë-* would both be formed by the root *\*kîpa-* plus the derivational suffix *\*me*. It is not possible to predict when *\*me* would result in *\*...m-* and when it would result in *\*...më-*. Further, *\*kîpamara-* would also have this suffix (*\*kîpa-me-re-*), yet the output would be *\*...ma....* Thus, we have one morpheme, *\*me-*, with three possible variants, *\*m-*, *\*më-* and *\*ma-*, with no way to predict which form would occur.

For the roots with *ö*, both Unger's (1993) and Russell's (1997) reconstructions fail to account for the vowel found between the derivational morphemes. For example, Unger's reconstruction for WOJ *töyömös-* would produce either *\*töyömas-* or *\*töyömës-*, and my earlier reconstruction would produce *\*töyömas-*.<sup>144</sup> Part of the problem could be solved by proposing that the vowel of the suffix assimilates to the vowel of the previous syllable. In other words, *\*ma-* (as written in Russell 1997) would be rewritten as *\*mA-* where *A* represents a vowel which becomes either *a* or *ö* after vowel assimilation occurs.

root + suffixes	> assimilation	> pre-WOJ
<i>*kîpa-mA-rA-</i>	> <i>*kîpa-ma-ra-</i>	> <i>*kîpamara-</i>
<i>*töyö-mA-sA-</i>	> <i>*töyö-mö-sö-</i>	> <i>*töyömösö-</i>

---

143. This is discussed in more detail in Russell (1997: 68-70).

144. This would fall into the "unexplained alternations between *a* and *ö*" discussed in Russell (1997: 15-16).

This solution produces the correct form, but is it the best way to account for all the data?

The pre-WOJ verb stem is a bound form; it must always be followed by an inflectional morpheme.<sup>145</sup> Inflectional suffixes are all vowel initial, and since vowel-vowel sequences are not allowed, the vowel of the derivational suffix is always deleted.<sup>146</sup> For example, if we add the negative suffix *-an-* to the above roots we get the following:

verb + NEG <i>-an-</i>	contraction	negative form
* <i>kîpamara-an-</i>	> * <i>kîpamar<del>a</del>an-</i>	> <i>kîpamaran-</i>
* <i>töyömösö-an-</i>	> * <i>töyömös<del>ö</del>an-</i>	> <i>töyömösan-</i>

Since this is the case, reconstructing vowel final derivational morphemes results in the reconstruction of a vowel that never occurs in the surface form and its existence cannot be proven.

Another possibility is that the suffixes are vowel initial. If we reconstruct them as vowel initial we get the following:

root + suffixes	> assimilation	> contraction
* <i>kîpa-Am-Ar-</i>	> * <i>kîpa-am-ar-</i>	> <i>kîpamar-</i>
* <i>töyö-Am-As-</i>	> * <i>töyö-öm-ös-</i>	> <i>töyömös-</i>

---

145. I discuss inflectional morphemes in Section 2.2.5.3 below.

146. As stated above (Section 2.2.4.3.3.1), when bound morphemes, i.e., derivational and inflectional suffixes are affixed to vowel final verb stems, the initial vowel of the suffix is deleted to prevent vowel clusters.

The main difference between reconstructing vowel initial suffixes and vowel final ones, is that with vowel initial suffixes we do not reconstruct a final vowel for the pre-WOJ form which may not even exist. There is no way to prove its existence as it would always be deleted when the verb is followed by a suffix.

#### 2.2.5.2.1.1 The Shape of the Transitivity Flipper

The transitivity flipper is more complicated than the other derivational morphemes, because monophthongization and not contraction is involved when verbs are formed with this suffix. For this reason I discuss this morpheme separately.

Unger (1993) reconstructs the transitivity flipper as *\*gi*, presumably to link this morpheme with the passive and causative morpheme found in Middle Korean: *\*-Gi-* < *\*-ki-*.<sup>147</sup> However, there is no internal evidence supporting the reconstruction of the consonant /g/ or any other consonant here; the consonant, if it even existed, is lost, and cannot be recovered (Russell 1997: 62-65). For this reason, in Russell (1997) this morpheme was reconstructed as *\*Ci*, where "C" represents any consonant including

---

147. Whitman (2003: 3) presents syntactic reasons arguing against the relationship of this morpheme and Korean *\*-Gi-* < *\*-ki-*. He notes that the Korean morpheme was originally a causative suffix which acquired a passive function. This morpheme in WOJ does not indicate either causative or passive. Therefore the proposed relationship between these morphemes has been rejected for both phonological reasons (e.g., Russell 1997) and for syntactic reasons (Whitman 2003).

"zero".<sup>148</sup> The reason for reconstructing a consonant was there, was to explain the occurrence of monophthongization and not contraction when this morpheme was suffixed to a verb root – presumably the consonant of the suffix was lost, which triggered monophthongization and not contraction.

More recently, Whitman (2003) revisited Yoshida's (1973: 85-86) claim that the *nidan* verbs, i.e., verbs that Unger (1993) and Russell (1997) analyze as being formed with the transitivity flipper, come from a consonant final verb root plus the verb *e-* < \**ë-* 'get' (MYS V: 806). Whitman (2003: 4) analyzes *e-* as deriving from the same root as the verb *ar-* 'exist' (KK 2), which he reconstructs as \**a-* > \**a-r-*. According to his treatment, then, *e-* is the result of \**a-* + *-i*, where *-i* is the infinitive suffix (Section 2.2.5.3.3). He explains the formation of the verbs *akë-* 'open (v.t.)' and *oki-* 'awaken' as follows:

Step one: *a-i* is suffixed to the root

\**ak-* + *a-i*

\**ökö-* + *a-i*

Step two: contraction occurs, since the verb stem is longer than the first suffix, *a-*, *a* is deleted

\**aka-i*

\**ökö-i*

Step three: monophthongization occurs<sup>149</sup>

\**akë-*

\**oki-*

---

148. In Russell (1997) \**C<sub>1</sub>* is the reconstructed form of the transitivity flipper and \**C<sub>2</sub>* is a verbalizer that does not indicate any change in transitivity. In both cases C represents any consonant or Ø.

149. As discussed above (Section 2.2.4.3.3.2), *a+i* monophthongize to *ë*, and *ö+i* and *u+i* monophthongize to *ï*.

There are several problems with this analysis. First, I am not convinced of the semantics: how can the transitive verb 'get' be used to create both intransitive and transitive verbs? Further, how does the verb *a-* 'exist' plus the infinitive result in a new verb, i.e., the verb *ë-* 'get' and not the infinitive form of the verb 'exist', i.e., 'exist and...'?

Second, Whitman (2003) bases the reconstruction of the root of *akë-* 'open' on the intransitive verb *ak-* which is not attested phonetically in WOJ. This is a minor problem, as we would get the same results if we instead used the verb pair *uk-* 'float (v.i.)' (K III: 34) and *ukë-* 'float (v.t.)' (MYS XX: 4398).<sup>150</sup> Next, the verb *ökï-* 'awaken' is also not attested phonetically in WOJ, and again, this problem would be solved if we used *öpï-* 'grow (v.i.)' (MYS V: 804), which can be reconstructed as having the root *öpö-* on the basis of *öpös-* 'grow (v.t.), cultivate' (MYS XVIII: 4113).

The next problem with Whitman's (2003) hypothesis is his claim that when a shorter morpheme is suffixed to a longer morpheme, the vowel of the shorter morpheme is deleted. This is not supported by the data. First, the majority of cases of contraction involve two-syllable words, and in these cases the vowel of the second member of the compound is preserved and the final vowel of the first member of the compound is

---

150. This verb occurs phonetically in a poem in Book XX of the *Man'yōshū* which is written in WOJ, and not EOJ.

deleted.<sup>151</sup> An argument about "longer versus shorter" cannot be made when the units are the same length.

There are also examples where polysyllabic words suffix to monosyllabic words, in which case the vowel of the monosyllabic word is preserved. This contradicts Whitman's (2003) claim that the vowel of the longer word is preserved and the vowel of the shorter word is deleted. Note the following:

<i>kô umu</i>	>	<i>kômu</i>	'give birth; lay an egg'	(KK 71)
<i>imo Nka ipê</i>	>	<i>imoNkapê</i>	'sweetheart's house'	(MYS V: 844)

In these examples the vowel of the monosyllabic units (shown in bold italics) is preserved. Thus, the vowel of the shorter unit is preserved and that of the longer one is deleted. The following examples also involve a monosyllabic unit, though in these examples the vowel of the monosyllabic unit is lost:

<i>kaNkë tu omo</i>	>	<i>kaNkëtomo</i>	'direction facing the sun'	(MYS I: 52)
<i>yama nö upë</i>	>	<i>yamanupë</i>	'on top of a mountain'	(MYS V: 872)
<i>wa Nka ipê</i>	>	<i>waNkîpê</i>	'my house'	(KK 32)

These examples are explained by claiming that the monosyllabic units, which are all nominal particles, are reanalyzed as being part of the previous word (Unger 1993: 42-46; Russell 2003: 520). In other words, *kaNkë-tu* 'reflection-LOC', *yama-nö* 'mountain-GEN',

---

151. This claim is based on the data presented in Russell (2003), discussed above in Section 2.2.4.3.3.1.

and *wa-Nka* 'I-GEN' are analyzed as one polysyllabic unit, and when compounding occurs, the initial vowel of the second member of the compound is preserved as predicted by the rules of contraction stated above (Section 2.2.4.3.3).<sup>152</sup> The last example *wa-Nka ipê* results in the compounding of two two syllable words, and cannot be used to confirm or reject Whitman's (2003) claim. If we treat the other examples as polysyllabic words, however, the result is a three syllable word followed by a two syllable word and the vowel of the shorter unit is clearly preserved, thus further contradicting Whitman's claim that the vowel of the longer unit is preserved and the shorter unit is deleted.

This brings us to the next problem with Whitman's proposal: why does monophthongization occur in Step Three and not contraction? In all other cases where the infinitive is used contraction, and not monophthongization, occurs (Section 2.2.5.3.3.1).

In addition, Whitman (2003) explains that *a-i* is the combination of *a-* 'exist' and *-i* 'INF'. If *a-* comes from 'exist', what happened to the /r/? The verb is attested in the infinitive form as *ar-i-te* 'exist-INF-GER' "being", and the /r/ is clearly written. Even if we assume that this *a-* is a grammaticalized form of the verb 'to exist', which seems to be

---

152. Unger (1993) and Russell (2003) fail to account for why particles would be full words (i.e., monosyllabic units) in some cases (e.g., *imö Nka ipê* > *imöNkapê*) and as part of the previous word in others (e.g., *wa-Nka ipê* > *waNkîpê*). I have no explanation for this at this time.

what Whitman is suggesting, we would need to explain why the /r/ is deleted here, but does not get deleted in the verb that the morpheme is derived from.

Finally, if we do explain away the /r/, we need yet another explanation to account for why *a-* plus *-i* does not monophthongize before suffixation to the verb root (in Step One). Presumably, the loss of a consonant would trigger monophthongization, thus: *-ar-i-* > *\*-a-i-* > *-ë-*. In other words, what is the evidence for claiming that *akë-* is derived from *\*ak-+a-i* and not *\*ak-ë-*? Further, if monophthongization occurs before suffixation, we cannot account for verbs like *ökï-* and *öpï-*, as *\*öpö-ë-* would produce *\*öpö-*, or maybe *\*opë-*, but the attested form, *opï-*, would not be produced.

The only way to ensure that loss of a consonant does not trigger monophthongization before suffixation is to keep the consonant and to have *ar-i* suffixed to the verb root, i.e., *\*öpö-ar-i-* > *\*öpöri-* > *\*öpöi-* > *öpï-*. However, it would still be necessary to explain why the /r/ gets deleted here and not in other morphemes formed with the verb *ar-* 'exist', e.g., *-êr-* > *\*i-ar-* 'PROG' (Section 2.2.5.3.3.4.1), *-kêr-* < *\*kî-ar-* 'PAST' (Section 2.2.5.3.3.5.2), *-tar-* > *\*-t-ar-* 'PERF/PROG' (Section 2.2.5.3.3.4.4), etc.

For the reasons discussed above, Whitman's (2003) proposal is too problematic; I reject it for both semantic and morphophonemic reasons. A new explanation is now needed to account for the data.

What is needed to best account for the data is an explanation similar to that proposed for the other derivational suffixes above, that is, vowel assimilation plays a role in the formation of verbs (Section 2.2.5.1.3.1). I now reconstruct this morpheme as a diphthong *\*-Ai-*, where the symbol "A" is used to represent a vowel that assimilates to either /a/ or /ö/ depending on the vowel of the previous syllable.<sup>153</sup> Then contraction occurs to prevent vowel sequences,<sup>154</sup> and finally, monophthongization occurs.

<u>root+suffix</u>	<u>assimilation</u>	<u>contraction</u>	<u>monophthongization</u>
<i>*aka-Ai-</i>	> <i>*aka-ai-</i>	> <i>*akai-</i>	> <i>akë-</i>
<i>*ökö-Ai-</i>	> <i>*ökö-öi-</i>	> <i>*ököi-</i>	> <i>ökï-</i>
<i>*suNku-Ai-</i>	> <i>*suNku-ai-</i>	> <i>*suNkui-</i>	> <i>suNkï-</i>
<i>*kîpa-Am-Ai-</i>	> <i>*kîpa-am-ai-</i>	> <i>*kîpamai-</i>	> <i>kîpamë-</i>
<i>*töyö-Am-Ai-</i>	> <i>*töyö-öm-öi-</i>	> <i>*töyömöi-</i>	> <i>töyömë-</i> <sup>155</sup>

#### 2.2.5.2.1.2 Summary

Table 2.10 presents the morphemes as reconstructed in Unger (1993), Russell (1997), and the present study. The function of these morphemes is presented in Table 2.17 below.

---

153. Russell (2005) reconstructs the transitivity flipper as *\*-ACi-*, where "C" represents any consonant or a "zero" consonant. The consonant is only reconstructed to ensure that contraction occurs before monophthongization occurs. However, there is no evidence to support the reconstruction of a consonant.

154. Here the initial vowel of the transitivity flipper is deleted.

155. As stated above /ö+i/ monophthongizes to either /ë/ or /ï/ and it is not yet clear why this is the case (Section 2.2.4.3.3.2)

Table 2.10: Revised Shape of pre-WOJ Derivational Morphemes

Unger (1993)	Russell (1997)	Present study
*ce	*sa	*-As-
*rē	*ra	*-Ar-
*mē	*ma	*-Am-
*pē	*pa	*-Ap-
*kē	*ka	*-Ak-
*gî	*Ci <sub>1</sub>	*-Ai-

### 2.2.5.2.2 The Transitive Suffix \*-As-

#### 2.2.5.2.2.1 The Function of \*-As-

The inflectional suffix \*-As- is added to verb roots to indicate transitivity or causativity, as in the following examples:

*aka-As-	>	akas-	'let brighten'	MYS XV: 3648
cf. *aka-Ar-	>	akar-	'brighten, redden'	MYS XIX: 4266 <sup>156</sup>
*opo-As-	>	opos-	'cultivate'	MYS XVIII: 4113
cf. opo-Ai-	>	opi-	'grow (v.i.)'	MYS V: 804
*tir-As-	>	tiras-	'scatter (v.t.)'	MYS XVIII: 4043
cf. *tir-	>	tir-	'scatter (v.i.)'	MYS V: 822

It can also be used in combination with other derivational morphemes:

---

156. The forms presented here for comparison are presented to show how the root and derivational suffixes were determined. The other derivational suffixes are discussed below.

\**naNku-As-Am-* > *naNkusam-* 'be at ease' MYS VI: 963  
 cf. \**naNku-Ai-* > *naNki-* 'get still' MYS V: 753

\**yo-As-Ap-* > *yösöp-* 'get dressed' K I: 33  
 cf. \**yo-Ar-Ap-* > *yöröp-* 'be dressed' MYS I: 2

The above examples show that \*-As- changes the syntactic function of the verb root to mark it as a transitive verb. The example *naNkusam-* 'be at ease' is the only example of \*-As- I have found that doesn't show transitivity, but perhaps this is due to the suffix \*-Am-, which is typically applied to stative verbs.<sup>157</sup>

Because of its function, scholars often relate the transitive suffix to the verb *se-* < \**sö-Ai-* 'to do' and the causative marker \*-ase-. However, it should be pointed out that the causative marker, although well attested in MJ, is rare in WOJ (Saeki 1959: 149), and not attested at all in EWOJ.<sup>158</sup> In other words, -ase- is a later development. As for the proposed relationship between the transitive suffix \*-As- and *se-* 'do', it is possible that they came from the same root historically. However, it is not likely that the suffix developed from the verb. If the suffix derived from *se-* then we would have to explain: 1) why the vowel *e* gets deleted or 2) if the vowel isn't deleted, why verbs derived with this

---

157. See Section 2.2.5.2.4 for discussion on the derivational suffix \*-Am-.

158. As discussed in Russell (2003), Bentley (2001: 196) claims to have found two examples of causative -ase- in EWOJ, though his examples are questionable, as they involve the same verb used two times in the same text (Liturgies #3 and #4). Since these examples are spelled logographically, it is not possible to know how they would have been pronounced. Furthermore, -ase- does not appear in early WOJ texts.

suffix do not conjugate as either *sahen* verbs like *se-* or as *shimo nidan* verbs like all other verbs ending in ...*ë-*.

#### 2.2.5.2.2.2 The Use of \*-As- With Other Derivational Suffixes

In order to fully understand the function of \*-As-, we must also consider its distribution, including what derivational morphemes it can and cannot function with. Of the 68 verbs in my database that are formed with the enclitic \*-As-, there are two instances of this suffix being used with \*-Am-, (*\*naNku-As-Am- > naNkusam-* 'be at ease' MYS VI: 963 and *\*toyo-Am-As- > töyömos-* 'make a sound'), and one verb where it is used with the morpheme \*-Ap- (*\*yo-As-Ap- > yösöp-* 'get dressed' K I: 33). Next, there are five cases of \*-As- plus \*-Ai- (e.g., *\*ki-As-Ai- > \*kîsai* or *\*kîsöi > kîse-* 'dress' MYS V: 901). Last, \*-As- and \*-Ar-, which are the most common derivational suffixes, occur in the same word only once (*\*yo-As-Ar- > yösör-* 'let come near' MYS XIII: 3305). It is not surprising that, although they are both common, they do not typically occur together in the same words considering they are opposites: \*-As- is a transitive marker and \*-Ar- is an intransitive (as I discuss in Section 2.2.5.2.3 below). Last, there are 55 examples of \*-As- without any other derivational morphemes. Table 2.11 shows the derivational suffixes that can be combined with \*-As-.

Table 2.11: Distribution of Transitive Derivational Suffix -As-

	*-Ar-	*-Am-	*-Ap-	*-Ak-	*-Ai-
*-As-	*-As-Ar-	*-As-Am- *-Am-As-	*-As-Ap-	N/A	*-As-Ai-

### 2.2.5.2.3 The Intransitive Suffix \*-Ar-

#### 2.2.5.2.3.1 The Function of \*-Ar-

The suffix \*-Ar- is the opposite of \*-As-; it makes a verb root intransitive, as in

the following examples:

*aka-Ar-	>	akar-	'brighten, redden'	MYS XIX: 4266
cf. *aka-As-	>	akas-	'let brighten'	MYS XV: 3648 <sup>159</sup>
*kömō-Ar-	>	kömor-	'insert (v.i.)'	MYS XIX: 4283
*kömō-Ai-	>	kömi- <sup>160</sup>	'insert (v.t.)'	K II: 45
*mak-Ar-	>	makar-	'retreat (v.i.)'	MYS XV: 3725
cf. *mak-	>	mak-	'retreat (v.t.)'	KK 3

---

159. The root here can also be reconstructed as \*aka- on the basis of the adjective *aka* 'red' (MYS V: 892).

160. As stated above, the form *kömē-* is also attested (MYS XVII: 3998); it is unclear why this doublet exists.

This morpheme can also be used with other derivational morphemes:

<i>*uma-Ar-Ai-</i>	>	<i>umare-</i>	'be born'	NR I: 18
cf. <i>*uma-</i>	>	<i>um-</i>	'give birth'	K I: 2
<i>*yo-Ar-Ap-</i>	>	<i>yöröp-</i>	'be dressed'	MYS I: 2
cf. <i>*yo-As-Ap-</i>	>	<i>yösöp-</i>	'get dressed'	K I: 33

Because of its function, the suffix *\*-Ar-* is often compared to the stative verb *ar-* 'to exist'. However, if this suffix derived from the verb, then we would need to explain why verbs formed with this derivational morpheme do not conjugate as *rahen* verbs as *ar-* does. Further, if verbs formed with *\*-Ar-* are the result of a verb root plus the verb *ar-*, then we would have to explain: 1) why vowel assimilation occurs here, that is, we do not find *\*yörap-* 'be dressed' for the example above, as would be expected in a verbal compound; and 2) why derivational morphemes can follow it, as inflectional morphemes are expected after a fully formed lexicalized verb, but derivational morphemes are not.

#### 2.2.5.2.3.2 The Use of *\*-Ar-* With Other Derivational Suffixes

I studied 63 examples of the morpheme *\*-Ar-*, examining which suffixes are and which are not used with *\*-Ar-*. I found one example of *\*-Ar-* being followed by the suffix *\*-Am-*,<sup>161</sup> *\*aka-i-Ar-Am-Ai-* > *akîramë-* 'brighten, clear' (MYS XVII: 3993), and two

---

161. I discuss *\*-Am-* below in Section 2.2.5.2.4.

examples of *\*-Am-* preceding *\*-Ar-*, *\*kipa-Am-Ar- > kîpamar-* 'reach limit' (RM), and *\*siNtu-Am-Ar- > siNtumar-* 'get quiet' (RM). There are three examples of *\*-Ar-Ap-*, e.g., *\*towo-Ar-Ap- > töworap-* 'swell, roll' (MYS IX: 1740). There is one example of *\*-Ar-Ak-*, *\*pipi-Ar-Ak- > pîpîrak-* 'be pungent' (Shinsenjikyō), and one of *\*-Ak-Ar-*: *\*tuna-Ak-Ar- > \*tunakar- > tuNkar-* 'tie'<sup>162</sup> (MYS IX: 1767). Finally, there are eight examples of *\*-Ar-* followed by *\*-Ai-*, e.g., *\*uma-Ar-Ai- > \*umare-* 'be born' (NR I: 18). The remaining 56 examples of *\*-Ar-* do not involve other derivational suffixes. The suffixes that *\*-Ar-* can be combined with are presented in Table 2.12.

Table 2.12: The Distribution of Intransitive Derivational Suffix *\*-Ar-*

	<i>*-As-</i>	<i>*-Am-</i>	<i>*-Ap-</i>	<i>*-Ak-</i>	<i>*-Ai-</i>
<i>*-Ar-</i>	<i>*-As-Ar-</i>	<i>*-Ar-Am-</i> <i>*-Am-Ar-</i>	<i>*-Ar-Ap-</i> <i>*-Ap-Ar-</i>	<i>*-Ar-Ak-</i> <i>*-Ak-Ar-</i>	<i>*-Ar-Ai-</i>

#### 2.2.5.2.4 The Verbalizer *\*-Am-*

##### 2.2.5.2.4.1 The Function of *\*-Am-*

The inflectional suffix *\*-Am-* is a verbalizer often added to adjective roots and sometimes to nouns to create a verb, although there are also instances where *\*-Am-* is

---

162. Cf. *tuna* [noun] 'rope' (MYS XIX: 4274).

suffixed to a root that is not otherwise attested as a noun or adjective. Below are some examples of the verbalizer \*-Am-:

* <i>ita-Am-</i>	>	<i>itam-</i>	'be sick, hurt'	Shinsenjikyō
cf. <i>ita-</i>			'hurt'	MYS XV: 3767
* <i>niku-Am-</i>	>	<i>nikum-</i>	'despise, hate'	MYS V: 804
cf. <i>niku-</i>			'hated [adj.]'	MYS I: 21
* <i>siwa-Am-</i>	>	<i>siwam-</i>	'wrinkle (v.i.)'	RM, Shinsenjikyō <sup>163</sup>
cf. <i>siwa</i>			'wrinkle [noun]'	MYS V: 804

This morpheme can also be used with other derivational morphemes:

* <i>naNku-As-Am-</i>	>	<i>naNkusam-</i>	'be at ease'	MYS VI: 963
cf. * <i>naNku-Ai-</i>	>	<i>naNki-</i>	'get still'	MYS V: 753
* <i>pîrö-Am-Ai-</i>	>	<i>pîrömë-</i>	'widen (v.t.)'	Edict 28
cf. * <i>pîrö-Ar-</i>	>	<i>pîrör-</i>	'widen (v.i.)'	KK 101
cf.		<i>pîrö-</i>	'wide [adj.]'	MYS V: 892
* <i>puka-Am-Ai-</i>	>	<i>pukamë-</i>	'deepen (v.t.)'	MYS XVIII: 4106
cf. * <i>puka-Ai-</i>	>	<i>pukë-</i>	'deepen (v.i.)' <sup>164</sup>	MYS XIX: 4163
cf.		<i>puka-</i>	'deep [adj.]'	MYS V: 813

Unger (1993: 147) claims this morpheme "indicates seemingness or attempt to achieve".<sup>165</sup> I find this definition unconvincing. First, it is not clear how he arrives at this

---

163. There are a few other attestations of this verb in WOJ texts, but they are written logographically.

164. Typically used as 'night deepens' or 'it grows late'.

165. Unger (1993) reconstructs this morpheme as \*me; the underline indicates that it does not occur in word initial position.

meaning; he lists a number of verbs that are formed with this morpheme but he does not discuss or compare them. Furthermore, the verbs created with this derivational suffix do not indicate an *attempt* to do anything – verbs like 'hate' (*nikum-*), or 'wrinkle' (*siwam-*), or 'widen' (*pîrömë-*) do not indicate that the action of the verb is attempted but not completed.

Since this morpheme most often occurs with roots that function as adjectives or nouns (i.e., *puka-* 'deep [adj.]', *siwa* 'wrinkle [noun]'), I treat it as a verbalizer, creating a verb from a non-verbal root.

#### 2.2.5.2.4.2 The Use of \*-Am- With Other Derivational Suffixes

My WOJ verbal database contains twelve examples of the derivational suffix \*-Am-. I examined how this morpheme is used with other derivational morphemes. First, I found six examples where \*-Am- is not used in conjunction with other suffixes, e.g., the three examples presented above: *\*ita-Am-* 'be sick, hurt', *\*niku-Am-* 'hate, despise', and *\*siwa-Am-* 'wrinkle (v.i.)'. Next, I found one example of this morpheme used with the transitive suffix \*-As-: *naNkusam-* < *\*naNku-As-Am-* 'be at ease' (MYS VI: 963). It is also used once with the intransitive suffix \*-Ar-: *siNtumar-* < *\*siNtu-Am-Ar-*

'get quiet' (RM).<sup>166</sup> Last, there are five examples of *\*-Am-* used with the transitivity flipper, which follows *\*-Am-* but cannot occur before it, e.g., *siNtumë- < \*siNtu-Am-Ai-* 'sink (v.t.), quiet (v.t.)' (MYS V: 813) and *pukamë- < \*puka-Am-Ai-* 'deepen (v.t.)' (MYS XVIII: 4106). The morpheme *\*-Am-* is not used with any of the other derivational suffixes. Table 2.13 shows the derivational suffixes with which *\*-Am-* is combined.

Table 2.13: The Distribution of Derivational Suffix *\*-Am-*

	<i>*-As-</i>	<i>*-Ar-</i>	<i>*-Ap-</i>	<i>*-Ak-</i>	<i>*-Ai-</i>
<i>*-Am-</i>	<i>*-As-Am-</i>	<i>*-Am-Ar-</i>	N/A	N/A <sup>167</sup>	<i>*-Am-Ai-</i>

#### 2.2.5.2.5 The Durative Suffix *\*-Ap-*

##### 2.2.5.2.5.1 The Function of *\*-Ap-*

The inflectional suffix *\*-Ap-* is added to verb roots to indicate durative aspect, as in the following examples:<sup>168</sup>

*\*pökör-Ap-* > *pököröp-* 'be proud'      MYS XVII: 4011

166. Cf. *\*siNtu-Ak-* 'sink (v.i.)' (MYS XIX: 4199). There is also the MJ adjective *siNtuka-* 'quiet' which is not attested phonetically in WOJ.

167. There is one possible example of *\*-Am-Ak-*, but it is not spelled out phonetically in WOJ.

168. Durative aspect indicates that an action continues over a period of time. I do not currently consider verbs such as *omop-* 'think, feel' (MYS XVII: 4016), *sukup-* 'save' (BK 4), or *tamap-* 'give' (MYS V: 882) as being formed with this suffix (cf. Russell [1997] and Unger [1993]), as reconstruction of this morpheme is not justified here; if WOJ had a verb *\*om-* 'think' or another verb based on the same root, then reconstructing *omop-* as coming from earlier *\*om-Ap-* would be justified, but this is not the case. There is no independent evidence for a verb root of the shape *\*om-*, thus I reconstruct pre-WOJ *\*omop-* here.

cf. * <i>pökör-</i>	>	<i>pökör-</i>	'boast'	MYS V: 892
* <i>suma-Ap-</i>	>	<i>sumap-</i>	'reside'	MYS V: 880
cf. * <i>suma-</i>	>	<i>sum-</i>	'settle'	MYS XV: 3748
* <i>tuta-Ap-</i>	>	<i>tutap-</i>	'communicate'	K II: 47
cf * <i>tuta-Ai-</i>	>	<i>tutë-</i>	'communicate'	MYS XVII: 3962

This morpheme can also be used with other derivational morphemes:

* <i>muka-Ap-Ai-</i>	>	<i>mukapë-</i>	'greet, face'	KK 88
cf. * <i>muka-Ap-</i>	>	<i>mukap-</i>	'face (v.i.)'	MYS XVII: 3988
cf. * <i>muka-Ai-</i>	>	<i>mukë-</i>	'face (v.t.)'	MYS XIX: 4191
* <i>yö-As-Ap-</i>	>	<i>yösöp-</i>	'get dressed'	K I: 33
cf. * <i>yö-Ar-Ap-</i>	>	<i>yöröp-</i>	'be dressed'	MYS I: 2

Unger (1993: 149) claims this morpheme "indicates intensive sense", though, as was the case with \*-*Am-* discussed above, Unger (1993) does not explain how he arrived at the meaning for this morpheme; there is no concrete discussion and/or comparison of verbs derived with this suffix. Further, it is not clear what Unger means by "intensive sense".

I think this morpheme, like the inflectional suffix *-ap-* (Section 2.2.5.3.3.3.1),<sup>169</sup> indicates durative aspect, that is, the resulting action of the verb lasts over a period of

---

169. As I discuss below, I treat the inflectional suffix *-ap-* as developing from the derivational suffix \*-*Ap-*.

time. Admittedly, there are only a handful of verbs formed with this suffix while the inflectional suffix is much more common, and my choice in determining the meaning of the derivational morpheme is influenced by the function of the inflectional suffix.

#### 2.2.5.2.5.2 The Use of \*-Ap- With Other Derivational Suffixes

As part of this study I considered how this suffix is, or is not, used in combination with other derivational suffixes. There are thirteen verbs formed with it in my WOJ database. Of these verbs, seven are formed with only the suffix \*-Ap-, including the examples presented above. Two are formed with \*-Ap- plus the transitive morpheme \*-As-: *kîsöp-* < \**ki-As-Ap-* 'wear layers' (MYS XVII: 3921) and *yösöp-* < \**yö-As-Ap-* 'get dressed' (K I: 33). There is one verb formed with \*-Ap- plus the intransitive suffix \*-Ar-: *yöröp-* < \**yö-Ar-Ap-* 'be dressed' (MYS I: 2), and another verb formed with both \*-Ar- and \*-Ai-: *naNkarapë-* < \**naNka-Ar-Ap-Ai-* '(rain) falls, (time) passes' (MYS XIX: 4160). Finally, there are two examples of \*-Ap- plus the transitivity flipper \*-Ai-: *maNsipë-* < \**maNsi-Ap-Ai-* 'mix (v.t.)' (MYS XVIII: 4101)<sup>170</sup> and *mukapë-*

---

170. I am not sure why this is *maNsipë-* and not \**maNsapë-*. The intransitive form of this verb is *maNsir-* < \**maNsi-Ar-* 'mix (v.i.)' (MYS V: 849). This pair, along with *wasise-* 'make run' (KK 78) and *wasir-* 'run' (K III: 17) are rare exceptions to our understanding of word formation in pre-WOJ.

< \**muka-Ap-Ai*- 'greet' (KK 88). Table 2.14 shows which suffixes \*-*Ap*- is combined with and the order in which these suffixes can be combined.

Table 2.14: The Distribution of Derivational Suffix \*-*Ap*-

	*- <i>As</i> -	*- <i>Ar</i> -	*- <i>Am</i> -	*- <i>Ak</i> -	*- <i>Ai</i> -
*- <i>Ap</i> -	*- <i>As-Ap</i> -	*- <i>Ar-Ap</i> - *- <i>Ar-Ap-Ai</i> -	N/A	N/A	*- <i>Ap-Ai</i> -

#### 2.2.5.2.6 The Derivational Suffix -*Ak*-

##### 2.2.5.2.6.1 The Function of \*-*Ak*-

There are five examples of verbs formed with the derivational suffix \*-*Ak*-, three where the suffix directly follows the verb root, and two where it is used in combination with another derivational suffix:

* <i>pîpî-Ak</i> -	>	<i>pîpîk</i> -	'be pungent'	KK 12
cf. * <i>pîpî-Ar-Ak</i> -	>	<i>pîpîrak</i> -	'pungent'	Shinsenjikyō
* <i>siNtu-Ak</i> -	>	<i>siNtuk</i> -	'sink (v.i.)'	MYS XIX: 4199
cf. * <i>siNtu-Am-Ai</i> -	>	<i>siNtumë</i> -	'sink (v.t.)'	MYS V: 813 <sup>171</sup>
* <i>uta-Ak</i> -	>	<i>utak</i> -	'roar'	KK 98
cf. * <i>uta-Ap</i> -	>	<i>utap</i> -	'sing'	K II:55

And two examples of this morpheme used with another derivational suffix:

---

171. This verb is also a transitive verb meaning 'quiet', cf. \**siNtu-Am-Ar*- > *siNtumar*- 'get quiet' (RM) and the MJ adjective *siNtuka*- 'quiet' which is not attested phonetically in WOJ.

<i>*pîpî-Ar-Ak-</i>	>	<i>pîpîrak-</i>	'pungent'	Shinsenjikyō
cf. <i>*pîpî-Ak-</i>	>	<i>pîpîk-</i>	'be pungent'	KK 12
<i>*tapa-Ak-Ai-</i>	>	<i>tapakë-</i>	'commit adultery'	Shinsenjikyō
cf. <i>*tapa-Ar-Ai-</i>	>	<i>tapare-</i>	'commit adultery'	MYS IX: 1738

Unger (1993: 146) claims this morpheme "indicates punctual or iterative action", but, as with *\*-Am-* and *\*-Ap-* discussed above, he does not explain how he came to define the function of this morpheme.<sup>172</sup> Further, these examples do not give us a clear picture of what this morpheme is. The two examples where *\*-Ak-* is used with another derivational suffix are both phonetic only in *Shinsenjikyō* and not in any earlier WOJ texts, which makes these examples questionable. The examples *utak-* 'roar' and *utap-* 'sing' are questionable on semantic grounds, one being a noise made by animals and the other intentional singing by people.<sup>173</sup> The first example, *pîpîk-* 'be pungent', can only be reconstructed if *pîpîrak-* 'pungent' can be reconstructed. This leaves us with the final example of *siNtuk-* 'sink (v.i.)'. I do not feel that the data are sufficient to justify the reconstruction of the morpheme *\*-Ak-*, let alone help to define its meaning. For the

---

172. Unger (1993) reconstructs this morpheme as *\*ke*. Both Russell (1997) and Unger (1993) have more examples of verbs derived with this suffix. However, most were rejected from the present study because either the verbs were not attested phonetically in WOJ, or the reconstruction of this suffix was not supported by the data.

173. Russell (1997) and Unger (1993) also reconstructed *utapë-* 'appeal' as being derived from the same verbal root (which Unger reconstructed as *\*ruta-* and Russell as *\*uta*), though, I now reject this on semantic grounds, and because *utapë-* is not phonetically attested in WOJ.

purpose of reconstructing pre-WOJ, I will call *\*-Ak-* a verbalizer, and see if external data can shed light on its existence (see Section 4.4.3.8).

#### 2.2.5.2.6.2 The Use of *\*-Ak-* With Other Derivational Suffixes

As presented in the examples above, and shown in Table 2.15, this suffix can be used with *\*-Ar-* and *\*-Ai-*.

Table 2.15: The Distribution of Intransitive Derivational Suffix *\*-Ak-*

	<i>*-As-</i>	<i>*-Ar-</i>	<i>*-Am-</i>	<i>*-Ap-</i>	<i>*-Ai-</i>
<i>*-Ak-</i>	N/A	<i>*-Ar-Ak-</i>	N/A <sup>174</sup>	N/A	<i>*-Ak-Ai-</i>

#### 2.2.5.2.7 The Transitivity Flipper *\*-Ai-*

##### 2.2.5.2.7.1 The Function of *\*-Ai-*

The inflectional suffix *\*-Ai-* is often called a "transitivity flipper" as it is said to change the transitive or intransitive nature of a root: if a root is transitive, then the resulting verb is intransitive, if the root is intransitive then affixation of this suffix creates a transitive verb. However, there are also cases of verbal word formation where the transitivity flipper is used but a change in transitivity is not evident. Note the following examples, which I discuss further below:

---

174. There is one possible example of *\*-Am-Ak-*, but it is not attested phonetically in WOJ.

Use of \*-Ai- showing a change in transitivity

*ata-Ai-	>	ate-	'strike (v.t.), hit (v.t.)'	KK 76
cf. *ata-Ar-	>	atar-	'strike (v.i.), touch (v.i.)'	KK 76
*ap-Ai-	>	apë-	'join (v.t.)'	MYS XIX: 4189
cf. *ap-	>	ap-	'join (v.i.)'	MYS XVIII: 4106
*ara-Ai-	>	are-	'be wasted (a field)'	MYS I: 194
cf. *ara-As-	>	aras-	'destroy, waste (v.t.)'	MYS XX: 4477 <sup>175</sup>
cf.	>	arasi-	'wild (adj.)'	MYS XV: 3688

Use of \*-Ai- showing no change in transitivity

*aka-Ai-	>	akë-	'dawn, (sky) reddens'	MYS XV: 3662
cf. *aka-As-	>	akas-	'brighten (v.t.)'	MYS XV: 3648
cf. *aka-Ar-	>	akar-	'brighten (v.i.)'	MYS XIX: 4266
cf.		aka	'red [adj.]'	MYS V: 892 <sup>176</sup>
*uma-Ar-Ai-	>	umare-	'be born'	NR I: 18
cf. *uma-	>	um-	'give birth'	K I: 2
*wasi-As-Ai-	>	wasise-	'make run'	KK 78
cf. *wasi-Ar-	>	wasir-	'run'	K III: 17 <sup>177</sup>

First, looking at the verbs where the transitivity flipper appears to have no effect on transitivity, we have verbs like *umare-* where intransitivity is marked by the suffix \*-Ar- (Section 2.2.5.2.3), and suffixation of \*-Ai- does not have any clear function. Similarly,

---

175. This poem is in Book XX of the *Man'yōshū*, but it is written in WOJ and not EOJ.

176. The verbs presented here are based on the adjective *aka* 'red' and have the meaning of 'brighten' or 'redden', and are also used metaphorically to mean "spend the night together until the sky reddens (at dawn)."

177. As discussed above this verb pair does not form as expected.

for *wasise-*, the transitive or causative nature of the verb is already determined by the suffix *\*-As-* and the function of *\*-Ai-* here is unclear. In the first example, *akë-*, it is unclear what role this morpheme plays, as there is a transitive verb formed by the same root plus the transitive suffix (*\*aka-As-* > *akas-*) and a related intransitive verb also exists (*\*aka-Ar-* > *akar-*).

Further, an examination of transitive/intransitive verb pairs in WOJ shows that these pairs are formed through affixation of different derivational morphemes, as shown below:<sup>178</sup>

<u>Transitive formed with *-As-</u>		<u>Intransitive formed with *-Ar-</u>	
<i>*kaku-As-</i>	>	<i>kakus-</i>	'hide (v.t.) MYS I: 18
<i>*kaku-Ar-</i>	>	<i>kakur-</i>	'be hidden' KK 3
.			
<u>Transitive formed with *-As-</u>		<u>Intransitive formed with *-Ai-</u>	
<i>*opo-As-</i>	>	<i>opos-</i>	'cultivate' MYS XVIII: 4113
<i>*opo-Ai-</i>	>	<i>opi-</i>	'grow (v.i.)' MYS V: 804
.			
<u>Transitive formed with *-As-</u>		<u>Intransitive equals verb root</u>	
<i>*tir-As-</i>	>	<i>tiras-</i>	'scatter (v.t.)' MYS XVIII: 4043
<i>*tir-</i>	>	<i>tir-</i>	'scatter (v.i.)' MYS V: 822
.			
<u>Transitive equals verb root</u>		<u>Intransitive formed with *-Ar-</u>	
<i>*mak-Ar-</i>	>	<i>makar-</i>	'retreat (v.i.)' MYS XV: 3725
<i>*mak-</i>	>	<i>mak-</i>	'retreat (v.t.)' KK 3

---

178. In the interest of space, I am only presenting one example of each. There are, however, many examples of each.

Transitive formed with *-Ai-		Intransitive formed with *-Ar-	
*kömö-Ar-	>	kömor-	'insert (v.i.)' MYS XIX: 4283
*kömö-Ai-	>	kömi- <sup>179</sup>	'insert (v.t.)' K II: 45

To date no study has been conducted explaining why there are this many ways to form transitive and intransitive verb pairs. Such a study will be left for further research.

For the purposes of this study, I will follow the tradition in the field and call this morpheme a "transitivity flipper" though I am no longer sure what relationship this suffix has to transitivity or intransitivity.<sup>180</sup>

#### 2.2.5.2.7.2 The Use of \*-Ai- With Other Derivational Suffixes

The transitivity flipper can follow all other WOJ derivational suffixes, as shown in

Table 2.16. This morpheme can also attach directly to the verb root.

Table 2.16: The Distribution of Intransitive Derivational Suffix \*-Ai-

	*-As-	*-Ar-	*-Am-	*-Ap-	*-Ak-
*-Ak-	*-As-Ai-	*-Ar-Ai-	*-Am-Ai-	*-Ap-Ai-	*-Ak-Ai-

179. The form *kömë-* is also attested (MYS XVII: 3998); it is unclear why this doublet exists.

180. Russell (1997) reconstructs both *\*Ci<sub>1</sub>* 'transitivity flipper' and *\*Ci<sub>2</sub>* 'verbalizer' for the cases where transitivity is not a factor; I am not sure this is an adequate solution, and now reconstruct all cases of this morpheme as *\*-Ai-*. Hopefully, future studies can further clarify the function of this morpheme.

### 2.2.5.2.8 Summary

Table 2.17 presents the suffixes as reconstructed in the present study, the meanings based on Unger (1993) for the reader's convenience, and the revised meanings for these morphemes as discussed above.

Table 2.17: The Function of pre-WOJ Derivational Morphemes

<b>Suffixes</b>	<b>Meanings (based on Unger 1993)</b>	<b>Meanings (present study)</b>
*-As-	to do; cause (object) to do (preceding root)	transitive, causative
*-Ar-	indicates spontaneous action, endo-activity	intransitive
*-Am-	indicates seemingness or attempt to achieve	verbalizes adjective or noun roots
*-Ap-	indicates intensive sense	iterative or durative
*-Ak-	indicates punctual or iterative action	verbalizer <sup>181</sup>
*-Ai-	changes endo-active verbs into exo-active and vice versa (i.e., a transitivity switcher)	1) transitivity flipper; 2) verbalizer of unclear meaning

### 2.2.5.3 Inflectional Morphemes

In addition to derivational morphemes, WOJ also has a number of inflectional morphemes, which I discuss below in the following order: prefixes and preverbs (Section 2.2.5.3.1), the circumfix (Section 2.2.5.3.2), and suffixes (Section 2.2.5.3.3).

---

181. As discussed above the status of this morpheme is in question.

### 2.2.5.3.1 Verbal Prefixes and Preverbs

I make the following distinction between prefixes and preverbs: prefixes are simple bound morphemes while preverbs are a special class of prefixes which are derived from a full verb. I discuss the prefixes *i-* 'goal', *sa-* 'be in such a way', and *ta-* 'EMPH' in section 2.2.5.3.1.1 and the preverbs *apî-* 'REC', *ari-* 'ITER', *kakî-* 'EMPH', and *uti-* '[indicates an action done impulsively]' in Section 2.2.5.3.1.2.

#### 2.2.5.3.1.1 Verbal Prefixes

2.2.5.3.1.1.1 The Prefix *i-* The function of the prefix *i-* is unclear, and scholars of WOJ have left it undefined. For example, Omodaka et al (1967: 65) and Yamada (1954: 530) simply say that *i-* is a prefix which attaches only to verbs. In order to determine the function of this prefix, I compiled a list of verbs which occur with this morpheme. What I found was that almost all occurrences of *i-* are in combination with a verb of movement, including intransitive verbs of motion (i.e., go, come, return) or transitive verbs which involve movement of a person or item from one place to another (i.e., take, follow). The verbs that *i-* occurs with are presented below:

### ***i-* + intransitive verbs of movement**

<i>i-kapêr-</i>	'return'	(KK 86)
<i>i-pap-</i>	'crawl'	(KK 13, MYS II: 199, MYS III: 239)
<i>i-pate-</i>	'(boats) stop'	(MYS XVIII: 4122) <sup>182</sup>
<i>i-puk-</i>	'blow'	(MYS II: 199)
<i>i-sik-</i>	'arrive (at)'	(KK 59) <sup>183</sup>
<i>i-tumor-</i>	'pile up'	(MYS I: 17) <sup>184</sup>
<i>i-yuk-</i>	'go'	(KK 14, KK 22, <sup>185</sup> MYS III: 319, NSK 13)
<i>i-yör-</i>	'pass'	(KK 104) <sup>186</sup>

### ***i-* + transitive verbs of motion**

<i>i-köNs(i)-</i> <sup>187</sup>	'dig up (roots)'	(MYS VIII: 1423)
<i>i-kum-</i>	'gather'	(KK 91) <sup>188</sup>
<i>i-mak-</i>	'roll, embrace'	(MYS II: 199)
<i>i-sôp-</i>	'accompany'	(KK 42)
<i>i-taNtôr-</i>	'follow'	(MYS V: 804)
<i>i-tör-</i>	'grasp'	(KK 51, MYS V: 804)
<i>i-tôr-</i>	'hold'	(MYS V: 813)
<i>i-tuNk-</i>	'follow'	(MYS X: 2145) <sup>189</sup>
<i>i-tuNkar-</i>	'tie together'	(MYS IX: 1767)
<i>i-watar-as-</i>	'make cross'	(MYS X: 2081, MYS XVIII: 4126)
<i>i-watas-</i>	'cross (v.t.)'	(MYS IX: 1742)

- 
182. This example is *i-pat-uru maNte ni* 'to the point where the boat stops'; movement and direction are implied in the text.
183. The verb *sik-* appears four times in this poem with the prefix *i-* all four times.
184. This example is *i-tumor-u maNte ni* 'to the point where it is piled up'. The fact that *maNte ni* is used here makes me think that it might be fitting to include 'pile up' as a verb of motion, since *maNte ni* is typically used with verbs of motion.
185. The verb *yuk-* appears twice in this poem with the prefix *i-*.
186. The verb *yör-* appears twice in this poem with the prefix *i-*.
187. This verb is only attested in its infinitive form; it is not possible to tell whether the stem is *köNs-* or *köNsi* (< \**köNsî*).
188. The verb *kum-* appears three times in this poem with the prefix *i-*.
189. The verb *tuNk-* appears twice in this poem with the prefix *i-*.

***i-* + other verbs**

<i>i-kakur-</i>	'be hidden'	(KK 99, MYS I: 17)
<i>i-kîr-</i>	'cut'	(KK 51) <sup>190</sup>
<i>i-sitap-</i>	'yearn'	(KK 2, KK 3)
<i>i-tukus-</i>	'use up'	(MYS XVIII: 4122)

The examples show that *i-* is used to indicate a goal or a movement towards a particular place. Even the examples where a verb of motion is not used seem to indicate this; the emphasis is on the direction of the action:<sup>191</sup>

伊由岐麻毛良比

*i-yuk-î mamôr-ap-î*

PREF-go-INF-protect-DUR-INF

Go there and protect...

(KK 14)

伊岐良牟登 許許呂波母閑杼 伊斗良牟登

許許呂波母閑杼

*i-kîr-am-u tö kökôrö pa möp-ë-Ntö i-tör-am-u tö kökôrö pa möp-ë-Ntö*<sup>192</sup>

PREF-cut-TENT-FIN DV heart TOP feel-EVD-CONC

PREF-grasp-TENT-FIN DV heart TOP feel-EVD-CONC

Although my heart thought I should cut [down the tree on the bank of Udi], although my heart felt I should grasp [it]...

(KK 51)

---

190. The verb *kîr-* appears twice in this poem with the prefix *i-*.

191. In an independent study, Hino Sukenari reached similar conclusions about *i-* in an unpublished paper (p.c. Alexander Vovin).

192. Here *pa möp-* 'TOP think/feel' is a contraction of *pa omöp-*.

Following the discussion presented above, I treat *i-* as a focus marker indicating the goal of the predicate.

2.2.5.3.1.1.2 The Prefix sa-. Like *i-*, the prefix *sa-* is typically left undefined.

Vovin (2005: 82-90) claims that *sa-* is a locative that marks nouns and noun phrases, as in the example below:

多爾具久能佐和多流伎波美  
tani-N-kuku n-ö sa-watar-u kîpam-î  
valley-GEN-toads DV-ATT PREF-cross-ATT limit-NML  
...the end [of the country], where the valley toads cross.  
(MYS V: 800)

Thus, according to Vovin's analysis, it is not *watar-* that is being marked by *sa-* but that *sa-* is affixed to the noun phrase *watar-u kîpam-î*.

There are also examples where *sa-* is used where it appears to be affixed to a verb and not a nominalized form of a verb, or a noun phrase. However, as Vovin (2005: 83) notes, this may indicate a second morpheme *sa-* since prefixes in WOJ typically affix to verbs or to nouns and nominalized forms of verbs, but not to both verbs (i.e., verb forms which are not nominalized) and nouns.

宇流波斯登 佐泥斯佐泥弓婆

urupa-si tö sa-ne s-i sa-ne-t-e-Npa

beautiful-FIN DV<sup>193</sup> PREF-sleep/NML do-INF

PREF-sleep-PERF-EVD-CONJ

Thinking that [she] was beautiful, while [we] slept [together] and  
[we] slept [together]

(KK 80)<sup>194</sup>

佐泥牟登波 阿禮波意母閑杼

sa-ne-m-u tö pa are pa omöp-ë-Ntö

PREF-sleep-TENT-FIN DV TOP I TOP long-EVD-CONC

Although I long for [her] thinking [we] would sleep [together].

(KK 27)<sup>195</sup>

春鳥之 佐麻欲比奴礼者

PARUTÖRI-NÖ sa-mayôp-î-n-ure-Npa

spring bird-NOM PREF-confuse-INF-PERF-EVD-CONJ

Since the spring birds were confused...

(MYS II: 199)

There are two occurrences of the prefix *sa-* in the first example. The first occurrence, *sa-ne*, is an example of this prefix used with a noun; *ne* in this example is a nominalized form of the verb 'sleep'.<sup>196</sup> The second occurrence shows *sa-* affixed to a verb. The line *sa-ne-t-e-Npa* can be analyzed as either the prefix *sa-* affixing to the verb,

---

193. Here *tö* is used to mean 'thinking that...'

194. The line *sa-ne-si sa-ne-t-e-Npa* appears twice in this poem.

195. This example appears in Vovin (2003: 237) under his treatment of the pronoun *are* 'I'. I have modified the example to be consistent with the romanization and grammatical analyses used in the present study.

196. This would be analyzed as *ne* < *ne-î* 'sleep-NML'. This nominalizer is discussed below (Section 2.2.5.3.3.9.2).

*ne-*, or to the verb phrase, *ne-t-e-Npa*; we need a better understanding of the function of this morpheme in order to determine if its scope is at the verb level or at the verb phrase level. Either way, *sa-* is used here to affix to a noun in one instance and a verb in another, and its function in both occurrences appears to be the same, indicating that this morpheme can affix to nouns, nominalized forms of verbs, and verb phrases, even though this is atypical for WOJ affixes.

The next issue is to determine the function of this morpheme. As stated above, Vovin (2003: 82-90) claims that this function is a locative marker, however, there are examples which do not state or imply a location. In order to further our understanding of the function of this morpheme, I have compiled examples of *sa-* being used with both nouns and verbs, some which were presented in Vovin (2003: 82-90) and others which were not included in his study.<sup>197</sup>

I divided the examples of *sa-* into groups where location is specified or implied and where it is not. I further divided the first group into three groups: 1) nouns and nominalized verbs followed by the locative particle *ni*; 2) examples where *sa-* marked a location word (i.e., *tökö* 'place' NSK 4); and 3) examples where *sa-* marks a relative

---

197. The examples not included in Vovin (2003) are: KK 27 (*sa-* occurs twice in this poem), KK 80 (*sa-* occurs twice in this poem), MYS II: 199, MYS V: 804 (*sa-* occurs twice in this poem, one example is in Vovin (2003) the other is not), MYS XVII: 4011, MYS XIX: 4148.

clause modifying either a location word or a noun followed by a locative particle. The second group, those examples of *sa-* which do not specify or imply a location, was also subdivided into three groups: 1) examples of *sa-* affixing to a noun or nominalized verb; 2) examples of *sa-* affixing to a verb in a relative clause; and 3) examples where *sa-* prefixes to a verb not used in a relative clause. The results are presented in Table 2.18 below.<sup>198</sup>

---

198. Some poems, e.g., *Kojiki kayō* 2 and *Kojiki kayō* 80, occur more than once in the table because there is more than one occurrence of *sa-* in the poem. In *Kojiki kayō* 80 the line *sa-ne s-i sa-ne-t-e-Npa* is repeated in the poem (as stated above), but I count this as two occurrences of *sa-* and not four.

Table 2.18: Functions of the WOJ Prefix *sa-*

Location is stated or implied	affixes to a noun or nominalized verb followed by the locative <i>ni</i>	KK 2, KK 2, KK 89, MYS XII: 3097	4 examples
	affixes to a noun denoting location	KK 23, NSK 4	2 examples
	affixes to a verb in a relative clause modifying a noun that either denotes location or is marked by a locative particle	MYS V: 800, MYS V: 859, MYS XV: 3735 <sup>199</sup>	3 examples (1 marked with a locative particle)
No Location is stated or implied	affixes to a noun or nominalized verb	KK 80, MYS II: 105, <sup>200</sup> MYS VIII: 1530, MYS XII: 2866, MYS XV: 3627	5 examples
	affixes to a verb in a relative clause modifying a noun	KK 27, MYS V: 804, MYS V: 804, MYS XV: 3760, MYS XVII: 4011, MYS XIX: 4148	6 examples
	affixes to a verb which is not used to modify a noun	KK 27, KK 80, MYS II: 199	3 examples

As shown in this table, there are nine examples of *sa-* used in an expression where a location is specified or implied, and fourteen examples where it is not. Of the nine examples involving a location, five examples use the locative particle *ni*. If *sa-* is a locative particle as Vovin (2003) claims, why would the locative particle *ni* also be needed? It is, of course, possible that "double" case marking occurs, but why only in so

---

199. The noun modified by the relative clause in *Manyōshū* XV: 3735 is followed by a locative particle. The other two poems have a noun that indicates a place.

200. My interpretation of this poem differs from Vovin (2003: 84). *Manyōshū* II: 105 reads: 佐夜深而 *sa-YŌ* PUKĒ-TE 'PREF-night deepen/INF-GER' which Vovin translates as "when the night deepens (lit. when it becomes deep in the night)." I agree with the original translation but do not agree with his literal interpretation; "the night deepens and..." is a more exact translation of this line. The same line is found in *Man'yōshū* XV: 3627.

few cases – why is only *ni* used in the vast majority of cases where a locative is indicated and not both *sa-* and *ni*? Further, considering that most of the examples of *sa-* do not even indicate a locative, I am not convinced that this prefix is a locative marker.

Vovin (2003: 87) presents two examples where *sa-* is not the locative prefix, but is a quality verb 'be so, be in such a way, thus':<sup>201</sup>

情佐麻祢之  
KÖKÖRÖ sa-mane-si  
thought so many-FIN  
So many [sad] thoughts  
(MYS I: 82)

比等里佐奴礼婆  
pîtö-ri sa-n-ure-Npa  
one-CL thus-sleep-EVD-COND  
When I thus sleep alone  
(MYS XV: 3626)

The question is, why not treat all examples of this prefix as the defective quality verb? I have reanalyzed the examples presented above, treating the prefix as the quality verb to see if this is a semantically plausible option:

---

201. Vovin (2003: 87) actually presents three examples, two of which support his claim that *sa-* is the quality verb. In the third example, he treats *sa* as a vocative "so": *sa yamaNta n-ö woNti-Nka* so Yamada COP-ATT old man-NOM 'So, Yamada, being an old man'. Vovin (2003: 87) analyzes *sa* as a free form, while I treat it as a bound form.

佐泥牟登波 阿禮波意母閑杼

sa-ne-m-u tö pa are pa omöp-ë-Ntö

PREF-sleep-TENT-FIN DV TOP I TOP long-EVD-CONC

Although I long to sleep that way [with you]

(KK 27)

宇流波斯登 佐泥斯佐泥弓婆

urupa-si tö sa-ne s-i sa-ne-t-e-Npa

beautiful-FIN DV PREF-sleep/NML do-INF

PREF-sleep-PERF-EVD-CONJ

Thinking that [she] was beautiful, while [we] slept this way and

[we] slept this way.<sup>202</sup>

(KK 80)

佐夜深而 sa-YÖ PUKË-TE

PREF-night deepen/INF-GER

In this way the night deepens and...

(MYS II: 105)

春鳥之 佐麻欲比奴礼者

PARUTÖRI-NÖ sa-mayôp-î-n-ure-Npa

spring bird-NOM PREF-confuse-INF-PERF-EVD-CONJ

Since the spring birds were confused in such a way...

(MYS II: 199)

多爾具久能佐和多流伎波美

tani-N-kuku n-ö sa-watar-u kîpam-î

valley-GEN-toads DV-ATT PREF-cross-ATT limit-NML

...the end [of the country], where the valley toads cross in

this way.

(MYS V: 800)

---

202. Or, perhaps, 'we slept this way and we slept that way'.

The examples above show that interpreting the prefix *sa-* as a form of the defective verb *sa-* is possible. This analysis is also more convincing than analyzing it as a locative, since many examples involving this morpheme do not involve a location or goal.

Although (Vovin 2003: 87) treats this as a full verb, I treat it as a bound form which affixes to both nouns and verbs. One reason for treating it as a bound form is that this morpheme does not otherwise occur with verbal or adjectival suffixes. This, however, is a weak argument: does it not occur with suffixes because it is a bound prefix, or because it is a free form that does not acquire suffixes? Omodaka et al. (1967: 317) claim that *sa-* occurs in its gerund form as *sate*, but the only examples of *sate* are semantic not phonetic, so we cannot be certain how this form was pronounced in WOJ.<sup>203</sup> Realistically, there are no reliable tests to determine if *sa-* is a bound or free form. We do know that other prefixes, adverbs, and/or adjectives do not occur between *sa-* and a noun or verb, and in that case it appears that *sa-* affixes to these forms. For the purpose of this study I treat WOJ *sa-* 'be so, this way, thus' as a prefix attaching to nouns and verbs.

---

203. The form *sate* 'be this way' is attested in MJ, and although it is quite likely that it was pronounced *sate* in WOJ as well, we cannot prove the correct pronunciation of this word without an attested phonetic spelling.

2.2.5.3.1.1.3 The Prefix ta- The prefix *ta-* in WOJ can affix to nouns, adjectives, and nominalized forms of verbs. Omodaka (1967: 408) and Yamada (1954: 534) present examples of this prefix, but do not discuss its function other than to say that it affixes to nominalized forms of verbs. Because of the limited number of examples, it is difficult to determine the meaning of this prefix, and I treat it as an emphatic, as shown below:<sup>204</sup>

麻佐吉久毛 安里多母等保利  
 ma-sakî-ku mô ari-ta-mötöpor-i  
 PREF-safe-INF PART ITER-PREF-wander around-NML  
 [I pray you] keep wandering around safely.  
 (MYS XVII: 4008)

霜上爾 安良礼多婆之里  
 SIMO-NÖ UPË-ni arare ta-pasir-i  
 frost-GEN above-LOC hail PREF-run-NML  
 Hail is falling on the frost.  
 (MYS XX: 4298)<sup>205</sup>

### 2.2.5.3.1.2 Preverbs

2.2.5.3.1.2.1 The Preverb apî- The preverb *apî-* indicates a reciprocal action (Omodaka et al., 1967: 36). Historically, this form is presumably derived from *ap-* 'meet' plus *-i* 'INF', but has been reanalyzed as a single unit: *apî-*. Note that analyzing this as

---

204. Examples modified from Yamada (1954: 534).

205. This poem is a WOJ poem in Book XX of the *Man'yōshū*.

*ap-î* in WOJ would lead us to translate it as 'meet and ...', which would not fit the context. See the following examples:

阿比麻久良麻久  
apî-makuramak-u  
REC-pillow-FIN  
[We] pillowed each other  
(KK 45)

阿比淤母波受阿良牟  
apî-omöp-aNs-u-ar-am-u  
REC-love-NEG-INF-exist-TENT-ATT  
It is probably [the case] that [they] do not love each other.  
(KK 60)

2.2.5.3.1.2.2 The Preverb *ari-*. Omodaka et al. (1967: 57) claim that the preverb *ari-* is prefixed to verbs to indicate that an action is repeated or done constantly. However, looking at the examples of this preverb, it appears that it only indicates the iterative aspect.<sup>206</sup> It is possible to interpret this as *ar-* 'exist' + *-i* INF, and this may be historically accurate, however, at the time of WOJ, *ari-* is a single unit, with a function independent from the verb *ar-* 'exist'. If we analyze this as WOJ *ar-i-* then its expected meaning would be '[something] exists and ...', yet the form denotes a repeated action, as in the following examples:

---

206. Iterative aspect indicates that an action is repeated, cf., English *re-* as in reread, redo, rewrite.

**阿理多多斯**

ari-tat-as-i

ITER-set out-HON-INF

[he] kept setting out and...

(KK 2)

**阿理加用婆勢**

ari-kayôp-ase<sup>207</sup>

ITER-go back and forth-HON

[he] kept going back and forth

(KK 2)

**安里我欲比**

ari-kayôp-î

ITER-go back and forth-INF

[I will] keep going back and forth

(MYS XVII: 3907)

2.2.5.3.1.2.3 The Preverb kakî-. The meaning of this preverb is not entirely clear, and is typically described as having an emphatic function, highlighting the action of the verb. Omodaka et al. (1967: 176) claim that it often attaches to verbs where the action is done with the finger tips. However, the data do not support this claim. The prefix is attested with the following verbs:<sup>208</sup>

---

207. The text may indicate either *kayôp-* or *kayôNp-* here, with the prenasalized /Np/ indicated by the character 婆 /Npa/. However, the writing system in *Kojiki* often confuses /Np/ and /p/, and since this word is spelled with a voiceless /p/ elsewhere (e.g., in the following example), I assume the "correct" spelling is *kayôp-* and the spelling here is an example of /Np/ and /p/ being confused in the *Kojiki*.

208. The prefix is attested with these verbs only once, however in the interest of space I am only presenting one textual source for each.

verbs where action is done with fingers

<i>kakî-kaNsôp-</i>	EMPH-count	(MYS VIII: 1537) <sup>209</sup>
<i>kakî-pîk-</i>	EMPH-pluck	(NSK 4)

verbs where action is not done with fingers

<i>kakî-kar-</i>	EMPH-mow, cut	K III: 36 <sup>210</sup>
<i>kakî-kiras-</i>	EMPH-fog	MYS VIII: 1537
<i>kakî-mi-</i>	EMPH-go around	KK 5
<i>kakî-tuk-</i>	EMPH-arrive	KK 95

As these examples show, there are two verbs that are used with the prefix that involve the fingers and four that do not. Further, it does not appear to be possible to categorize them as belonging to any particular class of verbs.

Historically this preverb may be from the infinitive form of *kak-* 'scratch, write' and *-î* 'INF', but as described with *apî-* and *ari-* above, this is treated as a single unit: *kakî-*. I treat this as a preverb emphasizing the action of the verb, as shown in the examples below:

加岐微流 伊蘇能佐岐淤知受

*kakî-mi-ru isô n-ö sakî oti-Ns-u*

EMPH-go around-ATT rock COP-ATT shore fall-NEG-FIN

[You] do not fall on the rocky shores that [you] go around.

(KK 5)

---

209. The text here specifically says to "count on bended fingers."

210. This example uses hands and a cutting tool, but not just fingers.

多古牟良爾 阿牟加岐都岐  
ta-kômura-ni amu kakî-tuk-î  
hand-flesh-LOC horse fly EMPH-arrive-INF  
A horse fly landed on his hand and...  
(KK 97)

2.2.5.3.1.2.4 The Preverb uti- The preverb *uti-* is often associated with the verb *ut-* 'hit, strike' because when it is written logographically it is represented with the character 打 'hit, strike'. However, it is not clear whether *uti-* is derived from the verb *ut-* or whether the usage of this character 打 is an example of a *kungana* phonogram, where the character was selected for its Japanese pronunciation (i.e., the infinitive form of the WOJ word to strike: *uti-*) but used to represent a homophone (i.e., the prefix *uti-*).<sup>211</sup> At this time I am not prepared to argue for one possibility over the other, and for the time being will adopt the traditional analysis, that *uti-* is a preverb derived from the verb *ut-*.

The function of this preverb is not entirely clear; many WOJ grammars leave it undefined.<sup>212</sup> Omodaka et al (1967: 119) claim that *uti-* is undoubtedly from the verb *ut-*, and the preverb has some meanings that are associated with the verb and others that are unrelated. Among the unrelated meanings are "a little, temporarily, lightly, and

---

211. *Kungana* phonograms are discussed above in Section 2.2.3.2.2.

212. For MJ, Vovin (2003: 192-194), following Ikeda (1975: 258), defines *uti-* as meaning either lightness or completeness, and presents MJ examples of both meanings.

continuously" (Omodaka et al, 1967: 119). Ōno et al (1994: 166-167) give the meanings of *uti-* as "quickly, casually, thoughtlessly or impulsively, suddenly". I tend to lean towards Omodaka's interpretations for WOJ, since the focus of Omodaka et al (1967) is OJ (both WOJ and EOJ), while Ōno et al (1994) include examples from all stages of Japanese prior to Modern Japanese (MdJ). However, my impression from the examples of this preverb in WOJ is that it is, in fact, typically used to express actions that are completed instantly or thoughtlessly, as Ōno et al (1994) suggests.

許能登理母 宇知夜米許世泥

kō n-ō tōri mō uti-yamē-kōse-n-e

this COP-ATT bird PART PREV-quit-DES-DES-IMP

I wish [you would make] those birds would stop [singing] at once.

(KK 2)

宇知微流 斯麻能佐岐邪岐

uti-mī-ru sima-nō sakî-N-sakî

PREV-go around-ATT island-GEN shore-LOC-shore

The shores of the island which [you] suddenly went around.

(KK 5)

#### 2.2.5.3.2 The Verbal Circumfix

WOJ has one verbal circumfix: *na...sō* 'do not do...', a negative imperative. The circumfix surrounds the infinitive form of verbs, except for the verb *se-* 'do' where it

surrounds the stem (i.e., *nasesö*). It is possible to analyze *na-* as a negative prefix and *sö* from one of the stems of the verb 'do' used here as an imperative.<sup>213</sup>

伊能知波 那志勢婆多麻比會

inöti pa na-si-se-tamap-î-sö

life TOP NEG-die-CAUS-HON-INF-IMP

Please do not end [your] life [with desire].

(KK 3)

半也久奈知利會

paya-ku na-tir-i-sö

fast-INF NEG-scatter-INF-IMP

Please do not scatter quickly.<sup>214</sup>

(MYS V: 849)

### 2.2.5.3.3 Verbal Suffixes and Auxiliaries

WOJ has both verbal suffixes and auxiliaries which follow verb stems and/or other suffixes or auxiliaries. The verb stem cannot be used on its own; it must be followed by at least one suffix or auxiliary.

The distinction I make between suffixes and auxiliaries is that suffixes attach directly to the verb stem or to another verbal suffix while auxiliaries follow the infinitive

---

213. The verb 'do' is analyzed as having two stems, i.e., *sö-* and *se-*, which account for the irregular paradigm with this verb. The stem *se-* comes from *\*sö-Ai-*.

214. The speaker is asking the flowers not to fall and scatter to the ground too soon.

-î. It is possible to have a string of suffixes and/or auxiliaries attached to a verb stem, in which case there is a set ordering of morphemes.<sup>215</sup>

Bentley (2001) and Vovin (2003) discuss verbal suffixes in terms of sentence final and non-sentence final suffixes. My treatment, on the other hand, divides the verbal suffixes and auxiliaries into groups (i.e., Group I, Group II, etc.) depending on the order in which they can occur in a verbal string; e.g., Group II morphemes may not precede Group I morphemes. My analysis for WOJ consists of seven groups, plus the infinitive -î. The infinitive is not treated as a member of any group because it is the only morpheme which can occur more than once in a verbal string; its order is not fixed like the other morphemes.

The suffixes in Group VII and the infinitive -î are the only suffixes that can appear in the final position of a verb string. Group VII morphemes can also affix to each other, i.e., a Group VII morpheme can end a verb string or be followed by another Group VII morpheme. For example, the evidential suffix -ë/-ure (Section 2.2.5.3.3.8.14) can occur in the final position of a verb string or be followed by either the conjunctive suffix -*Npa*

---

215. I return to the significance of morpheme ordering in Chapter 4, where I discuss morpheme ordering as a test to determine whether a morpheme found in more than one Japonic language is in the language as the result of a shared ancestor or whether it was borrowed from one language or dialect into another. As I discuss below, morphemes that derive from a common source have similar distribution in terms of verbal string ordering, while morphemes that are borrowed have a more limited distribution.

(Section 2.2.5.3.3.8.7) or the concessive suffix *-Ntö* (Section 2.2.5.3.3.8.8). With the other groups, however, only one morpheme from each group is allowed. Further, the verb root or the morphemes in Groups I-VI, *must* be followed by either the infinitive *-î* or one of the Group VII suffixes. Table 2.19 shows the groups, restrictions on ordering, and classification for morphemes within each group.

Table 2.19: Classification of WOJ Morphemes Based on Verbal String Ordering

	Ordering	Categories
infinitive -î	suffixes to verb stems, auxiliaries, and suffixes; can occur in the final position of a verb string; can be followed by a verb or auxiliary <sup>216</sup>	infinitive -î
Group I	follows infinitive -î in the pattern verb stem-INF-Group I auxiliary	honorific auxiliaries
Group II	suffixes to the verb stem or a Group I auxiliary; cannot follow the infinitive	durative, causative, honorific, and passive suffixes.
Group III	follows the verb root or Group I or II morphemes; must follow infinitive -î	perfective and progressive auxiliaries
Group IV	follows the verb root or Group I, II or III morphemes; must follow infinitive -î	past auxiliaries
Group V	suffixes to the verb root or Group I-IV morphemes; cannot follow the infinitive	suffixes of negation
Group VI	suffixes to the verb root or Group I-V morphemes; cannot follow the infinitive	suffixes of mood
Group VII	suffixes to the verb root or any Group I-VI morpheme; some Group VII morphemes can be followed by other Group VII morphemes	clause and sentence final morphemes

The verbal suffixes and auxiliaries are presented below according to this grouping.

---

216. The infinitive can also function to connect to verbs. In this case I analyze the verb string as suffixes and auxiliaries that follow the second member of the verbal compound; the second verb is not counted as filling a position in the verbal string.

### 2.2.5.3.3.1 The Infinitive -î

The first morpheme I discuss is infinitive -î. When the infinitive -î follows verb stems or suffixes that end in a consonant we get the following:

stem-suffix		neutralization <sup>217</sup>	
<i>yuk-î</i>	> <i>yukî</i>		'go and...'
<i>ar-î</i>	> * <i>arî</i>	> <i>ari</i>	'exist and...'
<i>sin-î</i>	> * <i>sinî</i>	> <i>sini</i>	'die and...'
<i>-as-î</i>	> * <i>-asî</i>	> <i>-asi</i>	'HON-INF'

The situation with vowel final stems, however, is not as expected. According to the rules for contraction (Section 2.2.4.3.3.1), we would expect that the final vowel of the first morpheme would be deleted and the -î would remain, since the infinitive is a monosyllabic morpheme. This, however, is not the case with verb stems ending in /i/ or /ë/. The expected process is as follows:

stem-suffix	contraction		neutralization
<i>oki-î</i>	> * <i>okî</i>	> * <i>okî</i>	> * <i>okî</i> 'wake and...'
<i>akë-î</i>	> * <i>akëî</i>	> * <i>akî</i>	> * <i>akî</i> 'dawn and...'

However, the attested forms are *oki* and *akë*. To account for this, I earlier proposed that the infinitive is suffixed to the root plus transitivity flipper before monophthongization occurs (Russell 1997: 40-42):

---

217. As discussed in section 2.2.4.2, the front vowels *î* and *ï* and *ê* and *ë* merge to *i* and *e* respectively after coronal consonants. Also *ô* and *ö* merge to *o* following labial consonants.

stem-suffix	assimilation	contraction	monophthongization	
<i>*okö-Ai-î</i>	> <i>*okööii</i>	> <i>*oköëiï</i>	> <i>*oköi</i>	> <i>oki</i>
<i>*aka-Ai-î</i>	> <i>*akaaii</i>	> <i>*akaæiï</i>	> <i>*akai</i>	> <i>akë</i>

This solution may explain why the infinitive *-î* is the only monosyllabic unit that gets deleted when contraction occurs.<sup>218</sup> It is, however, simply a proposal that is not provable; there may be other reasons why the infinitive is deleted following /i/ and /ë/.

With verb stems ending in an /î/ it is not possible to tell which /î/ (the vowel of the stem or the infinitive) is deleted:

stem-suffix	contraction	neutralization
<i>mî-î</i>	> <i>*mîî</i>	> <i>mî</i> 'see and...'

Ultimately, it does not matter which /î/ is deleted; the result is the same.

The irregular verbs *kö-* 'come' and *sö-* 'do' behave as expected for monosyllabic units. When the infinitive is suffixed to the root of the verb, contraction occurs as expected:

stem-suffix	contraction	neutralization
<i>kö-î</i>	> <i>*këî</i>	> <i>kî</i> 'comes and...'
<i>sö-î</i>	> <i>*sëî</i>	> <i>sî</i> 'does and...'

---

218. See previous discussion on contraction, particularly Group III, which discusses bound forms (Section 2.2.4.3.3.1).

As for the function of this morpheme, following Martin (1987) and Vovin (2003: 228-232), I treat the infinitive as a special verbal suffix that has two main functions: 1) it can act as a connector either between two verbs or between a verb and an auxiliary; 2) it can occur in the final position of a verbal string, and in this case is used as a clause-final (but not sentence-final) verbal suffix. The infinitive is the only morpheme that can occur more than once in a single verbal string, as in the second example.

阿理多多斯

ari-tat-as-i

ITER-set out-HON-INF

[he] kept setting out and...

(KK 2)

斯多比枳摩斯提

sitap-î k-î-mas-i-te

yearn-INF come-INF-HON-INF-GER

[She] came yearning and...

(MYS V: 794)

#### 2.2.5.3.3.2 Group I Morphemes

This group consists of honorific auxiliaries, which can be divided into three types: respectful, humble, and neutral. Respectful honorifics (RESP) indicate high status of the actor or subject of the verb, and humble honorifics (HUMB) indicate lower status of the actor or subject of the verb.<sup>219</sup> Neutral honorifics (HON) are sometimes used the same

---

219. This system is different from MdJ. In WOJ, as in MJ, it is possible for the Emperor to use an

way as respectful honorifics, but are mainly used as a politeness marker with respect to the listener. As stated above, all auxiliaries follow the infinitive *-î*. I present the honorific auxiliaries below in alphabetical order.

2.2.5.3.3.2.1 The Honorific Auxiliary *imas-*. The first auxiliary is *imas-*. Bentley (2001: 211) claims that this is the most common honorific auxiliary. Although we lack the statistics to confirm this, he is probably right: *imas-* appears frequently in both poetic and prose texts.

This form is reconstructed on the basis of its form in isolation, as in the following example:

遠迓伊麻世婆  
wo n-i *imas*-e-Npa  
man COP-INF be/HON-EVD-CONJ  
Since you are a man...  
(KK 5)

However, when *imas-* follows the infinitive *-î*, i.e., *-î-imas-*, one /î/ typically gets deleted.

I treat this as if the vowel of the auxiliary is deleted, as the rules of contraction would predict, though realistically it is not possible to tell which vowel is deleted.

---

honorific when speaking about himself.

斯多比枳摩斯提

sitap-î k-î-mas-i-te

yearn-INF-come-INF-HON-INF-GER

[She] came yearning and...

(MYS V: 794)

奈气伎之麻佐牟

nakëk-î s-î-mas-am-u

lament-NML do-INF-HON-TENT-FIN

[You] will surely lament.

(MYS XV: 3581)

2.2.5.3.3.2.2 The Honorific Auxiliary matur-. The auxiliary *matur-* is a humble

honorific, and often means 'to present, to offer'. It is often used in a compound with *tate-*

which literally means 'to make stand, to raise'.<sup>220</sup>

都加閑麻都礼利

tukapë-matur-er-i

serve/INF-HUMB-PROG-FIN

[I] am serving...

(BK 13)

登與美岐 多弓麻都良世

töyö mî-kî tate-matur-as-e

rich HON-wine raise/INF-HUMB-HON-IMP

Take the abundant wine [my lord]!<sup>221</sup>

(KK 5)

---

220. In MJ *matur-* is not used on its own; it occurs only in combination with other verbs *tatematur-* or *takaumatur-* (Vovin 2003: 349).

221. Here the humble *matur-* is used for the speaker in regards to the lord, but the phrase *tate-matur-as-* is analyzed as honorific because of the honorific suffix *-as-*.

2.2.5.3.3.2.3 The Honorific Auxiliary tamap-. The auxiliary *tamap-* is a respectful honorific meaning 'to give, to offer'. It can also be used to indicate respect towards either the listener or the actor.

須久比多麻波奈

sukup-î-tamap-ana

save-INF-HON-DES

[I] wish [you] would save [everyone].

(BK 4)

伊能知波 那志勢婆多麻比會

inöti pa na-si-se-tamap-î-sö

life TOP NEG-die-CAUS-HON-INF-IMP

Please do not end [your] life [with desire].

(KK 3)

#### 2.2.5.3.3.3 Group II Morphemes

Morphemes in this group consist of the honorific, causative, durative, and passive suffixes, which attach directly to verb stems or to the Group I auxiliaries.

2.2.5.3.3.3.1 The Durative Suffix -ap-. The durative suffix *-ap-* indicates the continuation of the action of the verb. I treat this morpheme as deriving from the derivational morpheme *\*-Ap-* (Section 2.2.5.2.5).

Bentley (2001: 200-203) and Vovin (2003: 323; forthcoming-b) call this suffix iterative rather than durative. Iterative implies that an action is repeated (e.g., *reread*, *rewrite*), whereas durative emphasizes the continuation of an action over a period of time (e.g., *read all day*, *write for a while*). The data indicate actions that occur over a period of time rather than those that are repeated, and therefore the term durative fits the function of this suffix better than iterative.<sup>222</sup>

阿理多多斯 用婆比还 阿理加用婆勢

ari-tat-as-i yôNp-ap-î-ni ari-kayôp-ase<sup>223</sup>

ITER-set out-HON-INF woo-DUR-NML-LOC ITER-go back and forth-HON

[He] kept setting out and [he] kept going back and forth in order to woo [her over a period of time].

(KK 2)

伊由岐麻毛良比

i-yuk-î mamôr-ap-î

PREF-go INF-protect-DUR-INF

Go there and protect...[for a period of time]

(KK 14)

---

222. My analysis of the function of the morpheme is the same as the analyses presented by Bentley (2001: 200-2003) and Vovin (2003: 323). It is only our terminology that differs.

223. The text may indicate either *kayôp-* or *kayôNp-* here, with the prenasalized /Np/ indicated by the character 婆 /Npa/. However, the writing system in *Kojiki* often confuses /Np/ and /p/, and since this word is spelled with a voiceless /p/ elsewhere (e.g., in the following example), I assume the "correct" spelling is *kayôp-* and the spelling here is an example of /Np/ and /p/ being confused in the *Kojiki*.

2.2.5.3.3.2 The Honorific Suffix -as-. In addition to the honorific auxiliaries mentioned above, WOJ also had one honorific suffix, indicating honorification towards the actor of the marked verb or the listener. It is possible for the honorific suffix to follow honorific auxiliaries, so I have placed it in Group II rather than Group I with the other honorifics.

阿理多多斯

ari-tat-as-i

ITER-set out-HON-INF

[he] kept setting out and...

(KK 2)

都麻母多勢良米

tuma möt-as-er-am-ë

spouse possess-HON-PROG-TENT-EVD

Since [I] have [you as my] spouse...

(KK 5)

The verb *kîk-* (< pre-WOJ \**kîkö-*) has both the honorific forms *kîk-ös-* and *kîk-as-*. There are two possibilities for this. First, the form with /*ö*/ is the original form and shows vowel assimilation discussed above (Section 2.2.5) and the form with /*a*/ developed by analogy (or contamination) with other verbs. In other words, other consonant final verb stems that acquire this suffix preserve the /*a*/, e.g., *tat-as-*, *möt-as-*, etc. The form *kîk-ös-* became *kîk-as-* to sound like the other verbs in its verb class. The second possibility is that the root of this verb is *kîkö-* and the initial vowel of the suffix is deleted in one case

(producing *kîkô-s-*) and is preserved in the other and the vowel of the stem is deleted (producing *kîk-as-*). However, the verbs *pîkô-* 'pull' (KK 2) and *osô-* 'push' (KK 2) never occur as *\*pîkô-s-* or *\*osô-s-*. I think the first solution, i.e., that analogy accounts for the form *kîk-as-*, may be a more realistic solution.

The honorific *-as-* is often compared with the causative suffix *-sase-* (see, e.g., Bentley 2001: 196-199; Ōno 1994: 1469). However, the causative suffix *-sase-* is not attested in WOJ;<sup>224</sup> the WOJ causative suffix is *-asimë-*, which I discuss in the next section.

#### 2.2.5.3.3.3.3 The Causative Suffix *-asimë-*. The WOJ causative suffix is *-asimë-*.

Since this morpheme is longer than two syllables, it is likely that it consists of more than one morpheme, though it is not known what its components are. In MJ this morpheme is used to express respect as well as causation, but in WOJ it functions as a causative.<sup>225</sup>

---

224. The MJ causative *-sase-* loses its initial consonant (i.e., appears as *-ase-*) following consonant stem verbs. Bentley (2001: 196) claims that there are two examples of causative *-ase-* in the liturgies. However, as discussed in Russell (2003) I am skeptical of this claim. First, *-ase-* is written logographically, not phonetically, so we cannot be sure of the character's reading. Presumably Bentley's reading is based on interlinear glosses, but he does not present this evidence. Second, I have doubts that this morpheme exists, since it is attested only in one text (the liturgies) and not attested again in WOJ texts. It is more likely that causative *-ase-* is a MJ innovation.

225. Ikeda (1980, 120 note #1) claims that in MJ this auxiliary was used mostly by men, and women used *-sase-*. This issue has not yet been studied for WOJ.

伊慕我堤鳴 倭例爾魔柯斯每

imo-Nka te-wo ware-ni mak-asimë

beloved-NOM/GEN hand-ACC I-DAT pillow-CAUS/INF

[My] beloved makes [or lets] me hold her hand.<sup>226</sup>

(NSK 96)<sup>227</sup>

於毛波之米都追

omôp-asimë-tutu

feel-CAUS/INF-COOR

While [she] makes me long for [her]

(MYS XV: 3737)

#### 2.2.5.3.3.3.4 The Passive Suffix -aye-. The WOJ passive suffix -aye- is

traditionally described as having three functions in WOJ: 1) spontaneous action; 2) passive; and 3) potential (Bentley 2001: 194-195; Ikeda 1975, 111-116; Saeki 1950: 150; Tsukishima 1969: 506; Yamada 1954: 250-255; etc.).<sup>228</sup> However, I have found no evidence that this morpheme is used as a potential in WOJ.<sup>229</sup> It is often claimed that spontaneous action is the original meaning of this suffix, but more research is needed here (Vovin 2003: 323-324).

---

226. Literally "pillow her hand".

227. This example is also in Vovin (forthcoming-b).

228. The WOJ form is also attested as *-raye-*, but there are some problems with this form: 1) *-raye-* only occurs in four examples, all of which are attested in Book XV, which is known to have an unreliable history of transmission; 2) all four examples are used with the verb *ne-* 'sleep'; 3) all four examples are followed by the negative suffix, and may indicate a negative potential usage (see next footnote). I do not think this constitutes reliable proof that the form *-raye-* occurred in WOJ, but rather it appears the text has been influenced by MJ.

229. Further, Vovin notes that for MJ the potential usage of this morpheme is limited to the negative passive (Vovin 2003: 324).

spontaneous action:

麻斯提斯能波由

masite sinöp-ay-u

even more long-PASS-FIN

Even more, I am suddenly longing [for them]

(MYS V: 804)

passive:

比等爾迺久麻延

pîttö-ni nikum-aye

people-DAT hate-PASS/INF

[He would be] hated by people and...

(MYS V: 804)

The verbs *omöp-* 'think, feel, love' and *kîk-* 'listen, hear' have doublets when used with *-aye-*: *omöpöye-/omöpaye-* and *kîköye-/kîkaye-*. The form with /ö/ is presumably the original form and shows vowel assimilation discussed above (Section 2.2.5) and the form with /a/ developed by analogy (or contamination) with other verbs.<sup>230</sup>

#### 2.2.5.3.3.4 Group III Morphemes

The morphemes in this group are auxiliaries that indicate perfective or progressive aspects. With the exception of *-êr-*, these morphemes follow the infinitive.

These morphemes are presented below in alphabetical order.

---

230. Cf. discussion on *kîkö-s-* and *kîk-as-* presented above (Section 2.2.5.3.3.3.2).

2.2.5.3.3.4.1 The Progressive Auxiliary -êr- The morpheme *-êr-* in WOJ marks the progressive aspect. A synchronic analysis of WOJ shows that this is a suffix and not an auxiliary, as it attaches directly to the verb stem or preceding suffix and not to the infinitive. However, historically *-êr-* is from monophthongization of *-î-ar-*.<sup>231</sup> So it appears that historically at least, the infinitive was used with this form.

許能波佐夜牙流

kö-nö pa sayaNk-êr-u

tree-GEN leaves rustle-PROG-ATT

The tree leaves are rustling.

(KK 21)

波祁流多知

pak-êr-u tati

wear-PROG-ATT sword

The sword [he] is wearing.

(KK 23)

2.2.5.3.3.4.2 The Perfective Auxiliary -n- WOJ has two perfective auxiliaries, namely *-n-* and *-t-*; it is not entirely clear what the difference is. Vovin (2003: 305-308) discusses what he terms Kolpakchi's constraint, which states that the perfective *-t-* does not occur with inanimate subjects. Vovin builds on this constraint claiming that *-n-* is the

---

231. As discussed above (Section 2.2.4.3.3.3) and in Russell (2004), monophthongization and not contraction, is expected when stative *ar-* follows an auxiliary.

perfective marker for inactive verbs and *-t-* is the perfective marker for active verbs.

However, more research needs to be done on WOJ to concerning this claim.

The perfective *-n-* is used as follows:<sup>232</sup>

奴延波那伎奴

nuye pa nak-î-n-u

White's ground thrush<sup>233</sup> TOP sing-INF-PERF-FIN

The White's ground thrushes have sung.

(KK 2)

阿布知乃波那波 知利奴倍斯

aputi-nö pana pa tir-i-n-uNpë-si

aputi-GEN flower TOP fall-INF-PERF-DEB-FIN

The flowers of the aputi tree have probably fallen.

(MYS V: 798)

#### 2.2.5.3.3.4.3 The Perfective Auxiliary -t- The perfective *-t-*, the perfective

marker used with active verbs and which does not occur with inanimate subjects, is used

as follows:

---

232. It should be noted that this morpheme conjugates like an irregular *nahen* verb and not a consonant final morpheme (Section 2.2.5.1).

233. The bird *nuye* is a White's ground thrush, Latin name: *turdus dauma* (<http://www.asahi-net.or.jp/~sg4h-hriz/dic/tugumi/toratugumi.html>).

伊久用加泥都流

iku yô ka ne-t-uru

how many night QP sleep-PERF-ATT<sup>234</sup>

How many nights have [we] slept?

(KK 25)

宇流波斯登 佐泥斯佐泥弓婆

urupa-si tō sa-ne s-i sa-ne-t-e-Npa

beautiful-FIN DV PEF-sleep/NML do-INF PEF-sleep-PERF-

EVD-CONJ

Thinking that [she] was beautiful, while [we] slept this way and

[we] slept this way

(KK 80)

#### 2.2.5.3.3.4.4 The Perfective Progressive Auxiliary -tar-. This auxiliary

historically derived from the perfective auxiliary *-t-* (Section 2.2.5.3.3.4.3) plus *ar-* 'exist', and is also attested as *-te-ar-*, showing that vowel contraction is not obligatory (Section 2.2.4.3.3.1). In WOJ the auxiliary *-tar-* is analyzed as a unit indicating the perfective progressive.

伊豆久欲利 枳多利斯物能會

iNtuku-yôri k-î-tar-i-si mönō sō

where-ABL come-INF-PERF/PROG-INF-PAST/ATT thing/person

EMPH

From where had they come?

(MYS V: 802)

---

234. The attributive occurs here in sentence final position because of the question particle *ka*. Some particles trigger the verb to end in either the attributive or evidential forms instead of the final form. These structures are known as *kakari musubi* structures. For more discussion see Sections 2.2.5.3.3.8.11 and 2.2.5.3.3.8.12.

和多之弓安良波

watas-i-te ar-aNpa

cross-INF-PERF PROG-COND

If [you] had been crossing...

(MYS XVIII: 4125)

宇倍母佐积多流

umë mö sak-î-tar-u

plum blossoms PART bloom-INF-PERF/PROG-ATT

The plum blossoms have been blooming.

(MYS V: 831)

#### 2.2.5.3.3.5 Group IV Morphemes

The auxiliaries in this group include the auxiliaries *-kêm-* and *-kêr-* which indicate past tense.<sup>235</sup> These morphemes and their functions are explained below.

2.2.5.3.3.5.1 The Tentative Past Auxiliary -kêm-. The auxiliary *-kêm-* derives from the past auxiliary *-kî* (Section 2.2.5.3.3.8.6) plus the tentative auxiliary *-am-* (Section 2.2.5.3.3.7.1).<sup>236</sup> In this case the vowels /î/ and /a/ monophthongize to /ê/, as

---

235. The past auxiliaries *-kî*, and *-si* are clause final suffixes discussed below (Section 2.2.5.3.3.8.6 and 2.2.5.3.3.8.10).

236. Even though historically the auxiliaries *-kêm-* and *-kêr-* are analyzed as deriving from the auxiliary *-kî*, in WOJ *-kî* is only used in clause final position and is not followed by other inflectional suffixes. However, pre-WOJ *-kî-* could be followed by tentative suffix *-am-* and stative suffix *-ar-* but in WOJ it only occurs in the final position of a verb string.

expected when a suffix compounds with an auxiliary.<sup>237</sup> This auxiliary indicates speculation about a past event, i.e., 'it must have been...!'

阿蘇比家武

asôp-î-kêm-u

play-INF-TENT/PAST-FIN

[They] must have been playing.

(MYS V: 804)

必例遠布利家牟

pîre-wo pur-i-kêm-u

long scarf-ACC shake-INF-TENT/PAST-FIN

[She] must have waved her long scarf.

(MYS V: 872)

2.2.5.3.3.5.2 The Modal Past Auxiliary -kêr-. The WOJ auxiliary *-kêr-*, which comes from past *-kî* (Section 2.2.5.3.3.8.6) plus *ar-* 'exist', expresses the modal past.<sup>238</sup> The vowels /î/ and /a/ monophthongize here, as expected in this environment. The difference in meaning between past *-kî* and modal past *-kêr-* is that *-kî* indicates a recollection of the speaker's own experience, whereas *-kêr-* indicates recollection of someone else's experience, something the speaker has heard about but did not experience

---

237. For rules of monophthongization see Section 2.2.4.3.3.2.

238. A comprehensive study of the function of this morpheme is presented in McNicoll (2005).

directly.<sup>239</sup> This auxiliary also has the effect of shock and surprise that something has happened, as in "Wow! The flowers have bloomed already."

岐美何余曾比斯 多布斗久阿理祁理  
kîmî-Nka yösöp-î si taputô-ku ar-i-kêr-i  
lord-GEN appear-NML EMPH awesome-INF  
exist-INF-PAST-FIN<sup>240</sup>  
[My] lord's appearance was awesome.  
(KK 7)

加奈之可利家理  
kanasi-k-ar-i-kêr-i  
sad-INF-exist-INF-PAST-FIN  
[I] realized that [I] was sad.  
(MYS V: 793)

#### 2.2.5.3.3.6 Group V Morphemes

This group consists of the two suffixes of negation and the negative tentative suffix. These suffixes can follow any of the Group I-IV morphemes, but do not directly follow the infinitive. When these suffixes follow a verb stem ending in *î*, *ï*, or *ë* the initial vowel of the suffix is deleted (see Section 2.2.4.3.3)

---

239. Structurally, these morphemes also differ: past *-kî* is a clause final morpheme, occurring in the final position of a verbal string, and modal past *-kêr-* cannot conclude a verbal string.

240. The final following the *rahen* verb *ar-* 'exit' is stative final *-î* (2.2.5.3.3.8.5) and not active final *-u* (Section 2.2.5.3.3.8.3). Auxiliaries formed with the verb *ar-* behave as *rahen* verbs.

2.2.5.3.3.6.1 The Negative Suffix -an-. WOJ has two negative suffixes: *-an-* and *-aNs-* (Section 2.2.5.3.3.6.2). It is not yet clear how these suffixes differ in terms of their function(s), but they are morphologically related forms; *-aNs-* is built off of *-an-* as discussed below.

佐祢耐據茂 阿黨播怒介茂譽  
 sa-ne-N-tökö atap-an-u kamo yö  
 PREF-sleep/NML-COP-place give-NEG-ATT EMPH EMPH  
 [My wife] will not give me a place to sleep.  
 (NSK 4)

奈會許許波伊能祢良要奴  
 naNsö kökōNpa i-nö ne-raye-n-u  
 why extremely sleep-GEN sleep-PASS-NEG-ATT  
 Why can't [I] sleep at all?  
 (MYS XV: 3684)

2.2.5.3.3.6.2 The Negative Suffix -aNs-. The suffix *-aNs-* is from the negative suffix *-an-*, the infinitive *-i*, and the irregular verb *sö-/se-* 'do' (Martin 1987: 111).<sup>241</sup> The infinitive is deleted, and the /n/ of the negative suffix causes the /s/ of the verb 'do' to be prenasalized (Section 2.2.4.1.2), i.e., *\*-an-i-sö-* > *\*-anis-* > *\*-ans-* > *-aNs-*. This

---

241. The verb *se-* 'do' has two roots: *sö-* and *se-*. It is not clear which root is used in the formation of this suffix as the final vowel never occurs; it is always replaced by the vowel of the inflectional suffix, typically active final *-u* or a special infinitive *-u*. Martin (1987: 111) writes 'do' here in its final form, *su* (*s-u*), however this is not the best analysis, as morphemes can be suffixed to the stem *-aNs-*.

morpheme has a special infinitive *-u*, the origin of which is unknown. This suffix is used as follows:

加岐微流 伊蘇能佐岐淤知受  
kakî-mi-ru isô-n-ö sakî oti-Ns-u  
EMPH-go around-ATT rock COP-ATT shore fall-NEG-FIN  
[You] do not fall on the rocky shores that [you] go around.  
(KK 5)

阿比淤母波受阿良牟  
apî-omöp-aNs-u-ar-am-u  
REC-love-NEG-INF-exist-TENT-FIN  
It is probably [the case] that [they] do not love each other.  
(KK 60)

#### 2.2.5.3.3.7 Group VI Morphemes

This group consists of suffixes indicating mood. These suffixes can follow any of the Group I-V morphemes, but do not directly follow the auxiliary.

2.2.5.3.3.7.1 The Tentative Suffix -am-. Ikeda (1975: 68-71) presents several meanings for the tentative suffix *-am-* in MJ: 1) volition when used for the speaker's own actions; 2) presumption, expectation, suggestion, or supposition when used towards a third person; 3) suggestion or a mild command when used towards a second person; and 4) irony. Vovin (2003: 273-275) rejects this, stating that there is no need to propose a

different meaning based on first, second, or third person, and that in all cases it can indicate intent, inclination, suggestion, or supposition.<sup>242</sup>

This suffix has not yet been extensively studied for WOJ, and it is not clear whether WOJ *-am-* has the same range of meanings or not. My impression from studying the texts is that *-am-* is used to indicate volition or conjecture, whether it be used for the speaker or a third person or an object that is not seen by the speaker.

許許呂袁陀迓迦 阿比淤母波受阿良牟  
kōkōrō-wo Ntani ka apî-omöp-aNs-u-ar-am-u  
heart-ACC PART QP REC-love-NEG-INF-exist-TENT-FIN  
Are [we] not loving each other just in our hearts?  
(KK 60)

奈氣伎之麻佐牟  
nakëk-î-s-î-mas-am-u  
lament-INF-do-INF-HON-TENT-FIN  
[You] will surely lament.  
(MYS XV: 3581)

2.2.5.3.3.7.2 The Debitive Suffix -uNpë-. The debitive suffix *-uNpë-* expresses events that are expected to have occurred. There is also a related adverb in WOJ: *uNpësi* 'certainly' (Ōno et al. 1990: 187). Ikeda (1975: 80, footnote 2) claims that *-uNpë-* in MJ expresses supposition about something which is the "natural result of certain causes".

---

242. Vovin (2003) does not address Ikeda's claim that a possible fourth usage is to express irony.

Vovin (2003: 288) asserts that this suffix is a debitive suffix which by extension has also come to be used to indicate strong probability and potential. More research is needed to determine whether this is true for WOJ as well as MJ.

比登斯理奴倍志

pîtö sir-i-n-uNpë-si

people know-INF-PERF-DEB-FIN

People should have known.

(KK 83)

阿布知乃波那波 知利奴倍斯

aputi-nö pana pa tir-i-n-uNpë-si

aputi-GEN flower TOP fall-INF-PERF-DEB-FIN

The flowers of the aputi tree have probably fallen.

(MYS V: 798)

2.2.5.3.3.7.3 The Tentative Suffix -uram-. As is the case with many of the WOJ suffixes, there has not been a comprehensive study of the tentative suffix *-uram-* to determine its meaning(s) and function(s). For MJ, Ikeda (1975: 73-76, 80) provides several possible meanings including: 1) conjecture about something taking place in the present that the speaker cannot see or did not experience; 2) speculation about why something happened when used with something that the speaker did experience; and 3) expression of irony. Vovin (2003: 282) notes that it is difficult to distinguish the function of this suffix from tentative *-am-* (Section 2.2.5.3.3.7.1). In Chapter 4 (Section 4.4.3.35),

I propose that this morpheme derives from Proto-OJ *\*-ur-am-* where *\*-ur-* < PJ *\*<sup>?</sup>ura-* is a non-past stative extension (Section 4.4.3.33). If my analysis is correct, then it explains why WOJ *\*-am-* and *\*-uram-* have the same function. At this time, a comprehensive study of the suffixes which express tentative, debitive, and suppositional moods is needed to fully understand their similarities and differences.

伊豆知武伎提可      阿我和可留良武  
 iNtu-ti muk-î-te ka    a-Nka wakar-uram-u  
 where-place face-INF-PERF QP I-NOM separate-TENT-FIN  
 Which direction should I be facing when I go [die]?  
 (MYS V: 887)

阿袁麻多周良武    知知波波良波母  
 a-wo mat-as-uram-u titi papa-ra pa mö  
 I-ACC wait-HON-TENT-FIN father mother-PL TOP PART  
 My mother and father, who are surely waiting for me.  
 (MYS V: 890)

2.2.5.3.3.7.4 The Suppositional Suffix -urasi-. Ikeda (1975: 78-80) states that *-urasi-* indicates supposition about something based on knowledge of something else. It is often translated as "it seems that..." Although Ikeda's analysis is for MJ, it appears to be true for this suffix in WOJ as well.

加理波古牟良斯

kari pa kô m-<sup>243</sup>urasi<sup>244</sup>

goose TOP egg lay-SUP/FIN

It seems the goose laid eggs.<sup>245</sup>

(KK 73)

佐加美豆久良斯

saka mîNtuk-urasi

wine soak-SUP/FIN

It seems that [they] are soaking in wine.

(KK 102)

宇倍之訶茂 蘇餓能古羅烏 於朋枳瀾能 菟伽破須羅志枳

uNpësi kamo sônka-nô kô-ra-wo opo kîmî-nô tukap-as-urasi-kî

certainly EMPH [place name]-GEN children-PL-ACC big lord-

NOM use-HON-SUP-ATT<sup>246</sup>

It seems the sovereign can certainly use the children of Soga.

(NSK 103)

### 2.2.5.3.3.8 Group VII Morphemes

The morphemes in this group can attach directly to a verb stem or to any suffix in Groups I-VI. They fill the final position of a verb string, and can be clause final, sentence final, or both clause and sentence final morphemes. As stated above, a verb string *must*

---

243. Here, *kô* 'egg' *um-* 'lay' contracts to *kô m-* following the rules for contraction outlined above (Section 2.2.4.3.3.1).

244. I analyze the suffix *-urasi-* in this example and the following example as *-urasi-* followed by stative final *-i* (Section 2.2.5.3.3.8.5). Following the rules of contraction (Section 2.2.4.3.3.1) the final vowel of *-urasi-* is deleted and the vowel of the suffix *-i* remains; i.e., *-urasi-i* becomes *-urasi*.

245. Japanese does not specify singular or plural, thus *kô* 'child; egg' can mean one or more than one.

246. The attributive form here is an example of a *kakari musubi* structure where the emphatic *kamo* triggers the verb to end in the attributive (see Section 2.2.5.3.3.8.14).

end with one of the suffixes or auxiliaries from this group. In addition, some Group VII morphemes can be used with other Group VII morphemes, e.g., the evidential suffix (Section 2.2.5.3.3.8.14) and can stand on its own or be followed by the conjunctive suffix *-Npa* (Section 2.2.5.3.3.8.7) or the concessive suffix *-Ntö* (Section 2.2.5.3.3.8.8),<sup>247</sup> and the past auxiliary *-si* (Section 2.2.5.3.3.8.9) can be used on its own or it can be followed by the hypothetical conditional *-aNpa* or *-Ntö* (Section 2.2.5.3.3.8.8),<sup>248</sup> desiderative *-ana* (Section 2.2.5.3.3.8.1) can be used on its own or followed by the imperative *-ê* (Section 2.2.5.3.3.8.4).

I discuss Group VII morphemes below in alphabetical order, with the exception of the evidential form *-ë/-ure* (Section 2.2.5.3.3.8.14), which is treated after the attributive form, *-u/-uru* (Section 2.2.5.3.3.8.13) because their development is similar.

2.2.5.3.3.8.1 The Desiderative Suffix *-ana*. The suffix *-ana* indicates the desiderative form: "I wish that..." It can be followed by the imperative suffix *-ê* (Section 2.2.5.3.3.8.4).<sup>249</sup> This suffix is used as a sentence final morpheme.

---

247. The conjunctive and concessive suffixes can only occur following the evidential suffix.

248. When *-Ntö* follows the past auxiliary it occurs with a special evidential form *-ka-: -si-ka-Ntö* This is discussed below (Section 2.2.5.3.3.8.9).

249. The vowel /ê/ becomes /e/ following /n/; thus *\*-ana + -ê > \*-anê > -ane*.

須久比多麻波奈

sukup-î-tamap-ana

save-INF-HON-DES

[I] wish [you would] save [us].

(BK 4)

阿素毘久良佐奈

asôNp-î kuras-ana

play-INF spend time together-DES

[How I] wish [we] could spend [our] time together playing.

(MYS V: 825)

許能登理母 宇知夜米許世泥

kô n-ö töri mö uti-yamë-köse-n-e

this COP-ATT bird EMPH PREV-quit-DES-DES-IMP

I wish [you would make] those birds would stop [singing] at once.

(KK 2)

2.2.5.3.3.8.2 The Hypothetical Conditional Suffix -aNpa. The suffix *-aNpa* is a

clause final morpheme. It sets up a hypothetical condition and is often translated as "if".

阿遠夜麻迹 比賀迦久良婆

awo yama-ni pî-Nka kakur-aNpa

blue/green mountain-LOC sun-NOM hide-COND

If the sun is hidden behind the green mountains...

(KK 3)

波流能吉多良婆

paru-nö k-î-tar-aNpa

spring-NOM come-INF-PERF/PROG-COND

If spring has come...

(MYS V: 815)

2.2.5.3.3.8.3 The Negative Tentative Suffix -aNsi. This suffix is the negative of tentative suffix *-am-* (Section 2.2.5.3.3.7.1). This suffix may be formed from either tentative *-am-* or negative *-an-* (Section 2.2.5.3.3.6.1) plus some suffix *-si*, although it is not clear at this time what the meaning of *-si* is or if there is any independent evidence that it exists.<sup>250</sup> It is used as a clause or sentence final suffix indicating something that probably will not happen or something the speaker will not do.

那迦士登波  
 nak-aNsi tö pa  
 cry-NEG/TENT DV TOP  
 Saying [you] would not cry...  
 (KK 4)

斯可爾波阿羅慈迦  
 sika-n-i pa ar-aNsi ka  
 this way-COP-INF TOP exist NEG/TENT QP  
 It cannot be this way, can it?  
 (MYS V: 800)

2.2.5.3.3.8.4 The Imperative Suffix -ê/-yö. The imperative suffix is *-ê* following consonant stem verbs and *-yö* following vowel stem verbs. The irregular verbs *kö-*

---

250. Perhaps *-si* is related to the verb *sö-/se-* 'do' and derived similarly to *-aNsi-* < *-an-* 'NEG' + *sö-/se-* as discussed above (Section 2.2.5.3.3.6.2). Note that *\*-amsi* would also result in a prenasalized /s/, i.e., *-aNsi*.

'come' and *se-* 'do' can either have unmarked imperatives, where the imperative is identical to the verb root, or the root can be followed by *-yö*.

伊斯祁伊斯祁

i-sik-ê i-sik-ê

PREF-reach-IMP PREF-reach-IMP

Go there! Go there! (lit. go till you reach there!)

(KK 59)

伊可爾世与等可

ika n-i se-yö tö ka

how DV-INF do-IMP DV QP

What would you have me do?

(MYS V: 794)

It is not clear how the imperative developed. I previously argued (Russell 1997: 51-55) that this form developed in two stages. In the first stage, the morpheme *\*rö* was suffixed to the infinitive forms of consonant final and *rahen* and *nahen* verbs.<sup>251</sup> Then *\*r* lenited to *\*y* and then was deleted triggering monophthongization. At the time when the suffix was *\*yö* it came to be suffixed to vowel final verbs.

stage one:

	infinitive+*rö	> lenition	> deletion	> monophth.
YD	*yuk-î-rö	> *yukîyö	> *yukîö	> yukê
NH	*sin-i-rö	> *siniyö	> *siniö	> sine

---

251. The morpheme *rö* was reconstructed on the basis of EOJ data which show *rö* for all classes (following Whitman 1990: 583).

stage two:

original KI	* <i>mî-yö</i>	> <i>miyö</i>
derived KI	* <i>pî-yö</i>	> <i>piyö</i>
KN	* <i>suNkî-yö</i>	> <i>suNkiyö</i>
SN	* <i>akë-yö</i>	> <i>akëyö</i>

I am no longer convinced that this solution explains the morphology without complicating the issue. First, lenition of *\*r* > *y* is not provable within OJ; there is no supporting evidence for this claim. Second, I am not convinced that a morpheme would be suffixed to certain verbs at one stage of a language, and then to the rest of the verbs later (conveniently after lenition has occurred). Further, the only evidence of monophthongization of *i+ö* > *ê* is in the infinitive form of verbs.<sup>252</sup> Without other evidence how can we be sure that *i + ö* would even monophthongize to *ê*? I must reject my earlier solution, but have nothing to offer in its place at this time.

2.2.5.3.3.8.5 The Stative Final Suffix -i. The stative final suffix *-i* is added only to *rahen* verbs (e.g., *ar-* 'to exist', *wor-* 'to be'), auxiliaries derived from the verb *ar-*,<sup>253</sup> and other stative suffixes (e.g., *-uras-*). It is a clause or sentence final morpheme, and can be followed only by emphatic and quote particles.

---

252. See Section 2.2.4.3.3.2 for discussion on *î + ö* > *ê*.

253. With the exception of progressive *-êr-* (Section 2.2.5.3.3.4.1).

岐美何余曾比斯 多布斗久阿理祁理  
 kîmî-Nka yösöp-î si taputô-ku ar-i-kêr-î  
 lord-GEN appear-NML EMPH awesome-INF  
 exist-INF-PAST-FIN  
 [My] lord's appearance was awesome.  
 (KK 7)

佐加志賣遠 阿理登岐加志弓  
 sakasi mê-wo<sup>254</sup> ar-î tö kîk-as-i-te  
 wise woman-ACC exist-FIN PART hear-HON-INF-GER  
 Having heard that there existed a wise woman...  
 (KK 2)

2.2.5.3.3.8.6 The Past Auxiliary -kî. The morpheme *-kî* is an auxiliary used to indicate the past tense. It expresses either something the speaker directly experienced or something known to have occurred in the past (Ikeda 1975: 104).<sup>255</sup> Omodaka et al. (1967: 236) suggest this form comes from the verb *kö-* 'come' and that the past auxiliary *-si* (Section 2.2.5.3.3.8.9) comes from the verb *sö-* 'do'. The distribution of these past auxiliaries differ: *-kî* is used as a clause or sentence final form and *-si* is used to indicate the attributive form. In addition, *-si* can be followed by the hypothetical conditional suffix or a concessive suffix; I return to this in my treatment of *-si* below.

---

254. Here *sakasi mê* is an example of bare stem modification, where the root of the adjective modifies the noun without the adjectival attributive suffix.

255. Cf. retrospective auxiliary *-kêr-* discussed in Section 2.2.5.3.3.5.3.

阿由比能古須受 淤知爾岐登

ayupî-nö kô-suNsu oti-n-i-kî tö

cord<sup>256</sup>-GEN DIM-bell fall/INF-PERF-INF-PAST DV

[Hearing that] the bell [from the courtier's] belt had fallen...

(KK 82)

伊志遠多礼美吉

isi-wo tare mî-kî

stone-ACC who saw-PAST/FIN

Who saw the stone?

(MYS V: 869)

2.2.5.3.3.8.7 The Conjunctive Suffix -Npa. The conjunctive suffix -Npa is a clause final suffix that indicates a fulfilled condition (Ideda 1975: 250), and is often translated as "since" or "when". It follows the evidential form of verbs (Section 2.2.5.3.3.8.9).

遠迹伊麻世婆

wo n-i imas-e-Npa

man COP-INF HON-EVD-CONJ

Being a man...

(KK 5)

春鳥之

PARU TÖRI-NÖ

spring bird-NOM

佐麻欲比奴礼者

sa-mayôp-î-n-ure-Npa

PREF-confuse-INF-PERF-EVD-CONJ

Since the spring birds have confused [flowers for snow]...

(MYS II: 199)

---

256. A cord worn as a belt.

2.2.5.3.3.8.8 The Concessive Suffix -Ntö. The concessive suffix *-Ntö* is a clause final suffix used to mean "although..." or "even though..." This suffix is often followed by the emphatic particle *mö*.

迦微能碁登 岐許延斯迦杼母 阿比麻久良麻久  
 kamī-nö N-kötö kîkô-ye-si-ka-Ntö mö apî-makuramak-u  
 god-GEN COP-like hear-PASS-PAST-EVD-CONC PART  
 REC-pillow-FIN  
Although [I]had heard [she] was like a goddess, we pillowed each  
 other.  
 (KK 45)

意母閑騰母  
 omöp-ë-Ntö mö  
 feel-EVD-CONC PART  
Although I love...  
 (MYS V: 805)

2.2.5.3.3.8.9 The Past Auxiliary -si. There are two past auxiliaries in WOJ: *-kî* (Section 2.2.5.3.3.8.6) and *-si*. As stated above, *-kî* is used as a clause or sentence final morpheme. On the other hand, when *-si* is used as a clause final morpheme, and is not used in conjunction with other verbal suffixes, it indicates the past attributive. The suffix *-si* can also be used with the hypothetical conditional suffix *-aNpa* (Section 2.2.5.3.3.8.2), in the form *-seNpa*, which presumably comes from monophthongization of /i+a/:  
 \*-si-aNpa > \*-sêNpa > \*-seNpa. The past auxiliary can also be used with the concessive

suffix *-Ntö* (Section 2.2.5.3.3.8.8). The concessive suffix must follow the evidential form (Section 2.2.5.3.3.8.14), though, the evidential form occurring with the concessive suffix is *-ka-*, i.e., *-si-ka-Ntö*. The evidential *-ka-* only occurs with this past auxiliary and the origin and development of this morpheme is not known at this time. This auxiliary indicates the past tense, as shown in the examples below:

泥牟登斯理勢波

ne-m-u tö sir-i-seNpa

sleep-TENT-FIN PART know-INF-PAST/COND

If [I] knew that [she] would be sleeping...

(KK 75)

迦微能碁登 岐許延斯迦杼母 阿比麻久良麻久

kamī-nō N-kötō kīkō-ye-si-ka-Ntö mö apî-makuramak-u

god-GEN COP-like hear-PASS-PAST-EVD-CONC PART

REC-pillow-FIN

Although [I]had heard [she] was like a goddess, we pillowed each other.

(KK 45)

2.2.5.3.3.8.10 The Subordinative Gerund *-te*. The subordinative gerund *-te* is a clause final auxiliary. It can be used to connect either two verbs or two clauses in the pattern [(clause) verb<sub>1</sub>]-*te* [(clause) verb<sub>2</sub>], and indicates that the action of the first verb (verb<sub>1</sub>) began before the action of the second verb (verb<sub>2</sub>). Vovin (2003: 242) presents examples from MJ texts that show that the action of the first verb, that is, the verb that *-te*

is affixed to, begins before but is not necessarily completed before the action of the second begins. Although the function of the gerund has not yet been extensively studied for WOJ, it seems to function in the same way as MJ *-te*.

佐加志賣遠 阿理登岐加志<sub>二</sub>  
 sakasi mē-wo<sup>257</sup> ar-i tö kîk-as-i-te  
 wise woman-ACC exist-FIN PART hear-HON-INF-GER  
 Having heard that there existed a wise woman...  
 (KK 2)

斯多比枳摩斯提  
 sitap-î k-î-mas-i-te<sup>258</sup>  
 yearn-INF come-INF-HON-INF-GER  
 [She] came yearning and...  
 (MYS V: 794)

#### 2.2.5.3.3.8.11 The Coordinative Auxiliary -tutu. The coordinative auxiliary *-tutu*

is used to indicate either simultaneous action (between the marked verb and the verb of the next clause) or a habitual action. The coordinative auxiliary can act either as a sentence final or clause final morpheme, depending on context, as shown in the examples below.

---

257. Here *sakasi mē* is an example of bare stem modification, where the root of the adjective modifies the noun without the adjectival attributive suffix.

258. The initial vowel of the honorific auxiliary *imas-* is deleted following the infinitive; see Section 2.2.5.3.3.2.1.

布賣留阿止乎 美都都志乃波牟

pum-êr-u atö-wo mî-tutu sinöp-am-u

step-PROG-ATT print-ACC see/INF-COOR revere-TENT-FIN

While looking at the [Buddha's] footprint,<sup>259</sup> [I] will revere [him].

(BK 6)

由企波布理都都

yukî pa pur-i-tutu

snow TOP fall-INF-COOR

The snow keeps falling.

(MYS XVIII: 4079)

2.2.5.3.3.8.12 The Active Final Suffix -u. The suffix *-u* is the final suffix for

active verbs.<sup>260</sup> It is a sentence final marker, but can be followed by grammatical

particles.

奴延波那伎奴

nuye pa nak-î-n-u

White's ground thrush<sup>261</sup> TOP sing-INF-PERF-FIN

The White's ground thrushes have sung.

(KK 2)

阿比麻久良麻久

apî-makuramak-u

REC-pillow-FIN

[We] pillowed each other.

(KK 45)

---

259. Literally: "the place where [he] stood."

260. Cf. stative final *-i* (Section 2.2.5.3.3.8.5), which marks the final for stative verbs, suffixes, and auxiliaries.

261. The bird *nuye* is a White's ground thrush, Latin name: *turdus dauma* (<http://www.asahi-net.or.jp/~sg4h-hriz/dic/tugumi/toratugumi.html>).

2.2.5.3.3.8.13 The Attributive Suffix -u/-uru. The attributive suffix is *-u* following

consonant final verb stems, *-uru* following vowel final verb stems, and *-ru* following *kami ichidan* verbs, which are typically monosyllabic verbs ending in /i/.<sup>262</sup> First I critique past analyses of this form, and then offer a better solution to explain the development of the attributive suffix.

To explain the allomorphs of this form, Russell (1997: 44-51), building off of earlier analyses by Yamaguchi (1978) and Unger (1993), proposed that the attributive and evidential forms are morphosyntactically complex.<sup>263</sup> First, the final suffix *-u* is affixed; this makes the predicate a full sentence. Next, the morpheme *-ra* is suffixed.<sup>264</sup> And finally, the suffix *-u* is added for the attributive and *-Ci* for the evidential. In the case of the attributive, contraction occurs, and in the case of the evidential form monophthongization occurs because of the loss of the unknown consonant ("C"):

attributive: [(clause) verb-u]-ra-u	>	(clause) verb-uru
evidential: [(clause) verb-u]-ra-Ci	>	(clause) verb-ure

This analysis is problematic for a number of reasons. First, the function of the morpheme *-ra-* is not clearly defined. The analysis presented in Russell (1997) was

---

262. Some verbs in this class are monosyllabic stems ending in a /i/. I call these "derived" *kami ichidan* verbs, meaning that they became *kami ichidan* verbs by analogy (Section 2.2.5.1).

263. The evidential form is discussed below (Section 2.2.5.3.3.8.14).

264. I discuss this morpheme below.

based in part on Yamaguchi's (1978: 52) analysis of the attributive form, where he proposed that the attributive was built off of the active final suffix *-u* (Section 2.2.5.3.3.8.14) plus *-ra-*, plus *otsurui* *\*ü*.<sup>265</sup> Yamaguchi claimed that the suffix *-ra-* is related to a suffix that follows the final form of adjectives, e.g., *kanasi-ra* 'sadness'. This morpheme, however, is a nominalizer (Omodaka et al. 1967: 808; Ikeda 1980: 265-266). If the morpheme *-ra-* is a nominalizer, then its function in the formation of these two forms (the attributive and evidential) is unclear: why would a nominalizer be part of a verbal morpheme that does not function as a noun?

Second, there is no evidence for the vowel /a/ in this form. This morpheme is reconstructed as *-ra-* to be vowel final and therefore an open syllable.<sup>266</sup> In addition, the evidential form following consonant final verb stems is *-ë*, with an *otsurui* /ë/,<sup>267</sup> which likely comes from monophthongization of *\*/a+i/* (Section 2.2.4.3.3.2),<sup>268</sup> thus, this morpheme was reconstructed as *-ra-* to help explain the final vowel of the evidential form.

---

265. Yamaguchi's pre-WOJ vowel *\*/i/* was proposed to account for EOJ attributive data. Russell (1997: 44-51) rejects this vowel and Yamaguchi's analysis because there is no evidence in WOJ to support the reconstruction of this vowel.

266. Russell (1997) reconstructs all verb roots and verbal suffixes as open syllable (Section 2.2.5.1.2).

267. The form following vowel final verb stems is *-ure* and since /ë/ and /ê/ merge after /r/ there is no way to determine the underlying vowel. Following consonant final verb stems, however, the vowel is /ë/ where a distinction can be made. Thus *-ure* < *\*-urë*.

268. It is also possible that this comes from monophthongization of /ö+i/, although that is statistically rare.

Finally, it is unclear what the function of the morphemes *-u* (attributive) and *-Ci* (evidential) are. If *-u* is an attributive marker and *-Ci* is an evidential marker why would these forms be suffixed to a noun to create a verbal form?

I now propose that the attributive and evidential forms are built off of a stative extension *-ur-* plus *-ö* '[attributive]' and *-ë* '[evidential]'.<sup>269</sup> The evidence for the stative extension *-ur-* is weak in WOJ, occurring only in these two forms. However, there is evidence for forms being built off of stative extensions in RK languages.<sup>270</sup> I discuss this further throughout Chapter 3, and also address the stative extension *-ur-* < PJ *\*-ʔura-* below (Section 4.4.3.33).

Evidence for the attributive *-ö* comes from the attributive form of the copula: *n-ö* 'COP-ATT' (KK 2). Typologically speaking, copulas tend to preserve older paradigmatic forms (Vovin, p.c.). It follows, then, that the attributive suffix that follows the copula is an older form than the attributive suffix *-u* found following consonant final verb stems.

---

269. This proposal developed from discussions with Alexander Vovin concerning problems with WOJ and EOJ attributive data. The idea that a stative extension is involved in the formation of the attributive and evidential forms is based on the analysis presented in Russell (1997), which was further developed by Serafim (2005). The process of vowel assimilation in WOJ is discussed above in 2.2.5.1.3.1, and is based on Russell (2005). The proposal that the attributive is *-ö* based on the attributive form of the copula *n-ö* comes from Vovin (p.c.). The stative extension *\*-ur-* is further discussed below (Section 4.4.3.33).

270. The stative extension *-ar-* is also productive in EOJ; see e.g., Sections 2.3.4.2.3.1.5.2 (NEOJ); 2.3.5.2.3.3.5.2 (CEOJ); 2.3.6.2.3.3.3.1 (SEOJ); 2.3.7.2.3.3.2.2 (UEOJ). WOJ has the progressive auxiliary *-êr-* which comes from the infinitive plus the stative extension *-ar-* (Section 2.2.5.3.3.4.1), the modal past auxiliary *-kêr-* from the past auxiliary *-kî-* plus *-ar-* (Section 2.2.5.3.3.5.2), and past progressive *-tar-* from *-te* plus *-ar-* (Section 2.2.5.3.3.4.4).

The sequence *\*-ur-ö*, although originally bimorphemic, becomes reanalyzed as a single morpheme. Although this claim can be critiqued as being speculative and not provable, the fact that *-ur-* is not found as a productive morpheme in WOJ, i.e, it is only used with a few morphemes which all appear to have been reanalyzed as single units,<sup>271</sup> makes it likely that the status of *-ur-* as a full morpheme was lost. However, the sequence *\*-urö* cannot occur. The problem, as stated above (Section 2.2.4.3.4), is that a back vowel (in this case /u/) and a non-back vowel (in this case /ö/) cannot occur in the same morpheme. In Section 2.2.5.1.3.1, I described a process of assimilation which occurs in the formation of verb roots, where a vowel assimilates to the front or back feature of a vowel in the preceding syllable. Following that discussion, *\*-urö* would become *\*-ura*, which is not the attested form. I also noted in the discussion above correspondences between WOJ /u/ and EOJ /ô/, e.g., WOJ *suNkus-* 'let pass' (MYS V: 804) : UEOJ *suNkôs-* (MYS XIV: 3564-U) and WOJ attributive *-u* : EOJ attributive *-ô/-u*.<sup>272</sup> What I propose for the attributive is a process at the proto-OJ level where the attributive suffix *-ö*, as found in

---

271. In addition to the attributive and evidential forms, I propose that *-ur-* is historically part of the tentative suffix, proto-OJ *\*-ur-am-* (Section 4.4.3.36), and the suppositional suffix, proto-OJ *\*-ur-as-* (Section 4.4.3.37)

272. As discussed below, there are cases where the attributive suffix in the various EOJ dialects occurs as /ô/ and cases where the attributive is /u/, see the discussion in Sections 2.3.4.2.3.1.6.9 (NEOJ), 2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ) below.

WOJ in the attributive form of the copula, i.e., *n-ö* 'COP-ATT', assimilates to /ô/ and then in WOJ raises to /u/ but remains /ô/ in EOJ.<sup>273</sup>

	proto-OJ form	assimilation	raising
WOJ	*-urö	*-urô	-uru
EOJ	*-urö	*-urô	(-uru/-urô) <sup>274</sup>

In the case of consonant final verb stems, the sequences *-uru* and *-ure* lose their /r/ due to Whitman's law (Section 2.2.4.3.2) that explains that /r/ is lost following short vowels. The attributive is shortened to \*-uu > -u, and the evidential \*-uë > -ë. However, in the case of vowel final verb stems, the /r/ does not get lost because the vowel of the stem, /i/ or /ë/, is a monophthong which is analyzed as being long (Russell 1997: 47). Even though the vowel of the stem gets deleted when suffixation occurs, the feature "length" is assumed to remain as a trace, and it is this feature that prevents /r/ from being lost. Monosyllabic verbs are also analyzed as being phonetically long, based mainly on RK monosyllabic words being lengthened and some evidence in dictionaries that WOJ words were lengthened (Serafim 1976: 34, Russell 1997: 48). Russell (1997: 47) analyzes the attributive form developing as follows:

---

273. However, the attributive is attested as both *-ô* and *-u* in the EOJ dialects. I return to this below in Sections 2.3.4.2.3.1.6.9 (NEOJ), 2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ).

274. Only *-uru* is found following vowel final verb stems in EOJ.

stem+ATT	<i>r</i> -loss	contraction	
consonant final (short vowel = <i>r</i> loss)			
<i>yuk-uru</i>	* <i>yukuu</i>	<i>yuku</i>	'go'
vowel final (long vowel = no <i>r</i> loss)			
<i>mî-uru</i>	* <i>mîuru</i>	<i>mîru</i>	'see'
<i>okî-uru</i>	* <i>okîuru</i>	<i>okuru</i>	'put'
<i>akë-uru</i>	* <i>akëuru</i>	<i>akuru</i>	'dawn'
irregular verbs			
<i>ku-uru</i>	* <i>kuuru</i>	<i>kuru</i>	'come'
<i>ar-uru</i>	* <i>aruu</i>	<i>aru</i>	'exist'
<i>sin-uru</i>	* <i>sinuru</i>	<i>sinuru</i>	'die'
<i>se-uru</i>	* <i>seuru</i>	<i>suru</i>	'do'

For the time being I accept this explanation for why the sequence *-ur-* is lost following consonant stem verbs, but not elsewhere. However, this analysis depends on the assertion that monophthongized vowels are long. Yet, there is no way to prove or disprove this assumption, and thus there is no way to prove or disprove this analysis.

This form has three main functions: 1) modification; 2) a sentence final marker for *kakari musubi* "linking" structures;<sup>275</sup> and 3) nominalized form of the verb.

---

275. In MJ, *kakari musubi* forms are "triggered" by the particles *ya*, *ka*, *zo* (WOJ [*N*]sö) or *namu*; when these particles appear in a clause the verb appears in the attributive form. In WOJ these forms also trigger the attributive form, however, there are many examples of the attributive in this function where no particle is present. For a historical analysis of *kakari musubi* structures see Serafim and Shinzato (2000).

加岐微流 伊蘇能佐岐淤知受

kakî-mi-ru isô-n-ö sakî oti-Ns-u

EMPH-go around-ATT rock COP-ATT shore fall-NEG-FIN

[You] do not fall on the rocky shores that [you] go around.

(KK 5)

多爾具久能佐和多流伎波美

tani-N-kuku nö sa-watar-u kîpam-î

valley-GEN-toads COP PREF-cross-ATT limit-NML

...the limit [of the country], where the valley toads cross.

(MYS V: 800)

奈曾許許波伊能祢良要奴

naNsö kökôNpa i-nö ne-raye-n-u

why extremely sleep-GEN sleep-PASS-NEG-ATT

Why can't [I] sleep at all?

(MYS XV: 3684)

#### 2.2.5.3.3.8.14 The Evidential Suffix -ë/-ure. The evidential form developed as

described above. It can be used on its own as a sentence final form in *kakari musubi* structures, either triggered by *kösö* or where there is no trigger (as in the first example below). The evidential can also be followed by the conjunctive suffix *-Npa* (Section 2.2.5.3.3.8.7) or the concessive suffix *-Ntö* (Section 2.2.5.3.3.8.8).

都麻母多勢良米

tuma möt-as-er-am-ë

spouse possess-HON-PROG-TENT-EVD

Since [I] have [you as my] spouse...

(KK 5)

春鳥之 佐麻欲比奴礼者  
 PARUTÖRI-NÖ sa-mayôp-î-n-ure-Npa  
 spring bird-NOM PREF-confuse-INF-PERF-EVD-CONJ  
Since the spring birds have confused [it]...  
 (MYS II: 199)

#### 2.2.5.3.3.9 Nominalizers

WOJ has two nominalizers which typically attach directly to the root of the verb and are not followed by any other suffix. The difference between these nominalizers is their scope: *-aku* nominalizes a verb phrase while *-i* nominalizes only the preceding verb.

2.2.5.3.3.9.1 The Nominalizer -aku. The nominalizer *-aku* is used with action verbs (Vovin 2003: 265). The nominalizer *-aku* attaches to the verb stem, or it can follow tentative *-am-*.

袁夫泥都羅羅玖  
 wo-N-pune turar-aku  
 small-COP-boat stretched in a line-NML  
 The small boats stretched in a line...  
 (KK 52)

烏梅乃波奈 知良麻久怨之美  
 umě-nö pana tir-am-aku pa wosi-mî  
 plum-GEN flower scatter-TENT-NML TOP regret-NML  
 The scattering of the plum blossoms is regrettable.  
 (MYS V: 824)

2.2.5.3.3.9.2 The Nominalizer -î. WOJ has a nominalized form that appears to be identical to the infinitive *-i*. However, in later stages of Japanese, we know that the verbs nominalized with *-î* and the infinitive forms of verbs have different accent patterns (Martin 1987: 211). Although we do not have accent information for WOJ, it is likely that the nominalized forms of verbs and the infinitive form developed separately, and it is just a coincidence that they are both formed with a homophonous morpheme.

久路岐美祁斯遠

kurô-kî mî-kês-î-wo

black-ATT HON-wear-NML-ACC

a black garment

(KK 4)

佐祢耐據茂 阿黨播怒介茂譽

sa-ne-N-tökô atap-an-u kamo yô

PREF-sleep/NML-COP-place give-NEG-ATT EMPH EMPH

[My wife] will not give me a place to sleep.<sup>276</sup>

(NSK 4)

#### 2.2.5.4 Summary

Table 2.20 lists the WOJ inflectional morphemes in alphabetical order, and presents their verbal string order and functions.

---

276. Literally "a place for sleeping."

Table 2.20: Summary of WOJ Inflectional Morphemes

<b>Morpheme</b>	<b>Type</b>	<b>Function</b>
-aku	suffix	nominalizer
-am-	suffix (Group VI)	tentative
-an-	suffix (Group V)	negative
-ana	sentence final suffix (Group VII)	desiderative
-aNpa	clause final suffix (Group VII)	hypothetical conditional
-aNs-	suffix (Group V)	negative
-aNsi	clause or sentence final suffix (Group VII)	negative tentative
-ap-	suffix (Group II)	durative
apî-	preverb	reciprocal
ari-	preverb	iterative
-as-	suffix (Group II)	honorific
-asimë-	suffix (Group II)	causative
-aye-	suffix (Group II)	passive
-ê/-yö	sentence final suffix (Group VII)	imperative
-ë/-ure	clause or sentence final suffix (Group VII)	evidential
-êr-	auxiliary (Group III)	progressive
i-	prefix	goal of verb of motion
-î	suffix	infinitive
-i	sentence final suffix (Group VII)	stative final
-î	suffix	nominalizer
imas-	auxiliary (Group I)	honorific
kakî-	preverb	emphatic
-kî	sentence final auxiliary (Group VII)	past
-kêm-	suffix (Group IV)	tentative past
-kêr-	suffix (Group IV)	modal past
matur-	auxiliary (Group I)	humble
-n-	suffix (Group III)	perfective
na...sö	circumfix	negative imperative
-Npa	clause final suffix (Group VII)	conjunctive

-Ntö	clause final suffix (Group VII)	concessive
sa-	prefix	do in this way
-si	clause final auxiliary (Group VII)	past
-t-	suffix (Group III)	perfective
ta-	prefix	emphatic
tamap-	suffix (Group I)	honorific
-tar-	suffix (Group III)	perfective progressive
-te	clause final auxiliary (Group VII)	subordinative gerund
-tutu	clause or sentence final auxiliary (Group VII)	coordinative
-u	sentence final suffix (Group VII)	active final
-u/-uru	clause or sentence final suffix (Group VII)	attributive
-uNpë-	suffix (Group VI)	debitive
-uram-	suffix (Group VI)	tentative
-urasi-	suffix (Group VI)	suppositional
uti-	preverb	instant or thoughtless act

### 2.3 Eastern Old Japanese (EOJ)

Eastern Old Japanese (EOJ) was the language spoken in the eastern region of Japan, traditionally divided into three dialects, called A, B, and C.<sup>277</sup> Because the labels "A", "B", and "C" are arbitrary, I have renamed them as follows: Northern Eastern Old Japanese (NEOJ) for Area A; Central Eastern Old Japanese (CEOJ) for Area B; and Southern Eastern Old Japanese (SEOJ) for Area C. In addition, there is a fourth category consisting of data that cannot be attributed to any dialect, which I classify as Unknown Eastern Old Japanese (UEOJ). This category contains a significant number of EOJ data. However, the data are likely from different areas and are treated as mixed dialect data.<sup>278</sup>

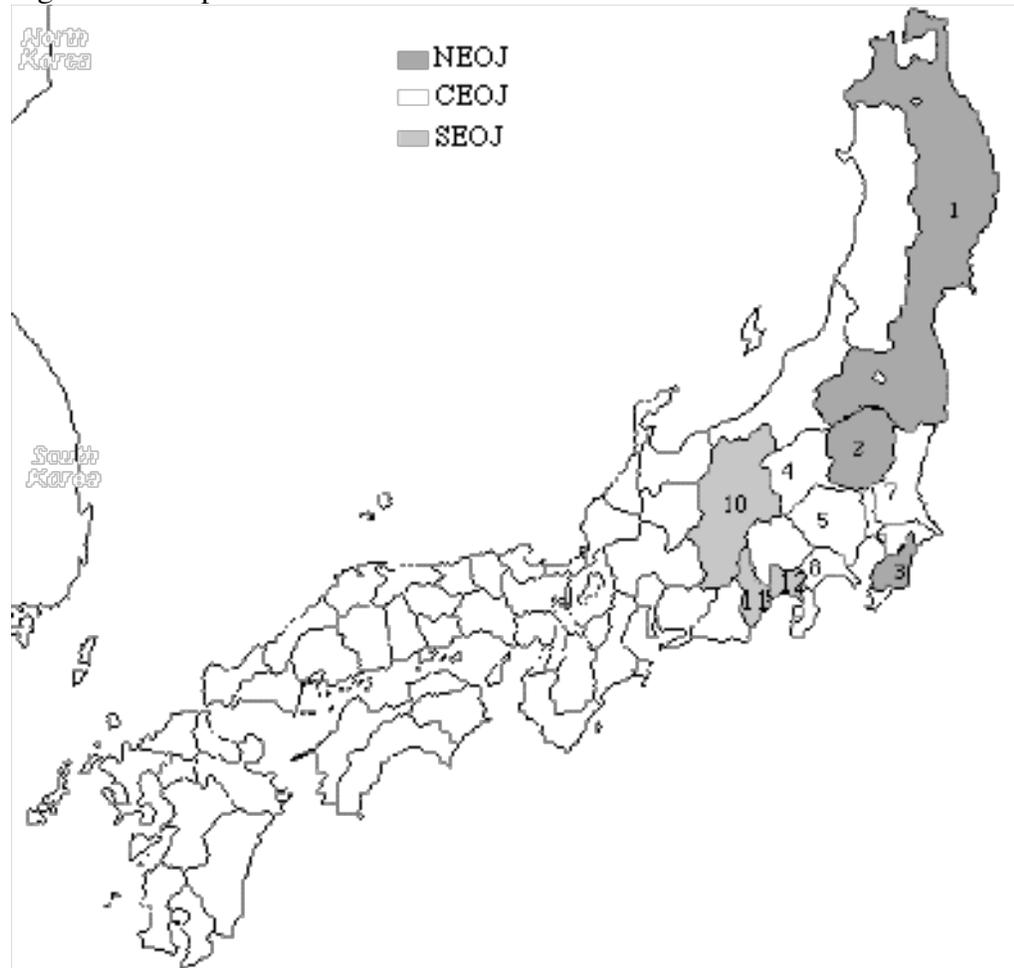
Much work remains to be done to fully understand the differences between these dialects. What has been noted are mainly different vowel correspondences between the dialects, and between the dialects and WOJ. The provinces corresponding to each dialect area are shown on Figure 2.6.

---

277. Ikier (2006) has recently proposed a fourth dialect area; I suspect there may be even more. At this time more research is needed, particularly in the area of EOJ phonology, to determine if more dialect areas are needed. For this study I follow the traditional analysis of three dialect areas and a fourth group consisting of data which cannot be categorized as belonging to any of the known dialect areas.

278. I discuss this in more detail below (Section 2.3.7).

Figure 2.6: Map of EOJ Dialect Areas<sup>279</sup>



- Area A: 1. Mutsu (陸奥)      2. Shimotsuke (下野)      3. Kazusa (上総)  
 Area B: 4. Kōzuke (上野)      5. Musashi (武蔵)      6. Shimōsa (下総)  
           7. Hitachi (常陸)      8. Sagami (相模)      9. Izu (伊豆)  
 Area C: 10. Shinano (信濃)      11. Tōtōmi (遠江)      12. Suruga (駿河)<sup>280</sup>

279. Map modified from [http://flagspot.net/flags/jp\(k.html#map](http://flagspot.net/flags/jp(k.html#map)

280. Readings of *kuni* (province) names are given in modern Japanese.

### 2.3.1 EOJ Primary Source Materials

EOJ is preserved in poems found in Book XIV and Book XX of the *Man'yōshū* (see Section 2.2.1). However, of the 450 poems found in these two books,<sup>281</sup> 234 were written in EOJ, with the remaining 215 poems were written in WOJ. Further, it is often possible to pinpoint where a poem or poet came from, typically because a place name is mentioned in the poem. Table 2.21 shows which poems of Books XIV and XX represent EOJ data and can be identified with a particular region (based on Mizushima 1972, 1984a, 1984b, 2003; Omodaka 1984a, 1984b). I have grouped them according to their dialect.

---

281. There are 230 poems in Book XIV and 220 and Book XX. See Table 2.21 for the poems in each book which were recorded in EOJ.

Table 2.21: EOJ Poems Divided by Dialect Group and Location

Area	Location	Book XIV		Book XX		Total
		poem numbers	total	poem numbers	total	
NEOJ	Kazusa (Ka)	3382, 3383	2	4347-4359	13	<b>15</b>
	Mutsu (Mt)	3426, 3437	2		0	<b>2</b>
	Shimotsuke (St)	3424, 3425	2	4373-4383	11	<b>13</b>
CEOJ	Hitachi (Hi)	3351, 3388, 3394, 3395, 3397	5	4363-4372	10	<b>15</b>
	Kōzuke (Ko)	3402, 3404, 3405, 3408-3410, 3412-3415, 3418-3420, 3422, 3423, 3434-3436	18	4404-4407	4	<b>22</b>
	Musashi (Mu)	3374-3376, 3379	4	4413-4424	12	<b>16</b>
	Sagami (Sa)	3361, 3363, 3366, 3368-3370, 3431, 3432	8	4328-4330	3	<b>11</b>
	Shimōsa (Ss)	3349, 3384, 3385	3	4384-4394	11	<b>14</b>
SEOJ	Shinano (Sn)	3352, 3398-3400	4	4401-4403	3	<b>7</b>
	Suruga (Su)	3359	1	4337-4346	10	<b>11</b>
	Tōtōmi (To)		0	4321-4327	7	<b>7</b>
UEOJ	unknown (U)	3442, 3444-3448, 3450, 3452, 3456, 3458, 3460, 3461, 3463, 3465, 3466, 3468, 3469, 3472-3474, 3476-3478, 3480-3485, 3487, 3489, 3493-3496, 3499-3506, 3509, 3511-3518, 3520-3533, 3536, 3537, 3539-3541, 3543, 3544, 3546, 3548, 3549, 3551-3553, 3555-3557, 3561, 3563-3566, 3571, 3572, 3575, 3576	92	4425-4432, 4436	9	<b>101</b>
<b>Total</b>			<b>141</b>		<b>93</b>	<b>234</b>

The abbreviations following the location names are used when referencing poems, e.g., "MYS XX: 4347-Ka" refers to poem 4347 found in Book XX of the *Man'yōshū* which is from the area of Kazusa (NEOJ).

### 2.3.2 EOJ Secondary Source Materials

There are fewer studies available for EOJ than for WOJ, and, with the exception of a few articles and Vovin (2005b) almost nothing is available in English. However, the material that is available for EOJ is far more detailed than the existing material for WOJ.

Some of the secondary sources discussed above for WOJ (Section 2.2.2) include a discussion of EOJ (e.g., Yamada 1954; Saeki 1972; Vovin 2005b), though they are mainly concerned with how EOJ contrasts with WOJ, and are not intended as grammars EOJ. Further, many sources on WOJ (e.g., Martin 1987; Russell 1997; Unger 1993) mention EOJ only to discuss the attributive form.<sup>282</sup> The few EOJ grammars that are available are quite comprehensive. I discuss them below in alphabetical order, first discussing the major works and then articles.

First, Fukuda (1965) presents a study of EOJ which includes both cultural and linguistic comparisons to WOJ and MJ. He also mentions a possible contact relationship

---

282. This form is discussed below for each dialect: Section 2.3.4.2.3.1.6.8 for NEOJ; Section 2.3.5.2.3.3.6.11 for CEOJ; Section 2.3.6.2.3.3.5.9 for SEOJ; and Section 2.3.7.2.3.3.6.12.

with the Ebisu and Ainu in Japan, particularly noticeable in eastern place names.<sup>283</sup>

Fukuda also discusses phonology and morphology, and often notes what forms and/or what phonemes can be attributed to a given location. Of particular interest, at least for the present study, are Fukuda's appendices, which present every verb attested in EOJ, the forms the verb is attested in (according to the traditional classification of verb bases), and the poem each verbal form occurs in. There are also a number of detailed maps which showing where various alternations between vowels can be found.

The next major work is Hōjō (1966). Much of this study focuses on EOJ orthography, describing what characters are used in each of the EOJ texts. There is also a phonology section that discusses sequential voicing and vowel contraction. Hōjō then discusses some special characteristics of EOJ grammar which are not found in WOJ. In particular he discusses the attributive forms of adjectives and verbs, the special negative forms, and the uses of stative *-ar-* from the verb of existence.

Mizushima has contributed four major volumes to the study of EOJ (Mizushima 1972 [originally published in 1950], 1984a, 1984b, and 2003). All four volumes investigate the language of EOJ with discussions on orthography, phonology, and grammar, although the focus of each study is different. Data are presented with

---

283. It is not clear at this time who the Ebisu were; they may have been ethnically Japanese and are believed to have lived in Northern Japan.

incredible detail; Mizushima indicates the poem number, location where the poem is from (if known), and indicates textual variations where relevant. All three books contain discussions on orthography, grammar, and differences with WOJ, although the focus of each discussion differs.

The first of Mizushima's studies, *Man'yōshū: Azumauta, sakimoriuta*,<sup>284</sup> discusses both Books XIV and XX of the *Man'yōshū*. It is particularly useful for its presentation of orthography, including discussions on which characters are used to record EOJ syllables, and where every character occurs. It also contains annotated versions of both Books XIV and XX of the *Man'yōshū*.

The next study, *Man'yōshū Azumauta honbun kenkyū narabi ni sōsakuin*,<sup>285</sup> concentrates on Book XIV of the *Man'yōshū*. The bulk of the book presents not only the poems as they appear in Book XIV, but also all variations of the poems found in other sources, such as private house collections. In these other collections the poems are written in *hiragana* and not *Man'yōgana* (*phonograms*). This is especially useful for scholars wishing to understand how EOJ poems were interpreted by later speakers of Japanese. This study is also helpful for its index of words found in EOJ, showing the various spellings for the words, and where each spelling occurs.

---

284. *Man'yōshū: The Songs of Azuma and Songs of the Border Guards* (Mizushima 1972).

285. *The Study of the Book of Azuma Songs and a Complete Index* (Mizushima 1984a).

The third study by Mizushima, *Azumauta kokugogakuteki kenkyū*,<sup>286</sup> is a complete grammar of the EOJ language. Mizushima presents a detailed study of EOJ grammar, including discussions of language use and comparisons with other languages and dialects spoken in Japan. Mizushima also discusses different text versions, and notes various spellings and in which texts the variations occur.

And finally, the fourth study by Mizushima, *Man'yōshū sakimori uta zenchūshaku*,<sup>287</sup> focusses on

In addition to the studies mentioned above, there are a few articles of note such as Frellesvig (2003) and Hino (2004). Frellesvig's article discusses pre-OJ verbal morphology, and, although it only mentions the EOJ attributive, presents some interesting observations about this form. Hino's article is a reconstruction of the PJ vowel system, and includes a thorough discussion of vowel correspondences between WOJ and EOJ.

### 2.3.3 EOJ Orthography

The EOJ texts are written almost entirely in phonograms, i.e., characters used for their phonetic values (see Section 2.2.3.2.2 above for further discussion). Mizushima (1972: 43) states that Book XIV is typically written with one character per syllable, with

---

286. A Linguistic Study of the Azuma Songs (Mizushima 1984b).

287. A Complete Commentary on the *Man'yōshū* Border Guard Poems (Mizushima 2003).

the exception of place names like 信濃 Shinano, 武蔵 Musashi, etc, and, of the six chapters that use characters phonetically (Books V, XIV, XV, XVII, XVIII, and XX), only Book XIV uses characters phonetically when an author is unknown. Book XX also uses characters phonetically, except for a few common words like 白玉 *siratama* 'white gem, jade', 父 *titi* 'father', 母 *papa* 'mother', 道 *miti* 'road, path, way' (Mizushima: 1972, 43).

#### 2.3.4 NEOJ

Northern Eastern Old Japanese (NEOJ), also known as Area A, consists of the dialects of EOJ spoken in the regions of Mutsu, Shimotsuke, and Kazusa (see Figure 2.6). Table 2.21 above shows which poems correspond to each area.

##### 2.3.4.1 NEOJ Phonology

As mentioned above in Section 2.3.3, EOJ texts are written in the same script as WOJ texts, presumably written by Western scribes, who would have recorded the Eastern dialects as they perceived them. Thus, our understanding of EOJ phonology is dependent on our understanding of WOJ phonology, and it is, therefore, necessary to describe EOJ phonology in terms of WOJ phonology.

### 2.3.4.1.1 NEOJ Consonants

The NEOJ consonants are as follows:<sup>288</sup>

Table 2.22: NEOJ Consonants

	Labial	Dental		Palatal	Velar
Voiceless obstruents	p	t	s		k
Prenasalized voiced obstruents	Np [ʰb]	Nt [ʰd]	Ns [ʰz]		Nk [ʰg]
Nasals	m	n			
Liquid		r [r]			
Glides	w			y	

#### 2.3.4.1.1.1 Voiceless Obstruents

The voiceless obstruents found in NEOJ are /p/, /t/, /k/, and /s/. They occur word initially and word internally, but never in word final position. As there is no evidence that the NEOJ consonants differ phonetically from WOJ consonants, I will assume the phonetic values reconstructed for WOJ by Miyake (1999; 2003b) are correct for NEOJ as well:

/p/ - voiceless unaspirated bilabial stop

/t/ - voiceless unaspirated dental stop

/k/ - voiceless unaspirated velar stop

/s/ - voiceless dental fricative

---

288. As far as we know, there are no phonetic differences between the WOJ and EOJ consonant system. This table is, therefore, identical to Table 2.3 presented above. In addition, all dialects of EOJ have the same consonantal system.

#### 2.3.4.1.1.2 Prenasalized voiced obstruents

NEOJ has the prenasalized voiced obstruents /Np/, /Nt/, /Nk/, and /Ns/, which are the prenasalized equivalents of the voiceless obstruents described above (See also Section 2.2.4.1.2).

/Np/ - prenasalized unaspirated bilabial stop

/Nt/ - prenasalized unaspirated dental stop

/Nk/ - prenasalized unaspirated velar stop

/Ns/ - prenasalized dental fricative

The issue of prenasalized consonants has not been fully investigated for EOJ.

Often words that are expected to be written with a prenasalized consonant, i.e., words that are prenasalized in WOJ or elsewhere in EOJ, are written with plain consonants. I transliterate the texts according to how they were written and do not correct the text according to what we think we know about the word in EOJ.

#### 2.3.4.1.1.3 Nasals

NEOJ has two nasals, which are probably the same as their WOJ equivalents, reconstructed by Miyake (1999; 2003b) as follows:

/m/ - bilabial nasal

/n/ - dental nasal

#### 2.3.4.1.1.4 Liquid

NEOJ has one liquid, traditionally written as "r". I follow Miyake's (1999; 2003b) argument for treating this as a flap (Section 2.2.4.1.4).

#### 2.3.4.1.1.5 Glides

Like WOJ, NEOJ has two glides, /y/ a front glide, and /w/ a back glide.

#### 2.3.4.1.2 NEOJ Vowels

The description of NEOJ vowels is more difficult than that of NEOJ consonants, mainly because we lack a complete study of NEOJ phonology comparing the characters used to record NEOJ syllables and their readings in LMC. Another problem is that we lack a comprehensive study of each dialect. Fukuda (1965), Hōjō (1966), Mizushima (1972, 1984a, 1984b, 2003) discuss the various areas but do not treat them separately in their studies; they mention the areas but do not discuss fully the features and characteristics of each dialect. For example, Mizushima (1984b) goes to great lengths to catalog the characters used to record the syllables used to record each dialect. However, he does not further explore the issue of what syllables are attested in each dialect. Also, this study only considers Book XIV materials and therefore misses significant data from

the EOJ poems in Book XX. Hino (2004) presents data illustrating correspondences between WOJ and vowels found in each of the dialects, and ultimately uses his findings to reconstruct a PJ vowel system. However, his treatment fails to account for all correspondences found between WOJ and EOJ (e.g., a treatment of WOJ /ō/ : EOJ /ë/ and WOJ /ë/ : EOJ ö is lacking). Further, not all data are presented; for NEOJ for example, he presents examples of WOJ /u/ corresponding to EOJ /ō/ but does not list examples of WOJ /u/ corresponding to EOJ /u/ which are well attested within NEOJ. Note the following NEOJ examples from Kazusa:<sup>289</sup>

WOJ /u/	:	NEOJ /u/
<i>-aN<sub>s</sub>-u</i> 'NEG-FIN' (KK 7)	:	<i>-aN<sub>s</sub>-u</i> 'id.' (MYS XX: 4347-Ka)
<i>-am-u</i> 'TENT-ATT' (BK 5)	:	<i>-am-u</i> 'id.' (MYS XX: 4348-Ka)
WOJ /u/	:	NEOJ /o/
<i>pap-u</i> 'crawl-ATT' (KK 13) <sup>290</sup>	:	<i>pap-o</i> 'id.' (MYS XX: 4352-Ka)
<i>-am-u</i> 'TENT-ATT' (BK 5)	:	<i>-am-o</i> 'id.' (MYS XX: 4359-Ka)

---

289. I am only presenting examples from Kazusa here to show that the correspondence of WOJ /u/ : NEOJ /u/ and WOJ /u/ : NEOJ /ō/o/ to show that these correspondences exist not only in NEOJ but can also be found in one dialect of NEOJ. The same correspondences can be found in Shimotsuke and Mutsu. Although my data contains only verbs, I found that in all three NEOJ dialects the correspondence of WOJ /u/ : NEOJ /u/ outnumbers correspondence of WOJ /u/ : NEOJ /ō/o/.

290. The WOJ verb *pap-* 'crawl' is not attested in its attributive form. However, it is attested phonetically in WOJ, it behaves like other consonant final verb stems, and so its expected attributive form is *pap-u*.

Hino (2004) would lead you to believe that WOJ /u/ always corresponds to NEOJ /ô/,<sup>291</sup> however this is definitely not the case.<sup>292</sup>

Clearly, more work needs to be done to further our understanding of EOJ phonology; such a treatment is, however, beyond the scope of this study. Although my discussion treats the phonology of each area of EOJ separately, my findings are ultimately limited by the present understanding of EOJ phonology which often treats EOJ as if it were one language/dialect.

#### 2.3.4.1.2.1 /î/, /i/, and /i/

Kazusa, Shimotsuke, and Mutsu all have the high front vowel /î/ following labials and velars and a neutral /i/ following coronal consonants.<sup>293</sup> Generally speaking, there is a one-to-one correspondence between WOJ /î/ and NEOJ /î/, and WOJ /i/ and NEOJ /i/.<sup>294</sup> However, Hōjō (1966: 414) presents one example of WOJ /i/ : NEOJ /ô/.<sup>295</sup>

WOJ /i/	:	NEOJ /ô/
<i>wa-nî</i> 'I-LOC'	:	<i>wa-nô</i> 'id.' (MYS XX: 4358-Ka)

---

291. NEOJ /ô/ is a neutral /o/ following labial consonants. It is unknown at this time whether vowels merged in NEOJ in the same ways that they did in WOJ or whether they did not merge but due to orthographic limitations could only be recorded in the same ways that WOJ syllables were.

292. I return to this phonemic correspondence below (Section 2.3.4.1.2.5).

293. A full list of the syllables attested in each dialect is presented in Appendix B.

294. By "one-to-one correspondence" I mean that an /î/ in WOJ will also be an /î/ in NEOJ, e.g., the WOJ word *namî* (K I: 33) is attested in NEOJ as *namî* (MYS XIV: 3349).

295. There are also examples of WOJ /i/ : CEOJ /ô/ and WOJ /i/ : SEOJ /ô/.

There are several problems with this example. First, in WOJ *wa* does not occur with the locative; it is always *ware-ni*.<sup>296</sup> Second, in Kazusa alone, there are 25 examples of the syllable *ni* which correspond to WOJ *ni*, indicating that there is a regular correspondence between WOJ /i/ and NEOJ /i/ and that the example presented above, WOJ /i/ : NEOJ /ô/ is an exception. Next, there are 18 examples of the locative *ni*, always recorded as *ni*; the example presented above is the only example of locative *nô*.

Another issue is that the character used to record *nô* in this example is 努 which is used in WOJ to record both *nô* and *nu*, yet, Hōjō (1966: 414), Mizushima (1972: 206-207) and Omodaka (1984b: 84-85) all treat this as an example of locative *nô* and would analyze this example as:

和努等里都伎弓

wa nô tör-i-tuk-î-te

I LOC take-INF-attach-INF-GER

[I] have taken [what my children said] and held [their words] to me, and...

(MYS XX: 4358-Ka)

An alternative analysis would be to treat 努 as *nu*.<sup>297</sup> In this case we interpret *wanu* as the EOJ pronoun 'I'.<sup>298</sup>

---

296. Vovin (2005: 219-220) discusses the distribution for *wa* 'I' and *ware* 'id.' and notes that WOJ *wa* occurs before the nominative/genitive particles *Nka* and *nô* but not before the locative *ni*.

297. This is the reading presented for this example in Vovin (n.d.).

298. *Wanu* 'I' is discussed in (Vovin 2005: 226).

和努等里都伎弓

wanu tör-i-tuk-î-te

I take-INF-attach-INF-GER

I have taken and held on to [what my children said], and...

(MYS XX: 4358-Ka)

Both analyses are plausible. However, since no other cases of locative *nô* exist, and since the locative is well attested as *ni*, I am inclined to favor the second analysis. Choosing this analysis also explains away the only example of WOJ /i/ : NEOJ /ô/,<sup>299</sup> allowing us to conclude that WOJ *î/i* always corresponds to NEOJ *î/i*.

The central high vowel /i/ is only attested in Kazusa, where it follows only /p/ and /Nk/.<sup>300</sup> It is not found in Mutsu and Shimotsuke.<sup>301</sup> In the case of Mutsu it is possible that /i/ simply was not attested; none of the words attested in Mutsu correspond to a word with an /i/ in WOJ. As for Shimotsuke, Hōjō (1966: 414) presents the following examples of WOJ /i/ corresponding to Shimotsuke /u/ and /ë/:

---

299. We see instead a lexical difference of WOJ *wa* with (N)EOJ *wanu*.

300. Typologically speaking, it is unusual for a language to have a voiced consonant where the voiceless counterpart does not occur, unless there is some motivation for voicing. However, there are languages which do have voiced consonants without a voiceless counterpart, e.g., Tiruray has /b/ but no /p/; Fijian has /b/ but no /p/ (p.c. Robert Blust). Although highly unusual, several NEOJ dialects have /Nki/ and not /ki/. This could be an orthographic error, or NEOJ could have /Nki/ and no /ki/.

301. There is one possible exception for Shimotsuke. Mizushima (1984a: 441) notes that MYS XIV: 3349 has 未 (*mi*) in some versions of the text and 末 (*ma*) in others, and Mizushima (1984a: 441) and Omodaka (1984a: 10) both choose 末 (*ma*) as the correct character.

WOJ /i/	:	NEOJ /u/ or /ë/
<i>suNki</i> 'pass' (KK 25)	:	<i>suNku</i> 'id.' (MYS XX: 4378)
<i>ki</i> 'tree' (KK 47)	:	<i>kë</i> 'id.' (MYS XX: 4375)

Both examples, however, are problematic. The first example can be dismissed on the basis that two different forms of the verb are being compared. The WOJ form Hōjō is using for this comparison, WOJ *suNki*, can either be the nominalized or infinitive form of the verb; he does not provide an attestation.<sup>302</sup> The NEOJ example comes from the following line:

都久比夜波 須具波由氣等毛  
 tuku pî ya pa suNku pa yuk-ë-tömô  
 moon sun QP TOP pass/NML TOP go-EVD-CONC  
 The sun and moon, as for [their] passing, although [they] have  
 gone...  
 (MYS XX: 4378-St)

This shows *suNku* in a nominalized form the problem is, how do we analyze this form?

One way to nominalize verbs is with the attributive, however, if NEOJ behaves like WOJ, we would expect the attributive ending following vowel final verb stems to be *-uru* and not *-u*, which is the attributive form following consonant final verb stems.<sup>303</sup> There

---

302. Hōjō does not provide attestations for his examples. The attestation presented here, KK 25, is an example of this verb in the infinitive form. The nominalized form of this verb is identical to the infinitive form, although they are historically from different sources.

303. This verb is attested in Kazusa as *suNki-te* 'pass/INF-GER' (MYS XX: 4349-Ka), so we assume that this verb has a vowel final stem. The attributive form is discussed in Section 2.3.4.2.3.1.6.8.

are only two examples of attributive *-uru* in NEOJ:once as *k-uru* 'come-ATT' (MYS XX: 4353-Ka) and once as *mî-y-uru* 'see-POT-ATT' (MYS XX: 4355-Ka). Both examples show the attributive modifying a noun and not as a nominalized form.

Another possibility is that this is the final form of the verb, i.e., *suNk-u* 'pass-FIN'.<sup>304</sup> However, this is grammatically awkward: the final form marks the end of a sentence and not the end of a clause (as in the example above).

A third possibility is that the verb root is being used as a noun. The main problem with this hypothesis is that we cannot reconstruct the root using only EOJ data. However, the root for this verb in pre-WOJ is *\*suNku-*,<sup>305</sup> and it is possible that the root is the same for EOJ, but this is just speculation. Further, there is evidence of adjective stems being used as free forms; such evidence has not yet been presented for EOJ.

Therefore, Hōjō's first example must be rejected as it is not possible to determine what forms are being compared. At any rate, this may be a morphological and not a phonological difference.

The second example, WOJ *kî* : NEOJ *kĕ*, is a little more complicated. The word for 'tree' in WOJ is attested in both bound and free forms: *kō-* (bound form) and *kî* (free form). Shimotsuke has only *kĕ*, so it is not possible to determine whether a bound form

---

304. The active final form is discussed in Section 2.3.4.2.3.1.6.9.

305. WOJ *suNki-* comes from the root plus the transitivity flipper (Section 2.2.5.2.7.2).

versus free form distinction is made, and therefore, not possible to determine if the correspondence here is really WOJ *i* : NEOJ *ë* or WOJ *ö* : NEOJ *ë*.

Another point to consider here is the phonetic value of these vowels. As discussed in Sections 2.2.4.2 and 2.2.4.3.3.2 above, /i/ is a monophthong formed from /ö+î/ and is phonetically [+], /ö/ is a mid central vowel [ə], and /ë/ is phonetically a diphthong [əy]. If Hōjō is correct, and the forms being compared here are both the free forms of the word 'tree', and thus, comparing WOJ /i/ to NEOJ /ë/, then it is possible this is a case of lowering of /i/ to /ë/. However, it is also possible that we have a difference in process; in WOJ monophthongization occurs while in NEOJ diphthongization occurs.

WOJ	<i>kö-î</i> 'tree-UNB'	> [monophthongization] <i>kî</i>
NEOJ-St	<i>kö-î</i> 'tree-UNB'	> [diphthongization] <i>kë</i>

Unfortunately, with only one example it is not possible to prove anything. Also, bound versus free forms in EOJ have yet to be studied; such consideration is beyond the scope of this study.

#### 2.3.4.1.2.2 /ê/, /e/, and /ë/

The mid front vowel /ê/ is attested in all three sub-dialects of NEOJ. The neutral vowel /e/, which is found following coronals where the distinction between /ê/ and /ë/ is

lost, is found in all areas of NEOJ. The diphthong /ë/, however, is attested in Shimotsuke and Kazusa, but is not attested in Mutsu.

There is one example of WOJ /ë/ corresponding to NEOJ-Mutsu /ê/:

都良波可馬可毛

tura pak-am-ê kamô<sup>306</sup>

bow string arm-TENT-EVD EMPH

[he] had presumably armed [himself] with [his] bow string

(MYS XIV: 3437-Mu)

Before *kamô* we would expect to find the verb in the attributive form, yet in this example the verb is in the evidential form, except instead of the expected /ë/ we find /ê/. Rather than treating this as an alternation between WOJ /u/ (the expected attributive form) and NEOJ /ê/, I treat this as a morphological issue where the evidential form occurs instead of the attributive, and thus the correspondence that remains is between WOJ /ë/ and NEOJ-Mutsu /ê/. Also, as stated above, /ë/ is not attested in Mutsu; it is possible that /ë/ and /ê/ merged in Mutsu following /m/ and that Western scribes recorded this syllable as *mê*. However, one example is not sufficient to prove any claims about the language.

With the exception of this one example, there is a one-to-one correspondence between WOJ *ê* and NEOJ *ê*, WOJ *e* and NEOJ *e*, and, for Kazusa and Shimotsuke, WOJ *ë* and NEOJ *ë*.

---

306. The character 馬 can also be read *ma* and the reading *mê* is limited to the *Man'yōshū* (Omodaka 1967: 800-801). I follow Mizushima (1972: 125, 1984a: 202-203), reading this as *mê*.

#### 2.3.4.1.2.3 /ô/, /o/, and /ö/

The mid back round vowel /ô/, the neutral /o/,<sup>307</sup> and the central vowel /ö/ is found in all three sub-dialects. As discussed in Section 2.2.4.2.3, the distinction between /ô/ and /ö/ is preserved following /m/ and /p/ in some early texts (Bentley 1997).<sup>308</sup> Spelling conventions show that the distinction between /ô/ and /ö/ is not preserved in NEOJ. For example, the particle *kamö* is spelled in NEOJ as 可毛 *kamô* (MYS XX: 4356-Ka) and 可母 *kamö* (MYS XX: 4354-Ka), if these vowels were distinct, then words with these vowels would be spelled consistently. There is a one-to-one correspondence between WOJ /ô/ and NEOJ /ô/, WOJ /o/ and NEOJ /o/, and WOJ /ö/ and NEOJ /ö/. However, for WOJ words where the *kô-otsu* distinction is preserved following /p/ and /m/, the correspondence is WOJ /ö/ or WOJ /ô/ with NEOJ /o/. NEOJ /ô/ also corresponds to WOJ /u/, which I discuss below (Section 2.3.4.1.2.5).

---

307. Neutral /o/ occurs following labial consonants. It is the result of a merger between /ô/ and /ö/ following labials.

308. According to Bentley (1997) the distinction between the syllables *pô* and *pö* is preserved in *Kojiki* spellings and between the syllables *mô* and *mö* is preserved in *Kojiki* and *Man'yôshû* V spellings.

#### 2.3.4.1.2.4 /a/

The low vowel /a/ is attested in all environments in all sub-dialects of NEOJ. In most cases, there is a one-to-one correspondence between WOJ /a/ and NEOJ /a/, however there are two examples where WOJ /a/ corresponds to something else in NEOJ:

WOJ /a/	:	NEOJ
<i>kamô</i> 'duck' (KK 8)	:	<i>kömô</i> 'id.' (MYS XX: 4354-Ka)
<i>yam-</i> 'fall ill' (MYS V: 897)	:	<i>yum-</i> 'id.' (MYS XX: 4382-St)

As for the first example, where WOJ /a/ : NEOJ /ö/, it is not possible to attribute the vowel correspondence to the phonetic environment, as there are examples of WOJ /a/ corresponding to NEOJ /a/ following /k/ and occurring before /m/, in fact, we have *kamö* (EMPH) attested in the same poem.<sup>309</sup> As for the second example, there are examples of WOJ /ya/ corresponding to NEOJ /ya/, e.g., WOJ *yama* 'mountain' (MYS V: 872) : NEOJ *yama* 'id.' (MYS XIV: 3424-St). For these two cases, it is not clear why WOJ /a/ does not correspond to NEOJ /a/ as it does in all other examples.

#### 2.3.4.1.2.5 /u/

The high back vowel /u/ is attested in all three sub-dialects of NEOJ. Hino (2004: 193-197) presents data showing the correspondences between WOJ and EOJ vowels. He

---

309. The vowels /ô/ and /ö/ merge after /m/ so *kamô* and *kamö* can both be treated as /kamo/.

argues that WOJ /u/ corresponds to NEOJ /ô/, showing that WOJ /u/ corresponds to NEOJ /ô/ twice in Shimotsuke, and once in Kazusa (Hino 2004: 197).<sup>310</sup> Hino does not include examples of WOJ /u/ corresponding to NEOJ /u/,<sup>311</sup> yet such examples exist. The following correspondences between WOJ and NEOJ vowels occur:

WOJ	:	NEOJ
ô/o	:	ô/o
u	:	ô/o
u	:	u

Hōjō (1966: 415) notes two examples of WOJ /u/ : NEOJ /ô/:

WOJ /u/	:	NEOJ /ô/
<i>inur-</i> 'sleep' (MYS VIII: 1511)	:	<i>inôr-</i> 'id.' (MYS XX: 4351)
<i>tu</i> 'port' (MYS IX: 1780)	:	<i>tô</i> 'id.' (MYS XX: 4380)
<i>pap-u mamë</i> [not attested] <sup>312</sup>	:	<i>pap-o mamë</i> '[a kind of bean]' (MYS XX: 4352)

However, the syllable *nô* in the first example is written with the character 努 which can also represent the syllable *nu*. In fact, Omodaka et al (1967: 89) and Vovin (n.d.) both transcribe this as *nu*, while Mizushima (1972: 204) and Omodaka (1984b: 75) treat this character as the syllable *nô*. Therefore it is not clear whether we are dealing with a case of WOJ /u/ corresponding to NEOJ /ô/ or of WOJ /u/ : NEOJ /u/. Since there

---

310. Hino (2004) does not include Mutsu data.

311. Hino (2004) does include evidence that WOJ /u/ corresponds to CEOJ and SEOJ /u/.

312. See discussion below.

are many examples of WOJ /nu/ corresponding to NEOJ /nu/, but no examples of WOJ /nu/ : NEOJ /nô/, it is tempting to conclude that this character should be read as *nu* here. Ultimately, since we cannot prove the reading of this character, and therefore the vowel correspondences here, this example will be rejected.

As for the second example, WOJ *tu* 'port' corresponding to NEOJ *tô*, Mizushima (1972: 218), Omodaka (1984b: 109), and Takagi, Gomi, and Ôno (1962: 429) all analyze NEOJ *tô* as the word 'door, gateway' (cf., WOJ *tô* 'door' [K I: 21]). Given this other possibility, it seems Hōjō (1966: 415) is wrong here and what we have is simply WOJ /ô/ corresponding to NEOJ /ô/.

As for the third example, *pap-o mamë*, this is analyzed as the attributive form of the verb 'to crawl' (*pap-o*) plus the word for 'bean' (*mamë*). It is also possible that this analysis is a folk etymology, and that the phrase has nothing to do with a "bean that crawls". If, however, this analysis is correct, although the expected WOJ equivalent, *pap-u mamë*, is not attested, the WOJ attributive form of the verb 'to crawl' is *pap-u* and this example would show a correspondence of WOJ /u/ : NEOJ /ô/.

In addition to Hōjō's examples, I have also found examples of the tentative suffix *-am-* followed by the attributive suffix *-u* (Section 2.3.4.2.3.1.6.8) attested as both *-am-u-* and *-am-o-*. Some examples follow:<sup>313</sup>

examples with u: -am-u-

母多牟

möt-am-**u**

hold-TENT-ATT

will probably hold

(MYS XIV: 3424-St)

衲牟加母

ne-m-u kamö

sleep-TENT-ATT EMPH

will probably sleep

(MYS XX: 4348-Ka)

由加牟

yuk-am-**u**

go-TENT-ATT

will probably go

(MYS XX: 4352-Ka)<sup>314</sup>

examples with o: -am-o-

牟可毛

muk-am-**ô**

turn around-TENT-ATT

will probably turn around

(MYS XX: 4359-Ka)

---

313. Since the distinction between /ô/ and /ö/ is lost after /m/, I treat this as a correspondence between WOJ /u/ and NEOJ neutral /o/, even though all these examples show a correspondence between /u/ and /ô/.

314. Note that this is the same poem where *pap-o mamë* (discussed above) occurs.

多志泥毛

tas-i-Nte-m-ô

stand-INF-go out-TENT-ATT

will probably set out

(MYS XX: 4383-St)

斯努比爾勢毛等

sinôp-î-n-i se-m-ô tō

think-INF-PERF-INF do-TENT-ATT DV

[I] wish that [you] would think of me

(MYS XIV: 3426-Mt)

The data can be explained in a couple of ways. First, the correct NEOJ form is *-am-o*, but was rewritten by WOJ scribes as *-am-u* to match WOJ. The problem with this claim is why would only this form have been rewritten and not other words within the same poem. Second, noting that the only examples of WOJ /u/ : NEOJ /o/, i.e., *-am-o* and *pap-o mamë*, occur after labials, and, that we have examples of both WOJ /u/ : NEOJ /u/ and WOJ /u/ : NEOJ /o/ not only with the same phonetic environment, but with the same word, it is possible to conclude that what we have here is an allophonic variant of /u/ following a labial, which may be more round and/or more low than /u/ in other environments, and the scribes simply recorded the vowel with the closest sounds available to them. I will treat this vowel as underlying /u/, with an allophonic variant after labials.<sup>315</sup>

---

315. This issue is also related to the shape of the NEOJ attributive (Section 2.3.4.2.3.1.6.8). As I discuss

### 2.3.4.1.3 Morphophonemic Rules

#### 2.3.4.1.3.1 Constraints on Consonant Clusters

NEOJ does not allow consonant clusters. There are some prenasalized consonants, discussed above (Section 2.3.4.1.1.2).

#### 2.3.4.1.3.2 Constraints on Vowel Clusters

Like WOJ, NEOJ does not allow vowel sequences. In the case of WOJ, when two vowels come together, either due to a lost morpheme boundary or consonant, then either contraction or monophthongization will occur. This issue has not been studied for EOJ, and in fact, the processes may be different for each dialect of EOJ. My discussion here should be seen as preliminary observations, as I have not yet fully studied this issue for EOJ, and I have not yet compiled all possible examples. This issue will be set aside for further research.

2.3.4.1.3.2.1 Vowel Sequences in Nouns. In WOJ a bound noun plus the unbinding morpheme *\*-i* create a free noun. When the final vowel of the bound noun stem plus the vowel of the unbinding morpheme form a vowel sequence, then

---

below, it may be necessary to reconstruct another vowel for pre-NEOJ to account for the WOJ vowel /u/ corresponding to NEOJ /ô/ or /o/ only following labials and only in the attributive form.

monophthongization occurs to prevent a VV sequence. As part of my preliminary study I looked for bound and free noun pairs, to compare how the free form is built off the bound form. I am assuming that free nouns developed from bound nouns in the same way in NEOJ as in WOJ; this assumption, of course, may not be correct.

The data for NEOJ are unclear. First, the bound form is not always attested, so the bound versus free distinction found in WOJ may not even be relevant for NEOJ. If we assume that this distinction existed, and that the bound form simply falls out of use or was not attested, then the some examples suggest that contraction occurs in the formation of the free form, others suggest that monophthongization occurs, and one example suggests diphthongization (as argued above in Section 2.3.4.1.2.1). The data are presented below:

WOJ	:	NEOJ
Contraction:		
free: <i>kami</i> 'god' (KK 2)	:	<i>kami</i> 'id.' (MYS XX: 4374-St)
bound: <i>kamu-</i> (KK 13)	:	not attested
free: <i>tuki</i> 'moon' (KK 28)	:	<i>tuku</i> 'id.' (MYS XX: 4378-St)
bound: <i>tuku-</i> 'moon' (MYS XX: 4489) <sup>316</sup>	:	not attested
Diphthongization:		
free: <i>ki</i> 'tree' (KK 47)	:	<i>kë</i> 'id.' (MYS XX: 4375)
bound: <i>kö-</i> (KK 21)	:	not attested

---

316. This is a WOJ poem within Book XX.

Monophthongization:

free: *pune* 'boat' (KK 52) : *pune* 'id.' (MYS XIV: 4359-Ka)

bound: *puna-* (KK 86) : *puna-* (MYS XIV: 4381-St)

free: *amë* 'heaven' (MYS V: 814) : *amë* 'id.' (MYS XX: 4374-St)

bound: *ama-* (KK 2) : not attested

free: *kaNse* 'wind' (KK 13) : *kaNse* 'id.' (MYS XX: 4353-Ka)

bound: *kaNsa-* (MYS III: 434) : not attested

Although it is not possible to say with any certainty, bound nouns that end in a /u/ (or at least, end in a /u/ in WOJ), appear to show contraction, but in one case the vowel of the unbinding morpheme remains (*\*kamu-i* > *kamî* 'god') and in the other the vowel of the stem remains (*\*tuku-i* > *tuku*). When the bound form of the noun ends in an /ö/ we find a diphthong.<sup>317</sup> Last, cases where the bound form of the noun ends in an /a/ the free form ends in /ë/,<sup>318</sup> which may suggest monophthongization of *a+i* > *ë* as in WOJ.

2.3.4.1.3.2.2 Vowel Sequences in Verbs. Next, I examined related verbs, in particular, transitive and intransitive verb pairs, to determine if contraction or monophthongization played a role in their formation. In the case of WOJ, the transitivity flipper *\*-Ai-* (Section 2.2.5.2.7) is often found in such verb pairs and monophthongization

---

317. As stated above, /ö/ is phonetically [ə] and /ë/ is a diphthong consisting of /ö/ and /i/ and is phonetically [əi].

318. The vowel /ë/ merges with /ê/ after coronal consonants and is written as /e/.

is involved in verbs derived with this derivational suffix. NEOJ lacks sufficient data to be certain how verbs with this suffix are formed,<sup>319</sup> or if monophthongization plays a role in their formation. Here are some examples:

*kôpu-* 'love' (MYS XIV: 3382-Ka)/*kôpi-* 'id.' (MYS XX: 4347-Ka)  
*wasur-* 'forget' (MYS XX: 4356-Ka)/*wasure-* 'id.' (MYS XX:  
4354-Ka)<sup>320</sup>  
*ap-* 'join, meet' (MYS XX: 4354-Ka)/*apê-* 'put together' (MYS XX:  
4377-St)

The verbs on the right are stems formed with the transitivity flipper. The verb stems ending in /i/, /e/ (which represents underlying /ê/ or /ë/), and /ê/. For WOJ we know that the vowel /i/ is a monophthong and comes from the crasis of either \**u+i* or \**ö+i*, the vowel /ê/ comes from \**i+a*, and the vowel /ë/ comes from either \**ö+i* or \**a+i*. However, for NEOJ we have no evidence that these vowels derived through monophthongization and not from some other source. Even though the first verb shows a root ending in /u/, it is not clear whether monophthongization of \**/u+i/* produces NEOJ /i/. It is possible that monophthongization of the vowel of the root plus the vowel of the transitivity flipper monophthongize here, but at this time it is not possible to determine whether this process

---

319. I discuss this suffix in more detail below in Section 2.3.4.2.2.3.

320. The pair *wasur-*/*wasure-* both mean 'forget', but, according to Omodaka (1967: 818) *wasur-* implies to forget something intentionally, while *wasure-* implies that something is naturally forgotten.

even occurs in NEOJ, and clearly more research on the vowel system of NEOJ is needed here. I return to this below (Section 2.3.4.2.2.3)

#### 2.3.4.1.4 Vowel Assimilation

Although WOJ has a constraint on back and non-back vowels occurring in the same morpheme, this has not been sufficiently studied for EOJ. There are no convincing examples arguing against such a constraint existing in NEOJ; I have found only *kômô* 'duck' (MYS XX: 4354-Ka), which is only an argument against this constraint if the final vowel is really an /ô/, which cannot be proven.<sup>321</sup>

### 2.3.4.2 NEOJ Verbal Morphology

#### 2.3.4.2.1 The Shape of Pre-NEOJ Verb Roots

In order to determine the shape of EOJ verb roots, I compiled a data base of all attested verbs, grouped by form and meaning. I found only 22 reconstructable verb roots, however, in some cases one verb supporting the reconstruction of the verb root is in one EOJ dialect and another verb supporting its reconstruction is in another EOJ dialect or in

---

321. In WOJ this is attested as *kamô* 'duck' (KK 8) in Kojiki which preserves the distinction between /mô/ and /mö/. Although this is written with 毛 /mô/ in the NEOJ example, it is not possible to prove that this should be /mô/ and not /mö/.

the poems that cannot be identified as belonging to a particular dialect (UEOJ); the data are too few if reconstructions are based solely on verbs attested in each dialect. For the purpose of the discussion below, I give examples attested within the same dialect of EOJ where possible, and otherwise indicate cases where supporting evidence for the reconstruction is from another dialect. As for the shape of the verb roots, some can be reconstructed as consonant final and others as vowel final, although it is not always possible to reconstruct verb roots.

#### 2.3.4.2.2 Derivational Morphemes

##### 2.3.4.2.2.1 The Derivational Suffix \*-s-

The derivational suffix \*-s- is attested only once in NEOJ: *yösör-* < \**yö-s-ör-* 'pass (v.t.)' (MYS XX: 4379-St), cf. *yör-* 'pass (v.i.)' (MYS XIV: 3446-UEOJ). This example is also the only example of \*-s- found in CEOJ (Section 2.3.5.2.2.1), but this morpheme is better attested in UEOJ data (Section 2.3.7.2.2.1).

Although in WOJ this suffix is vowel initial (\*-As-, Section 2.2.5.2.2), there is no evidence that this is vowel initial in NEOJ.<sup>322</sup> This morpheme is used to mark a verb root for transitivity. The one example of this suffix shows that it can be followed by the

---

322. The same is true for CEOJ and UEOJ.

derivational suffix *\*-ör-*, discussed below. This combination seems contradictory as *\*-ör-* marks a verb for intransitivity and it is unclear why a verb would be marked with both transitive and intransitive suffixes.

#### 2.3.4.2.2.2 The Derivational Suffix *\*-ör-*

The intransitivity marker, derivational suffix *\*-ör-* is found only once in NEOJ; I base the function of this morpheme on its usage in other dialects of EOJ and WOJ. The only example is:

*yösör-* < *\*yö-s-ör-* 'pass (v.t.)' MYS XX: 4379-St [cf. *yör-*  
< *\*yö-Vr-* 'pass' (MYS XIV: 3446-UEOJ)]<sup>323</sup>

As discussed above (Section 2.3.4.2.2.2), the example *yösör-* is formed with both the transitive suffix (*\*-s-*) and the intransitive (*\*-ör-*) although the suffixes clearly have opposite functions. This suffix is not used in combination with any other derivational verbal suffixes within NEOJ.

---

323. I use the symbol "V" to indicate a vowel of unknown value.

#### 2.3.4.2.2.3 The Derivational Suffix \*-i-/-ê-

The derivational suffix is used in the formation of three verbs in NEOJ:<sup>324</sup>

*kôpî-* < \**kôp-i-* 'love' (MYS XX: 4347-Ka) [cf. *kôpu-* 'id.' (MYS XIV: 3382-Ka)]

*wasure-* < \**wasur-e-* 'forget' (MYS XX: 4356-Ka) [*wasur-* 'id.' (MYS XX: 4354-Ka)]

*apê-* < \**ap-ê-* 'put together' (MYS XX: 4377-St) [cf. *ap-* 'join, meet' (MYS XX: 4354-Ka)]

As discussed above (Section 2.3.4.1.3.2.1), it is not known at this time how monophthongization occurs (if it does) in NEOJ. What is evident here, is that different vowels occur, i.e., /i/, /e/, and /ê/. It is not possible to reconstruct an earlier form for these vowels without knowing more about NEOJ (and EOJ) phonology. I, therefore, treat the transitivity flipper as NEOJ *-i-/-ê-*, with /ê/ becoming /e/ following coronal consonants as discussed above (Sections 2.2.4.2.2 and 2.3.4.1.2.2). In NEOJ, this suffix is not used in conjunction with any other derivational suffixes.

#### 2.3.4.2.2.4 Summary

Table 2.23 below lists the NEOJ derivational morphemes and their functions.

---

324. There may be more examples, however, I am only considering examples involving verb pairs (or sets) where it is possible to reconstruct a verb root for the verbs, plus additional morphemes for each member of the pair (or set). Where there is only one verb and no transitive/intransitive counterpart, it is not possible to prove whether this morpheme is involved in its formation or not.

Table 2.23: Summary of NEOJ Derivational Morphemes

Morpheme	Function
*-s-	transitivity or causative marker
*-ör-	intransitivity marker
*-î/-ê-	transitivity flipper

### 2.3.4.2.3 Inflectional Morphemes

In addition to derivational morphemes, NEOJ also has a number of inflectional morphemes, which I discuss below in the following order: verbal suffixes and auxiliaries (Section 2.3.4.2.3.1) and nominalizers (2.3.4.2.3.2).<sup>325</sup>

#### 2.3.4.2.3.1 Verbal Suffixes and Auxiliaries

NEOJ verb stems are bound forms and must be followed by at least one suffix or auxiliary. It is possible for a verb stem to be followed by a string of suffixes, and in this case there is a set order in which the morphemes can occur; some must attach directly to the stem and can be followed by other morphemes, while other suffixes may only occur in the final position of a verbal morpheme string.

Following the discussion above in Section 2.2.5.3, I have grouped the morphemes according to where they can occur in a verbal string. The infinitive suffix *-î* is not placed

---

325. There are no prefixes or preverbs in NEOJ.

in a group as its ordering is not as restricted as the other suffixes; it can occur before and/or after auxiliaries, and it is the only morpheme that can occur more than once in a verbal string. If more than one morpheme is present in a verbal string then a morpheme in Group I occurs before one in Group II, a morpheme in Group II occurs before Group III, etc. A verbal string does not need to have a morpheme from Group I-IV, but must end in either the infinitive *-î* or a Group V morpheme. Note that in some cases the morphemes fill the same slot in NEOJ as in WOJ, and in others they do not. For example, WOJ durative suffix *-ap-* is a WOJ Group II morpheme, occurring directly following the verb root or an honorific auxiliary. However, in NEOJ, this suffix is a NEOJ Group III suffix as it only follows the negative suffix *-an-*, which is in Group II. In addition, NEOJ has five groups, while WOJ has seven.<sup>326</sup> NEOJ also has fewer morphemes, but this may be simply because NEOJ has fewer data than WOJ. The NEOJ Groupings are presented in Table 2.24 below.

---

326. I return to the significance of verbal string ordering and differences between languages and dialects in my reconstruction of Japonic morphology presented in Chapter 4.

Table 2.24: Classification of NEOJ Morphemes Based on Verbal String Ordering

	Ordering	Categories
infinitive <i>-i</i>	suffixes to the verb stem, auxiliaries, and some suffixes; can occur in final position; can be followed by a verb or auxiliary	infinitive <i>-i</i>
Group I	auxiliaries which follow the infinitive and suffixes which follow the verb root	suffixes of mood, honorification, passive
Group II	suffixes of negation which must follow the verb stem or Group I morphemes	suffixes of negation
Group III	auxiliaries which must follow the infinitive	perfective auxiliaries
Group IV	suffixes which must follow the verb stem or Group I, II, or III morphemes	durative and stative suffixes
Group V	suffixes to the verb stem or any Group I-IV morpheme <sup>327</sup>	clause and sentence final morphemes

The morphemes are discussed below according to this grouping.

2.3.4.2.3.1.1 The Infinitive *-i*. The NEOJ infinitive *-i* is suffixed to verb roots and verbal auxiliaries. When used between two verbs or auxiliaries it acts as a connector between the two morphemes. The infinitive can also be in the final position of a verbal

---

327. Some Group V morphemes can suffix to other Group V morphemes; return to this below (Section 2.3.4.2.3.1.6).

string, and in this case it connects the first clause with the second, and may be thought of as English "and" ([clause 1]-and-[clause 2]). This morpheme is deleted when following vowel final stem verbs and auxiliaries in order to prevent a vowel-vowel sequence.<sup>328</sup>

和努等里都伎弓

wanu tör-i-tuk-î-te

I take-INF-attach-INF-GER

I have taken and held on to [what my children said], and...

(MYS XX: 4358-Ka)

阿米都知乃 可美乎伊乃里弓

amë tuti-nö kamî-wo inör-i-te

heaven earth-GEN gods-ACC pray-INF-GER

[I] pray to the gods of heaven and earth, and...

(MYS XX: 4374-St)

#### 2.3.4.2.3.1.2 Group I Morphemes. Group I morphemes suffixes which attach

directly to the verb root and the humble auxiliary *-matur-*. The Group I morphemes are presented below in alphabetical order.

##### *2.3.4.2.3.1.2.1 The Tentative Suffix -am-*. As discussed with WOJ (Section

2.2.5.3.3.7.1), this suffix is used to indicate volition or conjecture; there is no indication that the function of this suffix is different than its equivalent in WOJ.

---

328. See discussion on the WOJ infinitive *-î* (Section 2.2.5.3.3.1).

都良波可馬可毛

tura pak-am-ê kamô

bow string arm-TENT-EVD EMPH PART

[he] had presumably armed [himself] with [his] bow string

(MYS XIV: 3437-Mu)

多非乃加里保爾 夜須久祢牟加母

tapi<sup>329</sup>-nô karipo-ni yasu-ku ne-m-u kamô

travel-GEN temporary hut LOC peaceful-INF sleep-TENT-ATT

EMPH

I shall sleep peacefully in the temporary hut for travelers.

(MYS XX: 4348-Ka)

2.3.4.2.3.1.2.2 *The Honorific Suffix -as-*. NEOJ has one honorific suffix, namely

*-as-*. The function of this suffix is to indicate respect towards the actor of the marked

verb. While *-as-* is fairly common in WOJ, it occurs only once in NEOJ.

斯努比爾勢毛等 比毛牟須婆佐祢

sinôp-î-n-i se-m-ô tö pîmô musuNp-as-ane

think-INF-PERF-INF do-TENT-ATT DV string tie-HON-DES

[I] wish that [you] would think of me, [with] the cords [of your robe still] tied.

(MYS XIV: 3426-Mt)

2.3.4.2.3.1.2.3 *The Passive Suffix -aye-*. As discussed above in Section

2.2.5.3.3.3.4, the WOJ suffix *-aye-* is used to indicate: 1) spontaneous action; 2) passive

---

329. This example clearly shows *tapi* which is *taNpî* in WOJ and elsewhere in NEOJ.

voice; and 3) potential. It has not yet been investigated whether this suffix in NEOJ has the same range of meanings, or if one meaning is more likely than another. In NEOJ, only the form *-aye-* following consonant stem verbs is attested.

奈伎之許己呂乎 和須良延努可毛  
 nak-î-si kökörü-wo wasur-aye-n-u<sup>330</sup> kamô  
 cry-INF-PAST/ATT heart-ACC forget-PASS-NEG-ATT EMPH  
 I am unable to forget [your] heart which cried [for me].  
 (MYS XX: 4356-Ka)

和芸毛古我 蘇旦母志保保爾 奈伎志曾母波由  
 wa-Nk-îmô kô-Nka sôte mö sipopo n-i nak-î-si sö möp-ay-u  
 I-GEN-lover child-GEN sleeve PART wet COP-INF  
 cry-INF-PAST/ATT EMPH think-PASS-FIN<sup>331</sup>  
 I suddenly think of my lover's sleeve that was soaked as she cried.  
 (MYS XX: 4357-Ka)

2.3.4.2.3.1.2.4 *The Humble Auxiliary -matur-*. The humble auxiliary occurs only once in NEOJ. Literally it means 'to present' or 'to offer'.

---

330. The character 努 can be read as either *nô* or *nu* as discussed above (Section 2.3.4.1.2.1).

331. The final suffix *-u* may be a final or attributive here; it is not possible to distinguish the two. The emphatic particle *Nsö* in WOJ is expected to be followed by a verb in the attributive form. In NEOJ sometimes the verb is in the evidential form and sometimes in either final or attributive form. This is an issue which requires further study.

都久之閑爾 做牟加流布祢乃 伊都之加毛  
都加做麻都里弓 久爾爾閑牟可毛

tukusi pë-ni pë muk-ar-u pune-nö itusi kamô tukapê-matur-i-te  
kuni-ni pë muk-am-ô

Tukusi side-LOC bow turn-PROG-ATT boat-GEN when EMPH  
serve/INF-HUMB-INF-GER province-LOC side turn-TENT-ATT  
When will [my] boat, with its bow turning towards Tukusi, turn  
[its bow] towards my [home] province, [after] I have served [my  
duty].

(MYS XX: 4359-Ka)

2.3.4.2.3.1.3 Group II Morphemes. Group II morphemes consist of the two  
negative suffixes which may follow Group I morphemes or may suffix directly to the  
verb.

*2.3.4.2.3.1.3.1 The Negative Suffix -an-.* NEOJ has two negative suffixes: *-an-*  
and *-aNs-* (see next section). It is unclear how these differ in terms of their function; both  
negate the action of the verb.

奈伎之許己呂乎 和須良延努可毛

nak-î-si kökörü-wo wasur-aye-n-u kamô

cry-INF-PAST/ATT heart-ACC forget-PASS-NEG-ATT EMPH

I am unable to forget [your] heart which cried [for me].

(MYS XX: 4356-Ka)

阿母志志可 多麻乃須我多波 和須例西奈布母  
 amō sisi-ka<sup>332</sup> tama nō suNkata pa wasure se-n-ap-u mō  
 mother father-GEN jewel resemble shape TOP forget/INF  
 do-NEG-DUR-FIN PART  
 I still do not forget the jewel-like appearance of my mother and  
 father.  
 (MYS XX: 4378-St)

2.3.4.2.3.1.3.2 *The Negative Suffix -aNs-*. The negative suffix *-aNs-* is described by Martin (1987: 111) as deriving from the negative *-an-* (described above) and the irregular verb *se-* 'to do' (see also Section 2.2.5.3.3.6.2).

古非都都安良受波  
 kōpī-tutu ar-aNs-u pa  
 love/INF-COOR exist-NEG-ATT TOP  
 I long for [him] while [he] is not here.  
 (MYS XX: 4347-Ka)

多妣由岐爾 由久等之良受弓  
 taNpî yuk-î ni yuk-u tō sir-aNs-u-te  
 travel go-NML LOC go-ATT PART know-NEG-INF<sup>333</sup>-GER  
Not knowing [I] have left on a [long] trip...  
 (MYS XX 4376-St)

2.3.4.2.3.1.4 Group III Morphemes. The morphemes in this group consist of the perfective auxiliaries. These auxiliaries must, by definition, follow the infinitive suffix.

---

332. We would expect *-Nka* here on the basis of WOJ and other occurrences of the genitive particle in EOJ, however 可 indicates *ka* and not *Nka*.

333. The infinitive *-u* is only found after *-aNs-*.

2.3.4.2.3.1.4.1 *The Perfective Auxiliary -n-*. NEOJ, like WOJ, has two perfective auxiliaries, *-n-* and *-t-*, to express that an action has been or will be completed. The difference between these two morphemes is unclear, and will be left for further research.<sup>334</sup>

都由思母能 奴礼弓和伎奈婆  
 tuyu simö-nö nure-te wa k-î-n-aNpa  
 dew frost-NOM soak/INF-GER I come-INF-PERF-COND  
 If I have come soaked with dew and frost...  
 (MYS XIV: 3382-Ka)

斯努比爾勢毛等 比毛牟須婆佐祢  
 sinôp-î-n-i se-m-ô tö pîmô musuNp-as-ane  
 think-INF-PERF-NML do-TENT-ATT DV string tie-HON-DES  
 [I] wish that [you] would think of me, [with] the cords [of your  
 robe still] tied.  
 (MYS XIV: 3426-Mt)

2.3.4.2.3.1.4.2 *The Perfective Auxiliary -t-*. The other perfective in NEOJ, *-t-*, occurs only once, although *-tar-*, discussed in the next section, is treated as a related form.

---

334. The distinction may have to do with animate versus inanimate subjects, as was discussed with the WOJ morphemes *-n-* and *-t-* (Sections 2.2.5.3.3.4.2 and 2.2.5.3.3.4.3).

多知爾奈里弓母 伊波非弓之加母

tati n-i nar-i-te mö ipapī-te-si kamö

sword COP-INF become-INF-GER PART perform ritual/INF-  
PERF/INF-PAST/ATT EMPH

[I] became [your] sword and [I] have performed the ritual.

(MYS XX: 4347-Ka)

#### 2.3.4.2.3.1.4.3 *The Perfective Progressive Auxiliary -tar-*. The perfective

progressive auxiliary *-tar-* developed from the perfective auxiliary *-t-*, discussed above,

plus the stative suffix *-ar-* (Section 2.3.4.2.3.1.5.2). It is attested only once in NEOJ:

麻都能氣乃 奈美多流美礼婆 伊波妣等乃

和例乎美於久流等 多多理之母己呂

matu n-ö kë-nö nam-î-tar-u mî-re-Npa ipa-N-pîtö-nö ware-wo

mî-okur-u tö tat-ar-i-si mökörö

pine COP-ATT tree-GEN line up-INF-PERF/PROG-ATT

see-EVD-CONJ house-GEN-people-NOM I-ACC see/INF-send

off-ATT PART stand-PROG-INF-PAST/ATT be like

When I see the pine trees that are lined up, it is like the people of  
my home standing to see me off.

(MYS XX: 4375-St)

#### 2.3.4.2.3.1.5 Group IV Morphemes. This group consists of the durative suffix

*-ap-*, and the stative suffix *-ar-*.

2.3.4.2.3.1.5.1 *The Durative Suffix -ap-*. In WOJ, the durative suffix *-ap-* follows the verb stem, however in NEOJ, this suffix only occurs after the negative suffix *-an-*. Although it is only attested twice in NEOJ, its function appears to be the same as the WOJ durative suffix; it expresses something which does not or has not happened over a period of time.

安比豆祢能 久爾乎佐杼抱美 安波奈波婆  
 斯努比爾勢毛等 比毛牟須婆佐祢

apîtune-nö kuni-wo sa-Ntöpo-mî ap-an-ap-aNpa sinôp-î-n-i se-m-ô  
 tö pîmô musuNp-as-ane  
 [place name]-GEN country-ACC PREF-far-NML meet-NEG-  
DUR-COND think-INF-PERF-NML do-TENT-ATT DV string  
 tie-HON-DES

The distant Apitune country – If we still do not meet, [I] wish that [you] would think of me, [with] the cords [of your robe still] tied. (MYS XIV: 3426-Mt)

阿母志志可 多麻乃須我多波 和須例西奈布母

amö sisi-ka tama nö suNkata pa wasure se-n-ap-u mö  
 mother father-GEN jewel resemble shape TOP forget/INF  
 do-NEG-DUR-FIN PART

I still do not forget the jewel-like appearance of my mother and father. (MYS XX: 4378-St)

2.3.4.2.3.1.5.2 *The Progressive Suffix -ar-*. The progressive suffix *-ar-* is related to the verb *ar-* to exist. In WOJ this suffix only occurs with the progressive auxiliary *-êr-* < pre-WOJ \**-î-ar-* (Section 2.2.5.3.3.4.1), the modal past *-kêr-* < pre-WOJ \**-kî-ar-*

(2.2.5.3.3.5.2), and the perfective progressive *-tar-* < pre-WOJ \**-t-ar-* (Section 2.2.5.3.3.4.4). In NEOJ, however, the stative suffix *-ar-* can follow the perfective *-t-* as *-tar-* (Section 2.3.4.2.3.1.4.3) or can follow verbs directly as in the examples below.<sup>335</sup>

都久之閑爾 敞牟加流布祢乃 伊都之加毛

都加敞麻都里弓 久爾爾閑牟可毛

tukusi pë-ni pê muk-ar-u pune-nö itusi kamô tukapê-matur-i-te  
kuni-ni pë muk-am-ô

Tukusi side-LOC bow turn-PROG-ATT boat-GEN when EMPH  
serve/INF-HUMB-INF-GER province-LOC side turn-TENT-ATT  
When will [my] boat, with its bow turning towards Tukusi, turn  
[its bow] towards my [home] province, [after] I have served [my  
duty].

(MYS XX: 4359-Ka)

麻都能氣乃 奈美多流美礼婆 伊波妣等乃

和例乎美於久流等 多多理之母己呂

matu n-ö kë-nö nam-î-tar-u mî-re-Npa ipa-N-pîtö-nö ware-wo  
mî-okur-u tö tat-ar-i-si mökörö

pine COP-ATT tree-GEN line up-INF-PERF/PROG-ATT  
see-EVD-CONJ house-GEN-people-NOM I-ACC see/INF-send  
off-ATT PART stand-PROG-INF-PAST/ATT be like

When I see the pine trees that are lined up, it is like the people of  
my home standing to see me off.

(MYS XX: 4375-St)

2.3.4.2.3.1.6 Group V Morphemes. The morphemes in this group fill the final position of a verb string, and can attach directly to a verb stem or any suffix or auxiliary

---

335. CEOJ also has modal past *-kar-* < *kî-ar-*, cognate with WOJ *-kêr-*, however this is not attested in NEOJ.

in Groups I-IV. A verb string *must* end with one of the morphemes in this group. Unlike the other groups, some of the morphemes in this group can occur with each other. For example, the conjunctive suffix *-Npa* (Section 2.3.4.2.3.1.6.4) and the concessive suffix *-Ntö* must follow the evidential suffix *-ë/-ure* (Section 2.3.4.2.3.6.11). The evidential suffix can occur on its own or with *-Npa* or *-Ntö*.

The Group V morphemes are discussed below in alphabetical order, with the exception of the evidential suffix, which is discussed following the attributive suffix, because their developments are similar.

2.3.4.2.3.1.6.1 *The Desiderative Suffix -ane*. The desiderative suffix *-ane*

indicates the speaker's desire for something to happen or for the listener to do something, i.e., "I wish that..." This suffix is attested only once in NEOJ.

斯努比爾勢毛等 比毛牟須婆佐祢

sinôp-î-n-i se-m-ô tö pîmô musuNp-as-ane

think-INF-PERF-NML do-TENT-ATT DV string tie-HON-DES

[I] wish that [you] would think of me, [with] the cords [of your robe still] tied.

(MYS XIV: 3426-Mt)

2.3.4.2.3.1.6.2 *The Hypothetical Conditional Suffix -aNpa*. The suffix *-aNpa*

expresses a hypothetical condition ("if..."). The scope of this suffix is the clause which precedes it.

都由思母能 奴礼弓和伎奈婆

tuyu simö-nö nure-te wa k-î-n-aNpa

dew frost-NOM soak/INF-GER I come-INF-PERF-COND

If I have come soaked with dew and frost...

(MYS XIV: 3382-Ka)

安比豆祢能 久爾乎佐杼抱美 安波奈波婆

apîtune-nö kuni-wo sa-töpo-mî ap-an-ap-aNpa

[place name]-GEN country-ACC PREF-far-NML

meet-NEG-DUR-COND

The distant Apitune country – If we still do not meet...

(MYS XIV: 3426-Mt)

2.3.4.2.3.1.6.3 *The Conjunctive Suffix -Npa*. The NEOJ suffix *-Npa* is a

conjunctive suffix that indicates a fulfilled action. It is a clause, but not sentence, final suffix. This suffix follows the evidential form of verbs (Section 2.3.4.2.3.6.11).

多妣己呂母 夜倍伎可佐祢弓 伊努礼等母<sup>336</sup>

奈保波太佐牟志 伊母爾志阿良祢婆

taNpî körömö ya-N-pë k-î kasane-te in-ure-Ntö mö napo paNta

samu-si imö n-i si ar-an-e-Npa

travel clothes eight-COP-layer wear-NML layer/INF-GER

sleep-EVD-CONC PART moreover skin cold-FIN lover COP-INF

EMPH exist-NEG-EVD-CONJ

Although I sleep layered in my eight-layered travel clothes, my

skin is still cold, since [the clothes] are not my beloved.

(MYS XX: 4351-Ka)

麻都能氣乃 奈美多流美礼婆

matu n-ö kë-nö nam-î-tar-u mî-re-Npa

pine COP-ATT tree-GEN line up-INF-PERF/PROG-ATT

see-EVD-CONJ

When I see the pine trees that are lined up...

(MYS XX: 4375-St)

2.3.4.2.3.1.6.4 *The Concessive Suffix -Ntö*. The concessive suffix *-Ntö* is a clause

final suffix meaning "although..." or "even though..." This suffix must follow the evidential form of verbs.

---

336. The character 努 can be read either *nô* or *nu*; I have chosen to read it as *nu* here.

多妣己呂母 夜倍伎可佐祢弓 伊努礼等母

奈保波太佐牟志 伊母爾志阿良祢婆

taNpî körömö ya-N-pë k-î kasane-te in-ure-Ntö mö napo paNta

samu-si imö n-i si ar-an-e-Npa

travel clothes eight-COP-layer wear-NML layer/INF-GER

sleep-EVD-CONC moreover skin cold-FIN lover COP-INF EMPH

exist-NEG-EVD-CONJ

Although I sleep layered in my eight-layered travel clothes, my

skin is still cold, since [the clothes] are not my beloved.

(MYS XX: 4351-Ka)

伊倍加是波 比爾比爾布氣等

ipë kaNse pa pî-ni pî-ni puk-ë-Ntö

house winds TOP day-LOC day-LOC blow-EVD-CONC

Although the winds from home blow day after day...

(MYS XX: 4353-Ka)

2.3.4.2.3.1.6.5 *The Past Tense Auxiliary -si*. The NEOJ auxiliary *-si* indicates the

attributive past tense.

奈伎之許己呂乎 和須良延努可毛

nak-î-si kökörü-wo wasur-aye-n-u<sup>337</sup> kamô

cry-INF-PAST/ATT heart-ACC forget-PASS-NEG-ATT EMPH

I am unable to forget [your] heart, which cried [for me].

(MYS XX: 4356-Ka)

---

337. The character 努 can be read as either *nô* or *nu* as discussed above.

和芸毛古我 蘇弓母志保保爾 奈伎志曾母波由  
 wa-Nk-îmô kô-Nka sôte mö sipopo n-i nak-î-si sô möp-ay-u<sup>338</sup>  
 I-GEN-lover child-GEN sleeve PART wet COP-INF  
 cry-INF-PAST/ATT EMPH think-PASS-FIN<sup>339</sup>  
 I suddenly think of my lover's sleeve that was soaked as she cried.  
 (MYS XX: 4357-Ka)

2.3.4.2.3.1.6.6 *The Subordinative Gerund -te*. The subordinative gerund *-te* is a clause final auxiliary. It can be used to connect either two verbs or two clauses in the pattern [(clause) verb<sub>1</sub>]-*te* [(clause) verb<sub>2</sub>]. It indicates that the action of the first verb (verb<sub>1</sub>) began before the action of the second verb (verb<sub>2</sub>).<sup>340</sup>

阿米都知乃 可美乎伊乃里弓  
 amë tuti-nö kamî-wo inör-i-te  
 heaven earth-GEN gods-ACC pray-INF-GER  
 [I] have prayed to the gods of heaven and earth, and...  
 (MYS XX: 4374-St)

多妣由岐爾 由久等之良受弓  
 taNpî yuk-î ni yuk-u tö sir-aNs-u-te  
 travel go-NML LOC go-ATT PART know-NEG-INF<sup>341</sup>-GER  
 Not knowing [I] have left on a [long] trip...  
 (MYS XX 4376-St)

---

338. In this example *sö möp-* is the result of contraction of *sö ömöp-*.

339. The final suffix *-u* may be a final or attributive here; it is not possible to distinguish the two. The emphatic particle *Nsö* in WOJ is expected to be followed by a verb in the evidential form. In NEOJ sometimes the verb is in the evidential form and sometimes in either final or attributive form. This is an issue which requires further study.

340. As discussed above (Section 2.2.5.3.3.8.10), the action of the first verb may or may not end before the second action begins.

341. The infinitive *-u* is only found after *-aNs-*.

2.3.4.2.3.1.6.7 *The Coordinative Auxiliary -tutu.* The coordinative auxiliary *-tutu*

can be either a clause final or sentence final morpheme, depending on context. It must follow the infinitive *-î*. It only occurs once in NEOJ, where its function is to mark a simultaneous action.

古非都都安良受波

kôpî-tutu ar-aNs-u pa

love/INF-COOR exist-NEG-ATT TOP

I long for [him] while [he] is not here.

(MYS XX: 4347-Ka)

2.3.4.2.3.1.6.8 *The Active Final Suffix -u.* The suffix *-u* is a sentence final marker

indicating the final form of active verbs.

奈我目保里勢牟

na-Nka MË por-i se-m-u

you-NOM eyes want-NML do-TENT-FIN

[I] will want [to see] your eyes.

(MYS XIV: 3383-Ka)

阿母志志可 多麻乃須我多波 和須例西奈布母

amö sisi-ka tama nö suNkata pa wasure se-n-ap-u mö

mother father-GEN jewel resemble shape TOP forget/INF

do-NEG-DUR-FIN PART

I still do not forget the jewel-like appearance of my mother and father.

(MYS XX: 4378-St)

2.3.4.2.3.1.6.9 *The Attributive Suffix -u/-ô/-uru*. One of the most often discussed features of EOJ is the attributive form. Until recently, scholars have described the EOJ attributive ending following consonant stem verbs as  $-\hat{o}$ <sup>342</sup> and used it to demonstrate that the WOJ final suffix *-u* and WOJ attributive suffix *-u* come from different sources (see, e.g., Hōjō 1966: 468-485; Russell 1997: 44-45; Shirafuji 1987: 137-138; Yamaguchi 1978: 51-53). The traditional analysis for the development of the final and attributive forms, then, would be as follows (adapted from Frellesvig 2003: 5):

	WOJ	EOJ	PJ
final	<i>-u</i>	<i>-u</i>	<i>*u</i>
attributive	<i>-u</i>	$-\hat{o}$	<i>*-o</i>

However, Frellesvig (2003) questions whether the EOJ attributive *-o* really exists, calling it "The Great Azuma Rentai Hoax."<sup>343</sup> He presents some examples of the attributive form ending in *-u* and others in  $-\hat{o}$ , to show that the attributive suffix has two forms. However, Frellesvig does not make a distinction between the different EOJ dialects; he is essentially treating all of EOJ as if it were a homogeneous dialect. Further, he does not distinguish between EOJ and WOJ poems found in Books XIV and XX.

---

342. Neutral *-o* following labial consonants.

343. *Azuma* is another name for EOJ.

Frellesvig (2003: 5) then presents an alternate reconstruction of a finite form for PJ, and this form includes both the final and attributive forms.<sup>344</sup>

	WOJ	EOJ	PJ
Finite (final/attributive)	- <i>u</i>	- <i>u</i> (/ - <i>ô</i> )	*- <i>o</i>

I have also investigated the issue of the existence, or non-existence of the EOJ attributive -*ô*, but with different results. First, I discuss the data concerning the shape of the attributive form for NEOJ,<sup>345</sup> and then the development of this morpheme in NEOJ.

For this study, I collected examples of the attributive form in NEOJ poems, and categorized them by the final vowel and the function of the attributive form in each example, as the attributive form is used in three ways: 1) in a *kakari musubi* structure; 2) marking the verb for noun modification; or 3) a nominalized form of the verb which is followed by a case or emphatic particle. The data for NEOJ are presented in Table 2.25.<sup>346</sup> I have italicized examples which are considered to be EOJ, but are questionable sources as these texts have misspellings, but no other notable EOJ grammatical, lexical, or morphological features.<sup>347</sup>

---

344. Frellesvig's uses "conclusive" for what I call "final" and adnominal for what I call "attributive".

345. Data for CEOJ, SEOJ, and UEOJ are presented below in my treatment of each dialect.

346. Here I only present data for the attributive suffix used in conjunction with consonant final verb stems. All data, including consonant and vowel final stems, are presented in Appendix D.

347. Based on Mizushima (1972, 1984a, 1984b, 2003).

Table 2.25: NEOJ Attributive Forms by Suffix and Function

	Function	Example	Gloss	Attestation	Location
o	kakari musubi	muk-am-o	will turn around	MYS XX: 4359	Kazusa
	modifies noun	pap-o	beg, crawl <sup>348</sup>	MYS XX: 4352	Kazusa
		tas-i-Nte-m-o	will have set out	MYS XX: 4383	Shimotsuke
	nominalized form	sinôp-în-i-se-m-o tö	will have thought	MYS XIV: 3426	Mutsu
u	kakari musubi	mot-am-u	will probably hold	MYS XIV: 3424	Shimotsuke
		<i>tanaNpîk-u</i>	<i>(clouds) trail</i>	<i>MYS XX: 4380</i>	<i>Shimotsuke</i>
		<i>yuk-am-u</i>	<i>probably will go</i>	<i>MYS XX: 4349</i>	<i>Kazusa</i>
		yuk-am-u	will go	MYS XX: 4352	Kazusa
	modifies noun	muk-ar-u	turn towards	MYS XX: 4359	Kazusa
		<i>tat-u</i>	<i>stand</i>	<i>MYS XX: 4373</i>	<i>Shimotsuke</i>
		<i>yösör-u</i>	<i>pass by</i>	<i>MYS XX: 4379</i>	<i>Shimotsuke</i>
		<i>yuk-u</i>	<i>go</i>	<i>MYS XX: 4374</i>	<i>Shimotsuke</i>
	nominalized form	<i>ar-aN-s-u pa</i>	<i>as for not being...</i>	<i>MYS XX: 4347</i>	<i>Kazusa</i>
		m-i-okur-u tö	see off	MYS XX: 4375	Shimotsuke
		<i>ne-m-u kamo</i>	<i>will sleep</i>	<i>MYS XX: 4348</i>	<i>Kazusa</i>
		wakar-u wo	separating	MYS XX: 4381	Shimotsuke
		<i>yuk-u tö</i>	<i>go</i>	<i>MYS XX: 4376</i>	<i>Shimotsuke</i>

The seventeen examples of the attributive form presented above can be broken down as follows:

---

348. Here here "papo mame" a kind of bean.

Attributive <i>-o</i> :	4
Attributive <i>-u</i> from poems with EOJ features:	5
Attributive <i>-u</i> from poems with misspellings only:	8

The examples showing attributive *-o* all follow labial consonants. However, for the poems that have EOJ lexical and morphological features, two of the five examples of attributive *-u* also follow labials. Both of these examples follow the tentative *-am-* (Section 2.3.4.2.3.1.2.1), however two of the four examples presented above with attributive *-o* also follow the tentative *-am-*.

As discussed above (Section 2.3.4.1.2.5), WOJ /u/ corresponds to either NEOJ /ô/ or /u/ following labials and NEOJ /u/ elsewhere. Also, WOJ /ô/ always corresponds to NEOJ /ô/.<sup>349</sup>

WOJ	NEOJ
u	u including following labials
u	o only after labials
ô	ô neutral /o/ following labials

It should be noted that this correspondence is evident even if examples of EOJ poems that only show only misspellings and no other EOJ features are rejected. There are three possible explanations for this. First, Western scribes corrected examples of NEOJ /o/ recording them as /u/ because that was the vowel found in WOJ cognates. This

---

349. As discussed below, the vowel correspondences between WOJ and other dialects of EOJ differ.

explanation accounts for both *-am-o-* and *-am-u-* attested in NEOJ; the form *-am-o-* is correct for NEOJ but is also recorded as *-am-u-*, because that is the correct form in WOJ and Western scribes recorded what was correct in their language and not what was correct for NEOJ.

The second explanation is that there is another vowel in NEOJ that merged with /o/ following labials and with /u/ elsewhere, and that this vowel could not be adequately rendered by Western scribes: sometimes it was written as /u/ and other times as /o/.

proto-OJ	WOJ	NEOJ	
*u	u	u	including following labials
*U	u	o	only after labials
*o	ô	ô	neutral /o/ following labials

The third explanation, following my discussion of the WOJ attributive above (Section 2.2.5.3.3.8.14) proposing a process at the proto-OJ level where the attributive suffix *-ö*, as found in WOJ in the attributive form of the copula, i.e., *n-ö* 'COP-ATT', assimilates to /ô/ and then in WOJ raises to /u/ but remains /ô/ in EOJ. In the case of NEOJ, it is possible to predict the environments where /ô/ remains: after labials. In all other environments /ô/ raises to /u/.<sup>350</sup>

---

350. The vowel /ô/ presumably remains /ô/ following labials due to the round feature of both the vowel /ô/ and the labial consonants. Note that in other varieties of EOJ /ô/ remains following non-labial consonants thus different explanations are needed to account for this; I return to this below in Sections 2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ).

	proto-OJ form	assimilation	raising
WOJ	*-urö	*-urô	-uru
EOJ	*-urö	*-urô	(-uru/-urô)

This process of raising, however, must occur after the sequence *-ur-* is lost following consonant final stems. Following the discussion presented above on the WOJ attributive, historically, this morpheme was formed with a stative suffix *-ur-*, the attributive *\*-ö* is suffixed to it, and assimilation occurs as described above. For consonant final verbs the /r/ is lost due to Whitman's Law (Section 2.2.4.3.2) which states /r/ is deleted following short vowels. The vowel length of vowel stem verbs ending in /i/ or /ë/ and monosyllabic verbs ending in /î/ or /i/ prevents /r/ loss from occurring (Russell 1997: 47, see also Section 2.2.5.3.3.8.14). Thus, for NEOJ, we must assume a series of developments, which I illustrate below:

suffixation	r-loss	raising	gloss
* <i>pap-urô</i>	<i>pap-ô</i>	—	crawl-ATT
* <i>wakar-urô</i>	* <i>wakar-ô</i>	<i>wakar-u</i>	separate-ATT
* <i>mî-ye-urô</i>	—	<i>mî-y-uru</i>	see-POT-ATT

The attributive form is used as follows:

久毛為爾美由流 志麻奈良奈久爾  
kumô wi-ni mî-y-uru sima n-ar-an-aku n-i  
cloud well-LOC see-PASS-ATT island COP-exist-NEG-NML  
COP-INF  
It was not an island that was visible in the clouds.  
(MYS XX: 4355-Ka)

麻都能気乃 奈美多流美礼婆

matu n-ö kĕ-nö nam-î-tar-u mî-re-Npa

pine COP-ATT<sup>351</sup> tree-GEN line up-INF-PERF/PROG-ATT

see-EVD-CONJ

When I see the pine trees that are lined up...

(MYS XX: 4375-St)

2.3.4.2.3.1.6.10 *The Evidential Suffix -ĕ/-ure*. The NEOJ evidential form is *-ure*

following vowel stem verbs and *-ĕ* following consonant stem verbs. When discussing the

WOJ evidential form (Section 2.2.5.3.3.8.13) above, I proposed that the evidential form

developed in the same way as the attributive form (discussed above), that is, both the

attributive and the evidential forms are formed with the stative suffix *-ur-*. In the case of

the evidential, the suffix *-ĕ* is suffixed to the stative suffix forming *\*-urĕ*, and then /r/ loss

occurs following consonant stem verbs in the same manner as described for the

attributive above.

The evidential form can be used as a sentence final form in *kakari musubi*, or

linking, structures, and it can also be followed by the conjunctive suffix *-Npa* (Section

2.3.4.2.3.1.6.3) or the concessive suffix *-Ntö* (Section 2.3.4.2.3.1.6.4).

---

351. This is a special attributive used only with the defective verb *n-* 'to be [copula]'.

多妣己呂母 夜倍伎可佐祢弓 伊努礼等母  
 奈保波太佐牟志 伊母爾志阿良祢婆  
 taNpî körömö ya-N-pë k-î kasane-te in-ure-Ntö mö<sup>352</sup> napo paNta  
 samu-si imö n-i si ar-an-e-Npa  
 travel clothes eight-COP-layer wear-NML layer/INF-GER  
 sleep-EVD-CONC PART moreover skin cold-FIN lover COP-INF  
 EMPH exist-NEG-EVD-CONJ  
 Although I sleep layered in my eight-layered travel clothes, my  
 skin is still cold, since [the clothes] are not my beloved.  
 (MYS XX: 4351-Ka)

麻都能氣乃 奈美多流美礼婆  
 matu n-ö kē-nö nam-î-tar-u mî-re-Npa  
 pine COP-ATT tree-GEN line up-INF-PERF/PROG-ATT  
 see-EVD-CONJ  
 When I see the pine trees that are lined up...  
 (MYS XX: 4375-St)

都久比夜波 須具波由氣等毛  
 tuku pî ya pa suNk-u pa yuk-ë-tômô  
 moon sun QP TOP pass-ATT TOP go-EVD-CONC  
 The sun and moon, as for [their] passing, although [they] have  
 gone...  
 (MYS XX: 4378-St)

#### 2.3.4.2.3.2 Nominalizers

NEOJ has two nominalizers which usually attach directly to the root of the verb and cannot be followed by any other verbal suffix.

---

352. As discussed above, the character 努 can be read either *nô* or *nu*; I have chosen to read it as *nu* here.

2.3.4.2.3.2.1 The Nominalizer -aku. The nominalizer *-aku* occurs only once in

NEOJ. The scope of this nominalizer includes the preceding clause.

久毛為爾美由流 志麻奈良奈久爾  
kumô wi n-i mi-y-uru sima n-ar-an-aku-ni  
cloud exist-NML COP-INF see-PASS-ATT island  
COP-exist-NEG-NML-LOC  
It was not an island that was visible in the clouds.  
(MYS XX: 4355-Ka)

2.3.4.2.3.2.2 The Nominalizer -i. The NEOJ nominalizer *-î* follows the verb root.

While *-aku* (discussed above) nominalizes a clause, *-î* nominalizes just the verb.

多妣己呂母 夜倍伎可佐祢弓  
taNpî körömö ya-N-pë k-î kasane-te  
travel clothes eight-COP-layer wear-NML layer/INF-GER  
Although I sleep layered in my eight-layered travel clothes...  
(MYS XX: 4351-Ka)

多妣由岐爾 由久等之良受弓  
taNpî yuk-î ni yuk-u tö sir-aNs-u-te  
travel go-NML LOC go-ATT PART know-NEG-INF-GER  
Not knowing [I] have left on a [long] trip...  
(MYS XX 4376-St)

2.3.4.2.3.3 Summary

Table 2.26 below lists the NEOJ inflectional morphemes in alphabetical order, providing information as to how they affix to verbs, and also presents their functions.

Table 2.26: Summary of NEOJ Inflectional Morphemes

Morpheme	Type	Function
-aku	suffix	nominalizer
-am-	suffix (Group I)	tentative mood
-an-	suffix (Group II)	negative
-aNs-	suffix (Group II)	negative
-aNpa	clause final suffix (Group V)	hypothetical conditional
-ap-	suffix (Group IV)	durative
-ar-	suffix (Group IV)	stative
-ane	suffix (Group V)	desiderative
-as-	suffix (Group I)	honorific
-aye-	suffix (Group I)	passive
-ë/-ure	clause or sentence final suffix (Group V)	evidential
-î	suffix	infinitive
-î	suffix	nominalizer
-matur-	auxiliary (Group I)	humble
-n-	auxiliary (Group III)	perfective
-Npa	clause final suffix (Group V)	conjunctive
-Ntö	clause final suffix (Group V)	concessive
-si	clause final auxiliary (Group V)	past tense
-t-	auxiliary (Group III)	perfective
-tar-	auxiliary (Group III)	perfective progressive
-te-	auxiliary (Group V)	subordinative gerund
-tutu	clause or sentence final auxiliary (Group V)	coordinative
-u	sentence final suffix (Group V)	active final
-u/-ô/-uru	clause or sentence final auxiliary (Group V)	attributive

### 2.3.5 CEOJ

Central Eastern Old Japanese (CEOJ), also known as Area B (see Map 2.6 above), consists of the dialects of EOJ spoken in the regions of Hitachi (Hi), Izu (Iz), Kōzuke (Ko), Musashi (Ms), Sagami (Sa), and Shimōsa (Ss).<sup>353</sup> Table 2.21 above shows which poems correspond to each area.

#### 2.3.5.1 CEOJ Phonology

As stated in Section 2.3.4.1, since EOJ phonology is dependent on our understanding of WOJ phonology, it is necessary to discuss CEOJ phonology in terms of WOJ.

##### 2.3.5.1.1 CEOJ Consonants

The CEOJ consonants are identical to WOJ and NEOJ consonants (Sections 2.2.4.1.1 and 2.3.4.1.1), as shown in Table 2.27. The phonetic values for these consonants are the same as those presented above for WOJ and NEOJ.

---

353. There is only one poem attributed to Izu; however, this poem is recorded in WOJ. Therefore, I do not treat Izu here.

Table 2.27: CEOJ Consonants

	Labial	Dental		Palatal	Velar
Voiceless obstruents	p	t	s		k
Prenasalized voiced obstruents	Np [ᵐb]	Nt [ᵐd]	Ns [ᵐz]		Nk [ᵐg]
Nasals	m	n			
Liquid		r [r]			
Glides	w			y	

### 2.3.5.1.2 CEOJ Vowels

As was the case for NEOJ, the description of CEOJ vowels is more difficult than that of CEOJ consonants, partially because a complete study of CEOJ phonology comparing the characters used to record CEOJ syllables and their readings in LMC has not yet been presented.

#### 2.3.5.1.2.1 /î/, /i/, and /i/

The vowels /î/, /i/, and /i/ are all attested in CEOJ. The vowels /î/ and /i/ merge to /i/ following coronals.<sup>354</sup> The correspondences between WOJ /î/, /i/, and /i/ and CEOJ vowels are not clear cut and more research needs to be done to understand the

---

354. This merger happened in WOJ, and may or may not have also occurred in EOJ. WOJ orthography does not allow for a distinction between /î/ and /i/ following coronals, and since EOJ is written in terms of WOJ orthography, this merger happens in EOJ by default.

relationship of the vowels here. Hōjō (1966: 409-410) notes correspondences between the following vowels:

WOJ	:	CEOJ
î	:	ê
î	:	ë
ï	:	ô
ï	:	o
ï	:	u
ï	:	u

The first two correspondences, WOJ /î/ : CEOJ /ê/ and WOJ /î/ : CEOJ /ë/, both occur in Hitachi with the same word: 佐祁久 *sakê-ku* 'prosperous' (MYS XX: 4372-Hi) and 佐気久 *sakë-ku* 'id.' (MYS XX: 4368-Hi).<sup>355</sup> In addition, I have found another example showing Hitachi /î/ corresponding to Hitachi /ë/ with the same word in two different poems: 都岐許會 *tuk-î kôsö* 'tell-EVD EMPH' (MYS XX: 4365-Hi) and 都気許會 *tuk-ë kôsö* 'id.' (MYS XX: 4363-Hi).<sup>356</sup> There are a few possibilities here: 1) scribal error, where one of the examples is simply misspelled; 2) since the examples found thus far all occur after /k/, there is the possibility that the consonant is affecting the vowel,

---

355. Cf., WOJ *sakî-ku* 'prosperous-INF' (MYS V: 894).

356. I have analyzed this as the evidential form of the verb as expected before *kôsö*. However, it is also possible that the first example is the infinitive form and the second is the evidential form, resulting in a morphological issue rather than a phonological one.

though it is not clear what the "correct" form is here since we have conflicting data. This issue will be set aside for further research.

Next, Hōjō (1966: 409) presents one example of WOJ /i/ corresponding to CEOJ /ô/ and one with CEOJ /o/.<sup>357</sup>

WOJ /i/	:	CEOJ /o/
<i>niNsi</i> 'rainbow' (NR I: 5)	:	<i>nôNsi</i> 'id.' (MYS XIV: 3414-Ko)
<i>isô</i> 'rock, shore' (KK 5)	:	<i>osu</i> 'id.' (MYS XIV: 3385-Ss)

As for the first example, the syllable *ni* is well attested in CEOJ, and in the region of Kōzuke. In addition, the character used to write the syllable /nô/ in *nôNsi* is 努 which can also be used to record the syllable /nu/. If this is /nu/ and not /nô/ then this example fits well with the examples of WOJ /i/ : CEOJ /u/, which I discuss below. If this is /nô/ then, since there is only one example of this correspondence, it is not possible to make a generalization about this correspondence.<sup>358</sup>

As for the second example, WOJ *isô* 'shore' is attested in three forms throughout EOJ:

---

357. In this example the /o/ is in initial position and it is not possible to determine if this should be /ô/ or /ö/.

358. The proto-RK word for 'rainbow' is reconstructed as \*noozi (p.c. Alexander Vovin), so the reading of *nô* is probably correct for this example.

isô MYS XIV: 3563 (UEOJ); MYS XX: 4328 (SEOJ-Sagami);  
MYS XX: 4338 (SEOJ-Suruga); MYS XX: 4324  
(SEOJ-Tōtōmi)  
osi MYS XIV: 3359 (SEOJ-Suruga)  
osu MYS XIV: 3385 (CEOJ-Shimōsa)

Although it is interesting that this word in both Shimōsa and Suruga show initial /o/, Suruga also has a variant beginning with initial /i/, and both Shimōsa and Suruga allow for /i/ in initial position. It is, therefore, not clear what the motivation for /i/ > /o/ here might be.

Next, Hōjō (1966: 409) presents examples of WOJ /i/ : CEOJ /u/:

WOJ /i/	:	CEOJ /u/
<i>îmĕ</i> 'dream' (MYS V: 807)	:	<i>yumĕ</i> 'id.' (MYS XX: 4394-Ss)
<i>pari</i> 'needle' (MYS XVIII: 4128)	:	<i>paru</i> 'id.' (MYS XX: 4420-Ms)
<i>si</i> 'EMPH' (MYS II: 93)	:	<i>su</i> 'id.' (MYS XIV: 3363-Sa)
<i>sayuri</i> 'lily' (MYS XVII: 4086)	:	<i>sayuru</i> 'id.' (MYS XX: 4369-Hi)

Assuming that *imĕ* comes from \**yimĕ*,<sup>359</sup> we see that all these cases show a correspondence of WOJ /i/ with CEOJ /u/ following a coronal consonant; this correspondence is not found with WOJ /î/ and the examples of WOJ /i/ : CEOJ /u/ are rejected for morphological reasons, as discussed below. However, there are also

---

359. The sequence \**yi* is not possible in WOJ, and reduces to \**i* (Section 2.2.4.2).

numerous examples of CEOJ /i/ following a coronal, e.g., *si* 'EMPH' (MYS XIV: 3410-Ko) and *asiNkari* '[place name]' (MYS XIV: 3368-Sa), so it is not clear why in some cases we find WOJ /i/ : CEOJ /u/ and in others WOJ /i/ : CEOJ /i/ following a coronal. I question whether the difference here is due to the merger of /î/ and /i/ in WOJ, where underlying /i/ corresponds to CEOJ /u/ and underlying /î/ corresponds to CEOJ /i/; I have not yet investigated this, however. The fact that the emphatic particle *si* is attested as both *si* and *su* raises further questions.

Finally, there is one example of WOJ /i/ : CEOJ /u/:

WOJ /i/	:	CEOJ /u/
<i>pî</i> 'fire' (K I: 27)	:	<i>pu</i> 'id.' (MYS XX: 4419-Ms)

This example, however, can be easily rejected. The WOJ forms come from the bound forms, *\*kuku-* 'stalk' and *\*pö-*,<sup>360</sup> respectively, and the unbinding morpheme *\*-i* (see Section 2.3.5.1.2.1). The first example shows a correspondence between WOJ /u/ and CEOJ /u/, the second shows WOJ /ö/ : CEOJ /u/, which is discussed below.

---

360. As discussed in Section 2.2.4.3.3.2, WOJ /i/ comes from either monophthongization of *ö+i* or *u+i*. The bound form *pö-* 'fire' is attested in WOJ (K II: 42).

#### 2.3.5.1.2.2 /ê/, /e/, and /ë/

The vowels /ê/, /e/ and /ë/ are all attested in CEOJ. Hōjō (1966: 412-418) presents examples of these WOJ vowels and how they correspond to CEOJ vowels.

First, we have the correspondence of WOJ /ê/ with CEOJ /î/ which happens only once:

WOJ /ê/	:	CEOJ /î/
<i>pê</i> 'area, side' (K I: 33)	:	<i>pî</i> 'id.' (MYS XIV: 3385-Ss)

Since there is only one example of this correspondence it is not possible to make any generalizations. Further, the syllable /pê/ is attested in CEOJ and occurs six times in this sub-dialect of CEOJ (Shimōsa).

Next, Hōjō (1966: 417) presents one example of WOJ /e/ corresponding to CEOJ /ö/:

WOJ /e/	:	CEOJ /ö/
<i>-te</i> 'GER' (KK 80)	:	<i>-tö</i> 'id.' (MYS XX: 4390-Ss)

Again, since there is only one example, it is not possible to conclude anything about this correspondence. However, WOJ /e/ : CEOJ /ö/ is well attested and is discussed below in Section 2.3.6.1.2.0.4, where I argue that WOJ /e/ is expected to correspond to CEOJ /ö/ after a coronal consonant; this example fits the rule described below.

The third correspondence Hōjō (1966: 412) lists is one example of WOJ /ë/ corresponding to CEOJ /a/:

WOJ /ë/	:	CEOJ /a/
<i>suNkë</i> 'sedge' (K III: 8)	:	<i>suNka</i> 'id.' (MYS XIV: 3369-Sa)

This example is another case of different morphemes being compared. The WOJ form consists of a bound form *suNka-* (K III: 8) plus the unbinding morpheme \*-i. If we compare the WOJ bound form *suNka-* with the CEOJ form *suNka* then the result is a correspondence between WOJ /a/ and CEOJ /a/; the assumption here is that EOJ does not have the same process to form free nouns from bound forms and that, instead of monophthongization, contraction occurs in CEOJ (see below Section 2.3.5.1.3.2). The same explanation can be given for Hōjō's (1966: 418) next examples, except that the vowel of the bound stem is deleted and the vowel of the unbinding morpheme remains:

WOJ /ë/	:	CEOJ /î/
<i>kaNkë</i> 'shade' (MYS XIX: 4220)	:	<i>kakî</i> 'id.' (MYS XX: 4384-Ss)
<i>îmë</i> 'dream' (MYS V: 807)	:	<i>yumî</i> 'id.' (MYS XX: 4394-Ss)

This proposal has yet to be proven for EOJ; I return to this point below (Section 2.3.5.1.3.2).

### 2.3.5.1.2.3 /ô/, /o/, and /ö/

The vowels /ô/, /o/, and /ö/ are all attested in CEOJ. The vowel /o/ is the result of a merger of /ô/ and /ö/ after labials.<sup>361</sup> Hōjō (1966: 411-417) presents examples showing the reflexes of WOJ /ô/, /o/, and /ö/ in CEOJ.

First, there are many examples of WOJ /ô/ corresponding to CEOJ /u/, but this correspondence is only found in the regions of Hitachi, Sagami and Shimōsa and not in Kōzuke or Musashi:

WOJ /ô/	:	CEOJ /u/
<i>isô</i> 'shore' (KK 5)	:	<i>osu</i> 'id.' (MYS XIV: 3385-Ss)
<i>kaNtô</i> 'gate' (MYS XVII: 3978)	:	<i>katu</i> 'id.' (MYS XX: 4386-Ss)
<i>nô</i> 'field' (MYS V: 837)	:	<i>nu</i> 'id.' (MYS XX: 4387-Ss)
<i>yô</i> 'night' (K I: 32)	:	<i>yu</i> 'id.' (MYS XX: 4369-Hi)
<i>kôye-</i> 'to cross' (MYS XVII: 3915)	:	<i>kuye-</i> 'id.' (MYS XX: 4372-Hi)

Except for the final example, these examples show a correspondence of WOJ /ô/ : CEOJ /u/ following a coronal consonant, which may be significant. The final example shows this vowel before a coronal. However, these sub-dialects also have /ô/ in these environments. The examples may also provide insight into earlier forms of these words.

As discussed in Section 2.2.4.3.3.2, one source for /ô/ is monophthongization of /u+a/,

---

361. This merger happened in WOJ. It is not clear whether this merger occurred the same way in CEOJ, but since CEOJ is written with the same orthography as WOJ, it is dependent on WOJ phonological rules.

and the CEOJ form may reflect the earlier form. Of course, more research is needed to determine what the connection is between WOJ /ô/ and CEOJ /u/.

Further, there are some examples of WOJ /ô/ or WOJ /o/ corresponding to CEOJ /u/ following labial consonants:

WOJ /ô/ or /o/	:	CEOJ /u/
<i>opose-</i> 'to bear' (MYS XVIII: 4081)	:	<i>opuse-</i> 'id.' (MYS XX: 4389-Ss)
<i>pö-</i> 'fire' (K I: 27)	:	<i>pu</i> 'id.' (MYS XX: 4419-Ms) <sup>362</sup>
<i>sakîmori</i> 'border guards' <sup>363</sup>	:	<i>sakîmuri</i> 'id.' (MYS XX: 4364-Hi)

The syllables /po/ and /mo/ are well attested in CEOJ, so the /u/ here is not the result of some constraint against /u/ following labials. More research is needed here to explain these correspondences.

The final correspondence for this group is WOJ /ô/ : CEOJ /i/:

WOJ /ô/	:	CEOJ /i/
<i>tömar-</i> 'stop' (MYS II: 151)	:	<i>tîmar-</i> 'id.' (MYS XX: 4372-Hi)
<i>kökörö</i> 'heart' (KK 3)	:	<i>kököri</i> 'id.' (MYS XX: 4390-Ss)

Since the syllables /tö/ and /rö/ are attested in CEOJ, it is not clear why we see this correspondence only in these two words.

---

362. Højō treated this as a correspondence between WOJ /i/ and /u/; see discussion above (Section 2.3.5.1.2.1).

363. The word *sakîmori* is not attested phonetically as a compound in WOJ, though it is attested logographically. The two members of this compound are attested separately: *sakî* 'border' (K I: 34) and *mori* 'guard'.

#### 2.3.5.1.2.4 /a/

The low vowel /a/ is attested in all sub-dialects of CEOJ. There is a one-to-one correspondence between WOJ /a/ and CEOJ /a/. There is however, one word in Sagami that is attested in one case with a final /a/ and in others with a final /i/:

<i>asiwara</i> '[place name]'	MYS XIV: 3361
<i>asiwari</i> '[place name]'	MYS XIV: 3368, 3369, 3370

The reason for this is unclear. This may just indicate a scribal error, or these may even be different place names.

#### 2.3.5.1.2.5 /u/

Hōjō (1966: 410-411, 414-415) presents a number of examples showing WOJ /u/ and its correspondences in CEOJ, which I discuss below.

First, WOJ /u/ corresponds to CEOJ /î/ or /i/ in the following:<sup>364</sup>

WOJ /u/	:	CEOJ /î/ or /i/
<i>-tutu</i> 'COOR' (MYS XV: 3737)	:	<i>-tusi</i> 'id.' (MYS XX: 4366-Hi)
<i>muta</i> 'with' (MYS XV: 3661)	:	<i>mîta</i> 'id.' (MYS XX: 4394-Ss)

---

364. Hōjō (1966: 410-411) also presents WOJ *nunO* 'cloth' corresponding to CEOJ-Hitachi *ninô* 'id.' (MYS XIV: 3351). However, 'cloth' is not attested phonetically in WOJ. Omodaka et al (1967: 554) notes that we cannot be sure whether the second syllable is *nō* or *nô*. If this word is one morpheme, then the vowel of the second syllable has to be /ô/ because /u/ and /ô/ do not occur together in the same root. If this word is historically bimorphemic then we cannot be certain.

Next, WOJ /u/ also corresponds to CEOJ /ô/, /o/, and /ö/, as discussed below.

WOJ /u/ : CEOJ /ô/  
*yuk-* 'go' (K II: 47) : *yôk-* 'id.' (MYS XX: 4390-Ss)

WOJ /u/ : CEOJ /ö/  
*-tutu* 'COOR' (MYS XV: 3737) : *-tötö* 'id.' (MYS XX: 4421-Ms)

These examples show that WOJ /u/ corresponds to either /ô/ or /ö/ after a coronal, although syllables with a coronal plus /u/ are also attested in CEOJ.

As for the correspondence between WOJ /u/ and CEOJ /o/ we find the following:

WOJ /u/ : CEOJ /o/  
*-am-u* 'TENT-ATT' (KK 3) : *-am-o* 'id.' (MYS XX: 4367-Hi)

The situation here is the same as discussed for NEOJ above (Section 2.3.4.1.2.5); there are examples of both *-am-u* and *-am-o* in CEOJ. In the interest of space, I present only the poem numbers and not the full textual examples:

Poems with *-am-u*

Hitachi MYS XIV: 3395, 3397; MYS XX: 4364, 4366  
Kōzuke MYS XIV: 3404, 3415, 3415, 3434  
Musashi MYS XIV: 3376  
Sagami MYS XIV: 3369, 3370; MYS XX: 4329, 4330  
Shimōsa MYS XX: 4394

Poems with -am-o

Hitachi	MYS XX: 4367
Kōzuke	MYS XIV: 3418; MYS XX: 4406
Musashi	MYS XX: 4419, 4422, 4423
Sagami	MYS XIV: 3432

As argued above, such correspondences may show an allophonic variant of /u/ following a labial consonant, which may be more round and/or more low than /u/ in other environments, and the scribes simply recorded the vowel with the closest sounds available to them. I return to this below (Section 2.3.5.2.3.3.6.12).

2.3.5.1.3 Morphophonemic Rules

2.3.5.1.3.1 Constraints on Consonant Clusters

CEOJ does not allow consonant clusters. There are some prenasalized consonants, discussed above (Section 2.3.4.1.1.2).

2.3.5.1.3.2 Constraints on Vowel Clusters

CEOJ, like WOJ, does not allow vowel sequences within a word. In the case of WOJ, one of two processes occur to prevent such sequences: contraction or monophthongization (See Section 2.2.4.3.3.2). As discussed above in Section 2.3.4.1.3.2, this issue has yet to be explored for EOJ. My discussion here is based on a preliminary

study, and my discussion of the data here should be received as observational, as I have not yet considered all data, and am setting this issue aside for further research.

2.3.5.1.3.2.1 Vowel Sequences in Nouns. I have looked at bound and free nouns in CEOJ to determine if their development can indicate anything about the processes of contraction for monophthongization in CEOJ. I am assuming that free nouns developed from bound nouns plus an unbinding morpheme *\*-i* in CEOJ just as it did in WOJ; this assumption may be flawed. The examples of bound and free noun forms in CEOJ are presented below:

WOJ	:	CEOJ
free: <i>suNkë</i> 'sedge' (K III: 8)	:	<i>suNka</i> 'id.' (MYS XIV: 3369-Sa)
bound: <i>suNka-</i> (K III: 8)	:	not attested
free: <i>kaNkë</i> 'shade, reflection' (MYS XIX: 4220)	:	<i>kakî</i> 'id.' (MYS XX: 4384-Ss)
bound: <i>kaNka-</i> (KK 90) <sup>365</sup>	:	not attested
free: <i>îmë</i> 'dream' (MYS V: 807)	:	<i>yumî</i> 'id.' (MYS XX: 4394-Ss)
bound: not attested <sup>366</sup>	:	not attested
free: <i>pî</i> 'fire' (K I: 27)	:	<i>pu</i> 'id.' (MYS XX: 4419-Ms)
bound: <i>pö-</i> (K I: 27)	:	not attested

---

365. This attestation only applies if one accepts the reconstruction of *kaNkamî* 'mirror' (KK 90) as coming from *kaNka-* 'reflection' + *mî* 'see/NML'.

366. The final /ë/ indicates that the WOJ form either came from *\*ima-i* or *\*imo-i*.

Here it appears that we get contraction in all cases, except that in some cases the vowel of the bound form remains and in others the vowel of the unbinding morphemes remains.<sup>367</sup>

Clearly further research is needed here.

2.3.5.1.3.2.2 Vowel Sequences in Verbs. Next, I looked at some transitive and intransitive verb pairs found in CEOJ to see if monophthongization played a role in their formation, as is the case for WOJ in such verb pairs.<sup>368</sup> The examples from CEOJ are as follows:

*pur-* 'touch (v.i.)' (MYS XX: 4328-Sa)/*pure-* 'touch (v.t.)' (MYS XX: 4418-Mu)

*wasur-* 'forget' (MYS XIV: 3394-Hi)/*wasure-* 'id.' (MYS XIV: 3419-Ko)<sup>369</sup>

*tuk-* 'attach (v.i.)' (MYS XIV: 3408-Ko)/*tukë-* 'attach (v.t.)' (MYS XX: 4404-Ko) and *tukê-* 'attach (v.t.)' (MYS XX: 4366-Hi)

*sakar-* 'separate (v.i.)' (MYS XIV: 3420-Ko)/*sakë-* 'separate (v.t.)' (MYS XIV: 3420-Ko)

The verbs on the left have consonant final stems, those on the right with vowel final stems ending in /e/ and /ë/ are formed with the transitivity flipper.<sup>370</sup> The vowel /e/

---

367. See discussion above in Section 2.3.5.1.2.3 for the correspondence between WOJ /ö/ and CEOJ /u/ to account for the WOJ bound form *pö-* 'fire' compared to the CEOJ bound/free form *pu* 'id.'

368. See discussion in Section 2.2.5.2.7.

369. The pair *wasur-/wasure-* both mean 'forget', but, according to Omodaka (1967: 818) *wasur-* implies to forget something intentionally, while *wasure-* implies that something is naturally forgotten.

370. Discussed below in Section 2.3.5.2.2.4.

is a neutral vowel – the result of a merger of /ë/ or /ê/ following coronal consonants, and may represent underlying /ë/ or /ê/. For WOJ, there is evidence that the vowel /ë/ is formed from monophthongization of \*/a+i/ or \*/ö+i/, and /ê/ comes from the monophthongization of \*/i+a/. In the case of CEOJ, however, there is no evidence how these vowels are formed, that is, if they are the result of monophthongization or original vowels. More research on CEOJ vowels is needed to determine how these vowels developed.

#### 2.3.5.1.4 Vowel Assimilation

Although WOJ has a constraint on back and non-back vowels occurring in the same morpheme, this has not been sufficiently studied for EOJ. Examples like *taNtöri* '[place or river name]' (MYS XIV: 3405) suggest that this constraint may not have been present in CEOJ.

#### 2.3.5.2 CEOJ Verbal Morphology

##### 2.3.5.2.1 The Shape of Pre-CEOJ Verb Roots

In order to determine the shape of EOJ verb roots, I compiled a database of all attested verbs, grouped together by form and meaning. I found only 22 reconstructable

verb roots, however, in some cases one verb supporting the reconstruction of the verb root is in one EOJ dialect and another verb supporting its reconstruction is in another EOJ dialect or found in unknown data (UEOJ); the data are too few if reconstructions are based solely on verbs attested in each dialect. For the purpose of the discussion below, I give examples attested with the same dialect of EOJ where possible, and otherwise indicate cases where supporting evidence for the reconstruction is from elsewhere. As for the shape of the verb roots, some can be reconstructed as consonant final and others as vowel final, although it is not always possible to reconstruct verb roots.

#### 2.3.5.2.2 Derivational Morphemes

##### 2.3.5.2.2.1 The Derivational Suffix \*-s-

The derivational suffix \*-s- is attested with only one verb in CEOJ:

*yösör-* < \**yo-s-Vr-* 'pass (v.t.)' (MYS XIV: 3408-Ko) [cf. *yör-*  
< \**yö-Vr-* 'pass' (MYS XIV: 3446-UEOJ)]

As mentioned above (Section 2.3.4.2.1), as there is no evidence for a vowel initial suffix in EOJ, this suffix is reconstructed as simply \*-s-.

This verbal suffix can be followed by the intransitive suffix \*-*Vr-* (discussed in the next section). It seems contradictory, however, for the transitive suffix to be followed

by the intransitive suffix. In addition, the transitivity flipper here appears to have no effect on the meaning of the newly formed verb.

#### 2.3.5.2.2.2 The Derivational Suffix \*-Vr-

There are two verbs attested in CEOJ that are formed with the suffix \*-Vr-:

*sakar-* < \**sak-Vr-* 'separate (v.i.)' (MYS XIV: 3420-Ko) [cf. *sakë-*  
< \**sak-E-* 'separate, disperse (v.t.)' (MYS XIV: 3420-Ko)]  
*yösör-* < \**yo-s-Vr-* 'pass (v.t.)' (MYS XIV: 3408-Ko) [cf. *yör-*  
< \**yö-Vr-* 'pass' (MYS XIV: 3446-UEOJ)]

In one example the suffix occurs as *-ar-* and in the other as *-ör-*, thus I reconstruct \*-Vr- for this morpheme.<sup>371</sup> This suffix is used to create the intransitive forms of verbs, and is used with one other derivational suffix, \*-s- described above.

#### 2.3.5.2.2.3 The Derivational Suffix \*-E-

There are five examples of verbs formed with the transitivity flipper in CEOJ:<sup>372</sup>

*pure-* < \**pur-e-* < \**pur-E-* 'touch (v.t.)' (MYS XX: 4418-Mu) [cf. *pur-*  
'touch (v.i.)' (MYS XX: 4328-Sa)]

- 
371. NEOJ has only one example, for which \*-ör- is reconstructed (Section 2.3.4.2.2.2), but in UEOJ \*-Vr- is also reconstructed (Section 2.3.7.2.2.2). There are no examples of this morpheme in SEOJ.
372. There may be more examples, however, I am only considering examples involving verb pairs (or sets) where it is possible to reconstruct a verb root for the verbs, plus additional morphemes for each member of the pair (or set). Where there is only one verb and no transitive/intransitive counterpart, it is not possible to prove whether this morpheme is involved in its formation or not.

*wasure-* < \**wasur-e-* < \**wasur-E-* 'forget' (MYS XIV: 3419-Ko) [cf. *wasur-* 'id.' (MYS XIV: 3394-Hi)]<sup>373</sup>  
*tukë-* < \**tuk-ë-* < \**tuk-E-* 'attach (v.t.)' (MYS XX: 4404-Ko) [cf. *tuk-* 'attach (v.i.)' (MYS XIV: 3408-Ko)]  
*tukê-* < \**tuk-ê-* < \**tuk-E-* 'attach (v.t.)' (MYS XX: 4366-Hi) [cf. *tuk-* 'attach (v.i.)' (MYS XIV: 3408-Ko)]  
*sakë-* < \**sak-ë-* < \**sak-E-* 'separate (v.t.)' (MYS XIV: 3420-Ko) [cf. *sakar-* < \**saka-Vr-* 'separate (v.i.)' (MYS XIV: 3420-Ko)]

As these examples show, the transitivity flipper appears as *-e*, *-ë*, and *-ê*. As discussed above (Section 2.3.5.1.3.2), we know very little about monophthongization in CEOJ, so we do not know if the vowels /*ë*/ and /*ê*/ developed in CEOJ the same way they developed in WOJ.<sup>374</sup> It is not possible to determine the shape of this suffix. For the purposes of this study, I tentatively reconstruct this morpheme as \**-E-*, a symbol indicating a front mid vowel. This vowel will be a neutral /*e*/ after coronal consonants, and may be either /*ê*/ or /*ë*/ elsewhere.

The suffix \**-E-* functions as a transitivity flipper, in most cases changing the verb from either transitive to intransitive or intransitive to transitive, but in some cases the function is unclear (See Section 2.2.5.2.7). In CEOJ this morpheme only affixes to verb roots and is not used in conjunction with other derivational morphemes.

---

373. The pair *wasur-/wasure-* both mean 'forget', but, according to Omodaka (1967: 818) *wasur-* implies to forget something intentionally, while *wasure-* implies that something is naturally forgotten.

374. In WOJ, the vowel /*ê*/ is formed from monophthongization of \*/*î+a*/ and /*ë*/ is from either \*/*a+i*/ or \*/*ö+i*/ (Section 2.2.4.3.3.2).

#### 2.3.5.2.2.4 Summary

Table 2.28 below lists the CEOJ derivational morphemes and their functions.

Table 2.28: Summary of CEOJ Derivational Morphemes

Morpheme	Function
*-s-	transitivity or causative marker
*-Vr-	intransitivity marker
*-E-	transitivity flipper in some cases, function unknown in others

#### 2.3.5.2.3 Inflectional Morphemes

In addition to derivational morphemes, CEOJ also has a number of inflectional morphemes, which I discuss below in the following order: verbal prefixes and preverbs (Section 2.3.5.2.3.1), the circumfix (Section 2.3.5.2.3.2), suffixes and auxiliaries (Section 2.3.5.2.3.3), and nominalizers (Section 2.3.5.2.3.4).

##### 2.3.5.2.3.1 Verbal Prefixes and Preverbs

CEOJ has one verbal prefix and one preverb. The distinction I make between prefixes and preverbs is that prefixes are simple bound morphemes, while preverbs are a special class of prefixes which are derived from a full verb.

2.3.5.2.3.1.1 The Prefix *sa-*. CEOJ has one verbal prefix: *sa-*. Following the discussion for the WOJ prefix *sa-* (Section 2.2.5.3.1.1.2), I also treat CEOJ *sa-* as a prefix meaning to "(do) this way; (do) in such a way." In CEOJ this prefix is also used with the verb *ne-* 'sleep' with the meaning to sleep together.

麻可奈思美 佐祢爾和波由久  
 ma-kanasi-mî sa-ne-ni wa pa yuk-u  
 PREF<sup>375</sup>-dear-NML PREF-sleep/NML-LOC I TOP go-FIN  
 I go to sleep with [the one who] is dear to me.  
 (MYS XIV: 3366-Sa)

多都努自能 安良波路万代母 佐祢乎佐祢弓婆  
 tat-u nôNsi-nō arapar-ô-maNte mö sa-ne wo sa-ne-t-e-Npa  
 rise-ATT rainbow-GEN appear-ATT-TERM PART PREF-sleep/  
 NML ACC PREF-sleep/INF-PERF-EVD-CONJ  
 When [we will] sleep such a sleep this way until the rising rainbow  
 appears...  
 (MYS XIV: 3414-Ko)

2.3.5.2.3.1.2 The Preverb *kakî-*. CEOJ has one verbal prefix, *kakî-*, which is attested only once. This preverb is also attested in WOJ, and the meaning of this preverb is not entirely clear; it is thought to emphasize the action of the verb (Section 2.2.5.3.1.2.3). Historically, this preverb is thought to develop from *kak-* 'scratch, write' +

---

375. The prefix *ma-* is a prefix which means "entirely X" or "completely X", where X is a noun or adjective that is prefixed with *ma-*.

-î 'INF', but is treated as a single unit. If treated as *kak-î* it would mean "scratch and..."

and that is not a possible interpretation in this context.<sup>376</sup>

可伎武太伎 奴礼杼安加奴乎 安杼加安我世牟  
kakî-muNtak-î n-ure-Ntö ak-an-u wo aN-tö ka a-Nka se-m-u  
PREV-embrace-INF sleep-EVD-CONC EMPH get tired  
of-NEG-FIN what-DV QP I-GEN do-TENT-ATT  
Although [I] embraced [her] and we slept, I will not tire of it.<sup>377</sup>  
What am I to do?  
(MYS XIV: 3404-Ko)

#### 2.3.5.2.3.2 The Verbal Circumfix

The verbal circumfix *na...sö* is a negative imperative. As in WOJ (Section 2.2.5.3.2), the circumfix in CEOJ surrounds the infinitive form of the verb. It is only attested once in CEOJ.

伊香保祢爾 可未奈那里曾祢  
ikapo ne-ni kamī na-nar-i-sö-n-e  
[place name] peak-LOC thunder NEG-resound-INF-IMP-DES-IMP  
Please do not thunder on the peak of Mt. Ikapo.  
(MYS XIV: 3414-Ko)

---

376. See also discussion on WOJ *apî-* (Section 2.2.5.3.1.2.1) and *ari-* (Section 2.2.5.3.1.2.1).

377. Literally "I will not tire of it" used here in the meaning of "it will never be enough".

### 2.3.5.2.3.3 Verbal Suffixes and Auxiliaries

CEOJ verb stems are bound forms and must be followed by at least one suffix or auxiliary. It is possible for a verb stem to be followed by a string of suffixes, and in this case there is a set order in which the morphemes can occur; some must attach directly to the root and can be followed by other morphemes, while other suffixes may only occur in the final position of a verbal morpheme string.

Following the discussion above in Section 2.2.5.3, I have grouped the morphemes according to where they can occur in a verbal string. The infinitive suffix *-î* is not placed in a group as its ordering is not as restricted as the other suffixes; it can occur before and/or after auxiliaries, and it is the only morpheme that can occur more than once in a verbal string. If more than one morpheme is present in a verbal string then a morpheme in Group I occurs before one in Group II, a morpheme in Group II occurs before Group III, etc. A verbal string does not need to have a morpheme from Group I-III, but must end in either the infinitive *-î* or a Group V morpheme. Note that in some cases the morphemes fill the same slot in CEOJ as in WOJ, and in others they do not. In addition, CEOJ has five groups, while WOJ has seven. CEOJ also has fewer attested morphemes, but this

may be simply because CEOJ has fewer data than WOJ.<sup>378</sup> The CEOJ groupings are presented in Table 2.29 below.

Table 2.29: Classification of CEOJ Morphemes Based on Verbal String Ordering

	Ordering	Categories
infinitive <i>-i</i>	suffixes to the verb stem, auxiliaries, and some suffixes; can occur in final position; can be followed by a verb or auxiliary	infinitive <i>-i</i>
Group I	auxiliaries that follow the infinitive or suffixes that follow the verb stem	honorifics, causative, passive, tentative, and debitive suffixes
Group II	suffixes and auxiliaries which follow Group I morphemes or affix directly to the root	suffixes and auxiliaries of mood, negation, and aspect
Group III	auxiliaries which must follow the infinitive, and may also follow Group I or II morphemes	durative and stative suffixes and past tense auxiliaries
Group IV	suffixes which affix to verb stems or Group I-III morphemes	tentative and stative suffixes
Group V	suffixes to the verb stem or any Group I-IV morphemes	clause and sentence final morphemes

The morphemes are discussed below according to this grouping.

---

378. However, CEOJ has more attested morphemes than NEOJ and SEOJ.

2.3.5.2.3.3.1 The Infinitive -î. The CEOJ infinitive *-î* is suffixed to verb stems, verbal auxiliaries, and suffixes. When used between two verbs or auxiliaries it acts as a connector between the two morphemes. The infinitive can also be in the final position of a verbal string, and in this case it connects the first clause with the second, and may be thought of as English "and" ([clause 1]-and-[clause 2]). This morpheme is deleted when following vowel final stem verbs and auxiliaries in order to prevent a vowel-vowel sequence.<sup>379</sup>

可伎武太伎 奴礼杼安加奴乎 安杼加安我世牟  
 kakî-muNtak-î n-ure-Ntö ak-an-u wo aN-tö ka a-Nka se-m-u  
 PREV-embrace-INF sleep-EVD-CONC EMPH get tired  
 of-NEG-ATT ACC what-DV QP I-GEN do-TENT-ATT  
 Although [I] embraced [her] and we slept, I will not tire of it. What  
 am I to do?  
 (MYS XIV: 3404-Ko)

志保不尼乃 弊古祖志良奈美 爾波志久母  
 於不世他麻保加 於母波弊奈久爾  
 sipo pune-nö pê kôs-ô sira namî nipasi-ku mö opuse-tamap-o ka  
 omöp-apê-n-aku n-i  
 tide boat-NOM bow cross-ATT white wave sudden-INF PART  
bear/INF<sup>380</sup>-RESP-ATT QP think/INF-join-NEG-NML COP-INF  
 The white waves, which the bow of the boat crosses<sup>381</sup> – can it be  
 that without thinking [you] suddenly drafted [me]?  
 (MYS XX: 4389-Ss)

---

379. See discussion on the WOJ infinitive *-î* (Section 2.2.5.3.3.1).

380. The verb *opuse*- literally means 'bear [on one's back]' but is used here to mean 'assign; draft'. The speaker of this poem has been called to duty as a border guard.

381. Here a kind of boat which travels on the tide.

2.3.5.2.3.3.2 Group I Morphemes. The CEOJ Group I morphemes are presented

below in alphabetical order.

2.3.5.2.3.3.2.1 The Honorific Suffix -as-. CEOJ has one honorific suffix: *-as-*.<sup>382</sup>

The function of this suffix is to indicate honorification towards the actor of the marked verb or to indicate honorification towards the listener.

勢奈能我素弓母 佐夜爾布良思都  
se-na-nö-Nka sôte<sup>383</sup> mö sayani pur-as-i-t-u  
lover<sup>384</sup>-DIM-DIM<sup>385</sup>-GEN sleeve PART clearly  
wave-HON-INF-PERF-FIN  
My lover waves [her] sleeve clearly.  
(MYS XIV: 3402-Ko)

伊伎豆久伎美乎 為祢弓夜良佐祢  
ikîNtuk-u kîmî-wo wi-ne-te yar-as-an-e  
grieve-ATT lord-ACC be/INF-sleep/INF-GER give-RESP-DES-  
IMP  
[I] wish [you] would give [me my] grieving lord to sleep [here  
with me].  
(MYS XIV: 3388-Hi)

---

382. CEOJ also has a respectful honorific auxiliary, *tamap-*, (Section 2.3.5.2.3.3.7).

383. Here *sôNte* is expected, but 弓 *te* does not indicate prenasalization, i.e., *te* is written here, not *Nte*.

384. The word *se* literally means 'older brother' and is used in EOJ as a term of endearment towards a male lover and/or spouse, in the same way that *imo* 'younger sister' is used in both WOJ and EOJ texts towards female lovers and/or spouses.

385. Following Omodaka (1984a: 87) I treat *nö* here as a diminutive suffix. *Na* is also a diminutive suffix, and is found only in EOJ.

2.3.5.2.3.3.2.2 *The Causative Suffix -ase-*. CEOJ has a causative suffix *-ase-*,

which is used to express causative or potential.

多麻毛許曾 比氣波多延須礼 阿杼可多延世武

tama mô kösö pîk-ë-pa<sup>386</sup> taye-s-ure aN-tö ka taye-se-m-u  
jeweled seaweed PART pull-EVD-CONJ end-CAUS-EVD  
what-DV QP end-CAUS-TENT-ATT

Since [I] pulled the jeweled seaweed [our relationship] will be  
made to end, why should [it] be made to end?

(MYS XIV: 3397-Hi)

以弊乃母加 枳世之己呂母爾 阿加都枳爾迦理

ipê-nö mö-ka<sup>387</sup> kî-se-si körömö-ni aka tuk-î-n-i-kar-i  
house-GEN lover-NOM wear-CAUS-PAST/ATT clothes-LOC dirt  
attach-INF-PERF-INF-PAST-FIN

Dirt has become attached to the clothes which my lover made [me]  
wear.

(MYS XX: 4388-Ss)

2.3.5.2.3.3.2.3 *The Passive Suffix -aye-*. As discussed above in Section

2.2.5.3.3.3.4, the WOJ suffix *-aye-* is used to indicate: 1) spontaneous action; 2) passive voice; and 3) potential. In CEOJ the form *-aye-* is only attested once, and is used to show potential. However, the poem the example is found in shows misspellings but no other

---

386. Here, *-Npa* is written with 波 showing a voiceless initial.

387. Here *Nka* is expected, but 加 *ka* does not indicate prenasalization, i.e., it is *ka* not *Nka*.

EOJ vocabulary or morphology, and thus it is a questionable source for EOJ data.<sup>388</sup>

Nevertheless, I present the example below:

伊毛賀古比之久 和須良延奴加母  
imô-Nka kôpîsi-ku wasur-aye-n-u kamö  
lover-NOM dear-INF forget-PASS-NEG-ATT EMPH  
My lover is dear and [I] cannot forget [her].  
(MYS XX: 4407-Ko)

2.3.5.2.3.3.2.4 *The Causative Suffix -simë-*. The suffix *-simë-* indicates the causative. This suffix is attested only once:

伊射祢志米刀羅  
iNsa ne-simë tôra  
hey sleep-CAUS EMPH  
Hey! Let [me] sleep!  
(MYS XIV: 3409-Ko)

2.3.5.2.3.3.2.5 *The Respectful Honorific Auxiliary tamap-*. CEOJ has one respectful honorific auxiliary, *tamap-*, which is attested only once.

---

388. Passive *-aye-* is attested in NEOJ (Section 2.3.4.2.3.1.2.3).

志保不尼乃 弊古祖志良奈美 爾波志久母  
於不世他麻保加 於母波弊奈久爾

sipo pune-nö pê kôs-ô sira namî nipasi-ku mö opuse-tamap-o ka  
omöp-apê-n-aku n-i

tide boat-NOM bow cross-ATT white wave sudden-INF PART  
bear/INF-RESP-ATT QP think/INF-join-NEG-NML COP-INF

The white waves, which the bow of the boat crosses<sup>389</sup> – can it be  
that without thinking [you] suddenly drafted [me]?

(MYS XX: 4389-Ss)

The respectful auxiliary in this example shows respect towards the person who drafted the poet (presumably the Emperor or the Court).

2.3.5.2.3.3.2.6 *The Tentative Suffix -unam-*. There are several tentative suffixes in CEOJ: *-am-* (Section 2.3.5.2.3.3.3.1), *-unam-*, *-kêm-* (Section 2.3.5.2.3.3.4.3), and *-aNsi* (Section 2.3.5.2.3.3.5.3). The suffix *-kêm-* is a past tense and *-aNsi* is a negative tentative suffix. The differences between the other suffixes, however, have yet to be studied for CEOJ.

The suffix *-unam-* is not attested in WOJ; however *-uram-* is attested in WOJ (Section 2.2.5.3.3.7.3) and in SEOJ (Section 2.3.6.2.3.3.2.5).<sup>390</sup> Both *-unam-* and *-uram-* are found in UEOJ (see Sections 2.3.7.2.3.3.3.1 and 2.3.7.2.3.3.3.2). The different

---

389. Here a kind of boat which travels on the tide.

390. SEOJ is geographically closest to WOJ.

consonants, /r/ and /n/, are presumably a dialectal variation. This suffix indicates the tentative.

可麻久良能 美奈能瀬河伯爾 思保美都奈武賀  
kamakura-nö mîna-nö sekapa-ni sipo mît-unam-u ka  
[place name]-GEN [place name]-GEN [river name]-LOC tide  
fill-TENT-ATT QP  
Will the tide fill the River Se in Mina in Kamakura?  
(MYS XIV: 3366-Sa)

以母加去去里波 阿用久奈米加母  
imö-ka<sup>391</sup> kökôri pa ayôk-unam-ë kamö  
lover-GEN heart TOP move-TENT-EVD EMPH  
My lover's heart will surely be moved.  
(MYS XX: 4390-Ss)

2.3.5.2.3.3.2.7 *The Debitive Suffix -uNpê-*. In WOJ, the debitive suffix, *-uNpê-*, expresses events that are expected to have occurred (Section 2.2.5.3.3.7.2). This morpheme is only attested once in CEOJ, as *-uNpê-*, and appears to have the same function as the WOJ debitive suffix.<sup>392</sup>

---

391. Here *Nka* is expected, but 加 *ka* does not indicate prenasalization, i.e., it is *ka* not *Nka*.

392. The debitive suffix is attested as *-uNpê-* in UEOJ (Section 2.3.7.2.3.3.2.9).

佐伎牟理爾 多多牟佐和伎爾 伊敞能伊牟何  
 奈流弊伎己等乎 伊波須伎奴可母  
 sakîmuri-ni tat-am-u sawak-î-ni ipê-nö imu-ka<sup>393</sup> n-ar-upê-kî  
 kötö-wo ip-as<sup>394</sup>-u k-î-n-u kamö  
 border guard-LOC rise-TENT-ATT make noise-NML LOC  
 house-GEN lover-NOM COP-exist-DEB-ATT thing-ACC  
 say-NEG-INF come-INF-PERF-FIN EMPH  
 In the noise of my setting out as a border guard, my wife has come,  
 not saying anything about what might be.  
 (MYS XX: 4364-Hi)

2.3.5.2.3.3.3 Group II Morphemes. The morphemes in Group II consist of

suffixes and auxiliaries of mood, negation, and aspect. They can directly follow the verb stem or Group I morphemes.

*2.3.5.2.3.3.3.1 The Negative Suffix -an-.* CEOJ has three negative suffixes. The

first two, *-an-* and *-aNs-* (Section 2.3.5.2.3.3.3.3), are also present in WOJ, NEOJ, and SEOJ; it is unclear how these differ in terms of their function. The third, *-anana* (Section 2.3.5.2.3.3.5.5), is only attested in CEOJ, and is a clause final morpheme.

---

393. Here *Nka* is expected, but 何 *ka* does not indicate prenasalization, i.e., it is *ka* not *Nka*.

394. Here *-aNs-* is expected, but 須 *su* does not indicate a prenasalized /s/.

可伎武太伎 奴礼杼安加奴乎 安杼加安我世牟  
 kakî-muNtak-î n-ure-Ntö ak-an-u wo aN-tö ka a-Nka se-m-u  
 PREV-embrace-INF sleep-EVD-CONC EMPH get tired  
 of-NEG-ATT ACC what-DV QP I-NOM do-TENT-ATT  
 Although [I] embraced [her] and we slept, I will not tire of it. What  
 shall I do?  
 (MYS XIV: 3404-Ko)

西呂我馬伎己無 都久乃之良奈久  
 se-rö-Nka makî kö-m-u tuku-nö sir-an-aku<sup>395</sup>  
 lover-DIM-NOM [unknown] come-TENT-FIN moon-GEN know-  
NEG-NML  
Not knowing the moon [month] when [her] lover would come  
 [home].  
 (MYS XX: 4413-Ms)

2.3.5.2.3.3.3.2 *The Desiderative Suffix -ana-*. The desiderative suffix *-ana-* indicates the speaker's desire for something to happen or for the listener to do something, i.e., "I wish that..." In WOJ, NEOJ, and UEOJ it occurs as a sentence final morpheme, but in CEOJ it does not (as shown in the first example below). It is often used with the imperative *-e* (Section 2.3.5.2.3.3.5.3).

---

395. Mizushima (1972: 229) reads 馬 as *ma* but notes that *mê* is also possible here. The meaning of *makî* is unknown (Omodaka et al. 1967: 668; Mizushima 1972: 229).

兒良波安波奈毛 比等理能未思弓  
 KÔ-ra pa ap-ana-m-ô pîtöri nömï s-i-te  
 child-DIM TOP meet-DES-TENT-ATT one only do-INF-GER  
 I wish to meet my girl<sup>396</sup> (being) by herself.  
 (MYS XIV: 3405-Ko)

伊香保祢爾 可未奈那里曾祢  
 ikapo ne-ni kamï na-nar-i-sö-n-e  
 [place name] peak-LOC thunder NEG-resound-INF-IMP-DES-  
 IMP  
 Please do not thunder on the peak of Mt. Ikapo.  
 (MYS XIV: 3414-Ko)

2.3.5.2.3.3.3.3 *The Negative Suffix -aNs-*. The negative suffix *-aNs-* is described by Martin (1987: 111) as deriving from the negative *-an-* (described above) and the irregular verb *se-* 'to do' (see also Section 2.2.5.3.3.6.2).

久佐麻久良 多比由苦世奈我 麻流祢世婆  
 伊波奈流和礼波 比毛等加受祢牟  
 kusa makura tapî yuk-u se-na-Nka marune se-Npa ipa n-ar-u ware  
 pa pîmô tök-aNs-u ne-m-u  
 grass pillow trip go-ATT lover-DIM-NOM sleep/NML<sup>397</sup>  
 do-COND home COP-exist-ATT I TOP cords untie-NEG-INF  
 sleep-TENT-FIN  
 If my lover, who is traveling, is made to sleep on [his] grass  
 pillow, I, who am at home, will sleep with my cords not untied.<sup>398</sup>  
 (MYS XX: 4416-Ms)

---

396. Here 'my lover'.

397. *Marune-* is sleeping or dozing while traveling. Historically, the second part of this verbal compound is *ne-* 'to sleep'.

398. Meaning that the cords keeping her robes closed remain tied, indicating she will be faithful to her lover who has been sent away.

佐伎牟理爾 多多牟佐和伎爾 伊敞能伊牟何  
奈流弊伎己等乎 伊波須伎奴可母

sakîmuri-ni tat-am-u sawak-î-ni ipê-nö imu-ka n-ar-upê-kî kötö-wo  
ip-as<sup>399</sup>-u k-î-n-u kamö

border guard-LOC rise-TENT-ATT make noise-NML LOC  
house-GEN lover-NOM COP-exist-DEB-ATT thing-ACC  
say-NEG-INF come-INF-PERF-FIN EMPH

In the noise of my setting out as a border guard, my wife has come,  
not saying anything about what might be.

(MYS XX: 4364-Hi)

2.3.5.2.3.3.3.4 *The Perfective Auxiliary -n-*. CEOJ, like WOJ and NEOJ, has two

perfective auxiliaries, *-n-* and *-t-*, to express that an action has been or will be completed.

The difference between these two morphemes is unclear, and will be left for further

research.<sup>400</sup>

宇良爾弓爾家里

ura-ni te<sup>401</sup>-n-i-kêr-i

fortune-LOC go out-PERF-INF-PAST-FIN

[He] had set out to [find] the fortune [that was read for him].

(MYS XIV: 3374-Ms)

---

399. Here *-aNs-* is expected, but 須 *su* does not indicated a prenasalized /s/.

400. The distinction may have to do with animate versus inanimate subjects, as was discussed with the WOJ morphemes *-n-* and *-t-* (Sections 2.2.5.3.3.4.2 and 2.2.5.3.4.4).

401. The text here shows 𠄎 *te* which has a voiceless, plain /t/; this verb corresponds to WOJ *iNte-* 'go out', which is recorded in WOJ with a prenasalized /t/ (/Nt/). The reason for the spelling inconsistency is unknown: this may be a scribal error or the verb 'go out' may be *ite-* in CEOJ. This issue will be set aside for further research.

佐伎牟理爾 多多牟佐和伎爾 伊敞能伊牟何  
奈流弊伎己等乎 伊波須伎奴可母

sakîmuri-ni tat-am-u sawak-î-ni ipê-nö imu-ka n-ar-upê-kî kötö-wo  
ip-as<sup>402</sup>-u k-î-n-u kamö

border guard-LOC rise-TENT-ATT make noise-NML LOC  
house-GEN lover-NOM COP-exist-DEB-ATT thing-ACC  
say-NEG-INF come-INF-PERF-FIN EMPH

In the noise of my setting out as a border guard, my wife has come,  
not saying anything about what might be.

(MYS XX: 4364-Hi)

2.3.5.2.3.3.3.5 *The Perfective Auxiliary -t-*. As stated above, CEOJ has two  
perfective auxiliaries. The distinction between the two still needs to be researched  
further.

勢奈能我素弓母 佐夜爾布良思都

se-na-nö-Nka sôte mö sayani pur-as-i-t-u  
lover-DIM-DIM-GEN sleeve PART clearly  
wave-HON-INF-PERF-FIN

My lover's sleeve is waving clearly.

(MYS XIV: 3402-Ko)

多都努自能 安良波路万代母 佐祢乎佐祢弓婆

tat-u nôNsi-nö arapar-ô-maNte mö sa-ne wo sa-ne-t-e-Npa  
rise-ATT rainbow-GEN appear-ATT-TERM PART PREF-sleep/  
NML ACC PREF-sleep/INF-PERF-EVD-CONJ

When [we will] sleep such a sleep this way until the rising rainbow  
appears...

(MYS XIV: 3414-Ko)

---

402. Here *-aNs-* is expected, but 須 *su* does not indicated a prenasalized /s/.

2.3.5.2.3.3.4 Group III Morphemes. This group consists of the durative suffix *-ap-*, the tentative past auxiliary *-kêm-*, and the modal past auxiliary *-kar-/kêr-*. The durative suffix always follows the negative *-an-* which is a Group II morpheme.

*2.3.5.2.3.3.4.1 The Durative Suffix -ap-*. In WOJ, the durative suffix *-ap-* follows the verb stem, however in CEOJ (like NEOJ), this suffix only occurs after the negative suffix *-an-*. However, its function appears to be the same as the WOJ durative suffix; it expresses something which does not or has not happened over a period of time.

世呂爾安波奈布与

se-rö-ni ap-an-ap-u yö

lover-DIM-DAT meet-NEG-DUR-FIN EMPH

I have not seen my lover [for some time].

(MYS XIV: 3375-Ms)

那乎可家奈波賣

na-wo kakê-n-ap-am-ë

you-ACC hold in thoughts<sup>403</sup>-NEG-DUR-TENT-EVD

I will not have held you in my heart [for some time]

(MYS XIV: 3394-Hi)

*2.3.5.2.3.3.4.2 The Tentative Past Tense Auxiliary -kêm-*. In WOJ, the tentative past tense auxiliary historically derives from the past tense auxiliary *-kî* plus the tentative

---

403. EOJ *kakE-* 'to see' or 'to keep in the eyes/heart'.

suffix *-am-* (Section 2.2.5.3.3.5.1). Past auxiliary *-kî* does not occur as an auxiliary in EOJ.<sup>404</sup> Tentative *-am-*, however, does occur, and is discussed below (Section 2.3.5.2.3.3.5.1). This auxiliary indicates speculation about a past event ('it must have been...'). It is attested only once in CEOJ:

多祢物得米家武  
 tane mötömë-kêm-u  
 seed seek/INF-TENT/PAST-FIN  
 I must have sought the seeds.  
 (MYS XIV: 3415-Ko)

2.3.5.2.3.3.4.3 *The Modal Past Tense Auxiliary -kar-/-kEr-*. The CEOJ modal past tense auxiliary *-kêr-* historically developed from the past tense auxiliary *-kî* (see discussion in the previous section) plus the progressive *-ar-* (Section 2.3.5.2.3.3.5.2) The modal past tense auxiliary is attested in three forms in CEOJ: *-kêr-* (2 examples), *kër-* (1 example), and *-kar-* (1 example). This auxiliary always follows the perfective *-n-* when used with verbs.<sup>405</sup> The *-kêr-* and *-kër-* examples suggest that /ê/ and /ë/ may have merged after /k/, while the *-kar-* example shows that possibly contraction, and not, monophthongization occurs here.

---

404. Historically *-kî* appears to be related to the verb *kö-* 'come' which is attested in CEOJ; I discussed the relationship of this auxiliary to the verb 'come' in WOJ (Section 2.2.5.3.3.8.6) and return to the this for WOJ and EOJ below (Section 4.4.3.18).

405. There is one additional example of *-kêr-* used with an adjective: *tökî na-k-ar-i-kêr-i* 'time none-INF-exist-INF-PAST-FIN' 'there was no time' (MYS XIV: 3422-Ko).

宇良爾弓爾家里

ura-ni te<sup>406</sup>-n-i-kêr-i

fortune-LOC go out-PERF-INF-PAST-FIN

[He] had set out to [find] the fortune [that was read for him].

(MYS XIV: 3374-Ms)

以弊乃母加 枳世之己呂母爾 阿加都枳爾迦理

ipê-nö mö-ka<sup>407</sup> kî-se-si körömö-ni aka tuk-î-n-i-kar-i

house-GEN lover-NOM wear-CAUS-PAST/ATT clothes-LOC dirt

attach-INF-PERF-INF-PAST-FIN

Dirt has become attached to the clothes which my lover made [me]

wear.

(MYS XX: 4388-Ss)

和芸毛古賀 都氣之非毛我乎 多延爾氣流可母

wa-Nk-îmô tukë-si pîmô-Nka wo taye-n-i-kër-u kamö

I-GEN-lover attach/INF-PAST/ATT cord-GEN string end/

INF-PERF-INF-PAST-ATT EMPH

The string of the cord my lover attached has gone away.

(MYS XX: 4404-Ko)

2.3.5.2.3.3.5 Group IV Morphemes. There are two Group IV morphemes,

tentative *-am-* and progressive *-ar-*, discussed below.

---

406. As stated above, the text here shows 𠵿 *te* which has a voiceless, plain /t/; this verb corresponds to WOJ *iNte-* 'go out', which is recorded in WOJ with a prenasalized /t/ (/Nt/). The reason for the spelling inconsistency is unknown: this may be a scribal error or the verb 'go out' may be *ite-* in CEOJ. This issue will be set aside for further research.

407. Here *Nka* is expected, but 加 *ka* does not indicate prenasalization, i.e., it is *ka* not *Nka*.

2.3.5.2.3.3.5.1 *The Tentative Suffix -am-*. As discussed with WOJ (Section 2.2.5.3.3.7.1) and NEOJ (Section 2.3.4.2.3.1.2.1), this suffix is used to indicate volition or conjecture; there is no indication that the function of this suffix is different in CEOJ.

可伎武太伎 奴礼杼安加奴乎 安杼加安我世牟

kakî-muNtak-î n-ure-Ntö ak-an-u wo aN-tö ka a-Nka se-m-u

PREV-embrace-INF sleep-EVD-CONC EMPH get tired

of-NEG-ATT ACC what-DV QP I-NOM do-TENT-ATT

Although [I] embraced [her] and we slept, I will not tire of it. What shall I do?

(MYS XIV: 3404-Ko)

児良波安波奈毛 比等理能未思弓

KÔ-ra pa ap-ana-m-ô pîtöri nömï s-i-te

child-DIM TOP meet-DES-TENT-ATT one only do-INF-GER

I will wish to meet my girl<sup>408</sup> by herself.

(MYS XIV: 3405-Ko)

2.3.5.2.3.3.5.2 *The Progressive Suffix -ar-/-êr-*. CEOJ marks the progressive with the morphemes *-ar-* and *-êr-*.<sup>409</sup> The form *-êr-* may be the result of borrowing from WOJ, or it may have formed as the result of monophthongization of *-î-* 'INF' plus *-ar-*, however, as stated above, at this time we do not have an understanding of monophthongization in

---

408. Here 'my lover'.

409. Only *-ar-* is found in in NEOJ (Section 2.3.4.2.3.1.5.2), but in WOJ this suffix is *-êr-* (Section 2.2.5.3.3.4.1). However, in WOJ some suffixes are historically built from *-ar-*: *-êr-* < \**-î-ar-* (Section 2.2.5.3.3.4.1) *-kêr-* < \**-kî-ar-* (Section 2.2.5.3.3.5.2), and *-tar-* < \**-t-ar-* (Section 2.2.5.3.3.4.4). In EOJ, the suffix *-ar-* can affix directly to verb stems, but this usage is not found in WOJ.

EOJ, and we do not know if this process occurred, and, if it did, if it occurred in the same way that it did in WOJ (Section 2.3.5.1.3.2).

In WOJ, this suffix only occurs with the progressive auxiliary *-êr-* < pre-WOJ *\*-î-ar-* (Section 2.2.5.3.3.4.1), the modal past *-kêr-* < pre-WOJ *\*-kî-ar-* (2.2.5.3.3.5.2), and the perfective progressive *-tar-* < pre-WOJ *\*-t-ar-* (Section 2.2.5.3.3.4.4). In CEOJ, however, the stative suffix *-ar-* occurs with *-êr-* and *-kar-/kêr-* (Section 2.3.5.2.3.3.4.3), it can also affix to verb stems.<sup>410</sup>

由伎可母布良留

yukî kamö pur-ar-u

snow EMPH fall-PROG-ATT

Snow is falling.

(MYS XIV: 3351-Hi)

奈美爾安布能須 安敞流伎美可母

namî-ni ap-u nösu ap-êr-u kîmî kamö

wave-DAT meet-ATT resemble meet-PROG-ATT lord EMPH

Like the waves meet the shore – my lord who [I] am meeting.

(MYS XIV: 3413-Ko)

2.3.5.2.3.3.6 Group V Morphemes. The morphemes in this group fill the final position of a verb string, can attach directly to a verb stem or any suffix or auxiliary in

---

410. The suffix *-ar-* does not affix directly to verb stems in WOJ but does in NEOJ (Section 2.3.4.2.3.1.5.2).

Groups I-IV, and cannot be followed by any other verbal suffix,<sup>411</sup> but can be followed by emphatic particles. A verb string *must* end with one of the morphemes in this group.

2.3.5.2.3.3.6.1 *The Hypothetical Conditional Suffix -aNpa*. The suffix *-aNpa* expresses a hypothetical condition ("if..."). The scope of this suffix is the clause which precedes it.

久佐麻久良 多比由苦世奈我 麻流祢世婆  
伊波奈流和礼波 比毛等加受祢牟

kusa makura tapî yuk-u se-na-Nka marune se-Npa ipa n-ar-u ware  
pa pîmô tók-aNs-u ne-m-u

grass pillow trip go-ATT lover-DIM-NOM sleep/NML<sup>412</sup>

do-COND home COP-exist-ATT I TOP cords untie-NEG-INF  
sleep-TENT-FIN

If my lover, who is traveling, is made to sleep on [his] grass  
pillow, I, who am at home, will sleep with my cords not untied.<sup>413</sup>

(MYS XX: 4416-Ms)

---

411. With the exception of the evidential form, which can be followed by the conjunctive suffix *-Npa* (Section 2.3.4.2.3.1.6.3) or the concessive suffix *-Ntö* (Section 2.3.4.2.3.1.6.4).

412. *Marune-* is sleeping or dozing while traveling. Historically, the second part of this verbal compound is *ne-* 'to sleep'.

413. Meaning that the cords keeping her robes closed remain tied, indicating she will be faithful to her lover who has been sent away.

安之我良乃 美佐可爾多志弓 蘇泥布良婆

伊波奈流伊毛波 佐夜爾美毛可母

asiNkara-nö mî-saka-ni tas-i-te sôNte pur-aNpa ipa n-ar-u imô pa

saya-n-i mî-m-ô kamö

[place name]-GEN HON-slope-LOC stand-INF-GER sleeve

wave-COND house COP-exist-ATT lover TOP clear-COP-INF

see-TENT-ATT EMPH

If [I] stand on the slopes of Asigara and wave my sleeve, [my]

beloved who is at home will see [me] clearly.

(MYS XX: 4423-Ms)

2.3.5.2.3.3.6.2 *The Negative Tentative Suffix -aNsi*. This suffix is the negative of tentative suffix *-am-* (Section 2.3.5.2.3.3.5.1). It is used to indicate something that probably will not happen or something the speaker will not do. It is attested only once in CEOJ and its function is based on its cognate in WOJ.

和波等可自等余

wa pa tök-aNsi tö yö

I TOP untie-NEG/TENT PART<sup>414</sup> EMPH

Thinking I will not untie [my cords].

(MYS XX: 4405-Ko)

2.3.5.2.3.3.6.3 *The Imperative Suffix -e/-yö/-ërö*. The CEOJ imperative is attested in three different forms: *-e*, *-yö*, *-ërö*. There are not enough examples of each form to

---

414. The particle *tö* is used here to mean "thinking" (i.e., *tö omopu*).

determine the difference between these forms, as *-yö* and *-ërö* are attested only once, and *-e* only occurs after desiderative *-ana-* (Section 2.3.5.2.3.3.3.2).

伊伎豆久伎美乎 為祢弓夜良佐祢

ikîNtuk-u kîmî-wo wi-ne-te yar-as-an-e  
grieve-ATT lord-ACC be/INF-sleep/INF-GER give-RESP-DES-  
IMP

[I] wish [you] would give [me my] grieving lord to sleep [here with me].

(MYS XIV: 3388-Hi)

和我伊母古我 志濃比爾西余等

wa-Nka imö-kô-Nka sinup-î n-i se-yö tö  
I-GEN lover-DIM<sup>415</sup>-NOM remember-NML COP-INF do-IMP  
PART<sup>416</sup>

My lover, thinking she would make a keepsake...

(MYS XX: 4405-Ko)

安我弓等都氣呂

a-Nka te-tö tuk-ërö  
I-NOM hand hand-COM attach-IMP  
Attach [the cord] with your own hand.<sup>417</sup>

(MYS XX: 4420-Ms)

---

415. *Kô* literally means child but is used in EOJ to mean dear or beloved and could be analyzed as a diminutive suffix.

416. The particle *tö* is used here to mean "thinking" (i.e., *tö omopu*).

417. Here I follow Vovin's (2005: 238-239) claim that this is one example where *a-Nka* is used to mean "your own" and not "mine".

2.3.5.2.3.3.6.4 *The Stative Final Suffix -i*. The final suffix *-i* is affixed to stative

verbs and suffixes. It is a sentence final morpheme, and can be followed only by

emphatic or quote particles.

宇良爾弓爾家里

ura-ni te<sup>418</sup>-n-i-kêr-i

fortune-LOC go out-PERF-INF-PAST-FIN

[He] had set out to [find] the fortune [that was read for him].

(MYS XIV: 3374-Ms)

以弊乃母加 枳世之己呂母爾 阿加都枳爾迦理

ipê-nö mö-ka<sup>419</sup> kîse-si körömö-ni aka tuk-î-n-i-kar-i

house-GEN lover-NOM wear-PAST/ATT clothes-LOC dirt

attach-INF-PERF-INF-PAST-FIN

Dirt has become attached to the clothes which my lover wore.

(MYS XX: 4388-Ss)

2.3.5.2.3.3.6.5 *The Negative Infinitive Suffix -anana*. CEOJ has a negative

infinitive suffix, *-anana*, which is not attested elsewhere in OJ. Ikier (2006) analyzes this

form as consisting of negative *-an* followed by an attributive *-a*, which is only used

following the negative and in once instance following a consonant final verb,<sup>420</sup> and a

locative *-na* found only in EOJ. I follow Ikier's analysis and treat *-anana* as *-an-a-na*.

---

418. This is WOJ *iNte*- 'to go out'; 𠄎 does not indicate prenasalization.

419. Here *Nka* is expected, but 加 *ka* does not indicate prenasalization, i.e., it is *ka* not *Nka*.

420. The one example of attributive *-a* following a consonant final verb is found in UEOJ: *kayôp-a* (MYS XIV: 3526-U).

This construction is attested four times in CEOJ.<sup>421</sup> I present all the examples

below.<sup>422</sup>

爾比多夜麻 祢爾波都可奈那

nipîta yama ne-ni pa tuk-an-a-na

[place name] mountain peak-LOC TOP reach-NEG-ATT-LOC

When [I] did not reach the peak of Mt Nipita...

(MYS XIV: 3408-Ko)

宇良賀礼勢奈那

ura-N-kare se-n-a-na

treetop-GEN-wither/NML do-NEG-ATT-LOC

When the [leaves on the] treetops do not wither...

(MYS XIV: 3436-Ko)

和我弓布礼奈奈 都知爾於知母加毛

wa-Nka te pure-n-a-na tuti-ni oti-m-ö kamô

I-GEN hand touch-NEG-ATT-LOC ground-LOC fall-TENT-ATT

EMPH

[Will the flowers] fall to the ground not touching my hand?

(MYS XX: 4418-Ms)

於妣波等可奈奈 阿也尔加母祢毛

oNpî pa tök-an-an-a aya n-i kamö ne-m-ô

belt TOP untie-NEG-ATT-LOC extremely COP-INF EMPH

sleep-TENT-ATT

Without untying my belt, I shall really sleep.

(MYS XX: 4422-Ms)

---

421. There are also examples of *-an-a-na* in UEOJ, but not elsewhere in EOJ.

422. Since this construction is morphologically complex, i.e., it consists of more than one morpheme, and since it is not found outside of CEOJ and UEOJ, I do not treat it in Chapter 4 where I reconstruct PJ morphemes. I include it in the discussion here, because *-anana* is included in the literature as a form unique to EOJ.

2.3.5.2.3.3.6.6 *The Conjunctive Suffix -Npa*. The CEOJ suffix *-Npa* is a conjunctive suffix that indicates a fulfilled condition. It is a clause final suffix that follows the evidential form of verbs (Section 2.3.5.2.3.3.6.13).

多麻毛許曾 比氣波多延須礼 阿杼可多延世武

tama mô kösö pîk-ë-pa<sup>423</sup> taye-s-ure aN-tö ka taye-se-m-u  
 jeweled seaweed PART pull-EVD-CONJ end-CAUS-EVD  
 what-DV QP end-CAUS-TENT-ATT

Since [I] pulled the jeweled seaweed [our relationship] will end,  
 why should [it] end?

(MYS XIV: 3397-Hi)

比多敝登於毛敝婆

pîtapê tö omôp-ê-Npa  
 clothing PART think-EVD-CONJ

When I think of your clothing<sup>424</sup>

(MYS XIV: 3435-Ko)

2.3.5.2.3.3.6.7 *The Concessive Suffix -Ntö*. There concessive suffix *-Ntö* clause final suffixes to mean "although..." or "even though..." and it is not clear what the difference is between these two forms.

---

423. Here, *-Npa* is written with 波 showing a voiceless initial.

424. *Pîtapê* refers to a kind of clothing woven from bark.

可伎武太伎 奴礼杼安加奴乎 安杼加安我世牟  
 kakî-muNtak-î n-ure-Ntö ak-an-u wo aN-tö ka a-Nka se-m-u  
 PREV-embrace-INF sleep-EVD-CONC EMPH get tired  
 of-NEG-ATT ACC what-DV QP I-NOM do-TENT-ATT  
Although [I] embraced [her] and we slept, I will not tire of it. What  
 shall I do?  
 (MYS XIV: 3404-Ko)

伊波呂爾波 安之布多氣騰母  
 ipa-rö-ni pa asi pu tak-ë-Ntö mö  
 house-DIM-LOC TOP reed fire burn-EVD-CONC PART  
Although I made a fire of the reeds in my house...  
 (MYS XX: 4419-Ms)

2.3.5.2.3.3.6.8 *The Past Tense Auxiliary -si.* The CEOJ auxiliary *-si* denotes the past tense.<sup>425</sup> In WOJ this morpheme can be used in the evidential, but in CEOJ it functions only as an attributive past marker.

都氣志非毛  
 tukë-si pîmô  
 attach/INF-PAST/ATT cord  
 the cord which I attached  
 (MYS XX: 4405-Ko)

---

425. CEOJ also has the past tense auxiliaries *-kêm-*, tentative past (Section 2.3.5.2.3.3.4.2), and *-kar-/ -kEr-*, modal past (Section 2.3.5.2.3.3.4.3).

之麻加枳乎 己枳爾之布祢乃 他都枳之良須母

sima kakî-wo kök-î-n-i-si pune-nö tatukî sir-as-u mö<sup>426</sup>

island shade-ACC row-INF-PERF-INF-PAST/ATT boat-NOM

way know-NEG-FIN PART

The boat which had rowed into the shadow of the island – [we] did not know how.

(MYS XX: 4384-Ss)

2.3.5.2.3.3.6.9 *The Subordinative Gerund -te*. The subordinative gerund *-te* is a

clause final auxiliary. It can be used to connect either two verbs or two clauses in the

pattern [(clause) verb<sub>1</sub>]-*te* [(clause) verb<sub>2</sub>]. It indicates that the action of the first verb

(verb<sub>1</sub>) began before the action of the second verb (verb<sub>2</sub>).<sup>427</sup>

兒良波安波奈毛 比等理能未思<sub>二</sub>

KÔ-ra pa ap-ana-m-ô pîtori nômî s-i-te

child-DIM TOP meet-DES-TENT-ATT one only do-INF-GER

I wish to meet my girl<sup>428</sup> (being) by herself.

(MYS XIV: 3405-Ko)

---

426. The words *kakî* 'reflection, shade' (WOJ *kaNkë*) and *kök-* 'row' (WOJ *köNk-*) are expected to have a prenasalized consonant in the second syllable, yet, both are written with 枳 which indicates a plain /k/. Also, negative *-aNs-* is expected to have a prenasalized consonant but is written with 須 *su* here and voicing is not indicated.

427. As discussed above (Section 2.2.5.3.3.8.10), the action of the first verb may or may not end before the second action begins.

428. Here 'my lover'.

比多知散思 由可牟加里母我 阿我古比乎  
 志留志<sub>3</sub>都祁<sub>3</sub> 伊母爾志良世牟  
 pîtatî sas-i yuk-am-u kari mö Nka a-Nka kôpî-wo sirus-i-te tukê-te  
 imö-ni sir-ase-m-u  
 [place name] point-INF go-TENT-ATT wild geese PART NOM  
 I-NOM love/NML-ACC write-INF-GER attach/INF-GER  
 lover-DAT know-CAUS-TENT-FIN  
 I wrote and attached [a letter] to the wild geese flying towards  
 Hitachi, and [to] let my lover know [my feelings].  
 (MYS XX: 4366-Hi)

2.3.5.2.3.3.6.10 *The Coordinative Auxiliary -tutu.* The coordinative auxiliary

*-tutu* can be either a clause final or sentence final morpheme, depending on context. It must follow the infinitive *-î*. The function of this morpheme is to indicate either simultaneous action (between the marked verb and the verb of the next clause) or a habitual action. It is also attested in CEOJ as *-susu* (MYS XX: 4386-Ss) and *-tötö* (MYS XX: 4421-Ms). More research is needed to further our understanding of CEOJ phonology to understand how the variant forms developed.

阿良例布理 可志麻能可美乎 伊能利都都  
須米良美久佐爾 和例波伎爾之乎

arare pur-i kasima-nö kamî-wo inör-i-tutu sumëra mî-kusa-ni ware  
pa k-î-n-i-si wo

hail fall-INF [place name]-GEN gods-ACC pray-INF-CORD  
emperor HON-army-LOC I TOP come-INF-PERF-INF-PAST/  
ATT ACC

Hail falls while I pray to the gods of Kashima, I have come to the  
Emperor's army.

(MYS XX: 4370-Hi)

以都母以都母 於母加古比須須

itumö itumö omö-ka<sup>429</sup> kôp-î-susu

always always mother-NOM love-INF-CORD

Always, always [my] mother loves [me].

(MYS XX: 4386-Ss)

安之我良乃 美祢波保久毛乎 美等登志努波祢

asiNkara-nö mîne pap-o kumô-wo mî-tötö sinôp-an-e

[place name]-GEN peak stretch-ATT cloud-ACC see/INF-CORD  
think-DES-IMP

I wish [that] while you look at the clouds over the peaks at  
Asigara, you would think [of me].

(MYS XX: 4421-Ms)

2.3.5.2.3.3.6.11 *The Active Final Suffix -u.* The suffix *-u* is a sentence final  
marker indicting the final form of active verbs (cf., the stative final suffix *-i* Section  
2.3.5.2.3.3.6.4 above).

---

429. Here *Nka* is expected but 加 *ka* does not show prenasalization.

麻可奈思美 佐祢爾和波由久

ma-kanasi-mî sa-ne-ni wa pa yuk-u

PREF<sup>430</sup>-dear-NML PREF-sleep/NML-LOC I TOP go-FIN

I go to sleep with [the one who] is dear to me.

(MYS XIV: 3366-Sa)

勢奈能我素弓母 佐夜爾布良思都

se-na-nö-Nka sôte mō sayani pur-as-i-t-u

lover-DIM-DIM-GEN sleeve PART clearly

wave-HON-INF-PERF-FIN

My lover's sleeve is waving clearly.

(MYS XIV: 3402-Ko)

2.3.5.2.3.3.6.12 *The Attributive Suffix -u/-ô/-uru.* As discussed above, the EOJ attributive is perhaps the most frequently discussed feature of EOJ grammar because it is sometimes *-ô* following consonant final stem verbs and sometimes *-u*.<sup>431</sup> As with the NEOJ attributive above (Section 2.3.4.2.3.1.6.9), I collected examples of the attributive form and grouped them together by the final vowel and the function of the attributive form in each example, as the attributive form is used in three ways: 1) in a *kakari musubi* structure (Section 2.2.5.3.3.8.14); 2) marking the verb for noun modification; or 3) a nominalized form of the verb which is followed by a case, grammatical, or emphatic particle.

---

430. The prefix *ma-* is a prefix which means "entirely X" or "completely X", where X is a noun or adjective that is prefixed with *ma-*.

431. Compared to the attributive in WOJ which is always *-u* following consonant final verb stems.

I found 63 examples of the attributive suffix used with consonant final verb roots. Of these examples, 51 examples show an attributive ending of *-u* and the remaining 12 show *-ô* (or *-o* following labials). This is shown below in table 2.30.<sup>432</sup>

---

432. Here I only present data for the attributive suffix used in conjunction with consonant final verb stems. All data, including consonant and vowel final stems, are presented in Appendix D.

Table 2.30: CEOJ Attributive Forms Ending in ô/o by Suffix and Function

Examples with attributive *-ô/-o*

ô	modifies noun	yuk-ô	go	MYS XX: 4385	Shimôsa
		pîk-ô	pulling	MYS XIV: 3431	Sagami
	nominalized form	arapar-ô maNte	standing	MYS XIV: 3414	Kôzuke
o	modifies noun	wasure-m-o	probably forget	MYS XX: 4367	Hitachi
		yuk-am-o	will probably go	MYS XX: 4406	Kôzuke
		pap-o	crawl, grovel	MYS XX: 4421	Musashi
	kakari musubi	se-m-o	will do	MYS XIV: 3418	Kôzuke
		kôp-usikë-mop-am-o	will probably feel loving	MYS XX: 4419	Musashi
		ne-m-o	will surely sleep	MYS XX: 4422	Musashi
		kaNtusane-m-o	UNK	MYS XIV: 3432	Sagami
	nominalized form	tamap-o ka	serve, honor	MYS XX: 4389	Shimôsa
		mî-m-o kamo	will probably see	MYS XX: 4423	Musashi

Examples with attributive *-u*

modifies noun	watar-u	cross	MYS XX: 4328	Sagami
	se-m-u	will do	MYS XX: 4329	Sagami
	tat-am-u	probably will stand	MYS XX: 4364	Hitachi
	yuk-am-u	probably will go	MYS XX: 4366	Hitachi
	puk-u	blow	MYS XX: 4371	Hitachi
	kaNk-u	smell	MYS XX: 4371	Hitachi
	yuk-u	go	MYS XX: 4372	Hitachi
	kôp-î-s-unam-u	will probably love	MYS XX: 4391	Shimôsa
	köNk-u	rowing	MYS XIV: 3349	Shimôsa
	nak-u	singing	MYS XIV: 3351	Hitachi
	sas-u	set	MYS XIV: 3361	Sagami
	mat-u	waiting	MYS XIV: 3363	Sagami
	mak-as-am-u	will be pillowing	MYS XIV: 3369	Sagami
	nör-an-u	wasn't said	MYS XIV: 3374	Musashi
	ikî-N-tuk-u	breathing	MYS XIV: 3388	Hitachi
	kanômatuNk-u	UNK	MYS XIV: 3409	Kôzuke
	tat-u	standing	MYS XIV: 3414	Kôzuke
	sakar-u	separated	MYS XIV: 3420	Kôzuke
	puk-u	blowing	MYS XIV: 3422	Kôzuke
	puk-an-u	not blowing	MYS XIV: 3422	Kôzuke
	siratôpop-u	UNK far white topped (mountains)	MYS XIV: 3436	Kôzuke
	mor-u	guard	MYS XIV: 3436	Kôzuke

kakari musubi	makar-am-u	will probably leave	MYS XX: 4330	Sagami
	paNpakar-u	fear, awe	MYS XX: 4372	Hitachi
	watar-am-u	will surely cross	MYS XX: 4394	Shimôsa
	tok-aNsu-ne-m-u	will not untie	MYS XIV: 3370	Sagami
	taye-se-m-u	ceasing	MYS XIV: 3397	Hitachi
	mî-m-u	seeing	MYS XIV: 3397	Hitachi
	se-m-u	will do	MYS XIV: 3404	Kôzuke
	motômë-kêm-u	will have sought	MYS XIV: 3415	Kôzuke
	taye-se-m-u	will surely end	MYS XIV: 3434	Kôzuke
nominalized form	ter-u ya	shine	MYS XX: 4365	Hitachi
	pos-ar-u kamo	dry	MYS XIV: 3351	Hitachi
	mî-t-unam-u ka	be filled	MYS XIV: 3366	Sagami
	pur-am-u wo	shaking	MYS XIV: 3376	Musashi
	ne-te-m-u kamo	will have slept	MYS XIV: 3395	Hitachi
	ak-an-u wo	get tired of	MYS XIV: 3404	Kôzuke
	ap-u nôsu	like (as if) meeting	MYS XIV: 3413	Kôzuke
	kôpî-m-u tōya	will surely love	MYS XIV: 3415	Kôzuke
	kaNtusak-aNs-u tōmo	UNK	MYS XIV: 3432	Sagami

Looking at these examples, we note that 9 of the 12 examples involve a labial consonant, and most of those examples include the tentative suffix *-am-*. In Section 2.3.5.1.2.5 above, I presented examples of the attributive suffix following *-am-*, showing that it is *-ô* (*-o* in this phonemic environment) in some cases and *-u* in others, and argued that this indicates an allophone of /u/ in CEOJ following labial consonants that is

phonetically somewhere between WOJ /ô/ and /u/, and the scribes simply did not have more appropriate characters to transcribe this vowel. This leaves only two remaining examples, *pîk-ô* and *yuk-ô*.

Following my discussion of the WOJ attributive above (Section 2.2.5.3.3.8.14), I propose a process at the proto-OJ level where the attributive suffix *-ö*, as found in WOJ in the attributive form of the copula, i.e., *n-ö* 'COP-ATT', assimilates to /ô/ and then in WOJ raises to /u/ but remains /ô/ in EOJ.

	proto-OJ form	assimilation	raising
WOJ	*-urö	*-urô	-uru
EOJ	*-urö	*-urô	(-uru/-urô)

In the case of NEOJ, it is possible to predict the environments where /ô/ remains: after labials. In all other environments /ô/ raises to /u/. In the case of CEOJ, however, there are two examples where /ô/ remains after /k/, but there are also contradictory examples for both labials and the velar /k/. In UEOJ, the /ô/ also remains in many environments and does not raise to /u/.<sup>433</sup> In CEOJ and UEOJ, it is not possible to generate a rule to account for when /ô/ raises to /u/ and when it does not. The most likely explanation for this is that raising occurs through contamination with WOJ speakers; that is, the high occurrence of *-u* in CEOJ and UEOJ data reflect dialect mixing with WOJ and

---

433. I discuss the UEOJ attributive below (Section 2.3.7.2.3.3.6.1).

not linguistic features in these dialects. Thus, following vowel final verb stems only *-uru* occurs, following consonant final verb stems sometimes *-ô* occurs following labials and the velar /k/ and *-u* occurs elsewhere.

Examples of the CEOJ attributive are presented below:

伊伎豆久伎美乎 為祢弓夜良佐祢  
 ikîNtuk-u kîmî-wo wi-ne-te yar-as-an-e  
 grieve-ATT lord-ACC be/INF-sleep/INF-GER give-RESP-DES-  
 IMP  
 [I] wish [you] would give [me my] grieving lord to sleep [here  
 with me].  
 (MYS XIV: 3388-Hi)

比能具礼爾 宇須比乃夜麻乎 古由流日波  
 勢奈能我素弓母 佐夜爾布良思都  
 pî-nö Nkure-ni usupî n-ö yama-wo kôy-uru PI pa  
 se-na-nö-Nka sôte<sup>434</sup> mö sayani pur-as-i-t-u  
 day-GEN dark/NML-LOC [place name] DV-ATT mountain-ACC  
 cross-ATT day TOP lover<sup>435</sup>-DIM-DIM<sup>436</sup>-GEN sleeve PART  
 clearly wave-HON-INF-PERF-FIN  
 On the day that [he] crossed Mt. Usupi at sunset [I could see]  
 my lover's sleeve is waving clearly.  
 (MYS XIV: 3402-Ko)

---

434. Here *sôNte* is expected, but te does not indicate prenasalization, i.e., *te* is written here, not *Nte*.

435. The word *se* literally means 'older brother' and is used in EOJ as a term of endearment towards a male lover and/or spouse, in the same way that *imo* 'younger sister' is used in both WOJ and EOJ texts towards female lovers and/or spouses.

436. Following Omodaka (1984a: 87) I treat *nö* here as a diminutive suffix. *Na* is also a diminutive suffix, and is found only in EOJ.

可伎武太伎 奴礼杼安加奴乎 安杼加安我世牟  
 kakî-muNtak-î n-ure-Ntö ak-an-u wo aN-tö ka a-Nka se-m-u  
 PREV-embrace-INF sleep-EVD-CONC EMPH get tired  
 of-NEG-ATT ACC what-DV QP I-NOM do-TENT-ATT  
 Although [I] embraced [her] and we slept, I will not tire of it. What  
 shall I do?  
 (MYS XIV: 3404-Ko)

志保不尼乃 弊古祖志良奈美 爾波志久母  
 於不世他麻保加 於母波弊奈久爾  
 sipo pune-nö pê kôs-ô sira namî nipasi-ku mö opuse-tamap-o ka  
 omöp-apê-n-aku n-i  
 tide boat-NOM bow cross-ATT white wave sudden-INF PART  
 bear/INF<sup>437</sup>-RESP-ATT QP think/INF-join-NEG-NML COP-INF  
 The white wave which crossed the boat<sup>438</sup> – can it be that without  
 thinking [you] suddenly drafted [me]?  
 (MYS XX: 4389-Ss)

2.3.5.2.3.3.6.13 *The Evidential Suffix -ë/-ure*. The CEOJ evidential form is *-ure* following vowel stem verbs and *-ë* following consonant stem verbs. Following the discussion for the WOJ evidential form (Section 2.2.5.3.3.8.10), I propose that the evidential form, *-ure* developed from the stative extension *-ur-* (Section 4.4.3.34), plus the evidential *-ë*, which becomes a neutral *-e* following coronal consonants, thus *\*-ur-ë >*

---

437. The verb *opuse-* literally means 'bear [on one's back]' but is used here to mean 'assign; draft'. The speaker of this poem has been called to duty as a border guard.

438. Here a kind of boat which travels on the tide.

*-ure*. This sequence is analogically shortened following consonant stem verbs, as described for the attributive above.

The evidential form can be used as a sentence final form in *kakari musubi* structures, and it can also be followed by the conjunctive suffix *-Npa* (Section 2.3.4.2.3.1.6.3) or the concessive suffix *-Ntö* (Section 2.3.4.2.3.1.6.4).

多麻毛許曾 比氣波多延須礼 阿杼可多延世武

tama mô kôsö pîk-ë-pa<sup>439</sup> taye-s-ure aN-tö ka taye-se-m-u  
jeweled seaweed PART pull-EVD-CONJ end-CAUS-EVD what-  
DV QP end-CAUS-TENT-ATT

Since [I] pulled the jeweled seaweed [our relationship] will end,  
why should [it] end?

(MYS XIV: 3397-Hi)

可伎武太伎 奴礼杼安加奴乎 安杼加安我世牟

kakî-muNtak-î n-ure-Ntö ak-an-u wo aN-tö ka a-Nka se-m-u  
PREV-embrace-INF sleep-EVD-CONC EMPH get tired  
of-NEG-ATT ACC what-DV QP I-NOM do-TENT-ATT

Although [I] embraced [her] and we slept, I will not tire of it. What  
shall I do?

(MYS XIV: 3404-Ko)

2.3.5.2.3.3.6.14 *The Suppositional Suffix -urasi*. There is only one example for this suffix in CEOJ. I am, therefore, basing its meaning on its usage in WOJ, where

---

439. Here, *-Npa* is written with 波 showing a voiceless initial.

*-urasi-* is a suppositional suffix often rendered into English as "it seems that..." (Section 2.2.5.3.3.7.4).<sup>440</sup>

奈美多都良思母  
namî tat-urasi mö  
waves rise-SUP PART  
it seems that the waves are rising  
(MYS XIV: 3349-Ss)

#### 2.3.5.2.3.4 Nominalizers

CEOJ has two nominalizers which usually attach directly to the root of the verb and cannot be followed by any other verbal suffix.

2.3.5.2.3.4.1 The Nominalizer -aku. The CEOJ nominalizer *-aku* nominalizes clause preceding the verb it suffixes to.

---

440. This suffix is also attested once in UEOJ (Section 2.3.7.2.3.3.6.14).

志保不尼乃 弊古祖志良奈美 爾波志久母  
於不世他麻保加 於母波弊奈久爾

sipo pune-nö pê kôs-ô sira namî nipasi-ku mö opuse-tamap-o ka  
omöp-apê-n-aku n-i

tide boat-NOM bow cross-ATT white wave sudden-INF PART  
bear/INF<sup>441</sup>-RESP-ATT QP think/INF-join-NEG-NML COP-INF  
The white wave which crossed the boat<sup>442</sup> – can it be that without  
thinking [you] suddenly drafted [me]?

(MYS XX: 4389-Ss)

西呂我馬伎己無 都久乃之良奈久

se-rö-Nka makî kö-m-u tuku-nö sir-an-aku<sup>443</sup>

lover-DIM-NOM [unknown] come-TENT-FIN moon-GEN know-  
NEG-NML

Not knowing the moon [month] when [her] lover would come  
[home].

(MYS XX: 4413-Ms)

#### 2.3.5.2.3.4.2 The Nominalizer -î. The CEOJ nominalizer -î affixes to the verb

stem.<sup>444</sup> While *-aku* (discussed above) nominalizes a clause, *-î* nominalizes just the verb.

---

441. The verb *opuse-* literally means 'bear [on one's back]' but is used here to mean 'assign; draft'. The speaker of this poem has been called to duty as a border guard.

442. Here a kind of boat which travels on the tide.

443. Mizushima (1972: 229) reads 馬 as *ma* but notes that *mê* is also possible here. The meaning of *makî* is unknown (Omodaka et al. 1967: 668; Mizushima 1972: 229).

444. Although this suffix looks identical to infinitive *-î*, accent data from different stages of Japan indicate that the infinitive and the nominalizer are historically from different morphemes.

比多知散思 由可牟加里母我 阿我古比乎  
志留志弓都祁弓 伊母爾志良世牟

pîtati sas-i yuk-am-u kari mö Nka a-Nka kôpî-wo sirus-i-te tukê-te  
imö-ni sir-ase-m-u

[place name] point-INF go-TENT-ATT wild geese PART NOM  
I-NOM love/NML-ACC write-INF-GER attach/INF-GER  
lover-DAT know-CAUS-TENT-FIN

I wrote and attached [a letter] to the wild geese flying towards  
Hitachi, and they will let my lover know [my feelings].

(MYS XX: 4366-Hi)

佐伎牟理爾 多多牟佐和伎爾 伊敞能伊牟何  
奈流弊伎己等乎 伊波須伎奴可母

sakîmuri-ni tat-am-u sawak-î-ni ipê-nö imu-ka n-ar-upê-kî kötö-wo  
ip-as<sup>445</sup>-u k-î-n-u kamö

border guard-LOC rise-TENT-ATT make noise-NML LOC  
house-GEN lover-NOM COP-exist-DEB-ATT thing-ACC  
say-NEG-INF come-INF-PERF-FIN EMPH

In the noise of my setting out as a border guard, my wife has come,  
not saying anything about what might be.

(MYS XX: 4364-Hi)

#### 2.3.5.2.3.5 Summary

Table 2.31 below lists the CEOJ inflectional morphemes in alphabetical order,  
providing information as to how they affix to verbs and presents their functions.

---

445. Here *-aNs-* is expected, but 須 *su* does not indicated a prenasalized /s/.

Table 2.31: Summary of CEOJ Inflectional Morphemes

Morpheme	Type	Function
-aku	suffix	nominalizer
-am-	suffix (Group IV)	tentative
-an-	suffix (Group II)	negative
-ana-	suffix (Group II)	desiderative
-anana	clause final suffix (Group V)	negative infinitive
-aNpa	clause final suffix (Group V)	hypothetical conditional
-aNs-	suffix (Group II)	negative
-aNsi	clause or sentence final suffix (Group V)	negative tentative
-ap-	suffix (Group III)	durative
-as-	suffix (Group I)	honorific
-ase-	suffix (Group I)	causative
-aye-	suffix (Group I)	passive
-ë/-ure	sentence or clause final suffix (Group V)	evidential
-e/-yö/-ërö	clause or sentence final suffix (Group V)	imperative
-ar-/-êr-	auxiliary (Group IV)	progressive
-î	suffix	infinitive
-i	clause or sentence final suffix (Group V)	stative final
-î	suffix	nominalizer
kakî-	prefix	emphasis
-kêm-	auxiliary (Group III)	tentative past
-kar-/-kEr-	auxiliary (Group III)	modal past
-n-	auxiliary (Group II)	perfective
na...sö	circumfix	negative imperative
-Npa	clause final suffix (Group V)	conjunctive
-Ntö	clause final suffix (Group V)	concessive
sa-	prefix	focus
-si	auxiliary (Group V)	past
-simë-	suffix (Group I)	causative
-t-	auxiliary (Group II)	perfective

tamap-	auxiliary (Group I)	respectful honorific
-te-	auxiliary (Group III)	perfective
-tutu	clause final auxiliary (Group V)	coordinative
-u	sentence final auxiliary (Group V)	final
-u/-uru	clause or sentence final suffix (Group V)	attributive
-unam-	suffix (Group I)	tentative
-uNpE-	suffix (Group I)	debitive
-urasi	clause final suffix (Group V)	suppositional

### 2.3.6 SEOJ

Southern Eastern Old Japanese (SEOJ), also known as Area C (see Figure 2.6 above), consists of the dialects of EOJ spoken in Shinano (Sn), Suruga (Su), and Tōtōmi (To). Table 2.21 above shows which poems correspond to each area.

#### 2.3.6.1 SEOJ Phonology

As stated in Section 2.3.4.1, since EOJ phonology is dependent on our understanding of WOJ phonology, it is necessary to discuss SEOJ phonology in terms of WOJ.

### 2.3.6.1.1 SEOJ Consonants

The SEOJ consonants are identical to WOJ and NEOJ consonants (Sections 2.2.4.1.1 and 2.3.4.1.1), as shown in Table 2.32. The phonetic values for these consonants are the same as those presented above for WOJ and NEOJ.

Table 2.32: SEOJ Consonants

	Labial	Dental		Palatal	Velar
Voiceless obstruents	p	t	s		k
Prenasalized voiced obstruents	Np [ᵐb]	Nt [ᵐd]	Ns [ᵐz]		Nk [ᵐg]
Nasals	m	n			
Liquid		r [r]			
Glides	w			y	

### 2.3.6.1.2 SEOJ Vowels

The description of SEOJ vowels is more difficult than that of SEOJ consonants, partially because a complete study of SEOJ phonology comparing the characters used to record SEOJ syllables and their readings in LMC.

2.3.6.1.2.0.1 /ĩ/, /i/, and /i/. The vowels /ĩ/, /i/, and /i/ are all attested in the three sub-dialects of SEOJ. The vowels /ĩ/ and /i/ merge to /i/ following coronals.<sup>446</sup> Hōjō (1966: 409) presents one example of WOJ /i/ corresponding to SEOJ /o/:

WOJ /i/	:	SEOJ /o/
<i>isô</i> 'shore' (KK 5)	:	<i>osi</i> 'id.' (MYS XIV: 3359-Su)

As discussed in Section 2.3.5.1.2.1 above, both Suruga and Shimōsa (CEOJ) have a variant of WOJ *isô* beginning with initial /o/ and both allow initial /i/, so it is not clear what the motivation for a change of /i/ to /o/ in this environment might be.

Hōjō (1966: 414) presents one example of WOJ /i/ corresponding to SEOJ /u/:

WOJ /i/	:	SEOJ /u/
<i>kôpisi-ku</i> 'loving-INF' (MYS XVII: 3928)	:	<i>kupusi-ku</i> 'id.' (MYS XX: 4345-Su)

This example, however, is a morphological issue, and not a phonological one. The WOJ /i/ in the WOJ form shows that *\*kôpi-* comes from earlier *\*kôpu-i-*<sup>447</sup> and that /i/ is the result of monophthongization of *\*/u+ĩ/*. It follows then, that what should be compared in

---

446. As stated in Section 2.3.4.1.2.1 above, this merger happened in WOJ, and may or may not have also occurred in EOJ. WOJ orthography does not allow for a distinction between /ĩ/ and /i/ following coronals, and since EOJ is written in terms of WOJ orthography, this merger happens in EOJ by default.

447. This could also come from earlier *\*kaCupu-i-* or *\*kuCupu-i-*. Regardless of the underlying form of /ô/ here, the final vowel of the stem must be a /u/, as the only other option (/ö/) cannot occur here due to vowel assimilation (see Section 2.2.4.3.4).

this example is WOJ *kôpu-* with SEOJ *kupu-*, showing a correspondence of WOJ /u/ with SEOJ /u/.

With the exception of the unexplained example of SEOJ *osi* 'shore, rocky shore' mentioned above, there is a one-to-one correspondence between WOJ /î/, /i/, and /i/ with SEOJ /î/, /i/, and /i/ respectively.

2.3.6.1.2.0.2 /ê/, /e/, and /ë/. The mid front vowel /ê/ and diphthong /ë/ are attested in all sub-dialects of SEOJ, with a merger to /e/ after coronals.<sup>448</sup> Hōjō (1966: 412 and 418) presents examples of WOJ /ê/ or /e/ corresponding to SEOJ /î/ or /i/, respectively:

WOJ /ê/ or /e/	:	SEOJ /î/ or /i/
<i>ipê</i> 'house' (KK 32)	:	<i>ipî</i> 'id.' (MYS XX: 4343-Su)
<i>mê</i> 'woman' (K I: 31)	:	<i>mî</i> 'id.' (MYS XX: 4343-Su)

Both examples are from Suruga, and both from the same poem which is suspicious: the data may not be reliable. However, the syllable /mê/ is not attested in Suruga, and this may or may not be significant. The syllable /pê/, however, is attested: 於思敞 *osi pê* 'shore area' (MYS XIV: 3359). With only two examples we lack sufficient

---

448. As discussed above (Section 2.3.4.1.2.1), it is not possible to determine if these vowels merged following coronals in EOJ as they did in WOJ or if they were written with characters showing this merger because there were no other characters available to Western scribes.

data to conclude anything about the suggested correspondence between WOJ /î/ and SEOJ /ê/.

Next, Hōjō (1966: 417-418) presents evidence showing correspondences between WOJ /ë/ or /e/ with SEOJ /ö/ or /o/. For these correspondences, we find WOJ /e/ after coronals where /ë/ cannot occur, and WOJ /ë/ elsewhere. For SEOJ, we find /o/ after labials where /ö/ cannot occur, and /ö/ elsewhere:

WOJ /ë/ or /e/	:	SEOJ /ö/ or /o/
<i>kōye</i> - 'to cross' (MYS XVII: 3915)	:	<i>kōyō</i> - 'id.' (MYS XX: 4403-Sn)
<i>ware</i> 'I' (KK 12)	:	<i>warō</i> 'id.' (MYS XX: 4343-Su)
<i>kaNkē</i> 'shade' (MYS XIX: 4220)	:	<i>kaNkō</i> 'id.' (MYS XX: 4322-To)
<i>sasaNkē</i> - 'pick up' (BK 9)	:	<i>sasakō</i> - 'id.' (MYS XX: 4325-To)
<i>omöp-ë-Ntö</i> 'feel-EVD-CONC' (MYS XX: 4445) <sup>449</sup>	:	<i>omöp-o-Ntö</i> 'id.' (MYS XX: 4343-Su)

These correspondences can be explained as follows. First, we must consider the phonetic values for these vowels. Following Miyake (1999; 2003a; 2003b), the phonetic value of WOJ /ö/ is a central mid vowel [ə] and WOJ /ë/ is a diphthong consisting of a mid central vowel and /i/, i.e., [əi]. It is possible that the distinction between /ö/ [ə] and /ë/ [əi] did not exist in SEOJ; either this distinction was lost or it never developed. Western scribes may have simply chosen characters to record SEOJ by choosing the closest available sound; in some cases the result was an /ö/ and in others an /ë/. Note that there are also

---

449. This is a WOJ poem in Book XX.

many examples of WOJ /*ö*/ or /*o*/ corresponding to SEOJ /*ë*/ or /*e*/, which I discuss in the next section.

Another possibility to explain these examples, is that the difference here is morphological; the WOJ forms consists of the root plus the transitivity flipper (*\*-Ai-*) in the case of verbs and the unbinding morpheme (*\*-i*) in the case of nouns, the process is different in SEOJ, as discussed in detail below.

It is also possible that the SEOJ forms retain an older (proto-OJ) form of these words. As discussed in Section 2.2.5.1.3.1, vowel assimilation occurs in WOJ to prevent the central vowel from occurring in the same morpheme as a back vowel. The formation of these forms in WOJ is as follows:<sup>450</sup>

proto-OJ	assimilation	contraction	monophthongization
<i>*kôyö-Ai-</i>	<i>kôya-ai-</i>	<i>kôyai-</i>	<i>kôye-</i>
<i>*warö-i</i>	<i>wara-i-</i>		<i>ware</i>
<i>*kaNkö-i</i>	<i>kaNka-i-</i>		<i>kaNkë</i>
<i>*sasakö-Ai-</i>	<i>sasaka-ai-</i>	<i>sasakai-</i>	<i>sasaNkë-</i>

The assumption, then, is that the forms develop differently in SEOJ than they do in WOJ. In WOJ they develop as described above and in SEOJ the proto-OJ form survives. This is, admittedly, highly speculative and cannot be proven at this time.

---

450. WOJ *omop-ë-Ntö* is different than the other examples; this comes from the verb root *omop-* plus the evidential form of the verb followed by the concessive suffix (See Sections 2.2.5.3.3.8.14 and 2.2.5.3.3.8.8).

In all other cases WOJ /ê/, /ë/, and /e/ correspond to SEOJ /ê/, /ë/, and /e/, respectively.

2.3.6.1.2.0.3 /ô/, /o/, and /ö/. The vowels /ô/, /o/, and /ö/ are attested in all SEOJ sub-dialects, however, the syllable /rô/ is not attested in SEOJ. The vowel /o/ occurs only after labials where /ô/ and /ö/ have merged.<sup>451</sup> This may not be significant as there is nothing that corresponds to WOJ /rô/. Hōjō (1966: 411-417) presents a number of examples showing how WOJ /ô/, /o/, and /ö/ correspond to vowels in EOJ, here I discuss correspondences which relate to SEOJ.

First, Hōjō notes a correspondence between WOJ /ô/ : SEOJ /ö/:

WOJ /ô/	:	SEOJ /ö/
<i>nô</i> 'field' (MYS XIV: 3404)	:	<i>nö</i> 'id.' (MYS XIV: 3352-Sn)

With only one example of WOJ /ô/ corresponding to SEOJ /ö/, it is not possible to make any generalizations. It should be noted that the syllable /nô/ is attested twice in SEOJ, and the first example shows not only the syllable *nô*, but the same word, 'field' is attested also attested as *nô*:

---

451. As noted for /i/ and /e/ above, the vowel merger described here occurred in WOJ and since EOJ uses WOJ orthography, the merger happens by default in EOJ. Whether /ô/ and /ö/ really merged in this environment is unknowable.

努由伎  
nô yuk-i  
field go-INF  
going to the field  
(MYS XX: 4344-Su)

志努波牟  
sinôp-am-u  
feel-TENT-FIN  
[I] will probably feel  
(MYS XX: 4327-To)

However, in both cases, the character used to record /nô/ is 努, which can also be used to record the syllable /nu/.<sup>452</sup>

Hōjō (1966: 417) presents one example of WOJ /ô/ corresponding to SEOJ /u/.

WOJ /ô/	:	SEOJ /u/
<i>kôpisi-ku</i> 'loving-INF'	:	<i>kupusi-ku</i> 'id.' (MYS XX: 4345-Su)
(MYS XVII: 3928)		

With only one example, it is, of course, impossible to explain the correspondence here.

Further, the verbal equivalent is attested as *kôpi-* in Tōtōmi (MYS XX: 4322-To), so the

data are not consistent. It is also worth noting that WOJ /ô/ corresponds to NEOJ /u/ after

labials and CEOJ /u/ after coronal consonants. Clearly, more work needs to be done

before we understand the relationship of these vowels.

---

452. This has also been noted above in Section 2.3.4.1.2.3; it may not be possible to determine when this character should be read as *nô* and when it should be read as *nu*.

Hōjō (1966: 413) presents one example of WOJ /o/ corresponding to an /a/ in

SEOJ:

WOJ /o/ : SEOJ /a/  
*pone* 'bone' (WM) : *pane* 'id.' (MYS XIV: 3399-Sn)

Since there is only one example of this correspondence, and since the syllable *po* is attested in SEOJ, nothing conclusive can be said about this example.

Hōjō (1966: 416-418) presents many examples of WOJ /ō/ or /o/ corresponding to SEOJ /ë/ or /e/. WOJ /o/ appears after a labial consonant where /ō/ cannot occur,<sup>453</sup>

WOJ /ō/ or /o/	:	SEOJ /ë/ or /e/
<i>-tō</i> 'CONC' (KK 2)	:	<i>-te</i> 'id.' (MYS XX: 4346-Su)
<i>omöp-ë-Ntō</i> 'feel-EVD-CONC' (MYS XX: 4445) <sup>454</sup>	:	<i>omëp-o-Ntō</i> 'id.' (MYS XX: 4343-Su)
<i>mō</i> 'PART' (KK 2)	:	<i>më</i> 'id.' (MYS XX: 4345-Su)
<i>töpō-</i> 'far' (KK 2)	:	<i>töpë-</i> 'id.' (MYS XX: 4324-To)
<i>möt-i</i> 'hold-INF' (K III: 13)	:	<i>mët-i</i> 'id.' (MYS XX: 4343-Su)
<i>yōse-</i> 'draw close' (MYS XV: 3643)	:	<i>yese-</i> 'id.' (MYS XX: 4345-Su)
<i>waNkîmo</i> 'my sister/lover' <sup>455</sup> (NK 96)	:	<i>waNkîmë</i> 'id.' (MYS XX: 4345-Su)
<i>kötō</i> 'thing' (KK 2)	:	<i>këtō</i> 'id.' (MYS XX: 4346-Su)
<i>kömō</i> 'straw' (K II: 45)	:	<i>këmë</i> 'id.' (MYS XX: 4338-Su)
<i>omō</i> 'face' (MYS V: 804)	:	<i>omë</i> 'id.' (MYS XX: 4342-Su)

---

453. Here, I have marked cases of /ō/ after a labial where the value is known, following Bentley's (1997) study demonstrating that the distinction between *mō/mö* and is preserved in Kojiki and MYS Book V, and the distinction between *pō/pö* is preserved in Kojiki.

454. This is a WOJ poem in Book XX.

455. This literally means 'my younger sister', however, it is often used to mean 'girlfriend, lover'.

The first two examples show conflicting evidence: one has the concessive suffix recorded as *-te* and the other as *-Ntö*.<sup>456</sup> Further, as for the third example, there are examples of particle *mo* in SEOJ (e.g., MYS XX: 4343), so again we have conflicting data.

For the time being, I will assume one of the possible analyses used to explain the correspondence of WOJ /ë/ or /e/ with SEOJ /ö/ or /o/: that these vowels are very similar,<sup>457</sup> and that there was no distinction between them in SEOJ. Western scribes, then, simply chose the closest approximation they could and sometimes the result was an /ë/ and other times it was an /ö/.

Last, Hōjō (1966: 417) presents one example of WOJ /ö/ corresponding to SEOJ /ô/:

WOJ /ö/	:	SEOJ /ô/
<i>kötö</i> 'thing' (KK 2)	:	<i>kôNtô</i> 'id.' (MYS XX: 4346-Su)

However, this example is a textual variant and the more common version of this poem shows *këtö* as presented above (Mizushima 1972: 200).

2.3.6.1.2.0.4 /a/. The low vowel /a/ is attested in all sub-dialects of SEOJ. Hōjō (1966: 413) presents two examples of WOJ /a/ corresponding to SEOJ /e/:

---

456. I am not concerned with whether or not this is a prenasalized /Nt/ or a /t/ here; as stated in Section 2.3.4.1.1.2, the issue of prenasalized consonants in EOJ is understudied.

457. As discussed above, the phonetic values for these vowels are [ə] (/ö/) and [əi] (/ë/).

WOJ /a/	:	SEOJ /e/
<i>kaya</i> 'miscanthus reed'	:	<i>kaye</i> 'id.' (MYS XX: 4321-To)
(MYS XV: 3674)		
<i>ya</i> 'QP' (KK 2)	:	<i>ye</i> 'id.' (MYS XX: 4340-Su)

However, in all other cases WOJ /a/ : with SEOJ /a/. Both examples here show WOJ /a/ : SEOJ /e/ after /y/, however, the syllable /ya/ is fairly well attested in SEOJ, with sixteen occurrences. Thus, this is not a matter of the vowel correspondence here being caused by the environment, and more work is needed here to determine the relationship of these vowels.

Hōjō (1966: 413) also presents one example of WOJ /a/ corresponding to SEOJ

/ö/:

WOJ /a/	:	SEOJ /ö/
<i>tanaNpîk-</i> 'clouds trail'	:	<i>tönöNpîk-</i> 'id.' (MYS XX: 4403-Sn)
(MYS XIII: 3221)		

Although this example is interesting in terms of the discussion on vowel assimilation (Section 2.2.5.1.3.1), since there is only one example of this correspondence it cannot tell us anything about SEOJ phonology.

2.3.6.1.2.0.5 /u/. The high back vowel /u/ occurs in all sub-dialects of SEOJ.

Hōjō (1966: 414) notes one example of WOJ /u/ corresponding to SEOJ /î/. For the purpose of discussion, I have left out the morpheme boundaries here intentionally:

WOJ /u/ : SEOJ /î/  
*kôpurasi* 'it seems that [he] loves' (see note)<sup>458</sup> : *kôpîrasi* 'id.' (MYS XX: 4322-To)

As discussed in Section 2.2.5.3.3.7.4, the WOJ form is analyzed here as *kôp-uras-i* 'love-SUP-FIN'. For the SEOJ form, Hōjō (1966: 414) explains that it can't be built off of the infinitive form of the verb since then it would be *kôpîrasi* with /pî/ instead of /pî̃/. However, Mizushima (1972: 190) notes that there is a textual variant where this syllable is written with 非 /pî̃/ instead of 比 /pî̃/, which raises questions about the validity of the data. With the exception of this example, all other cases of WOJ /u/ correspond to SEOJ /u/.

### 2.3.6.1.3 Morphophonemic Rules

#### 2.3.6.1.3.1 Constraints on Consonant Clusters

SEOJ does not allow consonant clusters. There are some prenasalized consonants, discussed above (Section 2.3.4.1.1.2).

---

458. The form *kôp-uras-i* 'love-SUP/FIN' is not attested in WOJ. However, the verb *kôpî-* 'love, think, feel' is attested (e.g., KK 3) and is expected to have the form *kôp-uras-i* if used with the suppositional suffix *-uras-* (Section 2.2.5.3.3.7.4).

### 2.3.6.1.3.2 Constraints on Vowel Clusters

SEOJ does not allow vowel clusters. In WOJ, if two vowels came together one of two processes occurred to prevent a vowel sequence within a word: contraction or monophthongization (Section 2.2.4.3.3). As discussed above (Section 2.3.4.1.3.2), this issue has not been fully explored for EOJ, and it is not clear what processes, if any, occur here. My discussion here should be treated as a preliminary study and, as I have not yet considered all possible examples, and am simply presenting some examples and observations.

2.3.6.1.3.2.1 Vowel Sequences in Nouns. I have compared some bound and free noun pairs, to compare how the free form is built off the bound form. I am assuming that free nouns developed from bound nouns in the same way in SEOJ as in WOJ, that is, that the free form is derived from the bound form plus the unbinding morpheme \*-i; this assumption, of course, may not be correct. There is only one example from SEOJ:

WOJ	:	SEOJ
free: <i>kaNkë</i> 'shade' (MYS XIX: 4220):		<i>kaNkö</i> 'id.' (MYS XX: 4322-To)
bound: <i>kaNka-</i> (KK 90) <sup>459</sup>	:	not attested

---

459. This attestation only applies if one accepts the reconstruction of *kaNkamî* 'mirror' (KK 90) as coming from *kaNka-* 'reflection' + *mî* 'see'.

A possible explanation for the first example is presented above (Section 2.3.6.1.2.0.2). Only one example, however, cannot tell us anything, and this will be set aside for further research.

2.3.6.1.3.2.2 Vowel Sequences in Verbs. Next, I considered transitive and intransitive verb pairs in SEOJ, to determine if their formation, like the formation of their counterparts in WOJ, were formed with monophthongization.<sup>460</sup> The only example where both verbs are attested in SEOJ is *wasur-* 'forget' (MYS XX: 4344-Su)/*wasure-* 'id.' (MYS XX: 4344-Su),<sup>461</sup> and one example is not sufficient to make claims about the language.

#### 2.3.6.1.4 Vowel Assimilation

Although WOJ has a constraint on back and non-back vowels occurring in the same morpheme, there is no evidence for such a constraint in SEOJ. Examples such as the afrore mentioned WOJ *tanaNpîk-* 'clouds trail' (MYS XIII: 3221): SEOJ *tönöNpîk-* 'id.' (MYS XX: 4403-Sn) are interesting although not sufficient to prove anything. While

---

460. See Section 2.2.4.3.3.2.

461. The pair *wasur-/wasure-* both mean 'forget', but, according to Omodaka (1967: 818) *wasur-* implies to forget something intentionally, while *wasure-* implies that something is naturally forgotten.

the example *körömu* 'clothes' (MYS XX: 4401) suggest there might not have been a constraint against front and back vowels in the same morpheme in SEOJ.

### 2.3.6.2 SEOJ Verbal Morphology

#### 2.3.6.2.1 The Shape of Pre-EOJ Verb Roots

As discussed in Section 2.3.4.2 above, in order to determine the shape of EOJ verb roots, a database of attested verbs were compiled and grouped together with other verbs with the same meaning and form. Only 22 verb roots could be reconstructed, however, in some cases one verb supporting the reconstruction of the verb root is in one EOJ dialect and another verb supporting its reconstruction is in another EOJ dialect or in the data which cannot be identified as belonging to any dialect (UEOJ); the data are too few if reconstructions are based solely on verbs attested in each dialect. For the purpose of the discussion below, I give examples attested within SEOJ where possible, and otherwise indicate cases where supporting evidence for the reconstruction is from another dialect or UEOJ. As for the shape of the verb roots, some can be reconstructed as consonant final and others as vowel final, although it is not always possible to reconstruct verb roots.

### 2.3.6.2.2 Derivational Morphemes

#### 2.3.6.2.2.1 The Derivational Suffix \*-e-

The only reconstructable derivational morpheme attested in SEOJ is \*-e-, as found in the example: *wasure-* < *wasur-e-* 'forget' (MYS XX: 4344-Su) [cf. *wasur-* 'id.' (MYS XX: 4344-Su)].<sup>462</sup> With only one example, and one that is also attested in NEOJ and CEOJ, nothing conclusive can be claimed about this morpheme.

Based on the treatments of the other EOJ dialects, the suffix \*-e- functions as a transitivity flipper, in most cases changing the verb from either transitive to intransitive or intransitive to transitive, but in some cases the function is unclear (Section 2.2.5.2.7).

#### 2.3.6.2.2.2 Summary

Table 2.33 below lists the SEOJ derivational morphemes and their functions.

Table 2.33: Summary of SEOJ Derivational Morphemes

Morpheme	Function
*-e-	transitivity flipper

---

462. The pair *wasur-/wasure-* both mean 'forget', but, according to Omodaka (1967: 818) *wasur-* implies to forget something intentionally, while *wasure-* implies that something is naturally forgotten.

### 2.3.6.2.3 Inflectional Morphemes

In addition to derivational morphemes, SEOJ also has a number of inflectional morphemes, which I discuss below in the following order: verbal preverbs (Section 2.3.6.2.3.1), the circumfix (Section 2.3.6.2.3.2), and suffixes and auxiliaries (Section 2.3.6.2.3.3).

#### 2.3.6.2.3.1 Verbal Prefixes and Preverbs

SEOJ has one preverb and no prefixes. The distinction I make between prefixes and preverbs, is that prefixes are simple bound morphemes, while preverbs are a special class of prefixes which are derived from a full verb.

2.3.6.2.3.1.1 The Preverb *uti-*. As discussed in Section 2.2.5.3.1.2.5, this preverb is often associated with hitting or striking, although it is typically used to express actions that are completed instantly, thoughtlessly, or carelessly. There is only one example of this preverb in SEOJ.

和伎米故等 不多利和我見之 宇知江須流  
須流河乃祢良波 苦不志久米阿流可

wa-k-îmë kô tö putari wa-Nka MÎ-si uti-yes-uru suruNka-nö ne-ra  
pa kupusi-ku më ar-u ka

I-NOM-lover child<sup>463</sup> COM two I-NOM see-PAST/ATT

PREV-pass-ATT [place name]-GEN peak-PL TOP dear-INF

PART exist-ATT QP

The peaks of Suruga, which we carelessly passed by, [the peaks]  
seen with my lover – Could they be more dear?

(MYS XX: 4345-Su)

#### 2.3.6.2.3.2 The Verbal Circumfix

The verbal circumfix *na...sö* is a negative imperative. As in WOJ (Section 2.2.5.3.2), the circumfix in SEOJ surrounds the infinitive form of the verb. This form is attested only once in SEOJ.

許登奈多延會祢

kötö na-taye-sö-ne

words<sup>464</sup> NEG-end/INF-IMP-DES

Please do not stop writing.<sup>465</sup>

(MYS XIV: 3398-Sn)

---

463. *Kô* 'child' is used here as a diminutive suffix.

464. Literally "words", here used in the meaning of correspondence or letters.

465. The desiderative *-ne* '[I] wish that...' is used here to soften the command.

### 2.3.6.2.3.3 Verbal Suffixes and Auxiliaries

SEOJ verb stems are bound forms and must be followed by at least one suffix or auxiliary. It is possible for a verb stem to be followed by a string of suffixes, and in this case there is a set order in which the morphemes can occur; some must attach directly to the root and can be followed by other morphemes, while other suffixes may only occur in the final position of a verbal morpheme string.

Following the discussion above in Section 2.2.5.3, I have grouped the verbal suffixes and auxiliaries according to where they can occur in a verbal string. The infinitive suffix *-î* is not placed in a group as its ordering is not as restricted as the other suffixes; it can occur before and/or after auxiliaries, and it is the only morpheme that can occur more than once in a verbal string. If more than one morpheme is present in a verbal string then a morpheme in Group I occurs before one in Group II, a morpheme in Group II occurs before Group III, etc. A verbal string does not need to have a morpheme from Group I-IV, but must end in either the infinitive *-î* or a Group V morpheme. Note that in some cases the morphemes fill the same slot in SEOJ as in WOJ, and in others they do not.<sup>466</sup> In addition, SEOJ has five groups, while WOJ has seven. SEOJ also has

---

466. I return to this below in Chapter 4.

fewer morphemes, but this may be simply because SEOJ has fewer data than WOJ. The SEOJ Groupings are presented in Table 2.34 below.

Table 2.34: Classification of SEOJ Morphemes Based on Verbal String Ordering

	Ordering	Categories
infinitive <i>-i</i>	suffixes to the verb root, auxiliaries, and some suffixes; can occur in final position; can be followed by a verb or auxiliary	infinitive <i>-i</i>
Group I	suffixes to the verb root	negative, honorific, and mood suffixes
Group II	affixes which must follow the infinitive and can also follow Group I morphemes	perfective auxiliaries
Group III	suffixes and auxiliaries which follow Group I or II morphemes	past tense auxiliaries
Group IV	suffixes to the verb root or any Group I-III morpheme	tentative and progressive suffixes
Group V	suffixes to the verb root or any Group I-IV morpheme	clause and sentence final morphemes

The morphemes are discussed below according to this grouping.

2.3.6.2.3.3.1 The Infinitive *-i*. The SEOJ infinitive *-i* is suffixed to verb roots,

verbal auxiliaries, and suffixes. When used between two verbs or auxiliaries it acts as a connector between the two morphemes. The infinitive can also be in the final position of a verbal string, and in this case it connects the first clause with the second, and may be

thought of as English "and" ([clause 1]-and-[clause 2]). This morpheme is deleted when following vowel final stem verbs and auxiliaries in order to prevent a vowel-vowel sequence.<sup>467</sup>

安思布麻之奈牟 久都波氣和我世

asi pum-as-i-n-am-u kutu pak-ë wa-Nka se

leg step-HON-INF-PERF-TENT-ATT shoes wear-IMP I-GEN

lover

Wear the shoes you surely have walked in, my dear.

(MYS XIV: 3399-Sn)

已波比弓麻多祢

ipap-î-te mat-ane

perform ritual-INF-GER wait-DES

I wish [you] would perform the rituals [to keep me safe] and wait [for me].

(MYS XX: 4339-Su)

古米知夜須良牟 和加美可奈志母

kô mêt-i yas-uram-u wa-ka<sup>468</sup> mî kanasi mö

child have-INF get thin-TENT-ATT I-GEN woman dear/FIN

PART

My wife, who will have our child and get thin, is dear [to me].

(MYS XX: 4343-Su)

---

467. See discussion on the WOJ infinitive *-î* (Section 2.2.5.3.3.1).

468. Although this particle is usually written as *-Nka*, the character 加 has a voiceless initial.

2.3.6.2.3.3.2 Group I Morphemes. Group I morphemes are suffixes which attach

directly to the verb root.

2.3.6.2.3.3.2.1 *The Negative Suffix -an-*. SEOJ has two negative suffixes: *-an-* and *-aN-* (see next section); it is unclear how these differ in terms of their function(s). The suffix *-an-* is only attested following vowel stem verbs, where the initial vowel is deleted. However, the vowel occurs in *-aN-* (MYS XX: 4337-Su, see below).

道乃長道波 由伎加弓努加毛

MITI n-ō NANKATI pa yuk-î-kate-n-ô<sup>469</sup> kamô

road COP-ATT long road TOP go-INF-able-NEG-ATT EMPH

The road, being a long road, [I] will not be able to go.

(MYS XX: 4341-Su)

和我知知波波波 和須例勢努加毛

wa-Nka titi papa pa wasure se-n-ô<sup>470</sup> kamô

I-GEN father mother TOP forget/NML do-NEG-ATT EMPH

I will not forget my mother and father.

(MYS XX: 4344-Su)

---

469. The character 努 can represent *nu* or *nô*, I am reading it as *nô* here, following Mizushima (1972: 199).

470. The character 努 can represent *nu* or *nô*, I am reading it as *nô* here, following Mizushima (1972: 201).

2.3.6.2.3.3.2.2 *The Negative Suffix -aNs-*. The negative suffix *-aNs-* in WOJ is described by Martin (1987: 111) as deriving from the negative *-an-* (discussed above) and the irregular verb *se-* 'to do' (see also Section 2.2.5.3.3.6.2).

等伎騰吉乃 波奈波佐家登母 奈爾須礼會  
 波波登布波奈乃 佐吉泥己受祁牟  
 tökî-N-tökî-nö pana pa sak-ê-Ntömö nani s-ure sö<sup>471</sup> papa tö p<sup>472</sup>-u  
 pana-nö sak-î-Nte-kö-Ns-u-kêm-u  
 time-COP-time-GEN flower TOP bloom-EVD-CONC what  
 do-EVD EMPH mother PART say-ATT flower-NOM  
 bloom-INF-go out/INF-come-NEG-INF<sup>473</sup>-TENT/PAST-FIN  
 Although when in season flowers bloom, why is it that the flower  
 called "mother" probably did not come out and bloom?  
 (MYS XX: 4323-To)

父母爾 毛能波須價尔弓 已麻叙久夜志伎  
 TITI PAPA-ni mônö p<sup>474</sup>-as<sup>475</sup>-u kê-n-i-te ima Nsö kuyasi-kî  
 father mother-DAT thing say-NEG-INF come/  
 INF-PERF-INF-PERF now EMPH regret-ATT  
 I did not say things to my parents, now it has come that I regret  
 [it].  
 (MYS XX: 4337-Su)

---

471. In WOJ the emphatic can be *sö* or *Nsö*. The character 會 indicates a voiceless initial, thus, I transcribe *sö* here.

472. This is analyzed as the verb *ip-* 'say' with the initial vowel deleted following a word ending in a vowel.

473. The infinitive *-u* is only found after *-aNs-*.

474. This is analyzed as the verb *ip-* 'say' with the initial vowel deleted following a word ending in a vowel.

475. The character 須 *su* does not indicate prenasalization; *-aNs-* is expected here.

2.3.6.2.3.3.2.3 *The Passive Suffix -are-/aye-*. As discussed above in Section 2.2.5.3.3.3.4, the passive suffix in WOJ is *-aye-* used to indicate: 1) spontaneous action; 2) passive voice; and 3) potential. In SEOJ, this suffix is attested once as *-are-* and once as *-aye-*. However, both examples occur in the same poem. Further, this is the only example of the passive suffix in OJ (WOJ or EOJ) where the consonant is an /r/ instead of a /y/, and it is, therefore, a questionable example. However, in MJ, the passive is attested as *-rare-* and it is possible that later scribes altered this example.<sup>476</sup>

加其佐倍美曳弓 余爾和須良礼受  
 kaNkō sapē mî-ye-te yō-ni wasur-are-Ns-u  
 reflection even see-PASS/INF-GER world-LOC forget-  
 POT-NEG-FIN  
 Even [your] reflection<sup>477</sup> is visible and I cannot forget you in this  
 world.  
 (MYS XX: 4322)

2.3.6.2.3.3.2.4 *The Honorific Suffix -as-*. SEOJ has two honorific morphemes: *-as-* and *mas-* (discussed below). The function of the suffix *-as-* is to indicate respect

---

476. As stated above, the WOJ form is also attested as *-raye-*, but there are some problems with this form: 1) *-raye-* only occurs in four examples, all of which are attested in Book XV which is known to have an unreliable history of transmission; 2) all four examples used with the verb *ne-* 'to sleep'; 3) all four examples are followed by the negative suffix, and may indicate a negative potential usage. I do not think this constitutes reliable proof that the form *-raye-* occurred in WOJ, rather it appears the text has been influenced by MJ. It is interesting that this example in SEOJ is also followed by the negative suffix.

477. The poet is imagining his wife's face reflected in the water he drinks.

towards the actor of the marked verb. While *-as-* is fairly common in WOJ, it occurs only once in SEOJ:

安思布麻之奈牟 久都波氣和我世  
 asi pum-as-i-n-am-u kutu pak-ë wa-Nka se  
 foot step-HON-INF-PERF-TENT-ATT shoes wear-IMP I-GEN  
 lover  
 Wear the shoes you surely have walked in, my dear.  
 (MYS XIV: 3399-Sn)

2.3.6.2.3.3.2.5 *The Honorific Auxiliary mas-*. The second honorific morpheme in SEOJ is *mas-*, its function is the same as *-as-* above. It is only attested once in SEOJ, in the example presented below:

父母我 等能能志利弊乃 母母余具佐  
 母母与伊弓麻勢 和我伎多流麻弓  
 TITI PAPA-Nka tönö-nö siri pê-nö mömö yö-N-kusa mömö yö  
 ite<sup>478</sup>-mas-e wa-Nka k-î-tar-u mate<sup>479</sup>  
 father mother-GEN hall<sup>480</sup>-GEN behind side-GEN 100 generation-  
 COP-grass 100 generation go out/INF-HON-IMP-INF I-NOM  
 come-INF-PERF/PROG-ATT TERM  
 [To] the 100 generation grass behind my parent's home: please go  
 out [there] 100 generations – until I have come home.  
 (MYS XX: 4326-To)

---

478. The text here shows 𠄎 *te* which has a voiceless, plain /t/; this verb corresponds to WOJ *iNte-* 'go out', which is recorded in WOJ with a prenasalized /t/ (/Nt/). The reason for the spelling inconsistency is unknown: this may be a scribal error or the verb 'go out' may be *ite-* in SEOJ; note that *ite-* is also found in CEOJ. This issue will be set aside for further research.

479. This is expected to be a prenasalized *Nte*, but the character 𠄎 *te* does not indicate prenasalization.

480. Here, the parent's home.

2.3.6.2.3.3.2.6 *The Tentative Suffix -uram-*. The tentative suffix *-uram-* is attested only once in SEOJ. It is also attested in WOJ (Section 2.2.5.3.3.7.3), however, in CEOJ it is only attested as *-unam-* (Section 2.3.5.2.3.3.2.6). Both *-unam-* and *-uram-* are found in UEOJ (see Sections 2.3.7.2.3.3.3.1 and 2.3.7.2.3.3.3.2). The different consonants, /r/ and /n/, are presumably a dialectal variation. This suffix is used to express conjecture.

古米知夜須良牟 和加美可奈志母

kô mêt-i yas-uram-u wa-ka<sup>481</sup> mî kanasi mö

child have-INF get thin-TENT-ATT I-GEN woman dear/FIN

PART

My wife, who will have our child and get thin, is dear [to me].

(MYS XX: 4343-Su)

2.3.6.2.3.3.3 Group II Morphemes. The morphemes in this group consist of the perfective auxiliaries. The auxiliaries must, by definition, follow the infinitive.

2.3.6.2.3.3.3.1 *The Perfective Auxiliary -n-*. SEOJ, like other varieties of OJ, has two perfective auxiliaries, *-n-* and *-t-*, to express that an action has been or will be completed. The difference between these two morphemes is unclear, and will be left for further research.<sup>482</sup>

---

481. Although this particle is usually written as *-Nka*, the character 加 has a voiceless initial.

482. The distinction may have to do with animate versus inanimate subjects, as was discussed with the WOJ morphemes *-n-* and *-t-* (Sections 2.2.5.3.3.4.2 and 2.2.5.3.4.4).

奈久許惠伎氣婆 登伎須疑爾家里  
 nak-u köwe kîk-ë-Npa tökî suNkî-n-i-kêr-i  
 sing-ATT voice hear-EVD-COND time pass/  
 INF-PERF-INF-PAST-FIN  
 Since [we] heard the [birds] singing, time had passed.  
 (MYS XIV: 3352-Sn)

安思布麻之奈牟 久都波氣和我世  
 asi pum-as-i-n-am-u kutu pak-ë wa-Nka se  
 leg step-HON-INF-PERF-TENT-ATT shoes wear-IMP I-GEN  
 lover  
 Wear the shoes you surely have walked in, my dear.  
 (MYS XIV: 3399-Sn)

2.3.6.2.3.3.3.2 *The Perfective Auxiliary -t-*. As mentioned above, SEOJ has two perfective auxiliaries, *-n-* and *-t-*, and the difference between the two is as yet unknown.

伎弥之布美亅婆 多麻等比呂波牟  
 kîmî si pum-î-te-Npa tama tö pîröp-am-u  
 you EMPH step-INF-PERF-COND treasure PART pick  
 up-TENT-FIN  
 If *you* had walked in [them], [I] would pick [them] up as a treasure.  
 (MYS XIV: 3400-Sn)

伊比之氣等婆是 和須礼加祢豆流  
 ip-î-si kêtöNpa Nse wasure-kane-t-uru  
 say-INF-PAST/ATT words EMPH forget/INF-NEG/POT-PERF-  
 ATT<sup>483</sup>  
 [I] cannot forget the words said [by my parents].  
 (MYS XX: 4346-Su)

2.3.6.2.3.3.3.3 *The Progressive Perfective Auxiliary -tar-*. The perfective progressive auxiliary *-tar-* which developed from the perfective auxiliary *-t-*, discussed above, plus the stative suffix *-ar-* (Section 2.3.6.2.3.3.3.3). It is attested only once in SEOJ.

父母我 等能能志利弊乃 母母余具佐  
 母母与伊弓麻勢 和我伎多流麻弓  
 TITI PAPA-Nka tönö-nö siri pê-nö mömö yö-N-kusa mömö yö  
 ite<sup>484</sup>-mas-e wa-Nka k-î-tar-u mate<sup>485</sup>  
 father mother-GEN hall<sup>486</sup>-GEN behind side-GEN 100 generation-  
 COP-grass 100 generation exists-PERF/INF-HON-IMP-INF I-  
 NOM come-INF-PERF/PROG-ATT TERM  
 [To] the 100 generation grass behind my parent's home: please  
 exist [there] 100 generations – until I have come home.  
 (MYS XX: 4326-To)

---

483. This clause is a *kakari musubi* structure, ending in the attributive instead of the final form because of the emphatic particle *Nze* (WOJ *Nsö*); I discuss *kakari musubi* structures above in Section 2.2.5.3.3.8.13).

484. The text here shows 𠄎 *te* which has a voiceless, plain /t/; this verb corresponds to WOJ *iNte*- 'go out', which is recorded in WOJ with a prenasalized /t/ (/Nt/). The reason for the spelling inconsistency is unknown: this may be a scribal error or the verb 'go out' may be *ite-* in SEOJ. As stated above, *ite-* is also found in CEOJ. This issue will be set aside for further research.

485. This is expected to be a prenasalized *Nte*, but the character 𠄎 *te* does not indicate prenasalization.

486. Here, the parent's home.

2.3.6.2.3.3.4 Group III Morphemes. There are two group III morphemes: the past auxiliaries *-kêm-* and *-kêr-*.

*2.3.6.2.3.3.4.1 The Tentative Past Tense Auxiliary -kêm-*. In WOJ, the tentative past tense auxiliary historically derives from the past tense auxiliary *-kî* plus the tentative suffix *-am-* (Section 2.2.5.3.3.5.1). Past auxiliary *-kî* does not occur as an auxiliary in EOJ.<sup>487</sup> Tentative *-am-*, however, does occur, and is discussed below (Section 2.3.6.2.3.3.5.1). The vowel /ê/ in this suffix in WOJ is explained by monophthongization: *î+a* results in *ê*, i.e., *-kî+-am-* > *-kêm-*. However, this analysis is based on WOJ monophthongization, and the evidence for monophthongization is less clear in SEOJ (see above, Section 2.3.6.1.3.2). This auxiliary indicates speculation about a past event ('it must have been...'), and is attested only once in SEOJ:

---

487. Historically *-kî* appears to be related to the verb *kô-* 'come' which is attested in SEOJ; I discussed the relationship of this auxiliary to the verb 'come' in WOJ (Section 2.2.5.3.3.8.6) and return to the this for WOJ and EOJ below (Section 4.4.3.18).

等伎騰吉乃 波奈波佐家登母 奈爾須礼會  
波波登布波奈乃 佐吉泥己受祁牟

tökî-N-tökî-nö pana pa sak-ê-Ntömö nani s-ure sö<sup>488</sup> papa tö p<sup>489</sup>-u

pana-nö sak-î-Nte-kö-Ns-u-kêm-u

time-COP-time-GEN flower TOP bloom-EVD-CONC what

do-EVD EMPH mother PART say-ATT flower-NOM

bloom-INF-go out/INF-come-NEG-INF<sup>490</sup>-TENT/PAST-FIN

Although when in season flowers bloom, why is it that the flower  
called "mother" probably did not come out and bloom?

(MYS XX: 4323-To)

#### 2.3.6.2.3.3.4.2 The Modal Past Tense Auxiliary *-kêr-*. The CEOJ modal past tense

auxiliary *-kêr-* historically developed from the past tense auxiliary *-kî* (see discussion in

the previous section) plus the progressive *-ar-* (Section 2.3.6.2.3.3.5.2). Presumably,

monophthongization of *î+a* results in *ê*, as discussed for *-kêm-* above. This morpheme is

attested only once in SEOJ:

奈久許惠伎氣婆 登伎須疑爾家里

nak-u köwe kîk-ë-Npa tökî suNkî-n-i-kêr-i

sing-ATT voice hear-EVD-CONJ time pass/

INF-PERF-INF-PAST-FIN

Since [we] heard the [birds] singing, time had passed.

(MYS XIV: 3352-Sn)

---

488. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.

489. This is analyzed as the verb *ip-* 'say' with the initial vowel deleted following a word ending in a vowel.

490. The infinitive *-u* is only found after *-aNs-*.

2.3.6.2.3.3.5 Group IV Morphemes. This group consists of the tentative suffix

*-am-* and progressive auxiliary *-ar-*.

*2.3.6.2.3.3.5.1 The Tentative Suffix -am-.* As discussed with WOJ (Section

2.2.5.3.3.7.1), this suffix is used to indicate volition or conjecture; there is no indication

that the function of this suffix is different in SEOJ.

安思布麻之奈牟 久都波氣和我世

asi pum-as-i-n-am-u kutu pak-ë wa-Nka se

leg step-HON-INF-PERF-TENT-ATT shoes wear-IMP I-GEN

lover

Wear the shoes you surely have walked in, my dear.

(MYS XIV: 3399-Sn)

伎弥之布美弓婆 多麻等比呂波牟

kîmî si pum-î-te-Npa tama tö pîröp-am-u

you EMPH step-INF-PERF-COND treasure PART pick

up-TENT-FIN

If you had walked in [them], [I] would pick [them] up as a treasure.

(MYS XIV: 3400-Sn)

*2.3.6.2.3.3.5.2 The Progressive Auxiliary -ar-/er-.* There is one example in SEOJ

where the progressive is marked with the morpheme *-er-*. Synchronic analysis shows that

this is a suffix and not an auxiliary, as it attaches directly to the verb stem or preceding

suffix and not to the infinitive. However, as discussed for WOJ and CEOJ (Sections

2.2.5.3.3.4.1 and 2.3.5.2.3.3.5.2), *-êr-* may be from monophthongization of *\*-î-ar-*, and *-ar-* may be the result of contraction of *\*-î-ar-*. The only example of the progressive *-ar-* is presented above as historically a part of the perfective progressive auxiliary *-tar-* (Section 2.3.6.2.3.3.3.3).

麻氣波之良 宝米弓豆久礼留 等乃能其等  
已麻勢波波刀自 於米加波利勢受

ma-kë pasira pomë-te tukur-er-u tönö n-ö Nkötö imas-e papa tōNsi  
omë kapar-i se-Ns-u

real-wood pillars praise/INF-GER build-PROG-ATT hall

COP-ATT be like be/HON-IMP mother HON<sup>491</sup> face change-NML  
do-NEG-FIN

Be like the hall, which has been built and praised [for its] wooden  
pillars, Mother – [stay as you are forever] without changing [your]  
looks.

(MYS XX: 4342-Su)

2.3.6.2.3.3.6 Group V Morphemes. The morphemes in this group fill the final position of a verb string, can attach directly to a verb stem or any suffix or auxiliary in Groups I-III, and cannot be followed by any other verbal suffix,<sup>492</sup> but can be followed by emphatic particles. A verb string *must* end with one of the morphemes in this group.

---

491. The word *tōNsi* is typically used to show respect towards an older woman, but can also be used towards a younger woman (Omodaka et al. 1967: 493)

492. With the exception of the evidential form, which can be followed by the conjunctive suffix *-Npa* (Section 2.3.6.2.3.3.6.5) or the concessive suffix *-Ntö* (Section 2.3.6.2.3.3.6.6).

2.3.6.2.3.3.6.1 *The Desiderative Suffix -ane*. The desiderative suffix *-ane*

indicates the speaker's desire for something to happen or for the listener to do something,

i.e., "I wish that..."

許登奈多延會祢

kötö na-taye-sö-ne

words NEG-end/INF-IMP-DES

Please do not stop your words.<sup>493</sup>

(MYS XIV: 3398-Sn)

已波比呂麻多祢

ipap-î-te mat-ane

perform ritual-INF-GER wait-DES

I wish [you] would perform the rituals [to keep me safe] and wait [for me].

(MYS XX: 4339-Su)

2.3.6.2.3.3.6.2 *The Hypothetical Conditional Suffix -aNpa*. The suffix *-aNpa*

expresses a hypothetical condition ("if..."). The scope of this suffix is the clause which

precedes it.

伎弥之布美呂婆 多麻等比呂波牟

kîmî si pum-î-te-Npa tama tö pîröp-am-u

you EMPH step-INF-PERF-COND treasure PART pick

up-TENT-FIN

If you had walked in [them], [I] would pick [them] up as a treasure.

(MYS XIV: 3400-Sn)

---

493. The desiderative *-ne* 'I wish that...' is used here to soften the command.

等倍多保美 志留波乃伊宗等 爾閑乃宇良等  
安比弓之阿良婆 己等母加由波牟

töpëtapomî sirupa-nö isô tö nipë-nö ura tö ap-î-te si ar-aNpa kötö  
mö kayup-am-u

[place name] [place name]-LOC rocky shore PART [place name]-  
GEN bay PART meet-inf-GER EMPH exist-COND words PART  
pass-TENT-FIN

If the rocky shores of Sirupa [in]Tötömi and the bay of Nipe met,  
[your] words would pass.<sup>494</sup>

(MYS XX: 4324-To)

2.3.6.2.3.3.6.3 *The Imperative Suffix -ë*. The SEOJ imperative suffix is attested as

-ë (-e after coronals). There are no examples of this suffix following vowel final verb stems.

安思布麻之奈牟 久都波氣和我世

asi pum-as-i-n-am-u kutu pak-ë wa-Nka se

leg step-HON-INF-PERF-TENT-ATT shoes wear-IMP I-GEN  
lover

Wear the shoes you surely have walked in, my dear.

(MYS XIV: 3399-Sn)

---

494. Or, "your words will be understood."

父母我 等能能志利弊乃 母母余具佐

母母与伊弓麻勢 和我伎多流麻弓

TITI PAPA-Nka tönö-nö siri pê-nö mömö yö-N-kusa mömö yö  
ite<sup>495</sup> -mas-e wa-Nka k-î-tar-u mate<sup>496</sup>

father mother-GEN hall<sup>497</sup>-GEN behind side-GEN 100 generation-  
COP-grass 100 generation go out-PERF/INF-HON-IMP-INF I-  
NOM come-INF-PERF/PROG-ATT TERM

[To] the 100 generation grass behind my parent's home: please go  
out [there] 100 generations – until I have come home.

(MYS XX: 4326-To)

2.3.6.2.3.3.6.4 *The Stative Final Suffix -i.* The final suffix *-i* is affixed to stative

verbs and suffixes. It is a sentence final morpheme, and can be followed only by

emphatic or quote particles. It is attested only once in SEOJ.

奈久許惠伎氣婆 登伎須疑爾家里

nak-u köwe kîk-ë-Npa tökî suNkî-n-i-kêr-î  
sing-ATT voice hear-EVD-CONJ time pass/  
INF-PERF-INF-PAST-FIN

Since [we] heard the [birds] singing, time had passed.

(MYS XIV: 3352-Sn)

2.3.6.2.3.3.6.5 *The Conjunctive Suffix -Npa.* The SEOJ suffix *-Npa* is a

conjunctive suffix that indicates a fulfilled condition. It is a clause final suffix that

---

495. The text here shows 𠄎 *te* which has a voiceless, plain /t/; this verb corresponds to WOJ *iNte-* 'go out', which is recorded in WOJ with a prenasalized /t/ (/Nt/). The reason for the spelling inconsistency is unknown: this may be a scribal error or the verb 'go out' may be *ite-* in SEOJ; note that *ite-* is also found in CEOJ. This issue will be set aside for further research.

496. This is expected to be a prenasalized *Nte*, but the character 𠄎 *te* does not indicate prenasalization.

497. Here, the parent's home.

follows the evidential form of verbs (Section 2.3.6.2.3.3.6.12). It is attested only once in SEOJ, therefore its meaning is based on its usage in WOJ and other EOJ dialects.

奈久許惠伎氣婆 登伎須疑爾家里  
nak-u köwe kîk-ë-Npa tökî suNki-n-i-kêr-i  
sing-ATT voice hear-EVD-CONJ time pass/  
INF-PERF-INF-PAST-FIN  
Since [we] heard the [birds] singing, time had passed.  
(MYS XIV: 3352-Sn)

2.3.6.2.3.3.6.6 *The Concessive Suffix -Ntö*. The concessive suffix *-Ntö* is a clause final suffix used to mean "although..." or "even though...". This suffix is often followed by the emphatic *mö*.

等伎騰吉乃 波奈波佐家登母 奈爾須礼會  
波波登布波奈乃 佐吉泥己受祁牟  
tökî-N-tökî-nö pana pa sak-ê-Ntö mö nani s-ure sö<sup>498</sup> papa tö p-u  
pana-nö sak-î-Nte-kö-Ns-u-kêm-u  
time-COP-time-GEN flower TOP bloom-EVD-CONC PART what  
do-EVD EMPH mother PART say-ATT flower-NOM  
bloom-INF-go out/INF-come-NEG-INF<sup>499</sup>-TENT/PAST-FIN  
Although when in season flowers bloom, why is it that the flower  
called "mother" probably did not come out and bloom?  
(MYS XX: 4323-To)

---

498. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.

499. The infinitive *-u* is only found after *-aNs-*.

和例久礼等 和我知知波波波 和須例勢努加毛  
 ware k-ure-Ntö wa-Nka titi papa pa wasure se-n-ô<sup>500</sup> kamô  
 I come-EVD-CONC I-GEN father mother TOP  
 forget-CAUS-PERF-ATT EMPH  
Although I came [far away], I will not forget my mother and  
 father.  
 (MYS XX: 4344-Su)

2.3.6.2.3.3.6.7 *The Past Tense Auxiliary -si*. The SEOJ auxiliary *-si* denotes the past tense.<sup>501</sup> In SEOJ it functions only as an attributive past marker.

和伎米故等 不多利和我見之 宇知江須流  
 須流河乃祢良波 苦不志久米阿流可  
 wa-k-îmë kô tö putari wa-Nka MÎ-si uti-yes-uru suruNka-nö ne-ra  
 pa kupusi-ku më ar-u ka  
 I-NOM-lover child<sup>502</sup> COM two I-NOM see-PAST/ATT  
 PREV-pass-ATT [place name]-GEN peak-PL TOP dear-INF  
 PART exist-ATT QP  
 The peaks of Suruga, which we carelessly passed by, [the peaks]  
seen with my lover – Could they be more dear?  
 (MYS XX: 4345-Su)

---

500. The character 努 can represent *nu* or *nô*, I am reading it as *nô* here, following Mizushima (1972: 201).  
 501. SEOJ also has the past tense auxiliaries *-kêm-*, tentative past (Section 2.3.6.2.3.3.4.1), and *-kar-/kêr-*, modal past (Section 2.3.6.2.3.3.4.2).  
 502. *Kô* 'child' is used here as a diminutive suffix.

伊比之氣等婆是 和須礼加祢豆流  
 ip-î-si kêtöNpa Nse wasure-kane-t-uru  
 say-INF-PAST/ATT words EMPH forget/INF-NEG/POT-PERF-  
 ATT<sup>503</sup>  
 [I] cannot forget the words said [by my parents].  
 (MYS XX: 4346-Su)

2.3.6.2.3.3.6.8 *The Subordinative Gerund -te*. The subordinative gerund *-te* is a clause final auxiliary. It can be used to connect either two verbs or two clauses in the pattern [(clause) verb<sub>1</sub>]-*te* [(clause) verb<sub>2</sub>]. It indicates that the action of the first verb (verb<sub>1</sub>) began before the action of the second verb (verb<sub>2</sub>).<sup>504</sup>

父母爾 毛能波須價尔 已麻叙久夜志伎  
 TITI PAPA-ni mônö p<sup>505</sup>-as<sup>506</sup>-u kê-n-i-te ima Nsö kuyasi-kî  
 father mother-LOC thing say-NEG-INF come/INF-  
 PERF-INF-GER now EMPH regret-ATT  
 I did not say things to my parents, and now [I] came here and [I]  
 regret [it].  
 (MYS XX: 4337-Su)

- 
503. This clause is a *kakari musubi* structure, ending in the attributive instead of the final form because of the emphatic particle *Nze* (WOJ *Nsö*); I discuss *kakari musubi* structures above in Section 2.2.5.3.3.8.13).
504. As discussed above (Section 2.2.5.3.3.8.10), the action of the first verb may or may not end before the second action begins.
505. This is analyzed as the verb *ip-* 'say' with the initial vowel deleted following
506. The character 須 *su* does not indicate prenasalization; *-aN-* is expected here.

已波比<sup>3</sup>麻多祢

ipap-î-te mat-ane

perform ritual-INF-GER wait-DES

I wish [you] would perform the rituals [to keep me safe] and wait [for me].

(MYS XX: 4339-Su)

2.3.6.2.3.3.6.9 *The Coordinative Auxiliary -tutu.* The coordinative auxiliary *-tutu*

is a clause final morpheme in SEOJ. The function of this morpheme is to indicate simultaneous action. This morpheme is attested only once in SEOJ.

多妣由久阿礼波 美都都志努波牟

taNpî yuk-u are pa mî-tutu sinôp-am-u

trip go-ATT I TOP see-CORD yearn-TENT-FIN

I, who am going on a trip, will look [at a picture of my wife] and will yearn [for her].

(MYS XX: 4327-To)

2.3.6.2.3.3.6.10 *The Active Final Suffix -u.* The suffix *-u* is a sentence final

marker indicting the final form of active verbs (cf., the stative final suffix *-i* Section 2.3.6.2.3.3.6.4 above).

等伎騰吉乃 波奈波佐家登母 奈爾須礼會  
波波登布波奈乃 佐吉泥己受祁牟

tökî-N-tökî-nö pana pa sak-ê-Ntömö nani s-ure sö<sup>507</sup> papa tö p<sup>508</sup>-u  
pana-nö sak-î-Nte-kö-Ns-u-kêm-u

time-COP-time-GEN flower TOP bloom-EVD-CONC what  
do-EVD EMPH mother PART say-ATT flower-NOM

bloom-INF-go out/INF-come-NEG-INF<sup>509</sup>-TENT/PAST-FIN

Although when in season flowers bloom, why is it that the flower  
called "mother" probably did not come out and bloom?

(MYS XX: 4323-To)

多妣由久阿礼波 美都都志努波牟

taNpî yuk-u are pa mî-tutu sinôp-am-u

trip go-ATT I TOP see-CORD yearn-TENT-FIN

I, who am going on a trip, will look [at a picture of my wife] and  
will yearn [for her].

(MYS XX: 4327-To)

#### 2.3.6.2.3.3.6.11 *The Attributive Suffix -u/-uru.* As discussed in Sections

2.3.4.2.3.1.6.9 and 2.3.5.2.3.3.6.12, the EOJ attributive is perhaps the most frequently discussed feature of EOJ grammar, because the attributive ending for consonant final verbs is often *-ô* (*-o* following labial consonants). Hino (2004) claims that WOJ /u/ always corresponds with SEOJ /u/, which would suggest that the attributive form in SEOJ is *-u* and not *-ô*.<sup>510</sup> My study on the EOJ attributive forms, discussed above, also included

---

507. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.

508. This is analyzed as the verb *ip-* 'say' with the initial vowel deleted following a word ending in a vowel.

509. The infinitive *-u* is only found after *-aN-*.

510. Many of Hino's (2004) examples for correspondences between WOJ /u/ and EOJ /ô/ in other dialects

data from SEOJ. I found twelve examples of the attributive in SEOJ, ten of which show the attributive ending as *-u*, and two involve examples written with the character 努, which can be read as either *nô* or *nu*.<sup>511</sup> Thus, the SEOJ attributive suffix following consonant final verbs is *-u* in most cases and undeterminable *-ô* or *-u* in two cases. More research is needed to further our understanding of SEOJ phonology, and for the time being, I treat the SEOJ attributive as developing in the same manner as the WOJ attributive form (Section 2.2.5.3.3.8.14).

Examples of the attributive form in SEOJ are presented below.

和我知知波波波 和須例勢努加毛

wa-Nka titi papa pa wasure se-n-ô<sup>512</sup> kamô

I-GEN father mother TOP forget/NML do-NEG-ATT EMPH

I will not forget my mother and father.<sup>513</sup>

(MYS XX: 4344-Su)

等伎騰吉乃 波奈波佐家登母 奈爾須礼會

波波登布波奈乃 佐吉泥己受祁牟

tökî-N-tökî-nô pana pa sak-ê-Ntömö nani s-ure sô<sup>514</sup> papa tö p<sup>515</sup>-u

pana-nô sak-î-Nte-kö-Ns-u-kêm-u

---

of EOJ are based on the attributive forms of verbs.

511. All data for this study on the EOJ attributive, including consonant and vowel final stems, are presented in Appendix D.
512. The character 努 can represent *nu* or *nô*, I am reading it as *nô* here, following Mizushima (1972: 201).
513. Here the attributive form is used as a *kakari musubi* structure (see Section 2.2.5.3.3.8.13).
514. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.
515. This is analyzed as the verb *ip-* 'say' with the initial vowel deleted following a word ending in a vowel.

time-COP-time-GEN flower TOP bloom-EVD-CONC what  
do-EVD EMPH mother PART say-ATT flower-NOM  
bloom-INF-go out/INF-come-NEG-INF<sup>516</sup>-TENT/PAST-FIN  
Although when in season flowers bloom, why is it that the flower  
that is called "mother" probably did not come out and bloom?  
(MYS XX: 4323-To)

2.3.6.2.3.3.6.12 *The Evidential Suffix -E/-ure*. The SEOJ evidential form is *-ure* following vowel stem verbs and either *-ê* or *-ë* following consonant stem verbs; I use the symbol *-E* here to indicate that either /ê/ or /ë/ can occur but it is not possible to determine which "type" of /e/ is present. Following the discussion for the WOJ evidential form (Section 2.2.5.3.3.8.10), I propose that the evidential form for SEOJ also developed from the stative extension *-ur-* followed by the evidential suffix *-E*.

The evidential form can be used as a sentence final form in *kakari musubi* structures, and it can also be followed by the conjunctive suffix *-Npa* (Section 2.3.6.2.3.3.6.5) or the concessive suffix *-Ntö/-Ntömo* (Section 2.3.6.2.3.3.6.6). Examples of the evidential form are presented below:

---

516. The infinitive *-u* is only found after *-aN-*.

等伎騰吉乃 波奈波佐家登母 奈爾須礼會

波波登布波奈乃 佐吉泥己受祁牟

tökî-N-tökî-nö pana pa sak-ê-Ntömö nani s-ure sö<sup>517</sup> papa tö p<sup>518</sup>-u

pana-nö sak-î-Nte-kö-Ns-u-kêm-u

time-COP-time-GEN flower TOP bloom-EVD-CONC what

do-EVD EMPH mother PART say-ATT flower-NOM

bloom-INF-go out/INF-come-NEG-INF<sup>519</sup>-TENT/PAST-FIN

Although when in season flowers bloom, why is it that the flower called "mother" probably did not come out and bloom?

(MYS XX: 4323-To)

和例久礼等 和我知知波波波 和須例勢努加毛

ware k-ure-Ntö wa-Nka titi papa pa wasure se-n-ô<sup>520</sup> kamô

I come-EVD-CONC I-GEN father mother TOP

forget-CAUS-PERF-ATT EMPH

Although I came [far away], I will not forget my mother and father.

(MYS XX: 4344-Su)

2.3.6.2.3.3.6.13 *The Suppositional Suffix -urasi*. There is only one example for this suffix in SEOJ. In WOJ, *-uras-* is a suppositional suffix often rendered into English as "it seems that..." (Section 2.2.5.3.3.7.4); I assume this suffix has the same function in SEOJ.

---

517. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.

518. This is analyzed as the verb *ip-* 'say' with the initial vowel deleted following a word ending in a vowel.

519. The infinitive *-u* is only found after *-aN-*.

520. The character 努 can represent *nu* or *nô*, I am reading it as *nô* here, following Mizushima (1972: 201).

和我都麻波 伊多久古非良之  
 wa-Nka tuma pa ita-ku kôpî-rasi<sup>521</sup>  
 I-GEN spouse TOP dear-INF love-SUP  
 It seems that my wife loves me dearly.  
 (MYS XX: 4322-To)

#### 2.3.6.2.3.4 Summary

Table 2.35 below lists the SEOJ inflectional morphemes in alphabetical order, and provides information as to how they affix to verbs and presents their functions.

Table 2.35: Summary of SEOJ Inflectional Morphemes

Morpheme	Type	Function
-am-	suffix (Group IV)	tentative
-amas-	suffix (Group III)	subjunctive
-an-	suffix (Group I)	negative
-ane	sentence final suffix (Group V)	desiderative
-aNpa	clause final suffix (Group V)	hypothetical conditional
-aNs-	suffix (Group I)	negative
-ar-/er-	auxiliary (Group VI)	progressive
-as-	suffix (Group I)	honorific
-ë	sentence final suffix (Group V)	imperative
-E/-ure	clause or sentence final suffix (Group V)	evidential
-î	suffix	infinitive
-i	sentence final suffix (Group V)	stative final
-kêm-	auxiliary (Group III)	tentative past
-kêr-	auxiliary (Group III)	modal past

---

521. In WOJ the expected form is *kôp-urasi*.

mas-	auxiliary (Group I)	honorific
-n-	auxiliary (Group II)	perfective
na...sö	circumfix	negative imperative
-Npa	clause final suffix (Group V)	conjunctive
-Ntö	clause final suffix (Group V)	concessive
sa-	prefix	focus
-si	clause final auxiliary (Group V)	past tense
-t-	auxiliary (Group II)	perfective
-t-	auxiliary (Group II)	progressive perfective
-te	clause final auxiliary (Group V)	subordinative gerund
-tutu	clause final auxiliary (Group V)	coordinative
-u	sentence final suffix (Group V)	active final
-u/-uru	clause or sentence final suffix (Group V)	attributive
-uram-	suffix (Group I)	tentative
-urasi	clause or sentence final suffix (Group V)	supposition
uti-	preverb	spontaneous action

### 2.3.7 UEOJ: EOJ Poems of Unknown Origin

Many poems written in EOJ are classified as being of "unknown origin" (UEOJ).

Poems considered NEOJ, CEOJ, or SEOJ, are placed into those groups because of certain identifying markers, typically place names. UEOJ cannot be thought of as a single dialect, as UEOJ data is potentially a mix of NEOJ, CEOJ, SEOJ and perhaps even unknown Eastern dialects. The danger of lumping all unknown data together and analyzing them as if they come from a homogeneous dialect is that, since it is not entirely

clear what is being compared, it is also not clear what the results indicate. However, since the bulk of EOJ data cannot yet be classified as a member of any known dialect, and since these data contain Eastern features that are not found elsewhere in EOJ, the analysis of EOJ would not be complete if these data were discarded. I therefore analyze the UEOJ data together but do not consider them to be from a homogeneous source.

As stated above, more research is needed to further our understanding of EOJ; once we better understand the differences between NEOJ, CEOJ, and SEOJ, it may be possible to identify the dialect of some of these UEOJ poems based on linguistic features (i.e., phonology, morphology, lexical items). For the purpose of this study, poems that can not be classified by dialect are treated in this section.<sup>522</sup>

#### 2.3.7.1 UEOJ Phonology

As stated in Section 2.3.4.1, since EOJ phonology is dependent on our understanding of WOJ phonology, it is necessary to discuss UEOJ phonology in terms of WOJ.

---

522. Table 2.21 above shows which poems correspond to each EOJ dialect area and which are considered poems of unidentified origin (UEOJ).

### 2.3.7.1.1 UEOJ Consonants

The UEOJ consonants are identical to WOJ and NEOJ consonants (Sections 2.2.4.1.1 and 2.3.4.1.1), as shown in Table 2.36. The phonetic values for these consonants are the same as those presented above for WOJ and NEOJ.

Table 2.36: UEOJ Consonants

	Labial	Dental		Palatal	Velar
Voiceless obstruents	p	t	s		k
Prenasalized voiced obstruents	Np [ᵐb]	Nt [ᵐd]	Ns [ᵐz]		Nk [ᵐg]
Nasals	m	n			
Liquid		r [r]			
Glides	w			y	

### 2.3.7.1.2 UEOJ Vowels

As was the case with the three EOJ dialects presented above, the description of vowels is more complicated than the description of consonants. A complete study of the phonology has yet to be presented, and our understanding of UEOJ vowels relies on our understanding of WOJ vowels.

### 2.3.7.1.2.1 /î/, /i/, and /i/

The vowels /î/, /i/, and /i/ are all attested in UEOJ. The vowels /î/ and /i/ merge to /i/ following coronals.<sup>523</sup> In most cases there is a one-to-one correspondence between these vowels in WOJ and UEOJ, however, Hōjō (1966: 409-410) presents examples demonstrating the following correspondences:

WOJ	:	UEOJ
î	:	u
i	:	e
ï	:	ë
ï	:	u

The first correspondence is illustrated by the following example:

WOJ /î/	:	UEOJ /u/
<i>ikî-N-tuk-</i> 'breathe' <sup>524</sup> (KK 42)	:	<i>iku-N-tuk-</i> 'id.' (MYS XIV: 3458-U)

This example, however, is problematic: *ikî-N-tuk-* is also attested in EOJ (MYS XIV: 3527-U).<sup>525</sup> In addition, the syllable *kî* is well attested in the UEOJ poems, and this is the

---

523. As stated in Section 2.3.4.1.2.1 above, this merger happened in WOJ, and may or may not have also occurred in EOJ. WOJ orthography does not allow for a distinction between /î/ and /i/ following coronals, and since EOJ is written in terms of WOJ orthography, this merger happens in EOJ by default.

524. This can have the connotation of either breathing normally or breathing painfully, depending on context.

525. When citing EOJ data, I indicate the location of the poem by with an abbreviation following the poem number, e.g., "MYS XIV: 3388-Hi", where "Hi" indicates Hitachi. All UEOJ data are indicated with an "U" following the poem number. Although this is somewhat redundant in this section as all UEOJ data are indicated with an U, there are also examples presented in this section from known EOJ dialects for contrastive purposes; thus all data with an U represent UEOJ data.

only example of WOJ *kî* corresponding to UEOJ *ku*. It is possible that the UEOJ poems that *ikî-N-tuk-* and *iku-N-tuk-* are attested in are from different EOJ dialects, and this could account for the two different forms. However, there is no way to be certain if these words are from different dialects or not. If these forms are from the same dialect, it is not possible to explain why there are two different forms, unless *ikî-N-tuk-* is the result of contamination from WOJ or that *iku-N-tuk-* is a misspelling or scribal error. If these words are, in fact, from different EOJ dialects, the difference between them may be morphological rather than phonological. This word can be further analyzed as *ikî* 'breath' + *N* 'COP' + *tuk-* 'take'. Omodaka (1967: 68) claims that *ikî* 'breath' is related to the verb *ik-* 'to live'. Although this may be a folk etymology, if he is correct then *ikî-N-tuk-* can be explained as coming from the nominalized form of the verb: *ik-* 'live' + *-î* 'NML' > *ikî* 'breath'. The form *iku-N-tuk-* would be formed not from the nominalized form of the verb *ik-* but the attributive form: *ik-* 'live' + *-u* 'ATT' > *iku*.<sup>526</sup> In other words, the two words formed through different morphological processes.

The next correspondence, WOJ /i/ : UEOJ /e/ is found in the following example:

WOJ /i/	:	UEOJ /e/
<i>sî-mîNtu</i> 'clear water' (NS)	:	<i>se-mîNtô</i> 'id.' (MYS XIV: 3546-U)

---

526. Note that the attributive form can be used as a nominalized form of the verb as discussed in Sections 2.2.5.3.3.8.14 (WOJ), 2.3.4.2.3.1.6.9 (NEOJ), 2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ).

This is the only example of WOJ /i/ corresponding to UEOJ /e/. In addition, there are 168 examples of WOJ *si* corresponding to UEOJ *si* including fifteen of WOJ *sim...* corresponding to UEOJ *sim...*, and 46 of WOJ *se* corresponding to UEOJ *se*. It does not seem likely that the correspondence of WOJ /i/ : UEOJ /e/ here is phonologically motivated.

The next correspondence presented by Hōjō (1966: 410) is also attested only once.

WOJ /i/	:	UEOJ /ë/
<i>kami</i> 'gods' (KK 2)	:	<i>kamë</i> 'id.' (MYS XIV: 3566-U)

However, *kami* is also attested (MYS XX: 4426-U), as is *kamu* (MYS XX: 3516-U), discussed below. For the example *kamë*, Mizushima (1972: 178) notes that this is spelled as both 加未 (*kami*) and 加米 (*kamë*) in this poem depending on the textual variant. Since all other cases WOJ *mi* corresponds to UEOJ *mi*, it is likely that *kami* is the correct form and *kamë* is a misspelling.

As for the final correspondence, between WOJ /i/ and UEOJ /u/, Hōjō (1966: 410) gives the following examples:

WOJ /i/	:	UEOJ /u/
<i>kamī</i> 'gods' (KK 2)	:	<i>kamu</i> 'id.' (MYS XX: 3516-U)
<i>kôpīsi-</i> 'lovely' (MYS XVIII: 4119)	:	<i>kôpusi-</i> 'id.' (MYS XIV: 3476-U)
<i>kukī</i> 'stem' <sup>527</sup>	:	<i>kuku</i> 'id.' (MYS XIV: 2444-U)

I reject the example of WOJ *kukī* : UEOJ *kuku* since the WOJ form is not phonetically attested. I treat the remaining forms as free forms being compared to bound forms as discussed above (Section 2.3.5.1.2.1). Thus, the difference here is morphological and not phonetic.

#### 2.3.7.1.2.2 /ê/, /e/, and /ë/

The mid front vowels /ê/ and /e/ and the diphthong /ë/ are all attested in UEOJ.

Hōjō (1966: 412) notes two cases where WOJ /e/ does not correspond to UEOJ /e/:

WOJ /e/	:	UEOJ /ô/
<i>ter-</i> 'shine' (K III: 5)	:	<i>tôr-</i> 'id.' (MYS XIV: 3561-U)

WOJ /e/	:	UEOJ /a/
<i>yeNta</i> 'branch' (KK 98)	:	<i>yaNte</i> 'id.' (MYS XIV: 3493-U) <sup>528</sup>

---

527. As discussed in Section 2.3.5.1.2.1, this form provided by Hōjō is not attested in WOJ.

528. Mizushima (1972: 184) presents two versions of this UEOJ poem: in the first, 'branch' is written as 夜提 *yaNte* and in the second as 要太 *yeNta*, however, the version with *yeNta* contains no other EOJ features, and *yaNte* is assumed to be the correct EOJ examples.

Both examples are attested only once, and in all other cases WOJ *te* corresponds to UEOJ *te* and WOJ *ye* to UEOJ *ye*. With only one example for each correspondence, it is not possible to offer any explanation. In all other cases WOJ /ê/, /e/, and /ë/ correspond to UEOJ /ê/, /e/, and /ë/, respectively.

### 2.3.7.1.2.3 /ô/, /o/, and /ö/

The vowels /ô/, /o/, and /ö/ are all attested in UEOJ. Hōjō (1966: 413) presents two examples where there is not a one-to-one correspondence between these vowels in WOJ and UEOJ:

WOJ /o/	:	UEOJ /u/
<i>popomar</i> - 'contain, fill'	:	<i>pupumar</i> - 'id.' (MYS XIV: 3572-U)
(MYS XX: 4387-Ss)		

WOJ /ö/	:	UEOJ /ô/
<i>nunö</i> 'cloth' (see discussion)	:	<i>ninô</i> 'id.' (MYS XIV: 3513-U)

First, Hōjō's first example is not WOJ /o/ corresponding to UEOJ /o/ as he claimed; the example with /o/ is found in CEOJ (Shimōsa) and is not attested in WOJ.<sup>529</sup> Elsewhere

---

529. It may be worth investigating the correspondences between the vowels of the various EOJ dialects. However, for the purpose of this study I am limiting the discussion to correspondences between WOJ and each EOJ dialect and UEOJ and am not considering correspondences between the various forms of EOJ.

WOJ *po* corresponds to UEOJ *po* and WOJ *pu* corresponds to EOJ *pu*.<sup>530</sup> Thus, the correspondence claimed by Hōjō is rejected.

As for the second example, *nunö* is not attested phonetically in WOJ and a claim about the correspondence of these vowels cannot be made, since we don't know what to compare.<sup>531</sup> Since these two examples have been rejected, it can now be stated that WOJ /ô/, /ö/, and /o/ corresponds to UEOJ /ô/, /ö/, and /o/, respectively.

#### 2.3.7.1.2.4 /a/

Hōjō (1966: 408) presents examples showing a correspondence between WOJ /a/ and UEOJ /ê/ or /e/.

WOJ /a/	:	UEOJ /ê/
<i>kötönöpa</i> 'word' (see discussion)	:	<i>kötönöpê</i> 'id.' (MYS XIV: 3456-U)
WOJ /a/	:	UEOJ /e/
<i>sawasawa</i> 'rustling' (K III: 8)	:	<i>sawesawe</i> 'id.' (MYS XIV: 3481-U)
<i>yeNta</i> 'branch' (KK 98)	:	<i>yaNte</i> 'id.' (MYS XIV: 3493-U)

The first example is not attested phonetically as either *kötönöpa* or *kötönpa* in WOJ, where typically *kötö* 'word' (K I: 31) is used. Thus, UEOJ *kötönöpê* has no cognate in

---

530. There are 34 cases of UEOJ *po* and 53 of UEOJ *pu*.

531. Omodaka et al (1967: 554) notes that we cannot be sure whether the second syllable is *nö* or *nô*. If this word is one morpheme, then the vowel of the second syllable has to be /ô/ because /u/ and /ö/ do not occur together in the same root. If this word is historically bimorphemic then we cannot be certain.

WOJ. The second example is problematic: WOI *sawisawi* 'noisy' (MYS V: 503) could also be compared here, so the correspondence could be WOI /a/ to UEOJ /e/ or WOI /i/ to UEOJ /e/. These words are onomatopoeic expressions, and may not be the best source for regular phonemic correspondences. The third example, 'branch', will be rejected for reasons stated above (Section 2.3.7.1.2.2).

Next, Hōjō presents one example of WOI /a/ corresponding to UEOJ /u/:

WOI /a/	:	UEOJ /u/
<i>nayam</i> - 'worry' (XVII: 4094)	:	<i>nayum</i> - 'id.' (MYS XIV: 3533-U)

However, *nayam*- is also attested (MYS XIV: 3557-U), so we have two competing forms.

It is, of course, possible that *nayam*- and *nayum*- are members of two different dialects, but this is not something we can prove. At any rate, since there is only one example of *nayum*- in UEOJ, we cannot make any generalizations about the correspondence between WOI /a/ and UEOJ /u/ here.

In all other cases, there is a one-to-one correspondence between WOI /a/ and UEOJ /a/.

### 2.3.7.1.2.5 /u/

Hōjō (1966: 410-411) presents examples of WOJ /u/ corresponding to UEOJ /a/, /i/, and /ô/. First, he presents one example of WOJ /u/ : UEOJ /a/:

WOJ /u/	:	UEOJ /a/
<i>kayôp-u</i> 'pass-ATT' (MYS II: 148)	:	<i>kayôp-a</i> 'id.' (MYS XIV: 3526-U)

The UEOJ example is the attributive form of the verb, modifying a noun in this example.

It is an interesting example, because it is the only example of the attributive form of the verb marked with *-a* following a consonant stem verb.<sup>532</sup>

The next example shows a correspondence of WOJ /u/ to UEOJ /i/:

WOJ /u/	:	UEOJ /i/
<i>nunö</i> 'cloth' (see discussion)	:	<i>ninô</i> 'id.' (MYS XIV: 3513-U)

As noted above, *nunö* is not attested phonetically in WOJ, so the WOJ form is unknowable, and I reject this example accordingly.

Last, Hōjō (1966) notes the following correspondence:

WOJ /u/	:	UEOJ /ô/
<i>si-mîNtu</i> 'clear water' (NS)	:	<i>se-mîNtô</i> 'id.' (MYS XIV: 3546-U)

---

532. See Section 2.3.5.2.3.3.6.5 for examples of attributive *-a* following negative *-an* in CEOJ.

However, in all other cases WOJ /Ntu/ corresponds to UEOJ /Ntô/. In fact, /Ntu/ is a more common syllable in UEOJ than /Ntô/; there are 33 occurrences of /Ntu/ compared to only two of /Ntô/. In addition, there are 87 cases of /tu/ and 21 of /tô/. This shows that the sequence /Ntu/ and /tu/ are not only possible in UEOJ but are also more common.

As discussed for NEOJ and CEOJ above, there are also examples showing WOJ /u/ corresponding to UEOJ /o/ involving the attributive form of the tentative suffix *-am-*. Since there are 16 examples, in the interest of space I will list only the poem numbers and not the full examples:

Poems with *-am-u*

MYS XIV: 3442, 3472, 3474, 3477, 3513, 3515, 3520, 3528, 3536,  
3549, 3556, 3564, 3566

Poems with *-am-o*

MYS XIV: 3447, 3472, 3473

Of the 16 examples 3 have /o/ and the remaining 13 have /u/. As argued above, such correspondences may show an allophonic variant of /u/ following a labial consonant, which may be more round and/or more low than /u/ in other environments, and the scribes simply recorded the vowel with the closest sounds available to them. I return to this when discussing the attributive form in Section 2.3.7.3.3.3.6.12.

### 2.3.7.1.3 Morphophonemic Rules

#### 2.3.7.1.3.1 Constraints on Consonant Clusters

UEOJ does not allow consonant clusters. There are some prenasalized consonants, discussed above (Section 2.3.4.1.1.2).

#### 2.3.7.1.3.2 Constraints on Vowel Clusters

UEOJ does not allow vowel clusters. In WOJ, if two vowels came together one of two processes occurred to prevent a vowel sequence within a word: contraction or monophthongization (see Section 2.2.4.3.3). As discussed above (Section 2.3.4.1.3), this issue has not been fully explored for EOJ, and it is not clear what processes, if any, occur here. My discussion here should be treated as a preliminary study and, as I have not yet considered all possible examples, and am simply presenting some examples and observations.

2.3.7.1.3.2.1 Vowel Sequences in Nouns. I compared bound and free nouns in UEOJ to determine if their development can indicate anything about the processes of contraction or monophthongization in CEOJ. I am assuming that free nouns developed from bound nouns plus an unbinding morpheme *\*-i* in UEOJ just as in WOJ; this

assumption may not be correct. The examples of bound and free noun forms in CEOJ are presented below:

WOJ	:	UEOJ
free: <i>tuki</i> 'moon' (KK 28)	:	<i>tuku</i> 'id.' (MYS XIV: 3476-U)
bound: <i>tuku-</i> (KK 21)	:	<i>tuku-</i> (MYS XIV: 3565-U)
free: <i>pune</i> 'boat' (KK 52)	:	<i>pune</i> 'id.' (MYS XIV: 3650-U)
bound: <i>puna-</i> (KK 86)	:	not attested
free: <i>kami</i> 'gods' (KK 2)	:	<i>kami</i> 'id.' (MYS XX: 4426-U)
		<i>kamu</i> 'id.' (MYS XX: 3516-U)
bound: <i>kamu-</i> (KK 13)	:	not attested
free: <i>amë</i> 'rain' (MYS XII: 4123)	:	<i>amë</i> 'id.' (MYS XIV: 3561-U)
bound: <i>ama-</i> (XV: 3782)	:	not attested
free: <i>kaNse</i> 'wind' (KK 13)	:	<i>kaNse</i> 'id.' (MYS XIV: 3509-U)
bound: <i>kaNsa-</i> (MYS III: 434)	:	not attested
free: <i>kaNkë</i> 'shade, reflection'	:	<i>kaNkê</i> 'id.' (MYS XIV: 3447)
		(MYS XIX: 4220)
bound: <i>kaNka-</i> (KK 90)	:	not attested

Bound forms are only attested in UEOJ in the first two examples. For the first example, the bound form and the free form are the same shape (*tuku-* and *tuku*) so the free form was not formed from the bound form as is the case for WOJ. For the second example, the bound and free forms for 'boat' are identical to their counterparts in WOJ. This raises the question of whether bound and free forms are formed the same way in

UEOJ as in WOJ, or if these forms were borrowed from WOJ. For the remaining examples only the free forms are attested, so it is not possible to determine whether the bound form existed at all and was simply not recorded, or, if there was a bound form, it is not possible to reconstruct its shape. Therefore, there is not enough evidence to claim that either process of contraction or monophthongization played a role in the formation of bound versus free nouns. The issue of bound versus free forms of nouns in UEOJ will be set aside for further research.

2.3.7.1.3.2.2 Vowel Sequences in Verbs. Next, I considered transitive and

intransitive verbs pairs found in UEOJ to see if monophthongization played a role in their formation, as is the case for WOJ in such verb pairs.<sup>533</sup> The examples from UEOJ are as follows:

*tök-* 'untie (v.t.)' (MYS XX: 3465-U)/*tökê-* 'untie (v.i.)' (MYS XIV: 3483-U)

*panar-* 'separate (v.t.)' (MYS XIV: 3496-U)/*panare-* 'separate (v.i.)' (MYS XIV: 3480-U)

*nak-* 'cry (v.i.)' (MYS XIV: 3458-U)/*nakE-*<sup>534</sup> 'cry (v.t.)' (MYS XIV: 3471-U)

*pap-* 'stretch (v.i.)' (MYS XIV: 3507-U)/*papê-* 'stretch (v.t.)' (MYS XIV: 3525-U)

---

533. See discussion in Section 2.2.4.3.3.2.

534. See previous footnote.

The verbs on the left have consonant final stems, those on the right with vowel final stems formed with the transitivity flipper.<sup>535</sup> Two of these verbs stems end in /ê/, one in a neutral /e/, and two in /E/ (which could be either /ê/or /ë/). Thus, there is insufficient evidence to determine whether monophthongization played a role in the development of transitive versus intransitive verb pairs formed with the transitivity flipper. This issue will be set aside for further research.

#### 2.3.7.1.4 Vowel Assimilation

Although WOJ has a constraint on back and non-back vowels occurring in the same morpheme, this has not been sufficiently studied for EOJ, and this issue will be set aside for further research.

#### 2.3.7.2 UEOJ Verbal Morphology

##### 2.3.7.2.1 The Shape of Pre-EOJ Verb Roots

In order to determine the shape of EOJ verb roots, I compiled a data base of all attested verbs, grouped by form and meaning. I found only 22 reconstructable verb roots, however, in some cases one verb supporting the reconstruction of the verb root is in one

---

535. Discussed below in Section 2.3.7.2.2.3.

EOJ dialect and another verb supporting its reconstruction is in another EOJ dialect or the origin is unknown; the data are too few if reconstructions are based solely on verbs attested in each dialect. For the purpose of the discussion below, I give examples where both verbs are attested within UEJOJ where possible, and otherwise indicate cases where supporting evidence for the reconstruction is found elsewhere. As for the shape of the verb roots, some can be reconstructed as consonant final and others as vowel final, although it is not always possible to reconstruct verb roots.

#### 2.3.7.2.2 Derivational Morphemes

##### 2.3.7.2.2.1 The Derivational Suffix \*-s-

The derivational suffix \*-s- is attested twice in UEJOJ, where it functions as a transitivity or causative marker. It is attested with the same verb root as shown below:

*yös-* < \**yö-s-* 'pass (v.t.)' (MYS XIV: 3454-U) [cf. *yör-* < \**yö-ör-* 'pass (v.i.)' (MYS XIV: 3446-U) and *yösör-* < \**yö-s-ör-* 'pass' (MYS XIV: 3468-U)]  
*yösör-* < \**yö-s-ör-* 'pass' (MYS XIV: 3468-U) [cf. *yör-* < \**yö-ör-* 'pass (v.i.)' (MYS XIV: 3446-U) and *yöse-* < \**yö-s-E-* 'pass (v.t.)' (MYS XIV: 3384-Ss)<sup>536</sup>]

---

536. The verb *yöse-* is found in CEOJ (Shimōsa).

As mentioned above (Section 2.3.4.2.2.1), as there is no evidence for either a vowel final or vowel initial suffix in EOJ, I reconstructed as simply \*-s-.

This verbal suffix can be followed by the intransitive suffix \*-Vr-, as shown in the examples *yösör-* presented above. It seems contradictory, however, for the transitive suffix to be followed by the intransitive suffix.

#### 2.3.7.2.2.2 The Derivational Suffix \*-Vr-

The suffix \*-Vr-, used to create the intransitive forms of verbs, is a derivational morpheme used in the formation in the following verbs in UEOJ:

*sakar-* < \**sak-Vr-* 'separate (v.i.)' (MYS XIV: 3502-U) [cf. *sakë-*  
< \**sak-E-* 'separate (v.t.)' (MYS XIV: 3502-U)]  
*yör-* < \**yö-Vr-* 'pass (v.i.)' (MYS XIV: 3446-U) [cf. *yös-* < \**yö-s-*  
'pass (v.t.)' (MYS XIV: 3454-U) and *yöse-* < \**yö-s-E-* 'pass  
(v.t.)' (MYS XIV: 3384-Ss)<sup>537</sup>]  
*yösör-* < \**yö-s-Vr-* 'pass' (MYS XIV: 3468-U) [cf. *yös-* < \**yö-s-*  
'pass (v.t.)' (MYS XIV: 3454-U) and *yöse-* < \**yö-s-E-* 'pass  
(v.t.)' (MYS XIV: 3384-Ss)]

In one example the suffix occurs as *-ar-* and in the other two as *-ör-*, thus I reconstruct

\*-Vr- for this morpheme, where "V" represents a vowel that cannot be reconstructed.<sup>538</sup>

---

537. The verb *yöse-* is found in CEOJ (Shimōsa).

538. NEOJ has only one example, for which \*-ör- is reconstructed (Section 2.3.4.2.2.2). In CEOJ \*-Vr- is also reconstructed (Section 2.3.5.2.2). There are no examples of this morpheme in SEOJ.

This suffix is used to create the intransitive forms of verbs, and is used with one other derivational suffix, \*-s- described above.

#### 2.3.7.2.2.3 The Derivational Suffix \*-E-/ï-

There are 11 examples of verbs formed with the derivational suffix in UEOJ.<sup>539</sup>

The reconstruction of this morpheme is somewhat more complicated for UEOJ than presented above, as verb stems formed with this suffix can end in /ë/, /ê/, /e/, /E/<sup>540</sup>, or /ï/.

##### Verb stems ending in /ë/

*kapë*<sup>541</sup> < \**kap-ë*- 'change (v.t.)' (MYS XIV: 3482-U) [cf.

*kapar*- < \**kap-Vr*- 'change (v.i.)' (MYS XX: 4342-Su)<sup>542</sup>]

*sakë*- < \**sak-ë*- 'separate (v.t.)' (MYS XIV: 3465-U) [cf. *sakar*-

< \**sak-Vr*- 'separate (v.i.)' (MYS XIV: 3502-U)

---

539. There may be more examples, however, I am only considering examples involving verb pairs (or sets) where it is possible to reconstruct a verb root for the verbs, plus additional morphemes for each member of the pair (or set). Where there is only one verb and no transitive/intransitive counterpart, it is not possible to prove whether this morpheme is involved in its formation or not.

540. The symbol /E/ is used here to denote a vowel of unknown *kôruï* or *otusuri* value (i.e., either /ê/ or /ë/), but the vowel is in an environment where the distinction exists between the two vowels.

541. This is also attested as *kapê*-; listed with verb stems ending in /ê/.

542. The intransitive verb is from SEOJ.

Verb stems ending in /ê/

*kapê*<sup>543</sup> < \**kap-ê*- 'change (v.t.)' (MYS XIV: 3494-U) [cf.  
*kapar*- < \**kap-Vr*- 'change (v.i.)' (MYS XX: 4342-Su)<sup>544</sup>]  
*tökê*- < \**tök-ê*- 'untie (v.i.)' (MYS XIV: 3483-U) [cf. *tök*-  
< \**tök*- 'untie (v.t.)' (MYS XIV: 3465-U)]  
*papê*- < \**pap-ê*- 'stretch (v.t.)' (MYS XIV: 3525-U) [cf. *pap*-  
< \**pap*- 'stretch (v.i.)' (MYS XIV: 3507-U)]

Verb stems ending in /e/

*panare*- < \**panar-e*- 'separate (v.i.)' (MYS XIV: 3480-U) [cf.  
*panar*- < \**panar*- 'separate (v.t.)' (MYS XIV: 3496-U)]  
*pure*- < \**pur-e*- 'touch (v.t.)' (MYS XIV: 3537-U) [cf. *pur*-  
< \**pur*- 'touch (v.i.)' (MYS XX: 4328-Sa)<sup>545</sup>]  
*wasure*- < \**wasur-e*- 'forget' (MYS XIV: 3515-U) [cf. *wasur*-  
< \**wasur*- 'forget' (MYS XIV: 3394-Hi)<sup>546</sup>]

Verb stems ending in /E/

*nakE*- < \**nak-E*- 'cry (v.t.)' (MYS XIV: 3471-U) [cf. *nak*-  
< \**nak*- 'cry (v.i.)' (MY S XIV: 3458-U)]

Verb stems ending in /i/

*kôpî* < \**kôp-î*- 'love, feel' (MYS XIV: 3477-U) [cf. *kôp*-  
< \**kôp*- 'id.' (MYS XIV: 3476-U)]  
*opî*- < \**op-î*- 'live' (MYS XIV: 3452-U) [cf. *op*- < \**op*- 'live'  
(MYS XIV: 3488-U)]

At this time, because we lack sufficient understanding of (U)EOJ phonology and morphophonological processes, it is not possible to determine an underlying form for this suffix. I therefore leave this morpheme as \*-î- and \*-E-, where E can be /ê/, /ë/, or a

---

543. This is also attested as *kapê*-; listed with verb stems ending in /ê/.

544. The intransitive verb is from SEOJ.

545. The intransitive verb is from CEOJ.

546. The verb *wasur*- is from CEOJ.

neutral /e/ following coronals. It is not possible to predict when the transitivity flipper will be realized as \*-i- and when it will be realized as \*-E-.

This suffix functions as a transitivity flipper, in most cases changing the verb from either transitive to intransitive or intransitive to transitive, but in some cases the function is unclear (See Section 2.3.4.2.2.3). In UEOJ, the transitivity flipper directly follows the verb root and is not combined with other derivational suffixes.

#### 2.3.7.2.2.4 Summary

Table 2.37 below lists the UEOJ derivational morphemes and their functions.

Table 2.37: Summary of UEOJ Derivational Morphemes

Morpheme	Function
*-s-	transitivity or causative marker
*-Vr-	intransitivity marker
*-i-/-E-	transitivity flipper in some cases, function unknown in others

#### 2.3.7.2.3 Inflectional Morphemes

In addition to derivational morphemes, UEOJ also has a number of inflectional morphemes, which I discuss below in the following order: verbal prefixes and preverbs (Section 2.3.7.3.3.1), the circumfix (Section 2.3.7.3.3.2), verbal suffixes (Section 2.3.7.3.3.3), and nominalizers (Section 2.3.7.3.3.4).

### 2.3.7.2.3.1 The Verbal Prefixes and Preverbs

UEOJ has one prefix and one preverb. The distinction I make between prefixes and preverbs, is that prefixes are simple bound morphemes, while preverbs are a special class of prefixes which are derived from full verbs.

2.3.7.2.3.1.1 The Prefix *sa-* UEOJ has one verbal prefix: *sa-*. Following the discussion for the WOJ prefix *sa-* (Section 2.2.5.3.1.1.2), I also treat UEOJ *sa-* as a prefix meaning to "(do) this way; (do) in such a way." In UEOJ this prefix is also used with the verb *ne-* 'sleep' with the meaning to sleep together.

安是登伊敞可 佐宿爾安波奈久爾 真日久礼弓  
aNse tö ip-ê ka sa-ne-ni ap-an-aku n-i MA-PÍ kure-te  
what DV say-EVD QP PREF-sleep/NML-LOC meet-NEG-NML  
COP-INF PREF-sun set-GER  
What is this? Without [us] meeting to sleep together the sun set  
and...  
(MYS XIV: 3461-U)

阿須可河伯 之多爾其礼留乎 之良受思天  
勢奈那登布多理 左宿而久也思母  
asuka kapa sita nigör-er-u wo sir-aNs-u si-te se-na-na-tö putari  
sa-ne-te kuyasi mö  
[place name] river below dirty-PROG-ATT ACC know-NEG-INF  
do/inf-GER lover-DIM-DIM COM two PREF-sleep-GER  
regrettable PART  
Not knowing it is dirty at the bottom of the Asuka river, it is  
regrettable that my lover and I slept together.  
(MYS XIV: 3544-U)

2.3.7.2.3.1.2 The Preverb uti-. As discussed in Section 2.2.5.3.1.2.5, this preverb is often associated with hitting or striking, although it is typically used to express actions that are completed instantly, thoughtlessly, or carelessly. There is only one example of this preverb in UEOJ.

可良許呂毛 須蘇乃宇知可倍 安波祢杼毛  
家思吉己許呂乎 安我毛波奈久爾

kara körömô susô-nô uti-kapë ap-an-e-Ntö mô kësi-kî kökôrö-wo  
a-Nka môm<sup>547</sup>-an-aku n-i  
foreign<sup>548</sup> clothes skirt-NOM PREV-join/INF meet-NEG-EVD-  
CONC PART fickle-ATT heart-ACC I-NOM think-NEG-NML  
COP-INF

Although the hems of the foreign skirt do not come together at all,  
I am not loving you with a fickle heart.  
(MYS XIV: 3482-U)

#### 2.3.7.2.3.2 The Verbal Circumfix

The verbal circumfix *na...sö* is a negative imperative and is attested only once in UEOJ. As in WOJ (Section 2.2.5.3.2), the circumfix surrounds the infinitive form of the verb.

---

547. This is the verb *omop*- 'think' where the initial vowel has been deleted to avoid a vowel cluster.

548. The word *kara* in OJ often refers to Korea or items from Korean, but can also refer to China or items from China. Since the meaning is not clear here, I translate it as 'foreign'.

於毛思路伎 野乎婆奈夜吉曾 布流久左爾  
 仁比久佐麻自利 於非波於布流我爾  
 omôsirô-kî NÔ-woNpa na-yak-î-sö puru kusa-ni nipî kusa  
 maNzir-i opî pa op-uru Nkani  
 beautiful-ATT field-EMPH NEG-burn-INF-IMP old grass-LOC  
 new grass mix-INF grow/NML TOP grow-ATT TENT  
Do not burn the beautiful field! In the old grass new grass mixes  
 [in] and, as for the growing [things] [they] grow.  
 (MYS XIV: 3452-U)

### 2.3.7.2.3.3 Verbal Suffixes and Auxiliaries

UEOJ verb stems are bound forms and must be followed by at least one suffix or auxiliary. It is possible for a verb stem to be followed by a string of suffixes, and in this case there is a set order in which the morphemes can occur; some must attach directly to the root and can be followed by other morphemes, while other suffixes may only occur in the final position of a verbal morpheme string.

Following the discussion above in Section 2.2.5.3, I have grouped the morphemes according to where they can occur in a verbal string. The infinitive suffix *-î* is not placed in a group as its ordering is not as restricted as the other suffixes; it can occur both before and/or after auxiliaries, and it is the only morpheme that can occur more than once in a verbal string. If more than one morpheme is present in a verbal string then a morpheme in Group I occurs before one in Group II, a morpheme in Group II occurs before Group

III, etc. A verbal string does not need to have a morpheme from Group I-IV, but must end in either the infinitive  $-\hat{t}$  or a Group V morpheme. Note that in some cases the morphemes fill the same slot in UEOJ as in WOJ, and in others they do not. In addition, UEOJ consists of five groups, while WOJ has seven. UEOJ also has fewer morphemes, but this may be simply because UEOJ has fewer data than WOJ. The UEOJ Groupings are presented in Table 2.38 below.

Table 2.38: Classification of UEOJ Morphemes Based on Verbal String Ordering

	Ordering	Categories
infinitive <i>-i</i>	suffixes to the verb stem, auxiliaries, and some suffixes; can occur in final position; can be followed by a verb or auxiliary	infinitive <i>-i</i>
Group I	suffixes that follow the verb stem, and auxiliaries which follow the infinitive	honorific suffixes and auxiliaries, and auxiliaries of aspect, tentative past suffix, debitive suffix
Group II	suffixes which must follow the verb stem or Group I morphemes	negative, tentative, and progressive suffixes
Group III	suffixes which may affix to the verb stem or Group I or II morphemes	tentative suffix <i>-am-</i> and durative suffix <i>-ap-</i>
Group IV	suffixes to the verb stem or any Group I-III morpheme	clause and sentence final morphemes

The morphemes are discussed below according to this grouping.

2.3.7.2.3.3.1 The Infinitive *-î*. The UEOJ infinitive *-î* is suffixed to verb stems, verbal auxiliaries, and suffixes. When used between two verbs or auxiliaries it acts as a connector between the two morphemes. The infinitive can also be in the final position of a verbal string, and in this case it connects the first clause with the second, and may be thought of as English "and" ([clause 1]-and-[clause 2]). This morpheme is deleted when

following vowel final stem verbs and auxiliaries in order to prevent a vowel-vowel sequence.<sup>549</sup>

斯抱布祢乃 那良敞弓美礼婆 乎具佐可知馬利  
sipo pune-nö narapê-te mî-re-Npa woNkusa kat-i-mêr-i  
tide boat-COMP line up/INF-GER see-EVD-CONJ [place name]  
win-INF-CONJC-FIN  
When [I] saw [them] lined up like the tide boats, it seemed that  
Wogusa had won.  
(MYS XIV: 3450-U)

於毛思路伎 野乎婆奈夜吉會 布流久左爾  
仁比久佐麻自利 於非波於布流我爾  
omôsirô-kî NO-woNpa na-yak-î-sö puru kusa-ni nipî kusa  
maNzir-i opî pa op-uru Nkani  
beautiful-ATT field-EMPH NEG-burn-INF-IMP old grass-LOC  
new grass mix-INF grow/NML TOP grow-ATT TENT  
Do not burn the beautiful field! In the old grass new grass mixes  
[in] and, as for the growing [things] [they] grow.  
(MYS XIV: 3452-U)

夜麻杼里乃 乎呂能波都乎爾 可賀美可家  
刀奈布倍美許會 奈爾与會利鷄米  
yama-N-töri-nö wo-rö-nö patu wö-ni kaNkamî kakê  
tônâp-uNpê-mî kôsö na-ni yösör-i-kêm-ë  
mountain-COP-birds-GEN tail-DIM-COMP first hemp-LOC  
mirror hang/INF chant-DEB-NML EMPH you-LOC  
pass-INF-TENT/PAST-EVD  
[I] hang the mirror on the first hemp, which resembles the tail of  
the mountain birds, and surely [my] chanting would have passed to  
you [to your heart].  
(MYS XIV: 3468-U)

---

549. See discussion on the WOJ infinitive -î (Section 2.2.5.3.3.1).

2.3.7.2.3.3.2 Group I Morphemes. This group consists of honorific suffixes and auxiliaries, auxiliaries of aspect, the tentative past suffix, and the debitive suffix. Suffixes in this group affix directly to the verb stem. The auxiliaries affix to the infinitive following a verb stem. These morphemes can be followed by any Group II-IV morpheme and cannot conclude a verb string.

*2.3.7.2.3.3.2.1 The Honorific Suffix -as-.* The first morpheme is the honorific suffix *-as-*. The function of this suffix is to indicate respect towards the actor of the marked verb. Following vowel stem verbs, the initial vowel of the suffix is deleted.

伎波都久乃 乎加能久君美良 和礼都賣杼  
故爾毛美多奈布 西奈等都麻佐祢

kîpatuku-nö woka-nö kuku mîra ware tum-ë-Ntö kô-ni mô  
mît-an-ap-u se-na-tö tum-as-ane

[place name]-GEN slope-GEN stem leek I pick-EVD-CONC  
basket-LOC fill-NEG-DUR-FIN husband-DIM-COM  
pick-HON-DES

Although I picked leeks on the slope of Kipatuku, my basket still  
was not filled. I wish to pick [them] with my husband.<sup>550</sup>  
(MYS XIV: 3444-U)

安須伎西佐米也

asu kî-se-s-am-ë ya

tomorrow wear/INF-do-HON-TENT-EVD PART

Tomorrow, [I] will dress you.

(MYS XIV: 3484-U)

---

550. The honorific here refers to the speaker's husband.

2.3.7.2.3.3.2.2 *The Honorific Auxiliary -mas-*. In addition to the honorific suffix

*-as-*, presented above, UEOJ also has an honorific auxiliary *-mas-*. The difference between these two honorific morphemes has yet to be studied for EOJ.

和賀西奈波 阿是會母許与比 与斯呂伎麻左奴  
 wa-Nka se-na pa aNse sö mö köyöpî yös-i-rö kî-mas-an-u  
 I-GEN lover-DIM TOP what EMPH<sup>551</sup> PART tonight  
 pass-NML-LOC<sup>552</sup> come/INF-HON-FIN  
 As for my lover, why won't he come to me tonight?<sup>553</sup>  
 (MYS XIV: 3469-U)

可良須等布 於保乎會杼里能 麻左弓爾毛 伎麻左奴伎美乎  
 許呂久等會奈久  
 karasu tö pu<sup>554</sup> opo wosu-N-töri-nö masate n-i mô kî-mas-an-u  
 kîmî-wo kö-rö k-u tö sö nak-u  
 crow DV say big male-COP-bird-NOM truth COP-FIN PART  
 come/INF-HON-NEG-ATT lord-ACC child-DIM come-FIN DV  
 EMPH<sup>555</sup> sing-ATT  
 The big male bird called a crow sings truthfully [about his] lord,  
 who is not coming, [it sounds like he is singing] "he comes".<sup>556</sup>  
 (MYS XIV: 3521-U)

---

551. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.

552. The function of *rö* is unknown. I am treating this as a locative in the sense of the speaker of the poem's lover coming to where she is: [noun]-LOC [verb of motion] 'to go/come in order to do [noun]'. This pattern is found elsewhere with the locative *ni* (see example in Section 2.3.7.2.3.4.2). This could also be the diminutive *rö* attested elsewhere in UEOJ (e.g., MYS XIV: 3521, presented below) with *yös-i-rö* analyzed as 'pass by; approach-NML-DIM' 'the dear one who approaches'.

553. The honorific is used in reference to the speaker's lover.

554. Here *tö pu* is a contracted form of *tö ipu*.

555. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.

556. Omodaka (1984a: 220) suggests that *köröku* (*kö-rö k-u* 'child-DIM come-FIN) may be an onomatopoeic the sound that the crow makes.

2.3.7.2.3.3.2.3 *The Conjecture Auxiliary -mêr-*. There is only one example of the auxiliary *-mêr-* in UEOJ (presented below).<sup>557</sup> Although this auxiliary is well attested in MJ, it is not attested in WOJ.<sup>558</sup> In MJ, this form is *-umêr-*, but there is no evidence for an initial vowel in UEOJ; if this form is *-umêr-* in UEOJ, then the initial vowel was deleted and it is not possible to prove its existence.

斯抱布祢乃 那良敞弓美礼婆 乎具佐可知馬利  
 sipo pune-nō narapê-te mî-re-Npa woNkusa kat-i-mêr-i  
 tide boat-COMP line up/INF-GER see-EVD-CONJ [place name]  
 win-INF-CONJC-FIN  
 When [I] saw [them] lined up like the tide boats, it seemed that  
 Wogusa had won.  
 (MYS XIV: 3450-U)

2.3.7.2.3.3.2.4 *The Perfective Auxiliary -n-*. There are two perfective auxiliaries in UEOJ, *-n-* and *-t-*. Both indicate that an action has been or will be completed. The difference between these two morphemes is unclear, and will be left for further research.<sup>559</sup>

---

557. As this form is only found in UEOJ, it is not included in the reconstruction of PJ morphology presented in Chapter 4, since there are no other forms to compare it to.

558. Vovin (2003: 296) claims that this form is not attested in Old Japanese, but does not make a distinction between WOJ and EOJ here.

559. The distinction may have to do with animate versus inanimate subjects, as was discussed with the WOJ morphemes *-n-* and *-t-* (Sections 2.2.5.3.3.4.2 and 2.2.5.3.4.4).

思良久毛能 多要爾之伊毛乎 阿是西呂等  
許己呂爾能里弓 許己婆可那之家

sira kumô-nô taye-n-i-si imô-wo aNse se-rô tö kökôrô-ni nör-i-te  
kökôNpa kanasi-kê

white cloud-COMP cease-PERF-INF-PAST/ATT lover-ACC why  
do-IMP DV heart-LOC ride-INF-GER very dear-ATT<sup>560</sup>

[My] lover, who had vanished like a white cloud - what should [I]  
do? [She] rode on my heart, and was very dear [to me].

(MYS XIV: 3517-U)

伊母能良爾 毛乃伊波受伎爾弓

imö-nö-ra-ni mônö ip-aNs-u k-î-n-i-te

lover-DIM-DIM-LOC thing say-NEG-INF come-INF-PERF-INF-  
GER

Not saying anything to [his] lover, [he] has come.

(MYS XIV: 3528)

2.3.7.2.3.3.2.5 *The Perfective Auxiliary -t-*. As stated above, UEOJ has two perfective auxiliaries. The distinction between the two still needs to be researched further.

祢毛等可兒呂賀 於母爾美要都留

ne-m-ô tö ka KÔ-rö-Nka omö-ni mî-ye-t-uru

sleep-TENT-ATT DV QP girl-DIM-GEN face-DAT see-PASS-  
PERF-ATT

How will [I] sleep [if my] girl's face is visible?<sup>561</sup>

(MYS XIV: 3473-U)

---

560. The attributive *-kê* is an adjectival attributive form found in EOJ but not attested in WOJ.

561. Meaning that he will see his lover's face in his dreams which will keep him from sleeping.

左宿都礼婆 比登其等思气志  
 sa-ne-t-ure-Npa pîto-N-kötö sikë-si  
 pre-sleep-PERF-EVD-CONJ people-GEN-words thick-FIN  
 When we slept together, people's words were thick.<sup>562</sup>  
 (MYS XIV: 3556-U)

2.3.7.2.3.3.2.6 *The Debitive Suffix -uNpë-*. For WOJ, the debitive suffix *-uNpë-* expresses events that are expected to have occurred (Section 2.2.5.3.3.7.2). There is only one example of *-uNpë-* in UEOJ, and I analyze it as having the same meaning as its WOJ counterpart. This suffix is followed by suffixes for stative verbs (adjectives) and not those that follow active verbal suffixes.

夜麻杼里乃 乎呂能波都乎爾 可賀美可家  
 刀奈布倍美許曾 奈爾与曾利鷄米  
 yama-N-töri-nö wo-rö-nö patu wö-ni kaNkamî kakê  
 tônap-uNpë-mî kösö na-ni yösör-i-kêm-ë  
 mountain-COP-birds-GEN tail-DIM-COMP first hemp-LOC  
 mirror hang/INF chant-DEB-NML EMPH you-LOC  
 pass-INF-TENT/PAST-EVD  
 [I] hang the mirror on the first hemp, which resembles the tail of  
 the mountain birds, and surely [my] chanting would have passed to  
 you [to your heart].  
 (MYS XIV: 3468-U)

---

562. I.e., people were gossiping.

2.3.7.2.3.3.2.7 *The Passive Suffix -ye-*. As discussed above in Section

2.2.5.3.3.3.4, the WOJ suffix *-aye-* is used to indicate: 1) spontaneous action; 2) passive voice; and 3) potential. In UEOJ only the form *-ye-* is attested. It occurs twice, both times with the verb *mî-* 'see'.

祢毛等可兒呂賀 於母爾美要都留

ne-m-ô tö ka KÔ-rö-Nka omö-ni mî-ye-t-uru

sleep-TENT-ATT DV QP girl-DIM-GEN face-DAT see-PASS-  
PERF-ATT

How will [I] sleep [if my] girl's face is visible?<sup>563</sup>

(MYS XIV: 3473-U)

見延奴己能許呂

Mî-ye-n-u könö körö

see-PASS-NEG-ATT this time

[At] this time, when I cannot see [my lord]

(MYS XIV: 3506-U)

2.3.7.2.3.3.3 Group II Morphemes. Group II morphemes can affix directly to the

verb stem or to Group I morphemes. The morphemes in this group are the negative

suffixes *-an-* and *-aNs-*, the tentative suffixes *-unam-* and *-uram-*, and the progressive *-ar-/*

*-êr-*.

---

563. Meaning that he will see his lover's face in his dreams which will keep him from sleeping.

2.3.7.2.3.3.3.1 *The Negative Suffix -an-*. UEOJ has two negative suffixes: *-an-*

and *-aNs-* (see next section). It is unclear how these differ in terms of their function.

伎波都久乃 乎加能久君美良 和礼都賣杼  
故爾毛美多奈布 西奈等都麻佐祢  
kîpatuku-nö woka-nö kuku mîra ware tum-ë-Ntö kô-ni mô  
mît-an-ap-u se-na-tö tum-as-ane  
[place name]-GEN slope-GEN stem leek I pick-EVD-CONC  
basket-LOC fill-NEG-DUR-FIN lover-DIM-COM pick-HON-DES  
Although I picked leeks on the slope of Kipatuku, my basket still  
was not filled. I wish to pick [them] with my husband.<sup>564</sup>  
(MYS XIV: 3444-U)

可良須等布 於保乎曾杼里能 麻左弓爾毛 伎麻左奴伎美乎  
許呂久等會奈久  
karasu tö pu<sup>565</sup> opo wosu-N-töri-nö masate n-i mô kî-mas-an-u  
kîmî-wo kö-rö k-u tö sö nak-u  
crow DV say big male-COP-bird-NOM truth COP-FIN PART  
come/INF-HON-NEG-ATT lord-ACC child-DIM come-FIN DV  
EMPH<sup>566</sup> sing-ATT  
The big male bird called a crow sings truthfully [about his] lord,  
who is not coming, [it sounds like he is singing] "he comes".<sup>567</sup>  
(MYS XIV: 3521-U)

2.3.7.2.3.3.3.2 *The Negative Suffix -aNs-*. As stated above, the negative suffix

*-aNs-* is described by Martin (1987: 111) as deriving from the negative *-an-* (described

---

564. The honorific here refers to the speaker's husband.

565. Here *tö pu* is a contracted form of *tö ipu*.

566. In WOJ this is *Nsö* but the character 曾 indicates a voiceless initial.

567. Omodaka (1984a: 220) suggests that *köröku* (*kö-rö k-u* 'child-DIM come-FIN) may be an onomatopoeic the sound that the crow makes.

above) and the irregular verb *se-* 'to do' (see also Section 2.2.5.3.3.6.2). This suffix is followed by a special infinitive: *-u*.

伊母能良爾 毛乃伊波受伎爾弓

imö-nö-ra-ni mônö ip-aNs-u k-î-n-i-te

lover-DIM-DIM-LOC thing say-NEG-INF come-INF-PERF-INF-GER

Not saying anything to [his] lover, [he] has come.

(MYS XIV: 3528)

和伎毛古爾 安我古非思奈婆 曾和敞可毛 加未爾於保世牟  
己許呂思良受弓

wakîmô-kô-ni a-Nka kôpî sin-aNpa söwapê kamô kamî-ni

opose-m-u kökôrö sir-aNs-u-te

lover-DIM-DAT I-GEN love/NML die-COND [meaning unknown] EMPH god-LOC bear-TENT-FIN heart

know-NEG-INF-GER

If [I] die from loving my wife, [meaning unknown] bear [me] to the gods. [With her] not knowing my heart.

(MYS XIV: 3566-U)

2.3.7.2.3.3.3.3 *The Progressive Auxiliary -ar-/-êr-*. In EOJ the progressive can be marked with either *-ar-* or *-êr-*. UEOJ has six examples of the progressive being marked with *-êr-*,<sup>568</sup> and one example of the progressive marked with *-ar-*.<sup>569</sup> Synchronic analysis shows that this is a suffix and not an auxiliary, as it attaches directly to the verb stem or

---

568. Including *-er-* following coronal consonants.

569. There is one additional example of *-ar-* suffixed to the infinitive form of an adjective:

*kôpisi-k-ar-unam-ö* 'lovely-INF-PROG-TEN-ATT' "[She] is certainly lovely" (MYS XIV: 3476).

preceding suffix and not to the infinitive. However, as discussed for WOJ and CEOJ (Sections 2.2.5.3.3.4.1 and 2.3.5.2.3.3.5.2), *-êr-* may be from monophthongization of *\*-î-ar-*, and *-ar-* may be the result of contraction of *\*-î-ar-*.

奈爾己曾与佐礼

na-ni kösö yös-ar-e  
 you-DAT EMPH draw near-PROG-EVD  
 [I] am drawn to you.  
 (MYS XIV: 3478-U)

伊母乎許會 安比美爾許思可 麻欲婢吉能  
 与許夜麻敞呂能 思之奈須於母敞流

imö-wo kösö ap-î mî-ni kö-sika mayôNpîkî-nö yökö yama  
 pê-rö-nö  
 sisi-nasu omöp-êr-u  
 lover-ACC EMPH meet-INF see/NML-LOC come-PAST/EVD  
 [place name]-GEN [place name] mountain area-DIM-GEN deer-  
 COMP think-PROG-FIN  
 [I] came to meet my lover. [I] am thinking [of her] resembling the  
 deer at Mayobiki's Mt. Yoko.<sup>570</sup>  
 (MYS XIV: 3531-U)

阿須可河伯 之多爾其礼留乎 之良受思天  
 勢奈那登布多理 左宿而久也思母

asuka Nkapa sita nigör-er-u wo sir-aNs-u si-te se-na-na-tö putari  
 sa-ne-te kuyasi mö  
 [place name] river below dirty-PROG-ATT ACC know-NEG-INF  
 do/inf-GER lover-DIM-DIM COM two PREF-sleep-GER  
 regrettable PART  
 Not knowing it is dirty at the bottom of the Asuka river, it is  
 regrettable that my lover and I slept together.  
 (MYS XIV: 3544-U)

---

570. A reference to the deer mating on the side of the mountain.

2.3.7.2.3.3.3.4 *The Tentative Suffix -unam-*. Although the suffix *-unam-* is not attested in WOJ, it is attested several times in UEOJ. Examples of the tentative suffix *-unam-* are presented below:

宇倍兒奈波 和奴爾故布奈毛  
 upë kô-na pa wanu-ni kôp-unam-ô  
 indeed girl-DIM TOP I-DAT love-TENT-ATT<sup>571</sup>  
 Indeed, that girl will love me.  
 (MYS XIV: 3476-U)

麻比登其等 於毛抱須奈母呂 和賀母抱乃須毛  
 ma-pîtö-N-kötö omôpo-s-unam-ö rö wa-Nka möp-o<sup>572</sup>-nösu mô  
 PREF-person-GEN-word think-HON-TENT-ATT EMPH I-NOM  
 think-ATT-COMP PART  
 Like me, [you] are probably thinking about people's words.<sup>573</sup>  
 (MYS XIV: 3552-U)

2.3.7.2.3.3.3.5 *The Tentative Suffix -uram-*. Although the WOJ tentative suffix *-uram-* (Section 2.2.5.3.3.7.4) is well attested, it is attested only twice in UEOJ. It is possible that this suffix is related to *-unam-* and that there is some relationship between the /r/ and the /n/ in these suffixes, however, it is not clear why there would be such a

---

571. Here the attributive is a final form, and not used for noun modification. I treat this as a *kakari musubi* structure (Section 2.2.5.3.3.8.13), although there is nothing here which would trigger *kakari musubi*. As discussed above, in WOJ there are many cases of *kakari musubi* that are not triggered by a particle but may be there for

572. The initial vowel /o/ is deleted here showing that contraction may have occurred in UEOJ: *omopo* > *mopo*.

573. Or "gossip".

relationship in this case and not in other cases where these phonemes occur; this issue will be set aside for further research.

可保婆奈能 孤悲天香眠良武 伎曾母許余比毛  
kapo-N-pana-nö kôpi-te ka N-Uram-u kîsö mö köyöpî mô  
face-COP-flower-COMP love/INF-GER QP sleep-TENT-ATT last  
night PART tonight PART  
Like the "face flower", [you] surely love me while you sleep – both  
last night and tonight.  
(MYS XIV: 3505-U)

安乎思努布良武 伊敞乃兒呂波母  
a-wo sinôp-uram-u ipê-nö kô-rö pa mö  
I-ACC think-TENT-ATT house-GEN girl-DIM TOP PART  
She is certainly thinking about me – my wife at home.  
(MYS XIV: 3532-U)

2.3.7.2.3.3.4 Group III Morphemes. Group III morphemes are the tentative suffix *-am-* and the durative suffix *-ap-*. They can affix directly to the verb root or to Group I or II morphemes.

2.3.7.2.3.3.4.1 The Tentative Suffix -am-. As discussed with WOJ (Section 2.2.5.3.3.7.1), this suffix is used to indicate volition or conjecture; there is no indication that the function of this suffix is different in UEOJ.

比登豆麻等 安是可曾乎伊波牟 志可良婆加  
刀奈里乃伎奴乎 可里弓伎奈波毛

pîtö-N-tuma tö aNse ka sö-wo ip-am-u sika r<sup>574</sup>-aNpa ka tônari-nö  
kînu-wo kari-te kî-n-ap-am-ô

person-GEN-wife DV why QP this-ACC say-TENT-ATT thus  
exist-COND QP neighbor-GEN robe-ACC borrow/INF-GER  
wear-PERF-DUR-TENT-ATT

Why should [I] say [she] is [another] person's wife? If it is so, I  
will borrow my neighbor's robes and wear [them].

(MYS XIV: 3472-U)

伊毛我奈氣可牟

imô-Nka nakëk-am-u

lover-NOM lament-TENT-FIN

My lover is probably lamenting.

(MYS XIV: 3474-U)

2.3.7.2.3.3.4.2 *The Durative Suffix -ap-*. In WOJ, the durative suffix *-ap-* directly follows the verb stem, however in NEOJ and CEOJ this suffix only occurs after the negative suffix *-an-*.<sup>575</sup> In UEOJ, there is one example where *-ap-* follows the verb stem (MYS XIV: 3448-U, presented below). However, this poem contains only EOJ vocabulary, and does not have EOJ grammar or phonology. In the other six examples of the durative suffix, *-ap-* follows the negative *-an-*. Its function appears to be the same as

---

574. The initial /a/ of *ar-* is deleted here.

575. This suffix is not attested in SEOJ.

the WOJ durative suffix; it expresses something which does not or has not happened over a period of time.

伎波都久乃 乎加能久君美良 和礼都賣杼  
故爾毛美多奈布 西奈等都麻佐祢  
kîpatuku-nö woka-nö kuku mîra ware tum-ë-Ntö kô-ni mô  
mît-an-ap-u se-na-tö tum-as-ane  
[place name]-GEN slope-GEN stem leek I pick-EVD-CONC  
basket-LOC fill-NEG-DUR-FIN husband-DIM-COM  
pick-HON-DES

Although I picked leeks on the slope of Kipatuku, my basket still was not filled. I wish to pick [them] with my husband.  
(MYS XIV: 3444-U)

波奈治良布  
pana tir-ap-u  
flower scatter-DUR-FIN  
The flowers are scattered.  
(MYS XIV: 3448-U)

2.3.7.2.3.3.5 Group IV Morphemes. The morphemes in this group fill the final position of a verb string, can attach directly to a verb stem or any suffix or auxiliary in Groups I-III, and cannot be followed by any other verbal suffix,<sup>576</sup> but can be followed by emphatic particles. A verb string *must* end with one of the morphemes in this group.

---

576. With the exception of the evidential form, which can be followed by the conjunctive suffix *-Npa* (Section 2.3.7.2.3.3.5.6) or the concessive suffix *-Ntö* (Section 2.3.7.2.3.3.5.6).

2.3.7.2.3.3.5.1 *The Desiderative Suffix -ane*. The desiderative suffix *-ane* is a sentence final suffix indicating that the speaker wishes someone would do something. It is attested only once in UEOJ.

伎波都久乃 乎加能久君美良 和礼都賣杼  
 故爾毛美多奈布 西奈等都麻佐祢  
 kîpatuku-nö woka-nö kuku mîra ware tum-ë-Ntö kô-ni mô  
 mît-an-ap-u se-na-tö tum-as-ane  
 [place name]-GEN slope-GEN stem leek I pick-EVD-CONC  
 basket-LOC fill-NEG-DUR-FIN lover-DIM-COM pick-HON-DES  
 Although I picked leeks on the slope of Kipatuku, my basket still  
 was not filled. [I] wish to pick [them] with my lover.  
 (MYS XIV: 3444-U)

2.3.7.2.3.3.5.2 *The Hypothetical Conditional Suffix -aNpa*. The suffix *-aNpa* expresses a hypothetical condition ("if...").

比登豆麻等 安是可曾乎伊波牟 志可良婆加  
 刀奈里乃伎奴乎 可里弓伎奈波毛  
 pîttö-N-tuma tö aNse ka sö-wo ip-am-u sika r<sup>577</sup>-aNpa ka tôinari-nö  
 kînu-wo kari-te kî-n-ap-am-ô  
 person-GEN-wife DV why QP this-ACC say-TENT-ATT thus  
 exist-COND QP neighbor-GEN robe-ACC borrow/INF-GER  
 wear-PERF-DUR-TENT-ATT  
 Why should [I] say [she] is [another] person's wife? If it is so, I  
 will borrow my neighbor's robes and wear [them].  
 (MYS XIV: 3472-U)

---

577. The initial /a/ of *ar-* is deleted here.

和伎毛古爾 安我古非思奈婆 曾和敞可毛 加未爾於保世牟  
己許呂思良受弓

wakîmô-kô-ni a-Nka kôpi sin-aNpa sôwapê kamô kamî-ni

opose-m-u kôkôrô sir-aNs-u-te

lover-child/wife-DAT I-GEN love/NML die-COND [meaning  
unknown] EMPH god-LOC bear-TENT-FIN heart

know-NEG-INF-GER

If my love for my wife dies, [meaning unknown] bear [me] to the  
gods. [With her] not knowing my heart.

(MYS XIV: 3566-U)

2.3.7.2.3.3.5.3 *The Negative Tentative Suffix -aNsi*. The suffix *-aNsi* is the  
negative of tentative suffix *-am-* (Section 2.3.7.3.3.3.5.1). It is a clause or sentence final  
morpheme used to indicate something that probably will not happen or something the  
speaker will not do. This suffix is attested only once in UEOJ.

於曾波夜母 奈乎許曾麻多賣 牟可都乎能 四比乃故夜提能  
安比波多我波自

osô paya mö na-wo kôsô mat-am-ë muka-tu wo-nô sipî-nô kô

yaNte-nô ap-î pa taNkap-aNsi

slow fast PART you-ACC EMPH wait-TENT-EVD facing-LOC

peak-GEN pasania<sup>578</sup> tree-GEN small branch-GEN meet-NML

TOP differ-NEG/TENT

[No matter how] slow or fast, I will certainly wait for you. It is  
surely no different than the meeting of the small branches on the  
pasania tree on the peak facing [us].

(MYS XIV: 3493-U)

---

578. *Pasania edulis* (Japanese false oak)

2.3.7.2.3.3.5.4 *The Imperative -e/-rö*. The imperative is attested four times in the UEOJ poems: once the imperative is deleted following a vowel final verb stem, once the imperative is *-e*, and in the other two cases the imperative is marked by the suffix *-rö*. For the example where the imperative form is the same as the verb stem, it is likely that some vowel (perhaps *-e*) is suffixed to the stem and then deleted to avoid a vowel vowel sequence.

Imperative deleted following vowel final verb stem

阿米都之乃 可未爾奴佐於伎 伊波比都都 伊麻世和我世奈  
阿礼乎之毛波婆

amë tusi-nö kamī-ni nusa ok-î ipap-î-tutu imase wa-Nka se-na  
are-wo si môp<sup>579</sup>-aNpa

heaven earth-GEN gods-LOC offering put-INF pray-INF-CORD  
be/IMP<sup>580</sup> I-GEN husband-PART I-ACC EMPH think-COND

[I] place an offering to the gods of heaven and earth while praying.

Be (come) [here], my husband, if you love me.

(MYS XX: 4426-U)

Imperative -e

祢爾多都久毛乎 見都追之努波西

ne-ni tat-u kumô-wo MÎ-tutu sinôp-as-e

peak-LOC rise/stand-ATT cloud-ACC see-CORD think-HON-IMP

While looking at the clouds rising on the peaks, please think of me.

(MYS XIV: 3515)

---

579. Here the initial vowel of the verb *omop-* is deleted.

580. This has to be the command form of the honorific verb *imase-* 'make be' and not of *imas-* 'be (v.i.)' because the imperative form cannot follow an intransitive verb.

Imperative -rö

安杼世呂登可母

aNtö se-rö tö kamö

what do-IMP PART EMPH

What [would you] have [me] do?

(MYS XIV: 3465-U)

祢呂等敝奈香母

ne-rö tö p<sup>581</sup>-ên-a kamö

sleep-IMP DV say-NEG-ATT EMPH

[You] do not tell [me] "Go to sleep"!

(MYS XIV: 3499-U)

2.3.7.2.3.3.5.5 *The Stative final -i*. The final suffix *-i* is a sentence final morpheme

affixed to stative verbs and suffixes.

斯抱布祢乃 那良敝呂美礼婆 乎具佐可知馬利

sipo pune-nö narapê-te mî-re-Npa woNkusa kati-mêr-i

tide boat-COMP line up/INF-GER see-EVD-CONJ [place name]

win-CONJC-FIN

When [I] saw [them] lined up like the tide boats, it seemed that

Wogusa had won.

(MYS XIV: 3450-U)

古呂波伊敝杼母 伊末太年那久爾

kô-rö pa ip-ê-Ntömö imaNta ne-n-aku n-i

girl-DIM TOP said-EVD-CONC still sleep-NEG-NML COP-INF

Although [my] girl said [they did], [she] has not yet slept [with him].

(MYS XIV: 3543-U)

---

581. The initial vowel of *ip-* 'say' is deleted here.

2.3.7.2.3.3.5.6 *The Conjunctive Suffix -Npa*. The UEOJ suffix *-Npa* is a

conjunctive suffix that indicates a fulfilled action often translated as "since" or "when". It

is a clause final suffix that follows the evidential form of verbs (Section 2.3.7.2.3.3.5.6).

斯抱布祢乃 那良敞弓美礼婆 乎具佐可知馬利

sipo pune-nö narapê-te mî-re-Npa woNkusa kati-mêr-i

tide boat-COMP line up/INF-GER see-EVD-CONJ [place name]

win-CONJC-FIN

When [I] saw [them] lined up like the tide boats, it seemed that

Wogusa had won.

(MYS XIV: 3450-U)

左宿都礼婆 比登其等思气志

sa-ne-t-ure-Npa pîtö-N-kötö sikê-si

pre-sleep-PERF-EVD-CONJ people-GEN-words thick-FIN

When we slept together, people's words were thick.<sup>582</sup>

(MYS XIV: 3556-U)

2.3.7.2.3.3.5.7 *The Concessive Suffix -Ntö*. The concessive suffix *-Ntö* is a clause

final suffix used to mean "although..." or "even though...". This suffix is often followed

by the emphatic *mö*.

---

582. I.e., people were gossiping.

伎波都久乃 乎加能久君美良 和礼都賣杼  
 故爾毛美多奈布 西奈等都麻佐祢  
 kîpatuku-nö woka-nö kuku mîra ware tum-ë-Ntö kô-ni mô  
 mît-an-ap-u se-na-tö tum-as-ane  
 [place name]-GEN slope-GEN stem leek I pick-EVD-CONC  
 basket-LOC fill-NEG-DUR-FIN lover-DIM-COM pick-HON-DES  
Although I picked leeks on the slope of Kipatuku, my basket was  
 not filled. I wish to pick [them] with my lover.  
 (MYS XIV: 3444-U)

古呂波伊敞杼母 伊末太年那久爾  
 kô-rö pa ip-ê-Ntömö imaNta ne-n-aku n-i  
 girl-DIM TOP said-EVD-CONC still sleep-NEG-NML COP-INF  
Although the girl said [they did], [she] has not yet slept [with him].  
 (MYS XIV: 3543-U)

2.3.7.2.3.3.5.8 *The Past Auxiliary -si*. The UEOJ auxiliary *-si* is a sentence final morpheme which denotes the attributive past tense.<sup>583</sup> It has the special evidential form *-sika*, shown below.

---

583. In WOJ, *-si* is the attributive form and *-kî* is used for the sentence final form; *-kî* is not attested in UEOJ.

思良久毛能 多要爾之伊毛乎 阿是西呂等  
 許己呂爾能里弓 許己婆可那之家  
 sira kumô-nô taye-n-i-si imô-wo aNse se-rô tö kökôrô-ni nör-i-te  
 kököNpa kanasi-kê  
 white cloud-COMP cease-PERF-INF-PAST/ATT lover-ACC why  
 do-IMP DV heart-LOC ride-INF-GER very dear-ATT<sup>584</sup>  
 [My] lover, who had vanished like a white cloud - what should [I]  
 do? [She] rode on my heart, and was very dear [to me].  
 (MYS XIV: 3517-U)

伊母乎許會 安比美爾許思可 麻欲婢吉能  
 与許夜麻敞呂能 思之奈須於母敞流  
 imö-wo kösô ap-î mî-ni kö-sika mayôNpîkî-nô yökô yama  
 pê-rô-nô  
 sisi-nasu omöp-êr-u  
 lover-ACC EMPH meet-INF see/NML-LOC come-PAST/EVD  
 [place name]-GEN [place name] mountain area-DIM-GEN deer-  
 COMP think-PROG-FIN  
 [I] came to meet my lover. [I] am thinking [of her] resembling the  
 deer at Mayobiki's Mt. Yoko.<sup>585</sup>  
 (MYS XIV: 3531-U)

2.3.7.2.3.3.5.9 *The Subordinative Gerund -te*. The subordinative gerund *-te* is a clause final auxiliary. It can be used to connect either two verbs or two clauses in the pattern (clause)  $V_1-te$  (clause)  $V_2$ , and indicates that the action of the first verb ( $V_1$ ) began before the action of the second verb ( $V_2$ ).<sup>586</sup>

---

584. The attributive *-kê* is an adjectival attributive form found in EOJ but not attested in WOJ.

585. A reference to the deer mating on the side of the mountain.

586. Vovin (2003: 242) presents examples from MJ texts that show that the action of the first verb, that is, the verb that *-te* is affixed to, is not necessarily completed before the action of the second begins.

安是登伊敞可 佐宿爾安波奈久爾 真日久礼𠄎  
 aNse tö ip-ê ka sa-ne-ni ap-an-aku n-i MA-PÎ kure-te  
 what DV say-EVD QP PREF-sleep/NML-LOC meet-NEG-NML  
 COP-INF PREF-sun set-GER  
 What is this? Without [us] meeting to sleep together the sun set  
 and...  
 (MYS XIV: 3461-U)

斯抱布祢乃 那良敞𠄎美礼婆 乎具佐可知馬利  
 sipo pune-nö narapê-te mî-re-Npa woNkusa kat-i-mêr-i  
 tide boat-COMP line up/INF-GER see-EVD-CONJ [place name]  
 win-INF-CONJC-FIN  
 When [I] saw [them] lined up like the tide boats, it seemed that  
 Wogusa had won.<sup>587</sup>  
 (MYS XIV: 3450-U)

2.3.7.2.3.3.5.10 *The Coordinative Auxiliary -tutu.* The coordinative auxiliary

*-tutu* can be either a clause final or sentence final morpheme, depending on context. It marks a simultaneous action.

祢爾多都久毛乎 見都追之努波西  
 ne-ni tat-u kumô-wo MI-tutu sinôp-as-e  
 peak-LOC rise/stand-ATT cloud-ACC see-CORD  
 yearn-HON-IMP  
 While looking at the clouds rising on the peaks, please yearn [for  
 me].  
 (MYS XIV: 3515-U)

---

587. The two actions expressed by the gerund *-te* are first, them lining up and then seeing them lined up.

阿米都之乃 可未爾奴佐於伎 伊波比都都 伊麻世和我世奈  
阿礼乎之毛波婆

amë tusi-nö kamî-ni nusa ok-î ipap-î-tutu imase wa-Nka se-na  
are-wo si môp<sup>588</sup>-aNpa

heaven earth-GEN gods-LOC offering put-INF pray-INF-CORD  
be/IMP<sup>589</sup> I-GEN husband-PART I-ACC EMPH think-COND

[I] place an offering to the gods of heaven and earth while praying.

Be (come) [here], my husband, if you love me.

(MYS XX: 4426-U)

2.3.7.2.3.3.5.11 *The Final -u*. The suffix *-u* is a sentence final marker indicting the final form of active verbs (cf., the stative final suffix *-i* Section 2.3.7.2.3.3.5.5 above).

可良須等布 於保乎會杼里能 麻左弓爾毛 伎麻左奴伎美乎  
許呂久等會奈久

karasu tö pu<sup>590</sup> opo wosu-N-töri-nö masate n-i mô kî-mas-an-u  
kîmî-wo kö-rö k-u tö sö nak-u

crow DV say big male-COP-bird-NOM truth COP-FIN PART  
come/INF-HON-NEG-ATT lord although child-DIM come-FIN  
DV EMPH<sup>591</sup> sing-ATT

The big male bird called a crow sings truthfully [about her] lord,  
who is not coming, but [it sounds like he is singing] "he comes".<sup>592</sup>

(MYS XIV: 3521-U)

---

588. Here the initial vowel of the verb *omop-* is deleted.

589. This has to be the command form of the honorific verb *imase-* 'make be' and not of *imas-* 'be (v.i.)' because the imperative form cannot follow an intransitive verb.

590. Here *tö pu* is a contracted form of *tö ipu*.

591. In WOJ this is *Nsö* but the character 會 indicates a voiceless initial.

592. Omodaka (1984a: 220) suggests that *köröku* (*kö-rö k-u* 'child-DIM come-FIN) may be an onomatopoeic the sound that the crow makes.

伊母乎許曾 安比美爾許思可 麻欲婢吉能  
与許夜麻敞呂能 思之奈須於母敞流

imö-wo kösö ap-î mî-ni kö-sika mayôNpîkî-nö yökö yama  
pê-rö-nö

sisi-nasu omöp-êr-u

lover-ACC EMPH meet-INF see/NML-LOC come-PAST/EVD  
[place name]-GEN [place name] mountain area-DIM-GEN deer-  
COMP think-PROG-FIN

[I] came to meet my lover. [I] am thinking [of her] resembling the  
deer at Mayobiki's Mt. Yoko.<sup>593</sup>

(MYS XIV: 3531-U)

2.3.7.2.3.3.5.12 *The Attributive -u/-uru*. As discussed in Sections 2.3.4.2.3.2.6.7

(the NEOJ attributive), 2.3.5.2.3.3.6.10 (the CEOJ attributive), and 2.3.6.2.3.3.5.8 (the SEOJ attributive), the EOJ attributive is perhaps the most frequently discussed feature of EOJ grammar. Above I discussed claims that the attributive ending for consonant final verbs is *-ô* (*-o* following labial consonants). For NEOJ, I noted that this ending only appears after labial consonants and proposed a phonological rather than morphological solution, suggesting an allomorph of /u/ following labial consonants. For CEOJ, I found that nine of the eleven examples of attributive *-ô/o* followed a labial consonant, and the other two followed /k/, and that one of the two examples was attested with both attributive ending *-ô* and *-u*: *yuk-ô* (MYS XX: 4385-Ss) and *yuk-u* (MYS XX: 4372-Hi).

---

593. A reference to the deer mating on the side of the mountain.

For SEOJ, two examples could be read as either *-u* or *-ô*, and the remaining examples all show the attributive suffix as *-u*.

The case for the poems that cannot be identified as belonging to any dialect further complicate the issue. As described above, I collected examples of the attributive form and grouped them together by the final vowel and the function of the attributive form in each example, as the attributive form is used in three ways: 1) in a *kakari musubi* structure (Section 2.2.5.3.3.8.14); 2) marking the verb for noun modification; or 3) a nominalized form of the verb which is followed by a case or emphatic particle. In the UEOJ texts, I found 90 examples of the attributive suffix used with consonant final verb roots. Of these examples, 79 examples show an attributive ending of *-u* and the remaining 11 show *-ô*. The results are shown in Table 2.39 below:

Table 2.39: UEOJ Attributive Forms by Suffix and Function

Examples with *-ô/-o*

ô	modifies noun	tat-ô	standing	MYS XIV: 3476
		par-ar-ô	stretching	MYS XIV: 3546
	nominalized form	k-î-n-ô kamo	came	MYS XIV: 3527
		yuk-ô nösü	going	MYS XIV: 3541
		mat-ô nösü	like waiting	MYS XIV: 3561
o	modifies noun	ap-o	meeting	MYS XIV: 3478
		sum-o	living (residing)	MYS XIV: 3527
	kakari musubi	kî-nap-am-o	will surely not wear	MYS XIV: 3472
	nominalized form	ne-m-o tö ka	sleeping	MYS XIV: 3473
		pap-o nösü	like crawling	MYS XIV: 3525
		[o]mop-o nösü mo	like feeling	MYS XIV: 3552

Examples with *-u*

modifies noun	kanar-u	MYS XX: 4430	MYS XX: 4430
	ipap-u	celebrating	MYS XIV: 3460
	pat-u	begining (first)	MYS XIV: 3468
	sôp-u	accompanying	MYS XIV: 3485
	kar-u	cutting	MYS XIV: 3499
	opar-u	living	MYS XIV: 3501
	sak-u	blooming	MYS XIV: 3504
	tanaNpîk-u	trailing	MYS XIV: 3511
	ip-ar-u	saying	MYS XIV: 3512
	wasure-m-u	surely will forget	MYS XIV: 3515
	tat-u	rising	MYS XIV: 3515
	tanapîk-u	trailing	MYS XIV: 3516
	kakar-u	hanging	MYS XIV: 3518
	kanômaNtuk-u	[meaning unknown]	MYS XIV: 3518
	wasure-m-u	forget	MYS XIV: 3520
	tanabîk-u	trailing	MYS XIV: 3520
	k-î-mas-an-u	didn't come (HON)	MYS XIV: 3521
	ikîNtuk-u	breathing	MYS XIV: 3527
	tat-am-u	surely will stand	MYS XIV: 3528
	pam-u	eating	MYS XIV: 3532
	nayum-u	worried	MYS XIV: 3533
	pam-u	eating	MYS XIV: 3537
	nar-u	singing	MYS XIV: 3548
	sak-u	blooming	MYS XIV: 3551
	tok-u	untie	MYS XIV: 3551
	ir-u	entering	MYS XIV: 3553
	kôNk-u	rowing	MYS XIV: 3557
	puk-u	blowing	MYS XIV: 3564
	yu[N]tur-u	moving	MYS XIV: 3572
	pupum-ar-u	including	MYS XIV: 3572
tôp-u	asking	MYS XX: 4425	

kakari musubi	ne-m-u	will probably sleep	MYS XX: 4428
	ip-am-u	saying	MYS XIV: 3472
	nakëk-am-u	lament	MYS XIV: 3474
	omop-u	think	MYS XIV: 3494
	k-î-mas-an-u	come (HON)	MYS XIV: 3495
	omop-u	feeling	MYS XIV: 3511
	otapap-u	[meaning unknown]	MYS XIV: 3518
	nak-u	sing	MYS XIV: 3521
	ip-u	say	MYS XIV: 3536
	kayôp-am-u	passing by	MYS XIV: 3549
	si-m-u	will surely do	MYS XIV: 3556
	s[meaning unknown]ôs-am-u	will surely pass	MYS XIV: 3564
	op-ose-m-u	will be able to bear	MYS XIV: 3566

nominalized form	ne-m-u mo	will surely sleep	MYS XIV: 3442
	sikëk-u tömo	thicken	MYS XIV: 3456
	ut-u ya	hiting	MYS XIV: 3473
	kôp-u namo	will love	MYS XIV: 3476
	kôp-usikar-u namo	loving	MYS XIV: 3476
	kôpî-m-u na	loving	MYS XIV: 3477
	yör-u töka mo	pass	MYS XIV: 3483
	um-aNs-u tömo	not spun	MYS XIV: 3484
	parap-u mo	swept	MYS XIV: 3489
	kapê-r-u tenö	are changing	MYS XIV: 3494
	omop-u namu	thinking	MYS XIV: 3496
	sakar-u Nkapê	separated	MYS XIV: 3502
	taye-m-u tö	ending	MYS XIV: 3513
	tuk-u nösu	wearing	MYS XIV: 3514
	ne-nap-u mo	not sleeping	MYS XIV: 3525
	yuk-u namo to	going	MYS XIV: 3526
	pus-u ya	throw on groun	MYS XIV: 3530
	mîye-N-s-u tömo	not visible	MYS XIV: 3530
	kö-m-u tö	will come	MYS XIV: 3536
	mayukaserap-u mo	[meaning unknown]	MYS XIV: 3541
	mat-u tö	waiting	MYS XIV: 3546
	naras-u mo	leveling	MYS XIV: 3546
	yös-u nasu	like passing	MYS XIV: 3548
	yös-u mo	passing	MYS XIV: 3548
	mas-u ni	increasing	MYS XIV: 3557
	mat-u namo	waiting	MYS XIV: 3563
	yör-u mo	passing	MYS XIV: 3565
	puk-aN-s-u kamo	not blowing	MYS XIV: 3572
	yuk-u pa	going	MYS XX: 4425

As shown in Table 2.39, there are examples of the attributive *-ô/o* and *-u* following the same consonants, therefore treating /ô/ and /o/ as allomorphs of /u/ will not work here.

Following the discussion of the WOJ attributive above (Section 2.2.5.3.3.8.14), I propose a process at the proto-OJ level where the attributive suffix *-ö*, as found in WOJ in the attributive form of the copula, i.e., *n-ö* 'COP-ATT', assimilates to /ô/ and then in WOJ raises to /u/ but remains /ô/ in EOJ.

	proto-OJ form	assimilation	raising
WOJ	*-urö	*-urô	-uru
EOJ	*-urö	*-urô	(-uru/-urô)

In the case of NEOJ, it is possible to predict the environments where /ô/ remains: after labials. In all other environments /ô/ raises to /u/. In the case of CEOJ, there are two examples where /ô/ remains after /k/, but there are also contradictory examples for both labials and the velar /k/. Since for CEOJ and UEOJ, it is not possible to generate a rule to account for when /ô/ raises to /u/ and when it does not. The most likely explanation for this is that raising occurs through contamination with WOJ speakers; that is, the high occurrence of *-u* in CEOJ and UEOJ data reflect dialect mixing with WOJ and not linguistic features in these dialects. Thus, following vowel final verb stems only *-uru*

occurs, following consonant final verb stems sometimes *-ô* occurs following labials and the velar /k/ and *-u* occurs elsewhere.

Examples of the attributive form in UEOJ are presented below:

祢毛等可兒呂賀 於母爾美要都留

ne-m-ô tö ka KÔ-rö-Nka omö-ni mî-ye-t-uru

sleep-TENT-ATT DV QP girl-DIM-GEN face-DAT see-PASS-  
PERF-ATT

How will [I] sleep [if my] girl's face is visible?<sup>594</sup>

(MYS XIV: 3437-U)

於毛思路伎 野乎婆奈夜吉會 布流久左爾

仁比久佐麻自利 於非波於布流我爾

omôsirô-kî NO-woNpa na-yak-î-sö puru kusa-ni nipî kusa

maNzir-i opî pa op-uru Nkani

beautiful-ATT field-EMPH NEG-burn-INF-IMP old grass-LOC

new grass mix-INF live/NML TOP live-ATT TENT

Do not burn the beautiful field! In the old grass new grass mixes  
[in] and, as for the growing [things] [they] grow.

(MYS XIV: 3452-U)

2.3.7.2.3.3.5.13 *The Evidential -E/-ure*. The UEOJ evidential form is *-ure*

following vowel stem verbs and *-ë* following consonant stem verbs. Following the

discussion for the WOJ evidential form (Section 2.2.5.3.3.8.10), I propose that the

evidential form for UEOJ also developed from the stative extension *-ur-* followed by the

evidential suffix *-ë*.

---

594. Meaning that he will see his lover's face in his dreams which will keep him from sleeping.

The evidential form can be used as a sentence final form in *kakari musubi* structures, and it can also be followed by the conjunctive suffix *-Npa* (Section 2.3.7.3.3.3.6.6) or the concessive suffix *-Ntö* (Section 2.3.7.3.3.3.6.7).

安須伎西佐米也

asu kî se-s-am-ë ya

tomorrow wear/NML do-HON-TENT-EVD PART<sup>595</sup>

Tomorrow, [I] will dress you.

(MYS XIV: 3484-U)

於會波夜母 奈乎許曾麻多賣 牟可都乎能 四比乃故夜提能  
安比波多我波自

osö paya mö na-wo kösö mat-am-ë muka-tu wo-nö sipî-nö kô

yaNte-nö ap-î pa taNkap-aNsi

slow fast PART you-ACC EMPH wait-TENT-EVD facing-LOC

peak-GEN pasania<sup>596</sup> tree-GEN small branch-GEN meet-NML

TOP differ-NEG/TENT

[No matter how] slow or fast, I will certainly wait for you. It is surely no different than the meeting of the small branches on the pasania tree on the peak facing [us].

(MYS XIV: 3493-U)

2.3.7.2.3.3.5.14 *The Suppositional Suffix -urasi*. There is only one example of the clause or sentence final suffix *-urasi* in UEOJ. I treat it as functioning in the same way as the WOJ form, where *-urasi* (WOJ *-urasi-*) is a suppositional suffix often rendered into English as "it seems that..."

---

595. Here the evidential is used because of the particle *ya*.

596. *Pasania edulis* (Japanese false oak)

伊波乃伊毛呂 和乎之乃布良之  
ipa-nö imô-rö wa-wo sinöp-urasi  
house-GEN lover-PART I-ACC yearn-SUP  
It seems that my wife at home yearns for me.  
(MYS XX: 4427-U)

#### 2.3.7.2.3.4 Nominalizers

UEOJ has two nominalizers which usually attach directly to the root of the verb and cannot be followed by any other verbal suffix.

##### 2.3.7.2.3.4.1 The Nominalizer -aku. The UEOJ nominalizer *-aku* nominalizes

clause preceding the verb to which it affixes.

安是登伊敞可 佐宿爾安波奈久爾 真日久礼弓  
aNse tö ip-ê ka sa-ne-ni ap-an-aku n-i MA-PÎ kure-te  
what DV say-EVD QP PREF-sleep/NML-LOC meet-NEG-NML  
COP-INF PREF-sun set-GER  
What is this? Without [us] meeting to sleep together the sun set  
and...  
(MYS XIV: 3461-U)

古呂波伊敞杼母 伊末太年那久爾  
kô-rö pa ip-ê-Ntömö imaNta ne-n-aku n-i  
girl-DIM TOP said-EVD-CONC still sleep-NEG-NML COP-INF  
Although [my] girl said [they did], [she] has not yet slept [with  
him].  
(MYS XIV: 3543-U)

2.3.7.2.3.4.2 The Nominalizer -î. The UEOJ nominalizer -î follows the verb stem.

While -aku (discussed above) nominalizes a clause, -î nominalizes just the verb.

於會波夜母 奈乎許曾麻多賣 牟可都乎能 四比乃故夜提能  
安比波多我波自

osö paya mö na-wo kösö mat-am-ë muka-tu wo-nö sipî-nö kô  
yaNte-nö ap-î pa taNkap-aNsi  
slow fast PART you-ACC EMPH wait-TENT-EVD facing-LOC  
peak-GEN pasania<sup>597</sup> tree-GEN small branch-GEN meet-NML  
TOP differ-NEG/TENT

[No matter how] slow or fast, I will certainly wait for you. It is surely no different than the meeting of the small branches on the pasania tree on the peak facing [us].

(MYS XIV: 3493-U)

伊母乎許曾 安比美爾許思可 麻欲婢吉能  
与許夜麻敞呂能 思之奈須於母敞流

imö-wo kösö ap-î mî-ni kö-sika mayôNpîkî-nö yökö yama  
pê-rö-nö  
sisi-nasu omöp-êr-u  
lover-ACC EMPH meet-INF see/NML-LOC come-PAST/EVD  
[place name]-GEN [place name] mountain area-DIM-GEN deer-  
COMP think-PROG-FIN

[I] came to meet<sup>598</sup> my lover. [I] am thinking [of her] resembling the deer at Mayobiki's Mt. Yoko.<sup>599</sup>

(MYS XIV: 3531-U)

---

597. *Pasania edulis* (Japanese false oak)

598. Literally "to meet and see my lover". The word *mî* 'see' is nominalized here and is used in the pattern: [noun]-LOC [verb of motion] 'to go/come in order to do [noun]'.

599. A reference to the deer mating on the side of the mountain.

### 2.3.7.2.3.5 Summary

Table 2.40 below lists the UEOJ inflectional morphemes in alphabetical order, and provides information as to how they affix to verbs and presents their functions.

Table 2.40: Summary of UEOJ Inflectional Morphemes

<b>Morpheme</b>	<b>Type</b>	<b>Function</b>
-aku	suffix	nominalizer
-am-	suffix (Group III)	tentative
-an-	suffix (Group II)	negative
-ane	sentence final suffix (Group IV)	desiderative
-aNpa	clause final suffix (Group IV)	hypothetical conditional
-aNs-	suffix (Group II)	negative
-aNsi	clause or sentence final suffix (Group IV)	negative tentative
-ap-	suffix (Group III)	durative
-ar-/êr-	auxiliary (Group II)	progressive
-as-	suffix (Group I)	honorific
-ë/-rö	sentence final suffix (Group IV)	imperative
-E/-ure	clause or sentence final suffix (Group IV)	evidential
-î	suffix	infinitive
-i	sentence final suffix (Group IV)	stative final
-î	suffix	nominalizer
-kêm-	auxiliary (Group I)	tentative past
-mas-	auxiliary (Group I)	honorific
-mêr-	suffix (Group I)	conjuncture
-n-	auxiliary (Group I)	perfective
na...sö	circumfix	negative imperative
-Npa	clause final suffix (Group IV)	conjunctive
-Ntö	clause final suffix (Group IV)	concessive

sa-	prefix	do this way
-si	clause or sentence final auxiliary (Group IV)	past attributive
-t-	auxiliary (Group I)	perfective
-te	clause or sentence final (Group IV)	subordinative gerund
-tutu	clause final suffix (Group IV)	coordinative
-u	sentence final suffix (Group IV)	active final
-u/-uru	clause or sentence final suffix (Group IV)	attributive
-unam-	suffix (Group II)	tentative
-uNpë-	suffix (Group I)	debitive
-uram-	suffix (Group II)	tentative
-urasi	suffix (Group IV)	supposition
-uti	preverb	do thoughtlessly
-ye-	suffix (Group I)	passive

## CHAPTER 3. RYŪKYŪAN

### **3.1 Background**

Ryūkyūan (RK) refers to those languages and dialects spoken in the Ryūkyū islands; the island chain which extends from southern Japan to Taiwan (See Figure 3.1).

Figure 3.1: Map of the Ryūkyū Islands<sup>600</sup>



We have only one complete study presenting a reconstruction of the RK languages: Thorpe (1983). However, his study focuses on reconstructing proto-RK

600. Map scanned from Thorpe (1983: 368).

phonology, and does not present a complete reconstruction of proto-RK morphology.<sup>601</sup>

Other studies on the RK languages tend to be language and/or area specific (see discussion below). Thus, further research is needed to improve our understanding of the individual RK languages.

In addition, there is still reason for debate regarding the classification of languages and/or dialects spoken in the RK islands. Thorpe (1983) reconstructs three main language families which can be further divided into several dialects. Thorpe (1983: 2-3) presents the main families as:

- I. Amami-Okinawa
  - A. North Amami
  - B. South Amami-North Okinawa
  - C. Central and South Okinawa
- II. Sakishima
  - A. Miyako
  - B. Yaeyama
- III. Yonaguni

Serafim (2004) argues for four language families within RK. His classification is mainly based on mutual intelligibility: as he notes, "Where the chain of mutual

---

601. In addition, Shimabukuro (2002) has reconstructed the accent system for PJ and Proto-Ryūkyūan.

intelligibility is broken, there we recognize a language boundary" (Serafim 2004: 3).<sup>602</sup>

Serafim's grouping, then, is as follows:

- I. Northern Ryūkyūan
- II. Miyako
- III. Yaeyama
- IV. Yonaguni

Further, Bentley (2005) argues that Yonaguni should not be classified as its own group, but is a member of the Yaeyama branch of RK.<sup>603</sup>

For this study, because our understanding of the division of RK languages into language families is not yet clearly established, I have chosen one language from each geographic area. I am using Yamatoma to represent the Northern Ryūkyūan islands (Section 3.2), Shuri to represent the Central Ryūkyūan islands (Section 3.3), and Miyako to represent the Southern Ryūkyūan Islands (Section 3.4). These languages were chosen mainly because of the availability of primary and secondary sources.<sup>604</sup>

---

602. Mutual intelligibility is a criteria for determining the distinction between languages and dialects, although this is not always a clear cut issue (See Section 1.2.2 for more discussion).

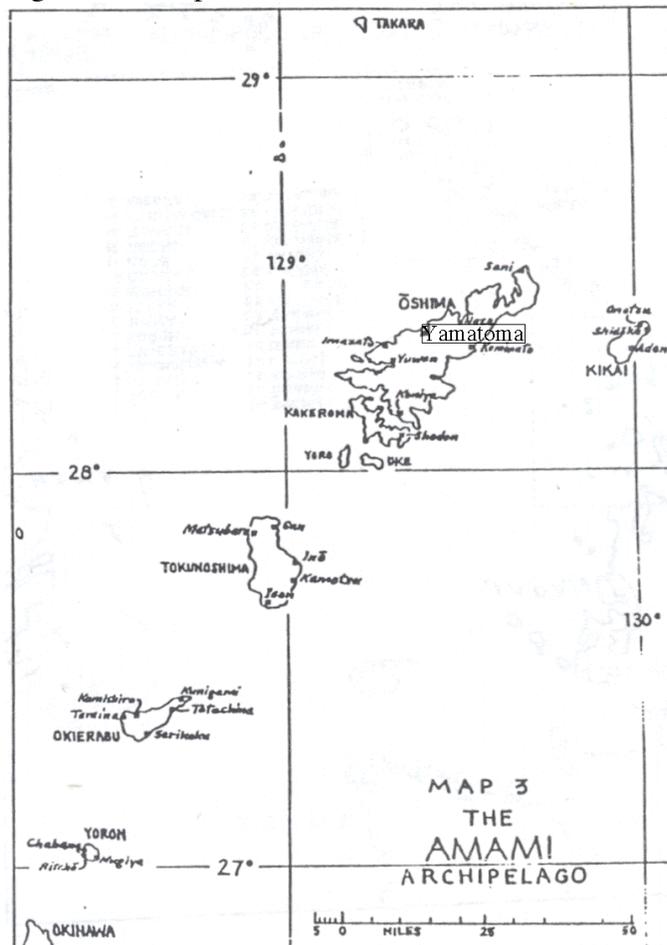
603. Yonaguni is particularly difficult to classify as it contains many features not found in other RK languages. For this reason both Thorpe (1983) and Serafim (2004) treat it as its own language family.

604. I acknowledge that inclusion of more languages would help to create a more convincing reconstruction. In the interest of space, I am, however, limiting myself to one language from each of the main geographic areas.

### 3.2 Northern Ryūkyūan Islands: Yamatoma

I have chosen Yamatoma to represent the languages of the northern Ryūkyūs, known as the Amami Islands, as shown on the map below (Figure 3.2).<sup>605</sup> Yamatoma is spoken on Amami Ōshima, the largest of the Amami islands.

Figure 3.2: Map of the Amami Islands<sup>606</sup>



605. Yamatoma is written with the characters 大和浜 which are read in Japanese as "Yamatohama", and online sources often romanize this place name as Yamatohama based on the Japanese reading. However, I follow Osada et al. (1977, 1980) and Thorpe (1983) in calling both the language and location "Yamatoma", as this is what native speakers call their language.

606. Map scanned from Thorpe (1983: 72).

The main reason for choosing Yamatoma, as opposed to another northern RK dialect, is because of the availability of both primary and secondary sources for this dialect.<sup>607</sup>

There are a number of general sources on the Amami dialects. However, in many cases, these studies do not make a distinction between the different dialects spoken throughout the northern islands, and in others they detail some dialects of Amami but present no data from Yamatoma. Thus, several of these sources were helpful in a general sense, but did not contribute much to the discussion at hand. Sources on Amami dialects include Iitoyo, Hino, and Satō (1984), who describe both Amami and Okinawan dialects, and Kanehisa (1963), who presents an interesting cultural study of the Amami islands, which does include language data, however it is not always clear what dialect of Amami is being presented.

In addition, Karimata (2003) presents a description of the dialect of Sani, spoken on the northern part of Amami Ōshima, but as this was the only major source for Sani, and was not as complete as the available material for Yamatoma, I chose Yamatoma over Sani.

---

607. I discuss primary sources for Yamatoma in Section 3.2.1 and secondary sources in Section 3.2.2.

### *3.2.1 Yamatoma Primary Source Material*

The primary source material for Yamatoma comes from Osada, Suyama, and Fuji's (1977, 1980) dictionary of the Amami dialect.<sup>608</sup> Their study consists of two volumes presented as word lists organized by categories. Each entry contains a dictionary style listing of a word followed by examples of the word used in a sentence, paragraph, or short story.<sup>609</sup> The data were collected from one extended family of Yamatoma speakers, and because of the ages of the speakers used in this study, the authors regard the language not as modern Yamatoma but as language from the Meiji and Taisho periods (Osada et al. 1977: 22).<sup>610</sup>

### *3.2.2 Yamatoma Secondary Source Material*

Osada et al. (1977, 1980) is also one of the main secondary sources for Yamatoma. There is a discussion of the phonemes and syllables found in the language, however, the linguistic description that is presented is too brief to be of much use.

---

608. Their study is called a dictionary of the Amami dialect, but it only presents examples from Yamatoma.

609. Most entries contain at least two to three examples showing how the word is used; in some cases there is only one example and in other cases there are more than five examples. Words within each category are not presented alphabetically, which makes finding entries difficult at times. Also, words may appear in more than one category.

610. The Meiji period is dated 1868-1912 and Taisho from 1912-1926. The oldest member of the family was born in Meiji 35 (1903), dates for the other family members (his wife, their siblings, and children) are not presented.

Next, Shibata (1984) presents data from the various dialects spoken on Amami Ōshima.<sup>611</sup> He shows how forms of words, phonemes, and/or accent vary throughout the island by mapping where each form occurs, and is very useful for comparative Amami dialectology. For the purpose of the present study, Shibata's research furthered our understanding Yamatoma phonology and historical phonological changes.

### 3.2.3 Yamatoma Phonology

#### 3.2.3.1 Yamatoma Consonants

The Yamatoma consonant inventory is presented in Table 3.1 below, followed by a discussion on the consonants.

Table 3.1: The Yamatoma Consonant Inventory

		Labial		Dental			Palatal		Velar		Glottal	
			dbl		dbl	asp			dbl	asp		
Stops	voiceless	p	pp	t	tt	t <sup>h</sup>			k	kk	k <sup>h</sup>	ʔ
	voiced	b		d					g			
Fricatives	voiceless			s	ss		ç	çç				h
	voiced			z								
Nasals		m		n								
Liquids				r								
Glides		y										ʹ

note: *dbl* = a double consonant, *asp* = an aspirated consonant

---

611. The linguistic distinction between languages and dialects is not made here; the Japanese word for "dialect" (*hōgen*) is used throughout.

### 3.2.3.1.1 Voiceless Obstruents

Yamatoma has the voiceless obstruents: /p/, /t/, /k/, /s/, /ç/, /ʔ/, and /h/.<sup>612</sup> All of the voiceless obstruents can occur word initially or medially, but cannot occur in final position. In addition, the phoneme /ʔ/ can occur before nasal consonants, but only in the following syllables: <sup>ʔ</sup>ni, <sup>ʔ</sup>na, <sup>ʔ</sup>nya, <sup>ʔ</sup>nyu, <sup>ʔ</sup>ma, <sup>ʔ</sup>mu, and <sup>ʔ</sup>mi.

The phonetic values and allophones for Yamatoma voiceless obstruents are presented in Table 3.2.

Table 3.2: Phonetic Values and Allophones for Voiceless Obstruents in Yamatoma

Phoneme	Phonetic Value	Allophones
/p/	voiceless unaspirated bilabial stop	[p] everywhere
/t/	voiceless unaspirated dental stop	[č] preceding /i/ and /y/ or following /i/ [t] elsewhere
/k/	voiceless unaspirated velar stop	[k] everywhere
/ç/	voiceless palatal fricative	[tž] preceding /i/ and /y/ [tz] elsewhere
/s/	voiceless dental fricative	[š] preceding /i/ and /y/ [s] elsewhere
/ʔ/	glottal stop	[ʔ] everywhere
/h/	glottal fricative	[ç] preceding /i/ and /ya/, /yo/, and /yu/ [k <sup>h</sup> ] preceding /e/, /i/, and /ye/ [ϕ] preceding /w/ [h] elsewhere

---

612. Yamatoma also has double and aspirated consonants which are discussed below in Sections 3.2.3.1.3 and 3.2.3.1.4, respectively.

### 3.2.3.1.1.1 The Historical Development of Voiceless Obstruents

Thorpe makes a number of claims about the development of consonants in each of the RK languages and dialects included in his study (Thorpe 1983: 51-110). His findings provide insight into the development of the phonemes in Yamatoma.

First, the phoneme /h/ in Yamatoma developed from two possible sources. One source is from proto-RK \*/p/ which became /h/ in morpheme initial position, except before \*/e/ where it became /hw/ [ϕ]. Another source for /h/ is from proto-RK \*/k/ in medial position between two non-high vowels, an environment where \*/k/ first is aspirated and then reduces to /h/.<sup>613</sup>

Next, the phoneme /ç/ in Yamatoma comes from word initial proto-RK \*/t/ followed by \*/i/, resulting in /çi/, or proto-RK \*/t/ followed by /u/, resulting in /çü/.<sup>614</sup> In addition, Osada et al. (1977: 26) also list the syllables /ço/ and /çü/ as occurring in Yamatoma. If true, the source of the initial consonant would be unexplained according to Thorpe's claims, but I have found no evidence of these syllables within Yamatoma data.

---

613. I discuss aspiration below (Section 3.2.3.1.4).

614. Proto-RK \*/u/ fronts to /i/ following coronal consonants, as discussed below (Section 3.2.3.2).

### 3.2.3.1.2 Voiced obstruents

Yamatoma has the following voiced obstruents: /b/, /d/, /g/, and /z/. The phoneme /z/ is the voiced counterpart of both /s/ and /ç/. These obstruents can occur word initially or medially, but do not occur in final position. The phonetic values and allophones for these phonemes are presented in Table 3.3:

Table 3.3: Phonetic Values and Allophones for Voiced Obstruents in Yamatoma

Phoneme	Phonetic Value	Allophones
/b/	voiced bilabial stop	[b] in all environments
/d/	voiced dental stop	[dž] preceding /i/ and /y/ [d] elsewhere
/g/	voiced velar stop	[g] in all environments
/z/	voiced dental fricative	[dž] preceding /i/ and /y/ [dz] elsewhere

The phonemes /d/ and /z/ merge to [dž] when followed by /i/ and /y/, Osada et al. (1977, 1980) transcribes the consonant as /z/ regardless of whether the phoneme is underlying /d/ or /z/.

### 3.2.3.1.3 Double Consonants

In Yamatoma all voiceless obstruents have double consonant counterparts.

Historically, these consonants usually developed when vowel loss resulted in a consonant cluster, as in the following examples:<sup>615</sup>

proto-RK	>	Yamatoma	gloss
* <i>arik-</i>	>	<i>akk-</i>	'to walk'
* <i>wototoi</i>	>	<i>wutti</i>	'day before yesterday'

However, a double consonant does not always result when a vowel is lost. Although Thorpe (1983) does not discuss this, his data show the loss of a vowel which in some other RK languages results in a double consonant, but it does not for Yamatoma where one consonant is simply deleted: e.g., proto-RK \**pito* > Yamatoma *çyu* 'person' (cf., Shuri *čçyu* 'id.'). The issue of when a consonant cluster results in a double consonant and when it results in a single consonant will be set aside for future research.

### 3.2.3.1.4 Aspirated Consonants

Yamatoma has two aspirated consonants: /t<sup>h</sup>/ and /k<sup>h</sup>/. Synchronically, these consonants are distinct from the phonemes /t/ and /k/, as they do occur in the same environments. Thorpe (1983: 53-54) claims that historically, these aspirated consonants

---

615. Examples and proto-RK reconstructions from Thorpe (1983: 260-353).

in Yamatoma derive from proto-RK \*/t/ and \*/k/, which become aspirated in initial position when followed by a non-high vowel, or in medial position between two non-high vowels. Aspirated /k<sup>h</sup>/ then becomes /h/ in medial position, unless it occurs at a morpheme boundary, thus verb roots ending in aspirated /k<sup>h</sup>/ retain the aspirated /k<sup>h</sup>/.<sup>616</sup>

Note the following examples:<sup>617</sup>

<u>proto-RK</u>	>	<u>Yamatoma</u>	<u>gloss</u>
* <i>ke</i>	>	<i>k<sup>h</sup>i</i>	'tree'
* <i>woke</i>	>	<i>wih<sup>i</sup></i>	'bucket'
* <i>kokoro</i>	>	<i>k<sup>h</sup>ohoro</i>	'heart'
* <i>te</i>	>	<i>t<sup>h</sup>i</i>	'hand'
* <i>peto</i>	>	<i>hw<sup>i</sup>u</i>	'dolphin'
* <i>mot-</i>	>	<i>mut<sup>h</sup>-</i>	'hold'
* <i>yak-</i>	>	<i>yak<sup>h</sup>-</i>	'burn'

The above examples require further explanation. First, looking at the forms in Yamatoma, we see that only the word for 'heart', *k<sup>h</sup>ohoro*, shows aspiration occurring in the environment predicted, that is, initial position followed by a non-high vowel or in medial position between two non-high vowels. All the other forms in Yamatoma show an aspirated consonant in examples involving high vowels. However, Thorpe's (1983) proto-RK reconstructions show non-high vowels which have raised in Yamatoma; I

---

616. I discuss this in more detail below when discussing the shape of verb roots in pre-Yamatoma (Section 3.2.4.1), which is the only environment where an aspirated consonant is found at a morpheme boundary.

617. Examples from Thorpe (1983: 260-353).

return to the conditions for vowel raising below (Section 3.2.3.2.1). Second, the example *wihi* 'bucket' shows high vowel assimilation (discussed below in Section 3.2.3.2.1) where one high vowel assimilates to a neighboring high vowel.<sup>618</sup>

These examples can be explained only if these phonological stages occur in a number of stages:

1. Stage One: Aspiration occurs to the consonants /k/ and /t/ when in initial position followed by a non-high vowel or when in intervocalic position between two non-high vowels.
2. Stage Two: proto-RK \*/e/ raises to /i/ and \*/o/ raises to /u/, where applicable.<sup>619</sup>
3. Stage Three: High vowel assimilation occurs.
4. Stage Four: Medial /k/ becomes /h/.<sup>620</sup>

The examples presented above, then, would develop in stages as follows:

---

618. The WOJ word for bucket is bimorphemic: *wo-kë*. It is not clear whether this is historically bimorphemic in Yamatoma; it may have been borrowed into the language as a single word.

619. As discussed below (Section 3.2.3.2.1), the environments for mid-to-high vowel raising in Yamatoma are not well known.

620. It is not clear when this change occurred in relation to the other changes; it could have occurred any time after Stage One without effecting the other phonological changes.

proto-RK	Stage 1	Stage 2	Stage 3	Stage 4	gloss
	Aspiration	Raising	Assimilation	/k/ > /h/	
* <i>ke</i>	* <i>k<sup>h</sup>e</i>	<i>k<sup>h</sup>i</i>	————	————	'tree'
* <i>woke</i>	* <i>wok<sup>h</sup>e</i>	* <i>wuk<sup>h</sup>i</i>	* <i>wik<sup>h</sup>i</i>	<i>wih<sup>i</sup></i>	'bucket'
* <i>kokoro</i>	* <i>k<sup>h</sup>ok<sup>h</sup>oro</i>	————	————	<i>k<sup>h</sup>ohoro</i>	'heart'
* <i>te</i>	* <i>t<sup>h</sup>e</i>	<i>t<sup>h</sup>i</i>	————	————	'hand'
* <i>peto</i>	* <i>hwet<sup>h</sup>o</i> <sup>621</sup>	<i>hwit<sup>h</sup>u</i>	————	————	'dolphin'
* <i>mot-</i>	* <i>mot<sup>h</sup>-</i> <sup>622</sup>	<i>mut<sup>h</sup>-</i>	————	————	'hold'
* <i>yak-</i>	* <i>yak<sup>h</sup>-</i> <sup>623</sup>	<i>yak<sup>h</sup>-</i>	————	————	'burn'

### 3.2.3.1.5 Nasal Consonants

Yamatoma has two nasals: a bilabial nasal /m/ and a dental nasal /n/. The nasals and their allophones are shown in Table 3.4.

Table 3.4: Phonetic Values and Allophones for Nasal Consonants in Yamatoma

Phoneme	Phonetic Value	Allophones
/m/	[m] - bilabial nasal stop	[m] in all environments
/n/	[n] - dental nasal stop	[ɲ] preceding /i/ and /y/ [ŋ] before /k/ and /g/ [n] elsewhere

In addition, the nasal /n/ is the result of the sequence of a voiced consonant plus a high vowel in morpheme final position (Thorpe 1983: 50).<sup>624</sup> However, Thorpe claims

621. The change from proto-RK \*/p/ to \*/hw/ [f] must have happened before the process of aspiration applied, as there are RK languages that also have an aspirated /p/ in the same environments that /k/ and /t/ become aspirated (Thorpe 1983: 54).

622. For aspiration to occur with the verbs presented here, there must be a non-high vowel in the second syllable of the verb root. I return to this point below (Section 3.2.4.1).

623. See previous footnote.

624. Thorpe (1983) follows the tradition in Japanese linguistics by presenting such examples with a

that in Yamatoma this sequence does not reduce to /n/ in two mora nouns, but does in three mora nouns (Thorpe 1983: 96). If, however, the subject marker *nyu* is added to a two mora noun, then the noun is treated as three moras long and the sequence reduces to /n/ (Thorpe 1983: 50).

proto-RK	>	Yamatoma	gloss
* <u>tori</u>	>	tʰ <u>uri</u>	'bird'
* <u>tori-no</u>	>	tʰ <u>un-nyu</u>	'bird-NOM'
* <u>Umi</u>	>	ʔ <u>umi</u>	'sea'
* <u>sirami</u>	>	siran <u>u</u>	'louse'

Thorpe (1983: 96) presents two examples of insect names in Yamatoma that undergo a different type of nasal analysis:

proto-RK	>	Yamatoma	gloss
* <u>tani</u>	>	tʰ <u>ami</u>	'tick'
*ʔ <u>ari</u>	>	*ʔ <u>ani</u> > ʔ <u>ami</u>	'ant'

At this time there is no explanation for the change of \*/r/ to /n/ or from \*/n/ to /m/.

---

capital N indicating that instances of the nasal /n/ created from a voiced consonant plus high vowel result in a mora length consonant. However, as this tradition is not recognized outside of the field of Japanese linguistics I indicate this consonant as simply "n", noting that /n/ at the end of a morpheme or before a consonant is phonemically lengthened.

### 3.2.3.1.6 The Liquid

Yamatoma has one liquid, /r/, which is phonetically a flap, [ɾ], in all environments. Thorpe (1983: 98) claims that proto-RK \*/r/ is always realized as /ɾ/ in Yamatoma.

### 3.2.3.1.7 Glides

Yamatoma has three glides: /y/, /w/, and onset /ʔ/. The glides /y/ and /w/ do not occur in syllable initial position, and must always follow the onset glide /ʔ/ or a consonant.

It is arguable whether the onset glide should be treated as a phoneme in Yamatoma, as it occurs in syllable initial position if no consonant is present and therefore it is predictable. It is phonetically glottal, but is distinct from the glottal stop /ʔ/, as shown in the following minimal pairs:

ʔuri-	'go down, descend'	'uri-	'break, fold'
ʔya	'arrow'	'ya	'house'

This glide also occurs between vowels, e.g., *k<sup>h</sup>a'i* 'rice gruel' and *a'omi* 'blue'. In WOJ the word for rice gruel is *kayu* and blue is *awo*,<sup>625</sup> therefore the onset glide occurs in

---

625. The word *kayu* 'rice gruel' is first phonetically attested in *Ruijūmyōgishō*, and *awo* 'blue' is phonetically attested in (KK 2).

places where the glides /y/ and /w/ have been lost in Yamatoma, which may be significant. This will be set aside for future research.

More importantly for the purposes of this study, there are examples of verb stems that behave as consonant final verb stems ending in the glide /ʔ/. If these verbs were vowel final verb stems there would be different morphophonological processes when suffixes were added, as shown in the examples below:

verb stem		infinitive -i	stative -yu-ri	gloss <sup>626</sup>
ending in /ʔ/	<i>mok<sup>h</sup>a'-</i>	<i>mok<sup>h</sup>a'i</i>	<i>mok<sup>h</sup>a'uri</i>	'turn'
consonant final	<i>muk-</i>	<i>muki</i>	<i>mukuri</i>	'turn around'
vowel final	<i>mok<sup>h</sup>e-</i>	<i>mok<sup>h</sup>e</i>	<i>mok<sup>h</sup>eruri</i>	'greet'

The verb *mok<sup>h</sup>a'* - 'turn' must be analyzed as consonant final and not vowel final, or the infinitive -i would be deleted when affixation occurs, i.e., the infinitive form verb would be \**mok<sup>h</sup>a*, similarly, with the stative suffix, if this were a vowel final verb stem, the form would be \**mok<sup>h</sup>aruri*. Since the verb *mok<sup>h</sup>a'*-, and many verbs like it, must be considered consonant final, and since /ʔ/ occurs in these forms, I treat /ʔ/ as a phoneme in Yamatoma, despite its predictable occurrence as an onset glide elsewhere. It should also be noted, that like the examples *k<sup>h</sup>a'i* 'rice gruel' and *a'omi* 'blue' presented above, the verb stems

---

626. The infinitive is discussed in Section 3.2.4.3.1.1. The stative -yu- is discussed in Section 3.2.4.3.1.4.3. The stative final -ri- is discussed in Section 3.2.4.3.1.5.6. The verbs were taken and modified from Osada et al. (1990: 292, 415).

reconstructed as ending in /ʔ/ correspond to verbs in WOJ that end in /p/. Some examples are presented below:

Yamatoma	WOJ	gloss
<i>haʔ-</i>	<i>pap-</i>	crawl
<i>mok<sup>h</sup>aʔ-</i>	<i>mukap-</i>	turn, face
<i>ʔo:ʔ-</i>	<i>ap-</i>	meet
<i>ʔomoʔ-</i>	<i>omöp-</i>	think
<i>çigaʔ-</i>	<i>tigap-</i>	differ

Note that, because of sound changes in Japanese, the WOJ verb stems that end in /p/ end in a /w/ in MdJ. Thus, in the nominal and verbal examples presented above, Yamatoma /ʔ/ corresponds either to WOJ /y/, /w/, or /p/ – which later becomes /w/ – and may be a trace of a lost phoneme.

Further, because it is necessary to analyze some consonant final verb stems as ending in the glide /ʔ/, I treat it as a phoneme in my analysis of Yamatoma. The glides in Yamatoma, therefore, are /y/, /w/ and /ʔ/; table 3.5 shows the distribution of these glides.<sup>627</sup>

---

627. Table adapted from Osada et al. (1977: 26-27).

Table 3.5: Distribution of Glides in Yamatoma

	y	w	'
<b>vowels</b>			
<b>i</b>		wi	'i
<b>ï</b>			'ï
<b>u</b>	yu		'u
<b>e</b>	ye	we	'e
<b>o</b>	yo	wo	'o
<b>a</b>	ya	wa	'a
<b>consonants</b>			
<b>p</b>	pyu, pye, pyo, pya		*
<b>b</b>	byu, bye, byo, bya		
<b>t</b>	tyu, tyo, tya		*
<b>ç</b>	çyu, çye, çyo, çya		*
<b>k</b>	kyu, kye, kyo, kya	kwe, kwo, kwa	*
<b>k<sup>h</sup></b>	k <sup>h</sup> yu, k <sup>h</sup> ye, k <sup>h</sup> yo, k <sup>h</sup> ya		
<b>h</b>	hyu, hye, hyo, hya	hwi, hwe, hwa	
<b>g</b>	gyu, gye, gyo, gya	gwa	
<b>s</b>	syu, sye, syo, sya		*
<b>z</b>	zyu, zye, zyo, zya		
<b>m</b>	myu, myo, mya		
<b>n</b>	nyu, nye, nyo, nya		
<b>r</b>	ryu, ryo		
<b>ʔ</b>	ʔyu, ʔye, ʔyo, ʔya	ʔwi, ʔwe, ʔwa	
<b>'</b>	'yu, 'ye, 'yo, 'ya	'wi, 'we, 'wa	

\*Phonetically, the onset glide always occurs following these consonants, but this appears to be a phonetic and not phonemic distinction.

### 3.2.3.2 Yamatoma Vowels

Yamatoma has six vowels, as shown below in Figure 3.3:

Figure 3.3: Yamatoma Vowels

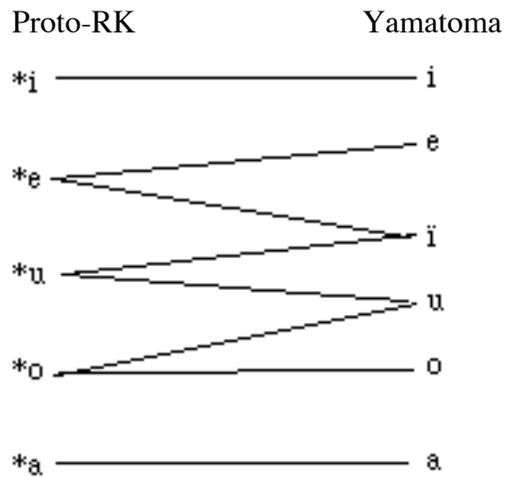
i	ï	u
e		o
	a	

These vowels all have long vowel counterparts; vowel length is indicated by a colon following the vowel, thus /a/ represents a short vowel and /a:/ represents a long vowel. Whereas most RK languages have a rule that monosyllabic words always end in a long vowel, Yamatoma does not have this constraint: e.g., *t<sup>h</sup>i* 'hand'; *mi* 'eye'; and 'ya 'TOP' (cf., 'ya: 'house').

#### 3.2.3.2.1 The Historical Development of Yamatoma Vowels

Our understanding of Yamatoma historical phonology is largely based on Thorpe's (1983) reconstruction of proto-RK. In his study, he explains how Yamatoma vowels developed from the proto-RK vowel system. I present a summary of Thorpe's (1983: 29-51) findings for Yamatoma in Figure 3.4 below.

Figure 3.4: Proto-RK Vowels and Their Correspondences in Yamatoma



As shown above, proto-RK \*/i/ and \*/a/ always result in Yamatoma /i/ and /a/ respectively. The proto-RK high back vowel \*/u/ fronts to /i/ following coronal consonants and remains /u/ elsewhere.

The situation with the mid vowels \*/e/ and \*/o/ is more complicated. In most cases they raise to /i/ and /u/, but in some cases they remain /e/ and /o/. Thorpe (1983: 35-37) presents three possible explanations for why /e/ and /o/ remain. First, he notes that there are Japanese cognates for some of the cases where these vowels are retained, and suggests that Japanese influence has effected these vowels. He rejects this, however, on the basis that there are many examples where cognates do not exist. Next, he argues against Nakamoto's (1976: 94-111) claim that /o/ in Northern Amami dialects reflects WOJ /ô/ because there are too many counter examples to substantiate this claim. Thorpe

(1983: 36) provides three examples where WOJ /ô/ corresponds to Yamatoma /u/ and not /o/ as Nakamoto's claim would suggest.<sup>628</sup> I present the examples below:<sup>629</sup>

WOJ	:	Yamatoma
<i>tôNsi</i> 'wife' (MYS IV: 723)	:	<i>tuzi</i> 'id.'
<i>kurô-</i> 'black' (MYS V: 804)	:	<i>kuru-</i> 'id.'
<i>sirô-</i> 'white' (KK 3)	:	<i>siru-</i> 'id.'

Last, Thorpe suggests the best possible explanation for why these vowels remain involves the environment in which the vowel occurs. He proposes that proto-RK \*/e/ and \*/o/ remain when:

1. The vowel \*/a/ occurs in a neighboring mora: e.g., proto-RK *\*kaze* > Yamatoma *k<sup>h</sup>aze* 'wind'.
2. The vowel \*/e/ or \*/o/ occurs in the second mora of a word: e.g., proto-RK *\*tuno* > Yamatoma *çino* 'horn'.
3. The vowels \*/u/ and \*/i/, whether original proto-RK \*/u/ and \*/i/ or the result of vowel raising assimilate to \*/e/ and \*/o/ that exist because of the first two proposals.<sup>630</sup>
4. In addition, the vowel \*/u/ becomes /o/ if adjacent to /a/ in some rare cases: proto-RK *\*unagi* > Yamatoma *onagi* 'eel'.

Thorpe's proposals suggest a type of vowel assimilation similar to what I proposed for pre-WOJ above (Section 2.2.5.1.3.1), but with different conditions: for pre-WOJ, I

---

628. Thorpe (1983:36) actually presents four examples, however, the fourth example, *posö* 'navel' is phonetically attested in *Ruijūmyōgishō*, where it clearly shows an *otsurui* /ō/, not a *kōrui* /ô/.

629. I have rewritten Thorpe's (1983: 36) WOJ examples to be consistent with the romanization used in the present study. I have also added WOJ attestations which were not provided by Thorpe.

630. Thorpe (1983) does not present any examples to support this hypothesis.

proposed a vowel assimilated to the feature (plus or minus back) of the vowel of the previous syllable. In Yamatoma, however, the issue appears to do with vowel height. Although Thorpe does not clearly state it, the implication in his first proposal is that \*/e/ and \*/o/ fail to raise to /i/ and /u/ respectively when the low vowel /a/ occurs in an adjacent syllable. The same issue is found in the fourth proposal where the high vowel /u/ becomes /o/ because it is assimilating to the height (or "lowness") of the adjacent vowel /a/. The third proposal essentially shows that /e/ and /o/ already assimilated, so if there is also a high vowel in the word, it two will lose its height and assimilate to a lower position. (in this case a high vowel would become a mid vowel). This leaves only the second proposal, which appears to be a change that has nothing to do with vocalic assimilation. Thorpe's proposals are intriguing but further research is needed to prove or disprove them.

There is another type of vowel assimilation described by Thorpe (1983: 45) which accounts for high vowels assimilating to each other. Here, one high vowel assimilates to another high vowel when these vowels occur in adjacent syllables:

<u>proto-RK</u>	>	raising	>	assimilation	>	Yamatoma	gloss
*/i/	>	/i/					
*pige	>	*pigī	>	pigi		——	'beard'
*/u/	>	/i/					
*tume	>	*tumī	>	tīmī	>	çīmī <sup>631</sup>	'nail, claw'
*/u/	>	/i/					
*tuzi	>	——	>	tizi	>	çizi	'top'

Examples like *asibur-* 'play' and *nibur-* 'sleep' show that high vowel assimilation does not always occur. More research is needed to determine when high vowel assimilation applies, and which vowel assimilates to the features of the other high vowel.

The last significant historical vowel change discussed by Thorpe (1983) is that of high vowel loss in devoiced syllables. Thorpe (1983: 47) claims that there was a tendency (but not a fixed rule apparently) for high vowels in the first mora of a word to be deleted between voiceless obstruents. Some of the examples he presents include: proto-RK *\*p̥ite:tu* > Yamatoma *t̥i:ç̥i* 'one'; proto-RK *\*p̥uta:tu* > Yamatoma *ta:ç̥i* 'two'; and proto-RK *\*p̥ito* > Yamatoma *ç̥yu* 'person'. However, in these cases it appears that the entire first syllable, and not just the high vowel, are deleted here. The loss of high vowel in these examples results in a double consonant in other RK languages (see discussion

---

631. As discussed above, \*/t/ > /ç/ when followed by \*/i/. It is therefore necessary to posit that high vowel assimilation occurs before the rule that \*/t/ > /ç/ applies, otherwise we do not get /i/ in this environment and there is no motivation for \*/t/ > /ç/.

above, Section 3.2.3.1.3 where I also raise this issue), but there is no trace of the initial consonant in Yamatoma. Thorpe also does not mention that these examples all begin with the same consonant, which may be significant.<sup>632</sup> Since these are the only examples Thorpe provides that apply to Yamatoma, I am not convinced that it is necessary to posit a rule of high vowel deletion in this environment.

### *3.2.4 Yamatoma Verbal Morphology*

#### 3.2.4.1 The Shape of Pre-Yamatoma Verb Roots

In order to determine the shape of pre-Yamatoma verb roots, I compiled a database of verbs from Osada et. al (1980). The database consists of 495 entries. For the purpose of this study, I considered only verbs for which a verb root can be reconstructed. Roots are reconstructed on the basis of verb pairs or sets (i.e., transitive verbs and intransitive verbs), where at least one member of the pair is formed from the root plus a derivational morpheme. Of the 495 entries only 99 contained verb pairs (or sets) which support the reconstruction of a verb root; the data are presented in Appendix E.

---

632. Thorpe (1983: 47) presents one other example which involves the past tense of the verb 'to come', \**kitamu*, but it does not apply for Yamatoma.

The data show that pre-Yamatoma verb roots can be either consonant final or vowel final. One interesting find, involves verb roots whose stems end in aspirated consonants. Note the following examples, which I discuss below.

<i>çizik<sup>h</sup>-</i>	'continue' (v.i.)
<i>çizik<sup>h</sup>-i-</i>	'continue' (v.t.)
<i>k<sup>h</sup>-</i>	'come' <sup>633</sup>
<i>t<sup>h</sup>at<sup>h</sup>-</i>	'stand' (v.i.)
<i>t<sup>h</sup>at<sup>h</sup>-i-</i>	'stand' (v.t.)
<i>ʔuk<sup>h</sup>-</i>	'float' (v.i.)
<i>ʔuk<sup>h</sup>-i-</i>	'float' (v.t.)

As discussed above (Section 3.2.3.1.4), aspiration occurs when the phonemes /t/ or /k/ occur in word initial position followed by a non-high vowel, or in intervocalic position between two non-high vowels. Thus, in order for these verb roots to end in an aspirated consonant, there must have been a final vowel in the root at an earlier stage of the language. This vowel cannot be reconstructed; all we can prove is that this vowel is non-high, which is what causes aspiration. For these roots, then, I reconstruct a final vowel  $V_{[-high]}$  for pre-Yamatoma:

---

633. This example is not counted as one of the 99 reconstructable verb roots, but I include it here as we can reconstruct it further.

Yamatoma	<	pre-Yamatoma	gloss
çizik <sup>h</sup> -	<	*çizik <sup>h</sup> V <sub>[-high]</sub> -	'continue' (v.i.)
çizik <sup>h</sup> -i-	<	*çizik <sup>h</sup> V <sub>[-high]</sub> -i-	'continue' (v.t.)
k <sup>h</sup> -	<	*k <sup>h</sup> V <sub>[-high]</sub> -	'come'
t <sup>h</sup> at <sup>h</sup> -	<	*t <sup>h</sup> at <sup>h</sup> V <sub>[-high]</sub> -	'stand' (v.i.)
t <sup>h</sup> at <sup>h</sup> -i-	<	*t <sup>h</sup> at <sup>h</sup> V <sub>[-high]</sub> -i-	'stand' (v.t.)
ʔuk <sup>h</sup> -	<	*ʔuk <sup>h</sup> V <sub>[-high]</sub> -	'float' (v.i.)
ʔuk <sup>h</sup> -i-	<	*ʔuk <sup>h</sup> V <sub>[-high]</sub> -i-	'float' (v.t.)

### 3.2.4.2 Derivational Morphemes

There are four derivational suffixes in pre-Yamatoma: transitive \*-as-, intransitive \*-ar-, verbalizer \*-am-, and the transitivity flipper \*-i-/\*-e-. I discuss the morphemes below in that order.

#### 3.2.4.2.1 The Derivational Suffix \*-as-

The derivational suffix \*-as- is used to form a transitive verb from an intransitive or neutral verb root.<sup>634</sup> It can be followed by the transitivity flipper \*-i-/\*-e-, but not any other derivational morphemes; there are only two examples of these morphemes being used together. This suffix is reconstructed as simply \*-as-, and when suffixed to a vowel final verb root, the vowel of the suffix is deleted. Note the following examples:

---

634. By "neutral" verb root, I mean a root that is not marked for either intransitivity or transitivity.

<i>hogas-</i>	<	* <i>hog-as-</i>	'rip, tear (v.t.)'
cf. <i>hoge-</i>	<	* <i>hog-e-</i>	'rip, tear (v.i.)' <sup>635</sup>
<i>hwe:s-</i>	<	* <i>hwe:-as-</i>	'brighten (v.t.)'
cf. <i>hwe:-</i>	<	* <i>hwe:-</i>	'brighten (v.i.)'
<i>k<sup>h</sup>akus-</i>	<	* <i>k<sup>h</sup>aku-as-</i>	'hide (v.t.)'
cf. <i>k<sup>h</sup>akuri-</i>	<	* <i>k<sup>h</sup>aku-ar-ï-</i>	'hide (v.i.)'
used with transitivity flipper:			
<i>nusi-</i>	<	* <i>nu-as-ï-</i>	'ride (v.t.)'
cf. <i>nur-</i>	<	* <i>nu-ar-</i>	'ride (v.i.)'
<i>'yusi-</i>	<	* <i>'yu-as-ï-</i>	'pass (v.t.)'
cf. <i>'yur-</i>	<	* <i>'yu-ar-</i>	'pass (v.i.)'

#### 3.2.4.2.2 The Derivational Suffix \*-ar-

The pre-Yamatoma derivational suffix \*-ar- is used to make an intransitive verb from a transitive or neutral verb root. Like \*-as- above, the intransitive suffix can be followed by the transitivity flipper \*-ï-/e-, it can also be suffixed to -am- (presented in the next section). When this morpheme is suffixed to a vowel final verb root, the vowel of the suffix is deleted. Examples of \*-ar- include:

---

635. Morphemes in the forms presented here for comparative purposes are discussed below.

<i>mo:r-</i>	<	* <i>mo:-ar-</i>	'turn (v.i.)'
cf. <i>mo:s-</i>	<	* <i>mo:-as-</i>	'turn (v.t.)'
<i>t<sup>h</sup>ubur-</i>	<	* <i>t<sup>h</sup>ubu-ar-</i>	'burn (v.i.)'
cf. <i>t<sup>h</sup>ubus-</i>	<	* <i>t<sup>h</sup>ubu-as-</i>	'burn, light (v.t.)'
<i>ʔarat<sup>h</sup>amar-</i>	<	* <i>ʔarat<sup>h</sup>-am-ar-</i>	'be renewed (v.i.)'
cf. <i>ʔarat<sup>h</sup>ami-</i>	<	* <i>ʔarat<sup>h</sup>-am-ï-</i>	'renew (v.t.)'

used with transitivity flipper:

<i>hanare-</i>	<	* <i>hana-ar-e-</i>	'separate (v.i.)'
cf. <i>hanas-</i>	<	* <i>hana-as-</i>	'separate (v.t.)'
<i>k<sup>h</sup>akuri-</i>	<	* <i>k<sup>h</sup>aku-ar-ï-</i>	'hide (v.i.)'
cf. <i>k<sup>h</sup>akus-</i>	<	* <i>k<sup>h</sup>aku-as-</i>	'hide (v.t.)'
<i>kyo(:)re-</i>	<	* <i>kyo:-ar-e-</i>	'break (v.i.)'
cf. <i>kyo:s-</i>	<	* <i>kyo:-as-</i>	'break (v.t.)'

### 3.2.4.2.3 The Derivational Suffix \*-am-

The derivational suffix \*-am- in pre-Yamatoma is a verbalizer, used to create verbs from adjectives as in the examples presented below. It can be followed by the transitivity flipper (Section 3.2.4.2.4) and the intransitivizing suffix -ar- (Section 3.2.4.2.1).

$\text{ʔarat}^h\text{amar-}$	<	$*\text{ʔarat}^h\text{-am-ar-}$	'be renewed (v.i.)'
cf. $\text{ʔarat}^h\text{ami-}$	<	$*\text{ʔarat}^h\text{-am-}\ddot{\text{i}}\text{-}$	'renew (v.t.)'
$\text{hukuram-}$	<	$*\text{hukur-am-}$	'swell (v.t.)'
cf. $\text{hukuri-}$	<	$*\text{hukur-}\ddot{\text{i}}\text{-}$	'swell (v.i.)'
$\text{k}^h\text{at}^h\text{ami-}$	<	$*\text{k}^h\text{at}^h\text{-am-}\ddot{\text{i}}\text{-}$	'harden (v.i.)'
cf. $\text{k}^h\text{at}^h\text{amar-}$	<	$*\text{k}^h\text{at}^h\text{-am-ar-}$	'harden (v.i.)'

#### 3.2.4.2.4 The Derivational Suffix \*-i-/\*-e-

The suffix \*-i-/\*-e- functions as a transitivity flipper, in most cases changing the verb from either transitive to intransitive or intransitive to transitive, but in some cases the function is unclear.

As discussed above (Section 3.2.3.2.1), the vowels /i/ and /e/ both derive from proto-RK \*/e/, so it is tempting to reconstruct this suffix as \*-e-, however it is not possible to predict when the transitivity flipper will become \*-i- and when it will be \*-e-. There are 53 examples of this morpheme; 43 show the transitivity flipper as \*-i- and 10 as \*-e-. All cases of \*-e- occur as Thorpe's (1983: 37) proposal for vowel assimilation predict (see Section 3.2.3.2.1), that is, \*-e- *only* occurs in words where the vowel of the previous syllable is a non-high vowel. But, \*-i- can also occur in the same environments, so it is not possible to predict the shape of the transitivity flipper, and this issue will be set aside for further research. The transitivity flipper occurs in the following examples.

examples with \*-e-

<i>hoge-</i>	<	* <i>hog-e-</i>	'rip, tear (v.t.)'
cf. <i>hogas-</i>	<	* <i>hog-as-</i>	'rip, tear (v.i.)'

<i>t<sup>h</sup>are-</i>	<	* <i>t<sup>h</sup>ar-e-</i>	'hang (v.t.)'
cf. <i>t<sup>h</sup>ar-</i>	<	* <i>t<sup>h</sup>ar-</i>	'hang (v.i.)'
cf. <i>t<sup>h</sup>aras-</i>	<	* <i>t<sup>h</sup>ar-as-</i>	'make hang (v.t.)'

' <i>ware-</i>	<	*' <i>war-e-</i>	'break (v.i.)'
cf. ' <i>war-</i>	<	*' <i>war-</i>	'break (v.t.)'

examples with \*-i-

<i>çizimî-</i>	<	* <i>çizim-i-</i>	'shrink (v.t.)'
cf. <i>çizim-</i>	<	* <i>çizim-</i>	'shrink (v.i.)'
cf. <i>çizimar-</i>	<	* <i>çizim-ar-</i>	'shrink (v.i.)'

<i>k<sup>h</sup>at<sup>h</sup>amî-</i>	<	* <i>k<sup>h</sup>at<sup>h</sup>-am-i-</i>	'harden (v.i.)'
cf. <i>k<sup>h</sup>at<sup>h</sup>amar-</i>	<	* <i>k<sup>h</sup>at<sup>h</sup>-am-ar-</i>	'harden (v.i.)'

<i>ʔarat<sup>h</sup>amî-</i>	<	* <i>ʔarat<sup>h</sup>-am-i-</i>	'renew (v.t.)'
cf. <i>ʔarat<sup>h</sup>amar-</i>	<	* <i>ʔarat<sup>h</sup>-am-ar-</i>	'be renewed (v.i.)'

When this suffix attaches to a verb root the vowel of the root is deleted. Also, this morpheme can follow the other derivational morphemes, as stated above.

### 3.2.4.2.5 Summary

Table 3.6 below lists the Yamatoma derivational morphemes and their functions.

Table 3.6: Summary of Yamatoma Derivational Morphemes

<b>Morpheme</b>	<b>Function</b>
*-as-	transitivity or causative marker
*-ar-	intransitivity marker
*-am-	unclear
*-i-/*-e-	transitivity flipper in some cases, function unknown in others

### 3.2.4.3 Inflectional Morphemes

Yamatoma has a number of inflectional morphemes. For the purpose of this study, however, I will only be discussing those morphemes which have cognates in WOJ and/or EOJ, and which are not Yamatoma innovations or loans either from MJ or possibly from later stages of Japanese.<sup>636</sup> There are many morphemes not treated here; in the interest of space I present them in Appendix F.

#### 3.2.4.3.1 Verbal Suffixes and Auxiliaries

Yamatoma verb stems are bound forms and must be followed by at least one suffix or auxiliary. It is possible for a verb stem to be followed by a string of suffixes, and in this case there is a set order in which the morphemes can occur; some must attach

---

636. Although I do not specifically discuss these morphemes, some do occur in examples presented throughout this section.

directly to the root and can be followed by other morphemes, while other suffixes may only occur in the final position of a verbal morpheme string.

Following the discussion above in Section 2.2.5.3, I have grouped the morphemes according to the order in which they can occur in a verbal string. The infinitive suffix *-i* is not placed in a group as its ordering is not as restricted as the other suffixes; it can occur before and/or after auxiliaries, and it is the only morpheme that can occur more than once in a verbal string.

If more than one morpheme is present in a verbal string, then a morpheme in Group I occurs before one in Group II, a morpheme in Group II occurs before Group III, etc. Group III or IV morphemes must end a verbal string,<sup>637</sup> thus, a verbal string does not need to have a morpheme from Group I-III, but must end in either the infinitive *-i* or a Group III stative or Group IV morpheme.

---

637. Only the stative suffixes in Group III may end a verbal string, but they are often followed by Group IV morphemes.

Table 3.7: Classification of Yamatoma Morphemes Based on Verbal String Ordering

	Ordering	Morphemes discussed in this study	<i>Morphemes not discussed in this study</i> <sup>638</sup>
infinitive <i>-i</i>	suffixes to the verb root, auxiliaries, and some suffixes; can occur in final position; can be followed by a verb or auxiliary	<i>-i</i>	
Group I	suffixes to the verb root	<i>-as-</i> CAUS suffix <i>-rar-</i> POT/PASS suffix <i>-yan-</i> NEG suffix	<i>-ins-</i> <i>-kir-</i>
Group II	follows the verb root or a Group I morpheme; can also follow Group III morphemes	<i>-t<sup>h</sup></i> - PERF suffix	<i>-adana</i> <i>-do/-ato</i> <i>-na:, -nya(:)</i> <i>-the(:)n</i>
Group III	follows the verb root or a Group I-II morpheme	<i>-ya-</i> PST suffix <i>-yo:-</i> NPS suffix <i>-yu-</i> STAT suffix	

---

638. The functions for these morphemes are presented in Appendix F.

Group IV	can affix to the verb root or follow a Group I-III morpheme, ends verbal string	<i>-a</i> VOL suffix <i>-azì</i> NEG suffix <i>-ba</i> CONJ suffix <i>-i/-i</i> EVD suffix <i>-n/-ru</i> attributive suffix <i>-ri</i> STAT FIN suffix <i>-rì</i> IMP suffix <i>-runa</i> NEG IMP suffix <i>-tʰi</i> GER suffix <i>-yumi</i> CONJ suffix	<i>-ami</i> <i>-attu</i> <i>-bosyari</i> <i>-gaççyana</i> <i>-gamarasyari</i> <i>-gurusyari</i> <i>-hana/-bana</i> <i>-hunde</i> <i>-khatha</i> <i>-made</i> <i>-ma'ye (do)</i> <i>-miçyuran</i> <i>-nogori</i> <i>-o:</i> <i>-sira</i> <i>-tyagesari</i> <i>-tyasari</i> <i>-ukha:zi</i> <i>-'yassari</i> <i>-ʔagumasyari</i> <i>-ʔagumasya-gessa</i>
----------	---	---	--

#### 3.2.4.3.1.1 The Infinitive -i

The Yamatoma infinitive, like the OJ infinitive, is suffixed to verb roots and verbal auxiliaries. When used between two verbs or auxiliaries it acts as a connector between the two morphemes. The infinitive also occurs in the final position of a verbal string, and in this case it connects the first clause with the second, and may be thought of

as English "and" ([clause 1]-and-[clause 2]). This morpheme is deleted when following vowel final stem verbs and auxiliaries in order to prevent a vowel-vowel sequence, as shown in the third example.

mun k<sup>h</sup>am-u-n 'yonma hanas-i nu kik-i-tyasa  
 thing eat-STAT-ATT COMP talk-NML TOP listen-INF-DES  
 More than eating something, [I] want to listen to [your] story.  
 (Osada et al. 1980: 500)

ʔuku'yama ni syen nen-k<sup>h</sup>a:ra sat-i mi-ran hana nu sat-yur-u çiba  
 ʔuri mi-razi ʔuk<sup>h</sup>ar-umi<sup>639</sup>  
 [place name] LOC 1000 year-ABL bloom-INF see-NEG/ATT  
 flower TOP bloom-STAT-FIN QUOT that/ACC see-NEG  
 put-CONJ  
 As for the flowers, which bloomed and were not seen on Mt. Uku  
 (from) a thousand years ago, saying that they are [now] blooming,  
 do [you] not see them?  
 (Osada et al. 1980: 498)

nya: dek<sup>h</sup>e-th-a  
 already complete/INF-PERF-PST  
 [It is] already completed.  
 (Osada et al. 1980: 503)

### 3.2.4.3.1.2 Group I Morphemes

Morphemes in this group include causative suffix *-as-*, the passive/potential suffix *-rar-*, and negative suffix *-yan-*. These suffixes affix directly to the verb stem.

---

639. Osada et al. (19880: 498) list this example is from an older Yamatoma speaker; *mi-raN* > *m-yaN* and *mi-razi* > *m-ya:zi* in the modern language.

3.2.4.3.1.2.1 The Causative Suffix -as-. The suffix *-as-* affixes to transitive verbs

and denotes causation where an actor makes or allows an agent do the action of the verb.

çigi: 'wa-nin ʔot<sup>h</sup>a'w-as-i  
next/TOP I-DAT sing-CAUS-IMP  
Let me sing next!  
(Osada et al. 1980: 502)

t<sup>h</sup>aru-n k<sup>h</sup>ak<sup>h</sup>-as-i-ba 'iççya k<sup>h</sup>a'i  
who-DAT write-CAUS-EVD-CONJ good/COP QP  
Who would be best to make write [it].  
(Osada et al. 1980: 502)

3.2.4.3.1.2.2 The Passive/Potential Suffix -rar-. The suffix *-rar-* in Yamatoma can

be used to express either passive or potential voice, as illustrated by the following

examples. When the passive/potential morpheme is followed by a suffix with initial /t/,

the consonant of the suffix assimilates to /t/: thus *-rar-ti* > *-ratti*. When suffixed to a

consonant final verb stem, the initial consonant of the morpheme is deleted.

Passive:

ʔin-nin ku'w-at-ti ʔitya-sari  
dog-DAT bite-PASS-GER painful-FIN  
[I] was bitten by a dog and it hurt.  
(Osada et al. 1980: 502)

nak<sup>h</sup>-at-ti k<sup>h</sup>oma-t<sup>h</sup>-a  
cry-PASS-GER trouble-PERF-PST  
I was troubled by being cried on.  
(Osada et al. 1980: 502)

Potential:

'warabĩn na: sĭ-rar-an  
children TOP do-POT-NEG  
Children cannot do [it].  
(Osada et al. 1980: 502)

k<sup>h</sup>u-n k<sup>h</sup>usuri: nigyasanu num-ar-an  
this-GEN medicine/TOP bitter drink-POT-NEG  
This medicine is bitter and [I] cannot drink [it].  
(Osada et al. 1980: 502)

3.2.4.3.1.2.3 The Negative Suffix -yan(-) < -ran(-). The negative suffix, -yan(-),

affixes directly to the verb root. This suffix can be followed by other suffixes, and can also end a verb string. When it ends a verb string, I treat it as historically bimorphemic consisting of negative -yan- plus stative final -ri, which form \*-yanri > \*-yani > -yan.

Osada et al. (1980: 501) note some irregular forms involving this suffix: *k<sup>h</sup>o-n* 'come-NEG' and *m-yan* < *mi-ran* 'see-NEG'; *sĭ-ran* 'do-NEG'. According to Osada et al. (1980: 501) the forms *mi-ran* and *sĭ-ran* are older attested forms of the negative, suggest that -yan- developed from -ran-. The initial /y/ of this suffix is deleted following verb stems ending in /t<sup>h</sup>/ or /r/, but preserved elsewhere.<sup>640</sup>

---

640. When comparing the negative suffix in Yamatoma and Shuri to the negative suffix in other Japonic languages, it appears that the initial /y/ < /r/ in Yamatoma and the initial /r/ in Shuri are innovations, as the negative is -an- elsewhere in Japonic. Below I discuss the possibility that the Yamatoma and Shuri negative suffixes are built off of the passive form; see Section 4.4.3.4 for more discussion.

'wan na: ʔik<sup>h</sup>-yan  
I TOP go-NEG  
I am not going.  
(Osada et al. 1980: 501)

ʔya: 'ya 'ya: nan 'ur-an na:  
you TOP house LOC exist-NEG QP  
Won't you be at your house?  
(Osada et al. 1980: 501)

### 3.2.4.3.1.3 Group II Morphemes

3.2.4.3.1.3.1 The Perfective -t<sup>h</sup>-. There is only one Group II morpheme, perfective -t<sup>h</sup>- which can follow Group I or III morphemes or the verb root or act as an auxiliary and follow the infinitive. It typically precedes a Group III stative morpheme (see discussion below) but in some cases also follows a Group III stative morpheme, but only in the pattern stative-perfective-stative.

There are a number of morphophonemic changes which occur when this morpheme is suffixed to consonant final stems; no changes occur following vowel stems where -t<sup>h</sup>- remains /t<sup>h</sup>/. Below I present examples taken from Osada et al. (1980) to show the phonemic changes that happen with this suffix depending on the final consonant of the preceding stem. Some of the examples they present involve the the gerund -t<sup>h</sup>i (Section 3.2.4.3.1.5.9 below), which undergoes the same morphophonemic changes.

/t<sup>h</sup>/ > /t<sup>h</sup>/ after /ʔ/, /n/, /r/

ʔomo'- 'think' > ʔomo-t<sup>h</sup>i think-GER 'thinking' (Osada et al. 1980: 485)

-ran- 'NEG' > ʔimor-yo:-ran-t<sup>h</sup>i be/HON-NPS-NEG-GER 'was not there' (Osada et al. 1980: 485)

ʔar- 'exist' > ʔat-t<sup>h</sup>-o exist-PERF-NPS<sup>641</sup>

/t<sup>h</sup>/ > /t/ after /k/

nak- 'cry' > na-t-ya cry-PERF-PST 'cried' (Osada et al. 1980: 485)

/t<sup>h</sup>/ > /z/ after /k<sup>h</sup>/

ʔik<sup>h</sup>- 'go' > ʔi-zi 'go-GER' 'going' (Osada et al. 1980: 497)

/t<sup>h</sup>/ > /ç/ after /s/

haras- 'flow' > hara-çi flow-GER 'flowing' (Osada et al. 1980: 365)

/t<sup>h</sup>/ > /çç/ after /kk/

ʔakk- 'walk' > ʔaçç-ya walk-PERF-PST 'walked' (Osada et al. 1980: 485)

/t<sup>h</sup>/ > /d/ after /b/, /m/

narab- 'learn' > nara-d-u-ri learn-PERF-STAT-FIN 'are learning' (Osada et al. 1980: 268)

k<sup>h</sup>am- 'eat' > k<sup>h</sup>a-dī eat-GER 'eating' (Osada et al. 1980: 485)

Examples of the how the perfective suffix is used are presented below:

k<sup>h</sup>u ma-nan syogosya ʔat-t<sup>h</sup>-o  
this place-LOC [place name] exist-PERF-NPS  
Shogosha is in this place.  
(Osada et al. 1980: 503)

---

641. Here the /r/ assimilates to /t/.

nya: dek<sup>h</sup>e-t<sup>h</sup>-a  
already complete/INF-PERF-PST  
[It is] already completed.  
(Osada et al. 1980: 503)

#### 3.2.4.3.1.4 Group III Morphemes

Group III consists of the stative auxiliaries. Serafim (2004) in his discussion on these auxiliaries in Shuri refers to them as "stative extensions" explaining that verb forms developed in part from stative verbs. There are three stative suffixes in Yamatoma: past stative suffix *-ya-*, non-past stative suffix *-yo:-*, and stative suffix *-yu-*. These suffixes can be followed by a Group IV morpheme, or end a verbal string.

3.2.4.3.1.4.1 The Past Stative Suffix -ya-. The stative suffix *-ya-* indicates the past tense. The glide is deleted following aspirated /t<sup>h</sup>/ and /r/ where the glide cannot occur (See Section 3.2.3.1.7 above) and remains elsewhere.

nya: dekhe-th-a  
already complete-PERF-PST  
[It is] already completed.  
(Osada et al. 1980: 503)

nya: çiç-ya kha'i 'ya:  
already wear-PST QP TAG  
[I] already wore [this] right?  
(Osada et al. 1980: 503-504)

3.2.4.3.1.4.2 The Non-past Stative Suffix -yo:-. Yamatoma also has a non-past

stative suffix, -yo:-. The glide of the suffix is deleted following /t<sup>h</sup>/ and /r/, for the reasons mentioned above.

'wa-ga nae:çi ?i-zi k-yo:-ri  
I-NOM [place name] go-GER come-NPS-FIN  
I will go to Naechi and come back.  
(Osada et al. 1980: 503)

syogosya ?ar-yo:-n k<sup>h</sup>anan sye'wa si-nsyon  
[place name] exist-NPS-ATT because worry do/HON-NEG/IMP  
[It] is at Shogosha, so don't worry.  
(Osada et al. 1980: 503)

k<sup>h</sup>u ma-nan syogosya ?at-t-o<sup>642</sup>  
this place-LOC [place name] exist-PERF-NPS  
Shogosha is in this place.  
(Osada et al. 1980: 503)

3.2.4.3.1.4.3 The Stative Suffix -yu-. Last, Yamatoma also has a stative suffix,

-yu-. The glide of the suffix is deleted following aspirated /t<sup>h</sup>/ and /r/, for the reasons mentioned above.

'wan dak<sup>h</sup>a 'yum-u-ri  
I also read-STAT-FIN  
I also read.  
(Osada et al. 1980: 500)

---

642. It is unclear why this vowel is shortened here.

da:çi-ga ?imor-u-ru  
where-NOM go/HON-STAT-ATT  
Where are you going?  
(Osada et al. 1980: 500)

'wa-ga gasi ?i:-ba, ?arī: nu: çi ?yu-u k<sup>h</sup>a'i  
I-NOM that say/EVD-CONJ, that/TOP<sup>643</sup> what QUOT say-STAT  
QP  
When I say that, what will s/he say.  
(Osada et al. 1980: 501)

### 3.2.4.3.1.5 Group IV Morphemes

Group IV morphemes occur in the final position of a verbal string. These morphemes can be affixed to the verb root directly, or to any Group I-III morpheme. The suffixes are presented below in alphabetical order.

#### 3.2.4.3.1.5.1 The Volitional Suffix -a/-o. Yamatoma has two volitional suffixes:

*-a* and *-o*. Osada et al. (1980: 495) suggests that *-a* may be the older form of *-o* but does not explain this development. The suffix *-a* is always followed by the conjunction *-ban*.

Examples of both suffixes follow:

---

643. Here: "that person".

ʔasīb-a ban ʔuk<sup>h</sup>-a ban ʔya k<sup>h</sup>atte  
 play-VOL CONJC quit-VOL CONJ you selfish<sup>644</sup>  
 [You] will [decide to] play or you will [decide to] quit, it's up to  
 you.  
 (Osada et al. 1980: 495)

ʔik<sup>h</sup>-ya<sup>645</sup> ban 'ur-a ban 'wan na: siçyu-ran  
 go-VOL CONJC be-VOL CONJC I-TOP know-NEG  
 I don't know if [I] will go or [if I] will stay.  
 (Osada et al. 1980: 495)

nya: modor-o  
 already return-VOL  
Let's return [home] already.  
 (Osada et al. 1980: 501)  
 ʔya-ga hwissa nar-i-ba k<sup>h</sup>uri kurir-o  
 you-NOM big become-EVD-CONJ this/ACC do-VOL  
 When you become big [grow up], we will do this.  
 (Osada et al. 1980: 493)

#### 3.2.4.3.1.5.2 The Negative Suffix *-azi*. In addition to the negative suffix *-yan-*

discussed above, Yamatoma has a negative suffix *-azi*. It is used as a clause final  
 negative suffix.

hon nin 'yum-azi ʔasi-dī be:ri 'ur-i  
 book even read-NEG play-GER just sit-FIN  
 [You] don't even read books, [you] just play and sit.  
 (Osada et al. 1980: 501)

---

644. This is typically translated as selfish, but used to mean "as you wish" or "[it's] up to you"

645. It is not clear why the volitional is *-ya-* here and *-a-* in all other examples.

sehe-n num-azi, t<sup>h</sup>abaku dak<sup>h</sup>a huk-azi, zin nu t<sup>h</sup>am-ar-u-ro:  
 alcohol even drink-NEG, smoke also smoke-NEG, money TOP  
 save-POT-STAT-CONJ  
 [You] don't drink alcohol, you also don't smoke, [you] can  
 probably save money.  
 (Osada et al. 1980: 501)

3.2.4.3.1.5.3 The Conjecture Suffix -ba. The conjecture suffix *-ba* follows the evidential suffix *-i* (see below) and is a clause final suffix used to indicate a fulfilled condition.

?ik<sup>h</sup>-i-ba 'wak<sup>h</sup>ar-u-ri  
 go-EVD-CONJ understand-stat-FIN  
When [you] go, [you will] understand.  
 (Osada et al. 1980: 493)

?ya-ga hwissa nar-i-ba k<sup>h</sup>uri kurir-o  
 you-NOM big become-EVD-CONJ this/ACC do-VOL  
When you become big, let's do this.  
 (Osada et al. 1980: 493)

?yatya k<sup>h</sup>o-n-ba ?o:'wa-r-an do  
 tomorrow come/EVD-CONJ meet-POT-NEG EMPH  
If [you] don't come tomorrow, [we] cannot meet.  
 (Osada et al. 1980: 493)

3.2.4.3.1.5.4 The Evidential Suffix -i. The evidential suffix *-i* is a sentence final suffix that indicates a fulfilled action. It is typically translated as "since" or "when". The

evidential form of the verb *kʰ-* 'to come' is irregular: *kʰo-n*. Osada et al. (1977, 1980) do not account for this; it could be that historically this suffix had a voiced initial and the sequence of voiced consonant plus high vowel results in /n/ (see Section 3.2.3.1.5).<sup>646</sup>

ʔamī-n çikat-t<sup>h</sup>-ī k<sup>h</sup>aze hik-i s-ya  
 rain-LOC wet-PERF-EVD cold catch-NML do-PST  
Since I got wet in the rain, I caught a cold.  
 (Osada et al. 1980: 504)

ʔun k<sup>h</sup>oro ʔya: ʔwan dak<sup>h</sup>a ʔwahasa-t<sup>h</sup>i çikara nu ʔa-t<sup>h</sup>-ī  
 that time TOP I also young-GER strength TOP exist-PERF-EVD  
 [At] that time, I was also young and as for strength, I had [it].  
 (Osada et al. 1980: 504)

ʔyaçya k<sup>h</sup>o-n-ba ʔo: ʔwa-r-an do  
 tomorrow come-EVD-CONJ meet-POT-NEG EMPH  
 If [you] don't come tomorrow, [we] cannot meet.  
 (Osada et al. 1980: 493)

#### 3.2.4.3.1.5.5 The Negative Imperative Suffix -na. The negative imperative form

of verbs is marked with the suffix *-na*. This suffix always follows the stative *-u* (Section 3.2.4.3.1.4.3).

ʔat-tu ʔasīb-u-na  
 that-COM play-STAT-NEG IMP  
Don't play with that!  
 (Osada et al. 1980: 498)

---

646. Other branches of Japonic support this: the evidential suffix in other branches has an initial /t/ which is lost in Yamatoma. I return to this in Section 4.4.3.25.

ʔagasyu-n t<sup>h</sup>oro:-çi 'ya: ʔimor-u-na 'yo:  
 that kind-ATT place-LOC TOP exist/HON-STAT-NEG IMP  
 EMPH  
Don't be at that kind of place!  
 (Osada et al. 1980: 498)

3.2.4.3.1.5.6 The Attributive Suffix -n/-ru. The attributive form is marked as *-n* or *-ru* in Yamatoma. Osada et al. (1980: 501) consider *-ru* to be an older form of this suffix, but have examples of this suffix where the data are not marked as older forms. It can be used as a clause or sentence final morpheme. This morpheme appears to always follow one of the stative suffixes discussed above (Section 3.2.4.3.1.4); I was unable to find an example of the attributive suffix that did not occur after one of the stative morphemes.<sup>647</sup>

'wa-ga 'ir-u-n t<sup>h</sup>oro 'ya: da:  
 I-NOM sit-STAT-ATT place TOP where  
 Where am I sitting? (Where is the place I should sit?)  
 (Osada et al. 1980: 500)

mun k<sup>h</sup>am-u-n 'yonma hanas-i nu kik-i-tyasa  
 thing eat-STAT-ATT COMP talk-NML TOP listen-INF-DES  
 More than eating something, [I] want to listen to [your] story.  
 (Osada et al. 1980: 500)

---

647. I do not necessarily take this as proof that the attributive suffix cannot attach directly to a verb root and must always follow a stative suffix, but I was unable to find examples of the attributive affixing directly to a verb root or other morpheme.

The attributive form can also mark the conclusive in a *kakari musubi* structure (Section 2.2.5.3.3.8.13) triggered by the emphatic particle *du* or in a question as in the following examples:

gasi du kiç-ya-n k<sup>h</sup>anan, ki: çiki-ri<sup>648</sup>  
that EMPH hear-PST-ATT because, energy/ACC attach-IMP  
I heard that, so be careful!  
(Osada et al. 1980: 504)

da:çi ga ʔimor-u-ru<sup>649</sup>  
where NOM go/HON-NPS-ATT  
Where are you going?  
(Osada et al. 1980: 500)

3.2.4.3.1.5.7 The Stative Final Suffix -ri. Yamatoma has a final suffix *-ri* which follows the stative morphemes and the stative verbs *ʔar-* 'to exist [used for things]' and *ʔur-* 'to exist [used for people], to sit'. The initial consonant of the suffix is preserved following the stative suffixes and deleted following the stative verbs.

nu: ba k<sup>h</sup>am-u-ri  
what ACC eat-STAT-FIN  
What do you eat?  
(Osada et al. 1980: 500)

---

648. The expression *ki: çikiri* (MdJ *ki-wo tsukete*) is a set phrase meaning "take care" or "be careful".

649. Osada et al. (1980: 500) consider this an older example.

'ya: t<sup>h</sup>at<sup>h</sup>ir-uri, zīn na: mo:k<sup>h</sup>er-u-ri, 'iççya-n k<sup>h</sup>utu: be:ri do.  
 house/TOP build-FIN money TOP profit-STAT-FIN good-ATT  
 thing just EMPH  
 [You] build a house, [you] make money, it is just a good thing.  
 (Osada et al. 1980: 500)

hon nin 'yum-azī ʔasi-di be:ri 'ur-i  
 book even read-NEG play-GER just sit-FIN  
 Without even reading [your] books, [you] play [or] just sit [there].  
 (Osada et al. 1980: 501)

#### 3.2.4.3.1.5.8 The Imperative Suffix -ri. The imperative suffix in Yamatoma is *-ri*.

When suffixed to a verb root or morpheme ending in a final consonant the /r/ is deleted and *-i* remains. The verb *k<sup>h</sup>*- 'to come' has a special form, *k<sup>h</sup>o:*, as shown below.

t<sup>h</sup>in-gade<sup>650</sup> nubur-i  
 heaven-TERM go up-IMP  
Go up to the heavens!  
 (Osada et al. 1980: 501)

'wa-ga ʔy-u-n ga ni:si si-ri  
 I-NOM say-STAT-ATT GEN way do-IMP  
Do as I say!  
 (Osada et al. 1980: 501)

k<sup>h</sup>a-n k<sup>h</sup>o:  
 here-LOC come/IMP  
Come here!  
 (Osada et al. 1980: 502)

---

650. Yamatoma *gade* has the same function as OJ *made*.

3.2.4.3.1.5.9 The Subordinative Gerund -tʰi. The subordinative gerund -tʰi is a clause final suffix. It can be used to connect either two verbs or two clauses in the pattern (clause) V<sub>1</sub>-tʰi (clause) V<sub>2</sub>, and indicates that the action of the first verb (V<sub>1</sub>) began before the action of the second verb (V<sub>2</sub>). There are a number of morphophonemic changes that occur when this morpheme suffixes to a consonant final morpheme, as discussed above (Section 3.2.4.3.1.3.1). The gerund is used in Yamatoma as follows:

ʔin-nin ku'w-at-ti ʔitya-sari  
 dog-DAT bite-PASS-GER painful-FIN  
 [I] was bitten by a dog and it hurt.  
 (Osada et al. 1980: 502)

'wa-ga nae:çi ʔi-zi k-yo:-ri  
 I-NOM [place name] go-GER come-NPS-FIN  
 I will go to Naechi and come back.  
 (Osada et al. 1980: 503)

3.2.4.3.1.5.10 The Conjecture Suffix -yumi. Yamatoma has one conjecture suffix, -yumi-, which is a clause or sentence final suffix. The initial /y/ is deleted when this suffix attaches to stems ending in /ɾ/ or /tʰ/. It is used as follows:

ʔya: ʔikʰ-yumi ʔikʰ-yami  
 you go-CONJ go-NEG/CONJ  
Will you be going, or not going?  
 (Osada et al. 1980: 497)

ʔuku'yama ni syen nen-k<sup>h</sup>a:ra sat-i mi-ran hana nu sat-yur-u çiba  
ʔurī mi-razi ʔuk<sup>h</sup>ar-umi<sup>651</sup>

[place name] LOC 1000 year-ABL bloom-INF see-NEG/ATT  
flower TOP bloom-STAT-FIN QUOT that/ACC see-NEG  
put-CONJ

As for the flowers, which bloomed and were not seen on Mt. Uku  
(from) a thousand years ago, saying that they are [now] blooming,  
will [you] not see them?  
(Osada et al. 1980: 498)

### 3.2.4.3.2 Nominalizers

Yamatoma has one nominalizer, *-i*. It attaches to the verb root to transform the verb into a noun. It is deleted following vowel final roots. When suffixing to roots ending in the glide /ʔ/, the glide is deleted, causing the vowel of the verb and the vowel of the nominalizer to monophthongize to /e/: e.g., ʔomo'-i > \*ʔomoi > ʔome 'thought' and çiga'-i > \*çigai > çige 'difference' (Osada et al. 1980: 503). The nominalizer is used as follows:

mun kham-u-n ʔyonma hanas-i nu kik-i-tyasa  
thing eat-STAT-ATT COMP talk-NML TOP listen-INF-DES  
More than eating something, [I] want to listen to [your] story.  
(Osada et al. 1980: 500)

---

651. Osada et al. (19880: 498) list this example is from an older Yamatoma speaker; *mi-raN* > *m-yaN* and *mi-razi* > *m-ya:zi* in the modern language.

ʔakk-i-n ʔakk-u-ri  
walk-NML-LOC walk-STAT-FIN  
Going [literally: walking] for a walk.  
(Osada et al. 1980: 503)

#### 3.2.4.4 Summary

Table 3.8 below lists the Yamatoma inflectional morphemes in alphabetical order, and provides information as to how they affix to verbs and presents their functions.

Table 3.8: Summary of Yamatoma Inflectional Morphemes

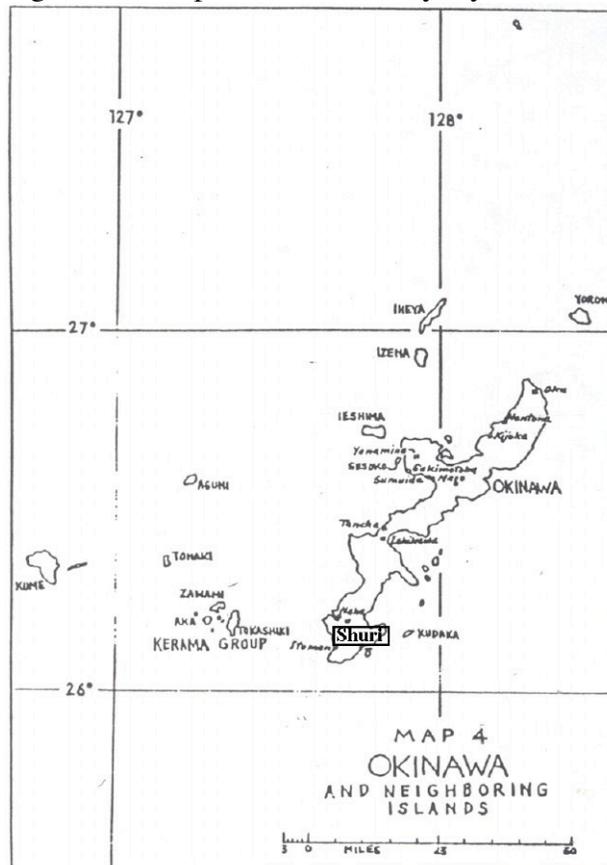
<b>Morpheme</b>	<b>Type</b>	<b>Function</b>
-a/-o	sentence final suffix (Group IV)	volitional
-as-	suffix (Group I)	causative
-azi	clause final suffix	negative
-ba	clause final suffix	conjecture
-i	infinitive	infinitive
-i	suffix	nominalizer
-ï	clause final suffix	evidential
-n/-ru	clause or sentence final suffix	attributive
-na	sentence final suffix	negative imperative
-rar-	suffix (Group I)	passive and potential
-ri	sentence final suffix	imperative
-t <sup>h</sup> -	suffix (Group II)	perfective
-t <sup>h</sup> i	suffix (Group IV)	gerund
-ya-	suffix (Group III); can be sentence final	past stative
-yan- < -ran-	suffix (Group I)	negative
-yo:-	suffix (Group III); can be sentence final	non-past stative
-yu-	suffix (Group III); can be sentence final	stative
-yumi	clause or sentence final suffix (Group IV)	conjecture

### 3.3 Central Ryūkyūan Islands: Shuri

I have chosen Shuri to represent the languages of the central Ryūkyūs. Shuri, also known as "Okinawan" and "Uchināguchi", is the most well-known dialect of the Ryūkyūs. A map of the central islands is shown below in Figure 3.5.

Shuri has two main forms "aristocratic", mostly used in the past by educated men, and "popular", which is the standard form of Shuri used today. Since most of my primary sources contain the popular form, my focus is on this variety of Shuri. However, there are times when it is beneficial to show the aristocratic form of a word, particularly because the aristocratic form preserves phonemic distinctions that have been lost in the popular variety, and thus may provide insight to an older form of a word. I mention aristocratic forms where necessary; unless otherwise stated, Shuri data presented below represent the popular variety.

Figure 3.5: Map of the Central Ryūkyūan Islands<sup>652</sup>



### 3.3.1 Shuri Primary Source Material

Shuri is the best documented of the RK languages. First, there are several texts of transcribed conversations (e.g., Kokuritsu Kokugo Kenkyūjō [1982, 1986, 1987a, 1987b] and Shibata [1966-1977]). These conversations are romanized and translated into

---

652. Map scanned from Thorpe (1983: 371).

Japanese.<sup>653</sup> In addition, most of the secondary sources also include examples from informants, and I have included these types of examples in my data.

### *3.3.2 Shuri Secondary Source Material*

Since Shuri is considered to be "Standard Okinawan" it is not surprising that much of the research on RK focusses on Shuri. Many of the secondary source materials for Shuri also include other RK languages. I list the secondary sources used for this study below, in alphabetical order.

First, Arakaki (2000) demonstrates the differences between the stative morphemes *-u* (Section 3.3.4.3.1.6.3) and *-a* (Section 3.3.4.3.1.6.1). Her study is short and her claims are argued with examples collected from field research. I discuss some of the problems with her study below, with my treatment of these morphemes.

Ashworth (1973) presents a study of Shuri morphophonemics, discussing both the "aristocratic" and "popular" varieties of Shuri dialect.<sup>654</sup> He describes the aristocratic variety as a version of Shuri which had been previously spoken by men in educated and

---

653. It is also easy to find examples of Shuri phrases online with a number of web pages, blogs, and radio broadcasts (including podcasts) presenting Shuri speech or sometimes words mixed in with Japanese. I have not used these sources for my data collection, as the phrases are typically either too short or are identical to phrases I have taken from other texts.

654. The focus of his study is on the aristocratic variety with comments on how to convert aristocratic forms to popular forms. The present study is the opposite, as stated above.

noble classes up to the end of the 19th century and, at the time of his study, was learned by some as a second language after they had learned the more commonly spoken popular, or standard, variety (Ashworth 1973: 2). This study includes a detailed treatment of Shuri phonology and nominal and verbal morphology.

Next, Hattori is one of the most well known scholars of RK linguistics; his work has certainly been instrumental in our understanding of RK. I use several sources from Hattori (i.e., Hattori 1959, 1978-1979) which include studies of Shuri and other RK languages as well as comparisons between RK and MdJ. His discussions include descriptions of phonology and morphology.

Hirayama, Ōshima, and Nakamoto (1966) present a detailed account of the languages and dialects spoken throughout the RK islands. There are also recordings of the conversations used to collect their data, and they support their claims about the language with examples from these recordings.

Another monograph which describes Shuri phonology and grammar as well as grammar from other dialects spoken in the central islands is Iitoyo, Hino, and Satō (1984). This study presents a number of forms (verbal and nominal), but does not generally give full examples of these forms used in a sentence.

Karimata's (2003) textbook of the Okinawan language is another source for data as well as discussion regarding the use of various suffixes and how they are affixed to various Shuri verbs.

Next, Murayama (1981) is particularly useful for its treatment of RK phonology. Murayama describes Shuri and other selected dialects separately and also compares the dialects with each other and/or with MdJ.

Nakamoto (1983) studies the history of RK vocabulary, including Shuri and other RK languages. In terms of the present study, it is helpful for understanding phonology and sound changes. However, since most of the data are nouns, it is not a major source for this study.

Next, Serafim (2003; 2004; and 2005) presents descriptions of the history of Shuri and Ryūkyūan in general, and also Shuri's relationship to Japanese. His discussions are helpful for understanding the development of the language, particularly phonological developments. He co-authored two articles which treat *kakari musubi* structures in Shuri and OJ (Serafim and Shinzato 2005; Shinzato and Serafim 2003).

Uemura's (1999) introduction to the *Okinawago jiten*<sup>655</sup> describes Shuri phonology, and compares it to MdJ phonology. In addition, he presents a discussion of

---

655. Dictionary of the Okinawan Language.

Shuri verbal morphology, and provides many examples to illustrate how verbal suffixes vary in meaning.

Finally, there are three main dictionaries I consulted for this study: *Okinawago jiten* (Dictionary of the Okinawan Language), *Okinawa kogo daijiten* (Dictionary of the Okinawan Old Language), and the online Shuri dictionary found at: <http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/index.html> The online dictionary also contains word lists classified by topic and by part of speech. There are also examples of word usage under each entry in the dictionary, and sound bites for some, but not all, examples.

### *3.3.3 Shuri Phonology*

#### 3.3.3.1 Shuri Consonants

The Shuri consonant inventory is presented in Table 3.9 below:

Table 3.9: The Shuri Consonant Inventory

		Labial		Dental		Palatal		Velar		Glottal
			gem		gem				gem	
Stops	voiceless	p	pp	t	tt			k	kk	ʔ
	voiced	b		d				g		
Fricatives	voiceless			s	ss	(š)	(ç)			h
	voiced			(z)						
Affricates	voiceless			č	čč					
	voiced			ž						
Nasals		m		n						
Liquids				r						
Glides		w				y				

The phonemes in parenthesis are only found in the aristocratic variety, and merge with other phonemes in the popular variety (as discussed below, Sections 3.3.3.1.1.1 and 3.3.3.1.2.1).

### 3.3.3.1.1 Voiceless Obstruents

Shuri has the following voiceless obstruents: /p/, /t/, /k/, /s/, /č/, /ʔ/, and /h/.<sup>656</sup> All of the voiceless obstruents can occur word initially or medially, but cannot occur in final position. The phonetic values and allophones for these phonemes are presented in Table 3.10, which is based on Ashworth (1973), Thorpe (1983), and Uemura (1999).

---

656. In addition, Shuri has voiceless double consonants, which I discuss in Section 3.3.3.1.2.

Table 3.10: Phonetic Values and Allophones for Voiceless Obstruents in Shuri

Phoneme	Phonetic Value	Allophones
/p/	voiceless unaspirated bilabial stop	[p] in all environments
/t/	voiceless unaspirated dental stop	[č] following /i/ [ç] preceding /u/ [t] elsewhere
/k/	voiceless unaspirated velar stop	[k] in all environments <sup>657</sup>
/č/	voiceless dental affricate	[č] in all environments <sup>658</sup>
/ç/	voiceless palatal central fricative	[č] preceding /i/, /e/, and /y/ [ç] elsewhere <sup>659</sup>
/s/	voiceless dental fricative	[š] preceding /i/, /e/, and /y/ [s] elsewhere
/š/	voiceless palatal grooved fricative	[š] preceding /i/, /e/, and /y/ [s] elsewhere
/ʔ/	glottal stop	[ʔ] in all environments
/h/	glottal fricative	[ç] preceding /i/ and /y/ [f] preceding /u/ and /w/ <sup>660</sup> [h] elsewhere

The phonemes /ç/ and /š/ are lost, due to mergers with other consonants, in the popular variety of Shuri and remain only in the aristocratic variety.

657. This is true synchronically, see discussion in Section 3.3.3.1.1.1 for rules on the palatalization of /k/ to /č/.

658. This is an affricate, also written as "č" (e.g., Ashworth 1973), as "c" (e.g., Kokuritsu Kokugo Kenkyūjo 1999; Nohara 1986), and as "tʃ" (e.g. Kokuritsu Kokugo Kenkyūjo 1982, 1985, 1987a, 1987b). I have chosen the symbol "č" as it is more recognizable outside of Japanese linguistics.

659. In the aristocratic variety, /ç/ has the allomorph [č] preceding /i/, /e/, and /y/. The online Shuri dictionary (<http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/index.html>) uses the symbol "C" to indicate this phoneme. Kokuritsu Kokugo Kenkyūjo (1999) uses "ç", Ashworth (1973) uses "c". I have chosen to use the symbol "ç" as it is recognizable outside of Japanese linguistics, and to avoid confusion with the symbol "c" which is used to represent "ç" by some and "č" by others.

660. This allophone is often romanized as "hw".

The phoneme /p/ in Shuri is attested in limited environments. It occurs word initially in Chinese loan words and onomatopoeiac expressions: e.g., *po:po:* 'Chinese tortilla' and *pakupaku* 'puff puff' (Ashworth 1973: 30). Additionally, it can occur morpheme internally as the second member of a compound following a mora nasal or obstruent: *'npana* 'your nose' < \**mi-* 'HON' + *pana ~ hana* 'nose' (Ashworth 1973: 31). Finally, /p/ can occur in medial position, but in such cases often alternates with /f/ or /ʔ/: *si:pui ~ si:fui* 'writhing' (Ashworth 1973: 30). I discuss the history of this phoneme below.

The glottal stop /ʔ/ also has limited distribution; it occurs word initially before all vowels, glides, and /n/.

#### 3.3.3.1.1.1 The Historical Development of Voiceless Obstruents

Table 3.2 shows the voiceless obstruents that are present in Shuri. In this section, I discuss the historical development of these phonemes.

One important feature of Shuri phonology is that of palatalization, where the vowel /i/ causes adjacent voiceless stops to palatalize. In other words, consonants occurring either before or after /i/ assimilate to the palatal nature of the vowel.

Because of this, both proto-RK \*/ki/ and proto-RK \*/ti/ merge to /či/ in Shuri.<sup>661</sup>

Note, however, that the syllables /ki/ and /ti/ do exist in Shuri, however, they come from proto-RK \*/ke/ and \*/te/ respectively, and are the result of vowel raising from \*/e/ to \*/i/.

This implies changes at different stages of the language history (p. c. Serafim):

1. Stage One: The rule that proto-RK \*/k/ and \*/t/ become \*/č/ when adjacent to \*/i/ applies: proto-RK *ki* and *ti* become *či*.
2. Stage Two: The previous rule is no longer necessary and no longer a productive rule in the language.
3. Stage Three: proto-RK \*/e/ raises to \*/i/, the syllables \*/ke/ and \*/te/ become Shuri *ki* and *ti*. Since the rule described in Stage One is no longer a productive rule *ki* and *ti* do not become *či*.

Shuri also has regressive assimilation, where proto-RK \*/k/ and \*/t/ become \*/č/ following \*/i/; so proto-RK \*/sita/ 'below' > Shuri *siča* 'id.'; proto-RK \*/ika/ 'squid' > Shuri *iča* 'id.'; proto-RK \*/tika-/ 'near' > Shuri \*/čika-/ ~ \*/čiča-/ 'id.'<sup>662</sup>

Another historical change discussed by Thorpe (1983: 59-61) is proto-RK \*/p/ becoming Shuri /f/ when \*/p/ is followed by \*/i/, and becoming Shuri /h/ in other

---

661. This change is often discussed in the literature. For descriptions specifically on the historical development of these phonemes, see Ashworth (1973) and Thorpe (1983).

662. Proto-RK reconstructions from Thorpe (1983: 52), Shuri data from <http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/index.html>

environments: e.g., proto-RK \*Uppo- ~ \*Uppe- 'big' > Shuri *uhu*~ *uho*:- ~ *ufi*-.<sup>663</sup> Shuri

/p/ is [p] only in the environments presented above.

### 3.3.3.1.2 Voiced obstruents

Shuri has the following voiced obstruents: /b/, /d/, /g/, and /ʒ/. Like their voiceless counterparts, these obstruents can occur word initially or medially, although examples of word initial voiced obstruents in Shuri are rare. The phonetic values and allophones for these phonemes are presented in Table 3.11:

Table 3.11: Phonetic Values and Allophones for Voiced Obstruents in Shuri

Phoneme	Phonetic Value	Allophones
/b/	voiced bilabial stop	[b] in all environments
/d/	voiced dental stop	[ʒ] following /i/ [d] elsewhere
/g/	voiced velar stop	[g] in all environments
/z/	voiced dental fricative	[ʒ] following /i/, /e/, and /y/ [z] elsewhere
/ʒ/	voiced dental affricate	[ʒ] in all environments

The phoneme /z/, highlighted above, is only found in the aristocratic variety of Shuri.

---

663. Proto-RK reconstructions from Thorpe (1983: 61), Shuri data from <http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/index.html> /U/ is used there to indicate a back vowel (either /u/ or /o/), which cannot be accurately reconstructed.

### 3.3.3.1.2.1 The Historical Development of Voiced Obstruents

Like their voiceless counterparts, the voiced obstruents proto-RK \*/d/ and \*/g/ also palatalize when adjacent to \*/i/. Thus, the syllables \**di* and \**gi* palatalize to *ži*.

Following the discussion above, the syllables /di/ and /gi/ in Shuri, are the result of vowel raising of proto-RK \*/e/ to \*/i/ – a change which occurred after the rule which palatalized consonants adjacent to \*/i/.

### 3.3.3.1.3 Double Consonants

The double consonants that occur in Shuri are: /pp/, /tt/, /kk/, /ss/, and /čč/.<sup>664</sup>

Double consonants occur word initially or word medially, but not word finally.

A diachronic analysis reveals the secondary nature of double consonants. They can be the result of a consonant cluster resulting from vowel loss: proto-RK \**pito* > \**pičo* > \**piču* > \**pču* > Shuri *čču*.<sup>665</sup>

Synchronically, double consonants can also occur at morpheme boundaries.

Thorpe (1983: 75) notes that when the gerund *-ti* is affixed to a verb root ending in ...*t*- or

---

664. Traditionally the double consonant is indicated by a "Q" in front of the double consonant, and it is understood that Q assimilates to the sound of the following consonant. I prefer to use double letters to indicate double consonants, as the symbol "Q" is not used in this way outside of Japanese linguistics.

665. Proto-RK example from Thorpe (1983: 160).

...*ir*- the result is a double consonant: e.g., \**mat*- 'wait' + *-čĭ* 'GER' > *maččĭ* 'waiting';

\**sir*- 'know' + *-čĭ* 'GER' > *siččĭ* 'knowing'.

### 3.3.3.1.4 Nasal Consonants

Shuri has two nasals: a bilabial nasal /m/ and a dental nasal /n/. The nasals and their allophones are shown in Table 3.12.

Table 3.12: Phonetic Values and Allophones for Nasal Consonants in Shuri

Phoneme	Phonetic Value	Allophones
/m/	[m] - bilabial nasal stop	[m] in all environments
/n/	[n] - dental nasal stop	[ɲ] preceding /i/ and /y/ [ŋ] before /k/ and /g/ [n] elsewhere

The consonant /n/ in final position and preceding consonants is phonetically long, i.e., a mora length consonant, and described in the literature as a mora nasal typically written as /N/.<sup>666</sup> Thorpe (1983: 95-96) demonstrates that the nasal in morpheme final position derives from a proto-RK sequence of a nasal plus a high vowel, thus \**mi*, \**mu*, \**ni*, and \**nu* result in the mora nasal in Shuri. However, Thorpe (1983: 96) also notes,

---

666. I do not use the symbol /N/ for the same reason I do not use the symbol Q described above: it is a symbol used in this way only in Japanese linguistics. Further, the length of this consonant is predictable; as stated in the text it is equal to a mora in length before consonants and in morpheme final position.

that if the nasal + high vowel occurs in a two mora noun, it typically does not become /n/: proto-RK \**sirami* 'louse' > *siran* 'id.' (three moras) but \**Umi* 'sea' > Shuri \*<sup>7</sup>*umi* 'id.' (two moras).

#### 3.3.3.1.5 The Liquid

Shuri has one liquid: /r/, which is phonetically [r] in all environments in which it occurs. Thorpe (1983: 98) claims that the proto-RK sequence \*/ri/ results in the deletion of \*r: proto-RK \**tori* 'bird' > Shuri \**tui* 'id.' Cases of /ri/ in Shuri result from vowel raising of proto-RK \*e to \*i. This can be explained by describing phonological rules in stages, similar to the stages described above (Section 3.3.3.1.1.1):

1. Stage One: The rule that proto-RK \*/r/ is deleted when followed by \*/i/ applies; proto-RK \*ri becomes Shuri *i*.
2. Stage Two: The previous rule is no longer necessary and no longer a productive rule in the language.
3. Stage Three: proto-RK \*/e/ raises to \*/i/, the syllable \*re becomes Shuri *ri*. Since the rule described in Stage One is no longer a productive rule /r/ is not deleted here.

#### 3.3.3.1.6 Glides

Shuri has two glides: /y/, /w/. The first, /y/, occurs only before /a/, /o/, and /u/, and can follow /p/, /b/, /m/, /n/, /h/, /ʔ/, and /ʻ/. The second, /w/, only occurs before the

vowels /i/, /e/, and /a/. It can follow velar and glottal consonants, namely /h/, /ʔ/, /ʔ/, /k/ and /g/.

In addition, there is a third glide, /ʔ/ an onset glide, which occurs before /e/, /i/, /o/, /u/, /w/, /y/ or /n/ (Ashworth 1973: 12). In Shuri its occurrence is predictable: it occurs before vowels, glides, and /n/ in initial position in cases where no other consonants occur. Since its occurrence is predictable, I do not treat this as a phoneme in Shuri.<sup>667</sup>

### 3.3.3.2 Shuri Vowels

Shuri has both short and long vowels, as shown below in Figure 3.6. I use a colon (:), following a vowel to indicate vowel length. The historical development of the vowel system is described in Section 3.3.3.2.1.

Figure 3.6: Shuri Vowels

Short Vowels

i                      u  
                            a

Long Vowels

i:                      u:  
e:                      o:  
                            a:

---

667. Note that in Yamatoma I do treat this glide as a phoneme, as it is needed for morphophonemic analyses as the final consonant of a verb stem, and it appears to indicate a lost glide or the consonant /p/ (Section 3.2.3.1.7).

All three short vowels have a long vowel counterpart, and /e/ and /o/ are only attested as long vowels. Ashworth (1973: 54) claims there are two sources for long vowels in Shuri: "...basically long (tense) and derived long."

First, long vowels which are "basically" long<sup>668</sup> include monosyllabic words which end in a lengthened vowel, e.g. \*ča 'tea' is always ča: 'tea' with a long vowel. However, when these words are in compounds the vowel is often (but not always) shortened, and it is not clear why these vowels sometimes shorten and sometimes retain their length (Ashworth 1973: 55). Note the following examples from Ashworth (1973: 54):

<u>long vowels</u>	<u>short vowels</u>
ča: 'tea'	ʔuča 'tea (HON)'
fi: 'fire'	fibači 'hibachi'
ha: 'tooth'	hašiši 'gums'
ha:či 'pot'	fibači 'hibachi'
na:ka 'middle'	nakaba 'center'
ti:da 'sun'	ʔutida 'sun (HON)'

Long vowels which Ashworth calls "derived long" are the result of a loss of an intervocalic consonant and monophthongization of the resulting vowel cluster (Ashworth 1973: 55). When the resulting vowel cluster consists of the same vowels, the vowel is simply lengthened: e.g., \*kawa > \*kaa > ka: 'well'. The long vowels /e:/ and /o:/ derive

---

668. Ashworth (1973) also calls these "originally long".

from monophthongization of /ai/ and /au/ respectively: \**saiku* > *se:ku* 'carpenter' and \**ʔa'o* > \**ʔa'u*<sup>669</sup> > *ʔo*: 'blue, green' (Ashworth 1973: 52).

### 3.3.3.2.1 The Historical Development of Shuri Vowels

In order to understand the Shuri vowel system, it is necessary to examine the history of the language. There are a series of vowel changes which must be understood as occurring at different stages of the language's development. If we treat these vowel changes as occurring simultaneously, then the attested forms in Shuri cannot be produced.

First, proto-RK \*/u/ fronted to \*/i/ following \*/ç/, \*/ş/, and \*/z/ in the aristocratic variety of Shuri (Ashworth 1973: 51). Then, the proto-RK vowels \*/e/ and \*/o/ raised to \*/i/ and \*/u/, respectively. Also, \*/ç/, \*/ş/, and \*/z/ remain unchanged (/ç/, /ş/, and /z/) in the aristocratic variety, and become /č/, /s/, and /ž/ in the popular variety.

The result of these changes, is that /i/ in Shuri has three sources: proto-RK \*/i/, \*/u/, and \*/e/. Similarly, /u/ in Shuri is the result of proto-RK \*/u/ or \*/o/. The key to determining the earlier vowel is to examine the environment in which it occurs. For example, as stated above (Section 3.3.3.1.1.1), proto-RK \*/i/ causes palatalization of

---

669. In this stage the vowel /o/ raises to /u/ as discussed below (Section 3.3.3.2.1).

proto-RK \*/k/ and \*/t/. Therefore, the syllable *či* in Shuri, can come from *\*ki* or *\*ti*, so it is not always possible to determine the initial consonant.<sup>670</sup> The vowel, however, can only be derived from proto-RK \*/i/. Further, the syllables *ki* and *ti* in Shuri do not have a palatalized consonant, which means that the vowel cannot have been proto-RK \*/i/, and must be the result of raising of proto-RK \*/e/ to \*/i/.

### 3.3.4 Shuri Verbal Morphology

#### 3.3.4.1 The Shape of Pre-Shuri Verb Roots

In order to determine the shape of the pre-Shuri verb root, I compiled a database of Shuri verbs for which a verb root can be reconstructed. Roots are reconstructed on the basis of verb pairs or sets (i.e., transitive verbs and intransitive verbs), where at least one member of the pair is formed from the root plus a derivational morpheme. This database contains seventy reconstructable roots. The data, which are presented in Appendix G, show that some verb roots can be reconstructed as consonant final and others are vowel final. For example, a consonant final verb root can be reconstructed for *\*<sup>?</sup>ak-* 'open' which is supported by *ʔak-* 'open (v.i.)' and *ʔaki-* < *\*<sup>?</sup>ak-i-* 'open (v.t.)'. An example of a

---

670. In most, if not all, cases, the source for the consonant can be determined through morphophonemic analyses or by comparison with Japanese or other RK languages.

vowel final verb root is \*ʔa:ka- 'break', which is reconstructed on the basis of ʔa:ki- < \*ʔa:ka-i- 'break (v.i.) and ʔa:kas- < \*ʔa:ka-s- 'break (v.t.).

### 3.3.4.2 Derivational Morphemes

There are four derivational suffixes in pre-Shuri: transitive \*-s-, intransitive \*-ri-, verbalizer \*-m-, and the transitivity flipper \*-i-. I discuss the morphemes below in that order.

#### 3.3.4.2.1 The Derivational Suffix \*-s-

The derivational suffix \*-s- is used to form a transitive verb from an intransitive or neutral verb root.<sup>671</sup> It can be used in conjunction with the transitivity flipper \*i, but not with any other derivational morphemes. When used with the transitivity flipper, it always precedes it. This suffix is reconstructed as simply \*-s-, as shown in the following examples:

ʔa:kas-	<	*ʔa:ka-s-	separate (v.t.)
cf. ʔakari-	<	*ʔaka-ri-	separate (v.i.)
ʔnžas-	<	*ʔnža-s-	put out (v.t.)
cf. ʔnži-	<	*ʔnža-i-	go out (v.t.)

---

671. By "neutral" verb root, I mean a root that is not marked for either intransitivity or transitivity.

<i>ʔutus-</i>	<	*ʔutu-s-	drop (v.t.)
cf. <i>ʔuti-</i>	<	*ʔutu-i-	fall (v.i.)

used with \*-i-

<i>nisi-</i>	<	*ni-s-i-	resemble (v.t.)
cf. <i>ni-</i>	<	*ni-	resemble (v.i.)

<i>nubusi-</i>	<	*nubu-s-i-	climb (v.t.)
cf. <i>nubu-</i>	<	*nubu-	climb (v.i.)

### 3.3.4.2.2 The Derivational Suffix \*-ri- < \*-re-

The pre-Shuri derivational suffix \*-ri- is used to derive an intransitive verb from a transitive or neutral verb root. Although this morpheme is reconstructed as consonant final in other branches of Japonic (WOJ \*-Ar-, EOJ \*-Vr-, Yamatoma \*-ar-, Hirara \*-Vr-), in Shuri it is used in the formation of only ten verbs, always occurring as \*-ri-.<sup>672</sup>

As discussed above (Section 3.3.3.1.5), historically, the phoneme /r/ is deleted before /i/. This means that this morpheme must go back to proto-RK \*-re-; I return to this below when reconstructing the PJ morpheme (Section 4.3.5). Another possibility is that this suffix is bimorphemic, consisting of \*-r- plus the transitivity flipper \*-i- (see discussion below), and a morpheme boundary blocks deletion of /r/. However, since \*-r- is not otherwise attested in Shuri, it is not possible to divide this morpheme further on the

---

672. There may or may not be an initial vowel here that is deleted when suffixation occurs, but the data do not indicate the need to reconstruct an initial vowel. I return to this below (Section 4.3.5).

basis of Shuri alone. I return to this point when reconstructing the PJ intransitive derivational marker (Section 4.3.5). Some examples of this morpheme are presented below:

<i>ʔakari-</i>	< *ʔaka-ri-	< *ʔaka-re-	separate (v.i.)
cf. <i>ʔa:kas-</i>	< *ʔa:ka-s-		separate (v.t.)
<i>to:ri-</i>	< *to:-ri-	< *to:-re-	fall (v.i.)
cf. <i>to:s-</i>	< *to:-s-		drop (v.t.)
<i>wari-</i>	< *wa-ri-	< *wa-re-	break (v.i.)
cf. <i>wa-</i>	< *wa-		break (v.t.)

#### 3.3.4.2.3 The Derivational Suffix \*-m-

The derivational suffix \*-m- is used to convert a quality verb root into an active verb.<sup>673</sup> This suffix can be followed by the transitivity flipper \*-i- but is not used in conjunction with other derivational suffixes.

<i>furum-</i>	<	* <i>furum-</i>	get old (v.i.) <sup>674</sup>
<i>furumi-</i>	<	* <i>furum-i-</i>	age (v.t.)
cf. <i>furu-</i>	<	* <i>furu-</i>	be old
<i>sidam-</i>	<	* <i>sida-m-</i>	cool (v.i.)
cf. <i>sida-</i>	<	* <i>sida-</i>	be cool

---

673. Following Vovin (2003), I use the term quality verb for adjectives in Japonic.

674. These verbs are used to describe inanimate objects getting old.

<i>siram-</i>	<	* <i>sira-m-</i>	whiten
cf. <i>sira-</i> <sup>675</sup>	<	* <i>sira-</i>	be white

#### 3.3.4.2.4 The Derivational Suffix \*-i- < \*-e-

The suffix \*-i- functions as a transitivity flipper, in most cases changing the verb from either transitive to intransitive or intransitive to transitive, but in some cases the function is unclear and it does not indicate a change in transitivity. As discussed above (Section 3.3.3.1.2.1), the vowel /i/ in Shuri has two possible sources: \*i and \*e.

Examples such as <sup>ʔ</sup>*uti-* < \*<sup>ʔ</sup>*utu-i-* 'fall (v.i.)' reveal that the suffix \*-i- can only come from earlier \*-e-; if the transitivity flipper came from earlier \*-i- then the consonant of <sup>ʔ</sup>*uti-* would palatalize and the form in Shuri would be \*<sup>ʔ</sup>*uči-*.<sup>676</sup> I return to this point on my discussion on the reconstruction of the PJ transitivity flipper (Section 4.3.1).

When this suffix attaches to a verb root the vowel of the root is deleted. Also, this morpheme can follow the other derivational morphemes, as stated above.

<sup>ʔ</sup> <i>agi-</i>	<	* <sup>ʔ</sup> <i>aga-i-</i>	rise (v.t.)
cf. <sup>ʔ</sup> <i>aga-</i>	<	* <sup>ʔ</sup> <i>aga-</i>	rise (v.i.)
<sup>ʔ</sup> <i>uti-</i>	<	* <sup>ʔ</sup> <i>utu-i-</i>	fall (v.i.)
cf. <sup>ʔ</sup> <i>utus-</i>	<	* <sup>ʔ</sup> <i>utu-s-</i>	drop (v.t.)

---

675. This quality verb root is also attested as *siro-*.

676. For further discussion on vowel raising and palatalization of consonants adjacent to /i/ see Sections 3.3.3.1.1.1 and 3.3.3.1.2.1).

ʔnži- < \*ʔnža-i- go out (v.i.)  
 cf. ʔnžas- < \*ʔnža-s- put out (v.t.)

### 3.3.4.2.5 Summary

Table 3.13 below lists the Shuri derivational morphemes and their functions.

Table 3.13: Summary of Shuri Derivational Morphemes

Morpheme	Function
*-s-	transitivity or causative marker
*-ri- < *-re-	intransitivity marker
*-m-	verbalizer
*-i- < *-e-	transitivity flipper in some cases, function unknown in others

### 3.3.4.3 Inflectional Morphemes

Shuri has a number of inflectional morphemes. For the purpose of this study, however, I will only be discussing morphemes which have cognates in WOJ and/or EOJ, and which are not Shuri innovations or loans from MJ or later stages of Japanese.<sup>677</sup>

Morphemes not treated here include: the polite auxiliary *-abi:-*; the continuative suffix *-agi-*; the desiderative auxiliary *-busi-*; the question suffix *-i:-*; the apparentive auxiliary *-gisa-*; and the honorific auxiliary *-mise:-* ~ *-nse:-*.

---

677. Although I do not specifically discuss these morphemes, some occur in examples presented throughout this section.

### 3.3.4.3.1 Verbal Suffixes and Auxiliaries

Shuri verb stems are bound forms and must be followed by at least one suffix or auxiliary. It is possible for a verb stem to be followed by a string of suffixes, and in this case there is a set order in which the morphemes can occur; some must attach directly to the root and can be followed by other morphemes, while other suffixes may only occur in the final position of a verbal morpheme string.

Following the discussion above in Section 2.2.5.3, I have grouped the morphemes according to where they can occur in a verbal string. The infinitive suffix *-i* is not placed in a group as its ordering is not as restricted as the other suffixes; it can occur both before and after auxiliaries, and it is the only morpheme that can occur more than once in a verbal string. I have adapted Ashworth's (1973: 70-71) reworking of Hattori's (1950: 346) model for morpheme ordering, which orders the verbal string as:

causative-passive/potential-auxiliaries-negative-inflectional affixes-final

Ashworth's (1973: 71) presents the following example which contains the most possible suffixes:<sup>678</sup>

---

678. Ashworth (1973: 70) presents this verb as his proposed underlying forms for the verb phrase: /yom+ri-yūs+ri-misaw+ri-'age-ri+gesa+ri-'abe-ri-wo-m/. I have rewritten the string according to my treatment of verb strings in order to be consistent with my analyses of Shuri morphology.

yum-i-yu:s-i-mise:-y-agi-i-gisai-i-bi:-n  
read-INF-POT-INF-HON-INF-PROG-INF-CONJ-INF-HON-FIN  
It seems [you (polite)] are in the process of being able to read.

Using this example and others from my database I have grouped the verbal strings into ten groups based on what position of the verb string the morpheme can occur. This means that Shuri has the longest verbal string of any of the languages included in this study; WOJ has the second longest verbal string.

If more than one morpheme is present in a verbal string, then a morpheme in Group I occurs before one in Group II, a morpheme in Group II occurs before Group III, etc. A verbal string must end with a morpheme from Group X, but, with the exception of final *-n*, do not have to follow another verbal suffix; they can affix directly to the verb root. Final *-n* typically follows one of the stative suffixes, but can occur after other suffixes as well. Thus, a verbal string does not need to have a morpheme from Group I-IX, but must end in either the infinitive *-i* or a Group X morpheme.

The groups are presented in Table 3.14 below.

Table 3.14: Classification of Shuri Morphemes Based on Verbal String Ordering

	Ordering	Morphemes discussed in this study	Morphemes not discussed in this study
infinitive <i>-i</i>	suffixes to the verb root, auxiliaries, and some suffixes; can occur in final position; can be followed by a verb or auxiliary	<i>-i</i>	
Group I	suffixes to the verb root	<i>-asimi-</i> CAUS suffix	
Group II	follows the infinitive or a Group I morpheme	<i>-rar-</i> PASS suffix <i>-yu:s-</i> POT auxiliary	
Group III	follows the infinitive and can also follow a Group I-II morpheme		<i>-busi-</i> DES auxiliary <i>-mise:- ~ -nse:-</i> HON auxiliary
Group IV	follows the infinitive and can also follow a Group I-III morpheme		<i>-agi-</i> CONT auxiliary
Group V	follows the infinitive and can also follow a Group I-IV morpheme		<i>-gisa-</i> APP auxiliary
Group VI	follows the verb root or a Group I-V morpheme		<i>-abi:-</i> POL suffix
Group VII	follows the verb root or a Group I-VI morpheme	<i>-ran(-)</i> NEG suffix <i>-t-</i> PERF suffix	

Group VIII	follows the verb root or a Group I-VII morpheme	- <i>t</i> - PERF suffix	
Group VIX	stative suffixes which follow the root or Group I-VII morphemes	- <i>a</i> - PST auxiliary - <i>e</i> :- PROG auxiliary - <i>o</i> :- NPS auxiliary - <i>u</i> - PST auxiliary	
Group X	suffixes which end the verbal string, can follow the verb root or Group I-VIII morphemes	- <i>ra</i> VOL suffix - <i>ra</i> : COND suffix - <i>re</i> : CONJ suffix - <i>ri</i> and - <i>e</i> : IMP suffix - <i>ru</i> ATT suffix - <i>tai</i> PERF/PROG suffix - <i>ti</i> GER suffix - <i>una</i> NEG IMP suffix - <i>yun</i> FIN suffix	- <i>i</i> :- question suffix

As this table shows, there are no morphemes in Groups III-VI which have cognates with OJ; these morphemes are Shuri innovations or borrowings. This distribution is significant, as morphemes attested in all Japonic languages in this study tend to occur in the same position of a verbal string. I discuss this in more detail below (Section 4.4.3).

The morphemes are discussed below according to the grouping presented in Table 3.14 above.

### 3.3.4.3.1.1 The Infinitive -i

The Shuri infinitive, like the OJ infinitive, is suffixed to verb roots and verbal auxiliaries. When used between two verbs or auxiliaries it acts as a connector between the two morphemes. The infinitive can also be in the final position of a verbal string, and in this case it connects the first clause with the second, and may be thought of as English "and" ([clause 1]-and-[clause 2]). This morpheme is deleted when following vowel final stem verbs and auxiliaries in order to prevent a vowel-vowel sequence.

syurei mon-kara massugu nka-ti ʔnzi kankai mon di či<sup>679</sup> ʔu-zo:-nu  
ʔai-bi:-t-a-s-e: ya:

[name] gate-ABL straight turn-GER go out/INF [name] gate DV  
say HON-door-NOM exist-POL-PERF-PST-do-EVD TAG

From Shurei Gate, when [you] exited and went straight and [you]  
were at the door called Kankai Gate, right?

(Kokuritsu Kokugo Kenkyūjo 1982: 261)<sup>680</sup>

---

679. Here *di či* is a contraction of *di ʔiči*.

680. I have modified the transcription of Shuri from other sources throughout this section to be consistent with the romanization used in the present study.

na: ča: mizi n bonbon si ʔizun un wač-i ʔu-nu ʔu-du:fi-nu du:-nu  
kuči-kara: mizi-nu ʔanu: wač-i-ʔnzi-t-o:-ta siga ya:  
already tea water EMPH [onomatopoeia] DV spring EMPH  
gush-INF that-NOM HON-spout<sup>681</sup>-GEN dragon-GEN  
mouth-ABL/TOP water-NOM HES gush-INF-go out/  
INF-PERF-NPS-PAST but<sup>682</sup> TAG

The tea water already gushes out *glug glug* from the spring and, as for that spout from the dragon's mouth, the water, uh, was gushing out [from it], you know.

(Kokuritsu Kokugo Kenkyūjo 1982: 262)

### 3.3.4.3.1.2 Group I Morphemes

#### 3.3.4.3.1.2.1 The Causative Suffix -asimi- The causative suffix *-asimi-* is the

only Group I morpheme. It attaches directly to the verb root to express causation.

eikiči-ga ʔari čukur-asimi-t-a-s-a ya:  
[name]-NOM that/ACC build-CAUS-PERF-PST-do-STATIVE  
EMPH

Mr. Eikichi made [us] build that.

(Kokuritsu Kokugo Kenkyūjo 1985: 326)

harukai ʔnž-a-či sigutu s-imi:-ru ba:te: ya:  
field/LOC go out-PASS-GER work/ACC do-CAUS-ATT reason  
EMPH

[We] were going out to the field, where they made us work.

(Kokuritsu Kokugo Kenkyūjo 1985: 339)

---

681. Literally 'dragon spout'.

682. *Siga* means 'but', and is used here for emphatic purposes.

### 3.3.4.3.1.3 Group II Morphemes

There are two Group II morphemes in Shuri: the passive/potential suffix *-rar-* and the potential suffix *-yu:s-*. They can affix directly to the verb root, or to the causative suffix discussed above.

3.3.4.3.1.3.1 The Passive Suffix *-rari-*. The suffix *-rari-* in Shuri is used to indicate three things: passive, potential, and honorific. According to Ashworth (1973: 71), when the suffix *-rari-* is used as a potential suffix it is used to indicate a state which can occur, and another potential morpheme, *-yu:s-* (Section 3.3.4.3.1.3.2), is used to indicate the ability of the agent to perform an action. However, the examples of the potential from Kokuritsu Kokugo Kenkyūjo presented below contradict this. Although I do not have statistical data to support this claim, my impression is that *-rari-* as a potential is much more common than *-yu:s-* and perhaps the function of *-rari-* has been extended to include the ability of an agent to perform an action. This issue will be set aside for further research.

As in MdJ, the Shuri passive can be used as an adversative passive to express being inconvenienced by something that happened (i.e., MdJ *ame ni fur-are-ta* 'I was

rained on.'). When affixed to consonant final verb stems, the initial consonant of the suffix is deleted. Examples of this suffix and its various functions are presented below.

passive

ʔyum-as-ari-yun

read-CAUS-PASS-FIN

[I] was made to read [it].

(Uemura 1999: 81)

humi-rari-juN

praise-PASS-FIN

[I] was praised [and it affected me].

(<http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/details.php?ID=SN44040>)

potential

ʔugam-ar-an

pray-PASS-NEG

[We] could not pray...

(Kokuritsu Kokugo Kenkyūjo 1982: 269)

na:ka-made: sikatto: ʔugam-ar-an-t-a siga

inside-TERM/TOP clearly/TOP pray-POT-NEG-PERF-PST but

[You] could not clearly pray inside, but...

(Kokuritsu Kokugo Kenkyūjo 1982: 265)

3.3.4.3.1.3.2 The Potential Auxiliary -yu:s-. As stated above, Shuri has two

potential morphemes. According to Ashworth (1973: 71), -*yu:s-* is used to indicate the ability of the agent to perform an action. I have found few examples of this morpheme and it may be that the other potential suffix, -*rari-* has become more common.

tu-yu:s-yun<sup>683</sup>  
 take/INF-POT-FIN  
 [I] can take [it].  
 (Kokuritsu Kokugo Kenkyūjo 1999: 296)

yum-i-yu:s-i-mise:-y-agi-i-gisai-i-bi:-n  
 read-INF-POT-INF-HON-INF-PROG-INF-CONJ-INF-HON-FIN  
 It seems [you (polite)] are in the process of being able to read.  
 (Ashworth 1973: 71)

#### 3.3.4.3.1.4 Group VII Morphemes<sup>684</sup>

3.3.4.3.1.4.1 The Negative Suffix -ran(-). The only morpheme in this group is the negative suffix *-ran(-)*.<sup>685</sup> It can affix to any morpheme from Groups I through VI or directly to the verb root. This suffix can occur in the middle of the verb string or it can occur in the final position. The explanation for this may lie in the source for the final *n*. As stated above (Section 3.3.3.1.4), the source for mora nasal *n* is a nasal consonant (either /n/ or /m/) plus a high vowel (either /i/ or /u/), however, it is not possible to determine the source of the nasal consonant through a synchronic analysis of Shuri.<sup>686</sup>

---

683. This develops as follows: \**tur-i-yu:s-yun* > [r deleted before /i/, vowel length lost] \**tuiyu:syun* > [loss of vowel] > *tuyu:syun* (modified from Kokuritsu Kokugo Kenkyūjo 1999: 296).

684. The morphemes in Groups III-VI are morphemes that do not have cognates in OJ, and are therefore not discussed in this study. Thus, my discussion of Shuri suffixes jumps from Group II to Group VII.

685. When comparing the negative suffix in Yamatoma and Shuri to the negative suffix in other Japonic languages, it appears that the initial /y/ < /r/ in Yamatoma and the initial /r/ in Shuri are innovations, as the negative is *-an-* elsewhere in Japonic. Below I discuss the possibility that the Yamatoma and Shuri negative suffixes are built off of the passive form; see Section 4.4.3.4 for more discussion.

686. Ashworth (1973: 81) claims that the underlying form for the negative is /ramu/ and historically

The high vowels following the suffix may either be the infinitive, *-i* (Section 3.3.4.3.1.1) when the suffix occurs verb string medially, or the final stative *-u* (3.3.4.3.1.6.3) when the negative occurs in the final position of a verb sting.

This suffix undergoes some morphophonemic changes, as described by Ashworth (1973: 82-83), who proposes the following rules:<sup>687</sup>

1. The initial consonant /r/ is deleted following a consonant.
2. The nasal plus high vowel, either infinitive /i/ or final /u/, become /n/.
3. Change of /nr/ to /nd/

	Rule 1		Rule 2		Rule 3		gloss
	deletion		/n/		/nr/ > /nd/		
<i>kak-ran-u</i>	<i>kakanu</i>	>	<i>kakan</i>	>	——		'doesn't write'
<i>nom-ran-u</i>	<i>nomanu</i>	>	<i>noman</i>	>	——		'doesn't drink'
<i>ʔuki-ran-u</i>	——	>	<i>ʔukiran</i>	>	——		'doesn't wake up'
<i>kumi-ran-u</i>	——	>	<i>kunran</i>	>	<i>kundan</i>		'doesn't bind'
<i>nemu-ran-u</i>	——	>	<i>nenran</i>	>	<i>nendan</i>		'doesn't sleep'

The negative is used as follows:

---

comes from *\*ramu*, but does not present evidence to support these claims.

687. Ashworth (1973: 82-83) presents five rules here, I am only presenting the rules that pertain to the negative suffix.

ponpon ʔuti-ti č-ai mata ʔanu: ʔu-ma-n nama-nu gutu-si ʔaka ʔaka  
 to: s-e:ʔu-ran  
 [onomatopoeia] fall-GER come-PERF/PROG also HES  
 that-space-EMPH now-GEN thing-DAT bright bright COP/TOP  
 do-STAT-NEG  
 [Sounding like] a thud [leaves] came falling and, also, uh, there  
 [just] like now it was not very bright.  
 (Kokuritsu Kokugo Kenkyūjo 1982: 263)

wa-tta:-ga: ʔui-bi-ran sa:  
 I-PL-NOM think/INF-POL-NEG TAG  
 We do not think [that], right?  
 (Kokuritsu Kokugo Kenkyūjo 1985: 305)

### 3.3.4.3.1.5 Group VIII Morphemes

3.3.4.3.1.5.1 The Perfective Suffix -t- The perfective suffix *-t-* is the only Group VIII morpheme, and can occur following any Group I-VII morpheme or the verb root. It is typically followed by a stative morpheme (see discussion below), and, like the infinitive, can also occur more than one time in a verb string, but its second occurrence is always after one of the Group IX stative suffixes.

wa-tta:-ga ʔubi-t-o:-ru ʔu-gusiku ndi ʔi-či n ʔikusa me:-nu kutu du  
 I-PL-NOM think-PERF-NPS-ATT HON-castle DV say-GER  
 EMPH war before-GEN thing COP/GER  
 What [we] call what we think of as "the castle" was a thing before  
 the war...  
 (Kokuritsu Kokugo Kenkyūjo 1982: 258-259)

ʔun ni:-ne: s-an-t-a-ru hazi ya siga  
that/GEN time-LOC/TOP do-NEG-PERF-PST-ATT should COP  
but

At that time, [it] was [something I] should not have done, but...  
(Kokuritsu Kokugo Kenkyūjo 1982: 261)

ʔa-t-a-n  
exist-PERF-PST-FIN  
[It] was here.<sup>688</sup>  
(Kokuritsu Kokugo Kenkyūjo 1982: 264)

ʔun ni:n-kara: *gunkoku židai*<sup>689</sup> na-t-o:-t-a-n  
that/GEN time-ABL *military country time period*  
become-PERF-NPS-PAST-PST-FIN  
From that time, [it] had become a militaristic period for the  
country.  
(Kokuritsu Kokugo Kenkyūjo 1985: 305)

### 3.3.4.3.1.6 Group IX Morphemes

The Group IX consists of the stative auxiliaries. Serafim (2004) refers to these as "stative extensions" explaining that verb forms in Shuri developed in part from stative verbs. Arakaki (2000: 1) presents the following examples to show the differences between the stative morphemes:<sup>690</sup>

---

688. Literally "It was here," but often used to mean "Here it is."

689. The italicized portion is in MdJ, not Shuri.

690. I have modified Arakaki's examples in the following ways: I have changed the romanization to match my other Shuri examples, and I have changed the morphemic boundaries where needed. The translations are according to her text.

wa-ne: tigami kač-a-n  
I-TOP letter write-PST-FIN  
I wrote a letter.  
(Arakaki 2000: 1)

are: tigami kač-u-t-a-n  
he/TOP letter write-STAT-PERF-PST-FIN  
He wrote/was writing a letter.  
(Arakaki 2000: 1)

are: tigami kač-e:-n  
he/TOP letter write-PROG-FIN  
He has written a letter.  
(Arakaki 2000: 1)

are: tigami kač-o:-t-a-n  
he/TOP letter write-NPS-PERF-PST-FIN  
He was writing a letter.  
(Arakaki 2000: 1)

In her study, Arakaki (2000) discusses the differences between the stative suffixes (-*a*- and -*u*-), which can both be used for past tense. I present her observations about each morpheme below.

3.3.4.3.1.6.1 The Past Stative Auxiliary -a-. The first stative suffix is -*a*-, which indicates the past tense. Arakaki (2000: 2) claims that this suffix "generally tends only to occur with non-first person subjects," yet the example she presents after this statement contradicts her claim:

wa-ne: 'u-nu tigami kač-a-n  
I-TOP this-GEN letter write-PST-FIN  
I wrote this letter.  
(Arakaki 2000: 2)

Arakaki (2000: 2) presents examples showing that this suffix is not used with the second or third person pronouns in declarative sentences, but can be used with the second person pronoun in interrogative sentences.

\*ya:-ya 'u-nu tigami kač-a-n<sup>691</sup>  
you-TOP this-NOM letter write-PST-FIN  
You wrote this letter

\*are: 'u-nu tigami kač-a-n  
he-TOP this-NOM letter write-PST-FIN  
He wrote this letter.

Arakaki (2000) concludes that *-a-* is a perfective stative suffix that implies direct experience by the speaker or is asking the listener about a direct experience. The claim that this auxiliary refers to direct experience seems to fit the examples I have, but the claim that it is a perfective suffix does not. All examples I have found show a past experience, which is only logical as one cannot express a "direct experience" about a future event.

---

691. The symbol \* here is used to indicate a non-occurring or ungrammatical sentence and not a reconstructed form.

This auxiliary is believed to be from the verb *a-* 'to exist' and is used as follows:

ʔuri hanase: čič-a-ru ya:  
HES talk/NML/TOP listen/INF-PST-ATT TAG  
Uh, you've heardthe story, right?  
(Kokuritsu Kokugo Kenkyūjo 1985: 302)

ʔun ni:n-kara: *gunkoku židai*<sup>692</sup> na-t-o:-t-a-n  
that/GEN time-ABL *military country time period*  
become-PERF-NPS-PERF-PST-FIN  
From that time, [it] had become a militaristic period for the  
country.  
(Kokuritsu Kokugo Kenkyūjo 1985: 305)

#### 3.3.4.3.1.6.2 The Progressive Auxiliary -e:-. The stative auxiliary *-e:-* is used to

indicate the progressive aspect and can refer to past or future ongoing events.

are: tigami kač-e:-n  
he/TOP letter write-PROG-FIN  
He has written a letter.  
(Arakaki 2000: 1)

nuku-ku na-ti ke:-t-e: ʔači-saru gutu-ru ʔa siga ya:  
warm-INF become-GER change-PERF-PROG hot-ATT  
thing-ATT feel but<sup>693</sup> TAG  
[Now it] is changing and becoming warmer, it feels hot, yeah?  
(Kokuritsu Kokugo Kenkyūjo 1982: 277-278)

---

692. The italicized portion is in MdJ, not Shuri.

693. *Siga* means 'but', and is used here for emphatic purposes.

### 3.3.4.3.1.6.3 The Non-Past Stative Auxiliary -o:-. The third stative auxiliary

treated in this study is *-o:-*. It is a non-past stative, meaning that it can indicate a state that is occurring or will occur in the future.

wa-tta:-ga ʔubi-t-o:-ru ʔu-gusiku ndi ʔi-či n ʔikusa me:-nu kutu du  
I-PL-NOM think-PERF-NPS-ATT HON-castle DV say-GER  
EMPH war before-GEN thing COP/GER  
What [we] call what we think<sup>694</sup> of as "the castle" was a thing  
before the war...  
(Kokuritsu Kokugo Kenkyūjo 1982: 258-259)

na: ča: mizi n bonbon si ʔizun un wač-i ʔu-nu ʔu-du:fi-nu du:-nu  
kuči-kara: mizi-nu ʔanu: wač-i-ʔnzi-t-o:-t-a siga ya:  
already tea water EMPH [onomatopoeia] DV spring EMPH  
gush-INF that-NOM HON-spout<sup>695</sup>-GEN dragon-GEN  
mouth-ABL/TOP water-NOM HES gush-INF-go out/  
INF-PERF-NPS-PERF-PST but<sup>696</sup> TAG  
The tea water already gushes out *glug glug* from the spring and, as  
for that spout from the dragon's mouth, the water, uh, was gushing  
out [from it], you know.  
(Kokuritsu Kokugo Kenkyūjo 1982: 262)

### 3.3.4.3.1.6.4 The Stative Auxiliary -u-. The stative auxiliary *-u-*, like *-a-*

discussed above, can indicate past tense, however, it also functions as a non-past stative.

First, I discuss its usage as a past tense marker and then as a non-past marker.

---

694. Literally, this could be translated as "what we are thinking of" to better reflect the meaning of the stative auxiliary, however, this sounds unnatural in English.

695. Literally 'dragon spout'.

696. *Siga* means 'but', and is used here for emphatic purposes.

The past stative *-a-* indicates something the speaker directly experienced, *-u-*, on the other hand, is used to indicate a past event that the speaker observed (Arakaki 2000; Serafim and Shinzato 2000: 98; Shinzato 1985). In this usage it is used with second or third person pronouns, as in the following examples:

'ya:-ya činu: syumuči yun-u-t-a-n  
you-TOP yesterday book read-STAT-PERF-PST-FIN  
You read the book yesterday.  
(Serafim and Shinzato 2000: 98)

are: kusui num-u-t-a-n  
he-TOP medicine took-STAT-PERF-PST-FIN  
He took medicine.  
(Arakaki 2000: 3)

When used as a non-past stative, it is not restricted to first, second, or third pronoun. In this usage, it indicates a habitual action.

wa:-ne: kusui num-u-n  
I-TOP medicine take-STAT-FIN  
I take medicine.  
(Arakaki 2000: 5)

### 3.3.4.3.1.7 Group X Morphemes

Group X morphemes are the suffixes which can occur in the final position of a verbal string. These morphemes can be affixed to the verb root directly, or to any Group I-IX morpheme. The suffixes are presented below in alphabetical order.

3.3.4.3.1.7.1 The Negative Imperative Suffix -na. The suffix *-na* in Shuri is used to express the negative imperative, 'do not do'. It typically follows the stative *-u* as in the following examples:

ʔu-ma-'nka'i kak-u-na ke:  
that-place-LOC write-STAT-NEG IMP EMPH  
Don't write on that [place].  
(Hirayama et al, 1966: 266)

'yum-u-na  
read-STAT-NEG IMP  
Don't read [it]!  
(Uemura 1999: 76)

3.3.4.3.1.7.2 The Volitional Suffix -ra. The volitional suffix *-ra* is used to express intention to perform an action. The initial /r/ of the suffix undergoes the same

morphophonemic processes described for the negative suffix above (Section

3.3.4.3.1.4.1).<sup>697</sup>

ʔik-a ndi su-ru  
go-VOL PART do-ATT  
[Saying] you will go.  
(Kokuritsu Kokugo Kenkyūjo, 1982: 266)

ʔya: ya wa:-ga ma:-sidun s-e: mata utu muč-u-ra ja: ndi ʔyab-i-t-a-n  
you TOP I-NML die-PAST do-CONJ again husband have-STAT-  
VOL COP PART say-INF-PERF-PST-FIN  
[He] said: "As for you, when I die, [you] will again have [another]  
husband."  
(Uemura 1999: 23)

3.3.4.3.1.7.3 The Conditional Suffix -ra: The suffix *-ra:* is a clause final suffix that indicates a hypothetical conditional ('if...'). Ashworth (1973: 84) states that this suffix comes from *\*rawa* < *\*raba*, though he provides no examples to support this claim.

The initial /r/ of the suffix undergoes the same morphophonemic processes described for the negative suffix above (Section 3.3.4.3.1.4.1).

ʔari-ga ʔyum-a: ʔya: n ʔyum-e:  
he-NOM read-COND you also read-IMP  
If he reads it, you will also read it!  
(Uemura 1999: 69)

---

697. In Section 4.4.3.3, where I compare this form with other forms found throughout Japonic, I suggest that the /r/ is a Shuri innovation as it is not found elsewhere in Japonic. It may show a second morpheme, e.g., the passive, as discussed for the negative *-ran(-)* (Section 4.4.3.4).

ʔutuč-a-ra: ʔwari-t-a-n  
 fall/INF-PST-COND break/INF-PERF-PST-FIN  
 If it fell, it will have broken.  
 (Uemura 1999: 79)

3.3.4.3.1.7.4 The Conjunctive Suffix -re: The suffix *-re:* is a clause final suffix used to express a fulfilled condition ('when...' or 'since...' something occurred). Ashworth (1973: 84) states that this suffix comes from \**rewa* < \**reba*. The initial /r/ of the suffix undergoes the same morphophonemic processes described for the negative suffix above (Section 3.3.4.3.1.4.1).

syurei mon-kara massugu nka-ti ʔnzi kankai mon di či<sup>698</sup> ʔu-zo:-nu  
 ʔai-bi:-t-a-s-e: ya:  
 [name] gate-ABL straight turn-GER go out/INF [name] gate DV  
 say HON-door-NOM exist-POL-PERF-PST-do-CONJ TAG  
 From Shurei Gate, when [you] exited and went straight and [you]  
 were at the door called Kankai Gate, right?  
 (Kokuritsu Kokugo Kenkyūjo 1982: 261)

ʔyum-e: ʔwaka-yun  
 read-CONJ understand-FIN  
 When [you] read it, [you'll] understand.  
 (Uemura 1999: 69)

---

698. Here *di ci* is a contraction of *di ʔici*.

3.3.4.3.1.7.5 The Imperative Suffix -ri. The imperative suffix in Shuri is *-ri*. As discussed above (Section 3.3.1.5), this suffix must come from an earlier *\*-re*; if this suffix was historically *\*-ri* then the /r/ would have been deleted. The initial consonant undergoes the same changes discussed above with the negative suffix *-ran(-)* (Section 3.3.4.3.1.4.1).

ʔya: kak-i  
you/TOP write-IMP  
You write (it).  
(Hirayama et al, 1966: 266)

nama ʔnzi-ti ʔik-i  
now go out-GER go-IMP  
Go now!

n-nde:<sup>699</sup>  
see-IMP  
Look!  
(<http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/details.php?ID=SN48145>)

3.3.4.3.1.7.6 The Attributive Suffix -ru. The attributive suffix *-ru* can be a clause or sentence final suffix. This suffix often follows the stative suffixes described above. It is used to mark a verb phrase for nominal modification, or it can be used as a sentence

---

699. This example is from *\*n-re*: 'see-IMP'; the sequence /nr/ becomes /nd/ as predicted (see Section 3.3.4.3.1.4.1).

final particle in *kakari musubi* structures (Section 2.2.5.3.3.8.14).<sup>700</sup> The initial consonant undergoes the same changes discussed above with the negative suffix *-ran(-)* (Section 3.3.4.3.1.4.1).

wa-tta:-ga ʔubi-t-o:-ru ʔu-gusiku ndi ʔi-či n ʔikusa me:-nu kutu du  
 I-PL-NOM think-PERF-NPS-ATT HON-castle DV say-GER  
 EMPH war before-GEN thing COP/GER  
 What [we] call what we think of as "the castle" was a thing before  
 the war...  
 (Kokuritsu Kokugo Kenkyūjo 1982: 258-259)

ʔun ni:-ne: s-an-t-a-ru hazi ya siga  
 that/GEN time-LOC/TOP do-NEG-PERF-PST-ATT should COP  
 but  
 At that time, [it] was [something I] should not have done, but...  
 (Kokuritsu Kokugo Kenkyūjo 1982: 261)

tui-nu du nač-o:-ru  
 bird-NOM EMPH chirp-NPS-ATT  
 It is the bird that is singing.  
 (Serafim 2004: 32)

3.3.4.3.1.7.7 The Progressive Perfective Suffix -tai. The suffix *-tai* is a clause final morpheme used to indicate the progressive perfective aspect. Presumably this morpheme comes from the perfective suffix *-t-* plus the infinitive form of the verb to exist, i.e., *a-i* 'exist-INF'. The initial /t/ of this suffix undergoes certain phonemic changes

---

700. A thorough treatment of *kakari musubi* structures is outside the scope of this study. For a complete study see Serafim and Shinzato (2000).

following consonant final verb stems. This is discussed in the next section, where more examples could be found.

žito: ʔwi:-tai ʔanu: ʔun-na kutu-nkai yu: čika-t-o:-t-a siga ya:  
vaccination/ACC plant-PERF/PROG HES that-ATT thing-LOC  
often use-PERF-NPS-PERF-PST but TAG  
[We] had planted vaccinations, uh, they used that kind of thing  
often, you know.  
(Kokuritsu Kokugo Kenkyūjo 1982: 260)

ponpon ʔuti-ti č-ai mata ʔanu: ʔu-ma-n nama-nu gutu-si ʔaka ʔaka  
to: s-e:ʔu-ran  
[onomatopoeia] fall-GER come-PERF/PROG also HES  
that-space-EMPH now-GEN thing-DAT bright bright COP/TOP  
do-STAT-NEG  
[Sounding like] a thud [leaves] came falling and, also, uh, there  
[just] like now it was not very bright.  
(Kokuritsu Kokugo Kenkyūjo 1982: 263)

#### 3.3.4.3.1.7.8 The Gerund -ti. The subordinative gerund *-ti* is a clause final suffix.

It can be used to connect either two verbs or two clauses in the pattern (clause)  $V_1$ -*ti* (clause)  $V_2$ , and indicates that the action of the first verb ( $V_1$ ) began before the action of the second verb ( $V_2$ ).

Ashworth (1973: 74-79) discusses the morphophonemic changes that occur when the gerund is suffixed to a verb root. First, Ashworth (1973: 74) presents the following vowel final verb roots:<sup>701</sup>

<i>či-ti</i>	>	<i>čiči</i>	'wearing'
<i>ko:-ti</i>	>	<i>ko:ti</i>	'buying'
<i>nin-ti</i>	>	<i>ninti</i>	'sleeping'
<i>nu-ti</i>	>	<i>nuti</i>	'riding'
<i>ʔuki-ti</i>	>	<i>ʔukiti</i>	'waking up (v.i.)'

The first example, *čiči* 'wearing', shows a palatalized consonant for the gerund, but in all other cases the consonant for the gerund remains /t/. It can be explained that the palatalization in this example is caused by the final vowel of the root (/i/). However, the final example, *ʔukiti* 'waking up (v.i.)' does not have a palatalized consonant here.

Ashworth (1973: 74-75) states that a distinction must be made between those that have underlying /i/ and underlying /e/. As stated above (Sections 3.3.3.1.1.1 and 3.3.3.2.1), the vowel /i/ causes palatalization of surrounding voiceless consonants. Then, the rule that palatalization occurs in this environment stops being a productive rule. Next, /e/ raises to /i/ but since the rule causing palatalization is no longer in place,

---

701. I have modified Ashworth's examples to match the romanization used in this study. Also, he presents the gerund as *te*, which is accurate historically: pre-Shuri would have had *\*te* which raised to *ti* in Shuri. If the underlying form was *\*ti*, then Shuri would have *či* as discussed above (Section 3.3.3.1.1.1). I render this morpheme as *ti* which is accurate according to a synchronic analysis of Shuri.

sequences like ...*it*... no longer palatalize. The difference between the gerund forms of the verbs *či-* and <sup>ʔ</sup>*uki-*, then, is that *či-* has underlying /i/ and <sup>ʔ</sup>*uki-* has underlying /e/. Further evidence that <sup>ʔ</sup>*uki-* < \*<sup>ʔ</sup>*uke-* is the lack of palatalization of /k/; if this verb came from pre-Shuri \*<sup>ʔ</sup>*uki-*, then we would expect Shuri <sup>ʔ</sup>*uči-*. Thus, a verb followed by the gerund provides evidence for reconstructing an earlier form of the verb.

As for consonant stem verbs, Ashworth (1973: 75-77) proposes a number of rules to explain the morphophonemic processes that occur when *ti* is suffixed to a verb stem:

1. If the final consonant is voiced or a labial, then *-ti* > *-di*.
2. If the final consonant is /k/, /s/, /g/, or /n/, then *-ti*, *-di* > *-či*, *-ži*.
3. After 1 and/or 2 apply, the final consonant of the root is deleted, unless the final consonant is an /n/ (see Rule 4) or /r/ or /t/ (see Rule 5).

	Rule 1		Rule 2		Rule 3	gloss
	voicing		palatalization		deletion	
<i>fus-ti</i>	————	>	* <i>fusči</i>	>	<i>fuči</i>	'drying'
<i>kak-ti</i>	————	>	* <i>kakči</i>	>	<i>kači</i>	'writing'
<i>ku:g-ti</i>	* <i>ku:gdi</i>	>	* <i>ku:gži</i>	>	<i>ku:ži</i>	'rowing'
<i>num-ti</i>	* <i>numdi</i>	>	————	>	<i>nudi</i>	'drinking'
<i>sin-ti</i>	* <i>sindi</i>	>	* <i>sinži</i>	>	<i>siži</i>	'dying'
<i>tub-ti</i>	* <i>tubdi</i>	>	————	>	<i>tudi</i>	'flying'

4. If the final consonant of the root is an /n/, then the underlying vowel determines the shape of the gerund. If the underlying vowel is /i/ then *-ti* is palatalized, if /u/ then palatalization does not occur.

	Rule 4	nasal+high vowel	gloss
	palatalization	become /n/	
<i>kumi-ti</i>	* <i>kumiči</i> >	<i>kunči</i>	'binding'
<i>nemu-ti</i>	——— >	<i>nenti</i>	'sleeping'

5. If the final consonant is /r/ or /t/, the gerund becomes a palatalized double consonant.<sup>702</sup>

	palatalization	assimilation	gloss
<i>tat-ti</i>	* <i>tatči</i> >	<i>tačči</i>	'standing'
<i>čir-ti</i>	* <i>čirči</i> >	<i>čičči</i>	'cutting'

The gerund is used in Shuri as follows:

syurei mon-kara massugu nka-ti<sup>703</sup> ʔnzi kankai mon di či<sup>703</sup> ʔu-zo:-nu  
ʔai-bi:-t-a-s-e: ya:

[name] gate-ABL straight turn-GER go out/INF [name] gate DV  
say HON-door-NOM exist-POL-PERF-PST-do-CONJ TAG

From Shurei Gate, when [you] exited and went straight and [you]  
were at the door called Kankai Gate, right?

(Kokuritsu Kokugo Kenkyūjo 1982: 261)

ʔa: syuri ko: ya ka:ma ʔa: ku-ma-ga činma:sa:-nkai ʔuri-ti ʔič-u-ru  
tukuru

HES [place name] high school TOP far HES this-place-NOM  
rotary-LOC go down-GER go/INF-STAT-ATT place

As for Shuri High School, [it is] far...uh, [it is] here, the place  
where [you] go down to the rotary.

(Kokuritsu Kokugo Kenkyūjo 1985: 301)

---

702. Ashworth (1973: 76) explains this process as the gerund becoming palatalized and the final consonant of the root becoming a mora obstruent [t]. My explanation simplifies his, as it does not require the addition of a mora obstruent, and the gemination can be explained by assimilation of the final consonant of the stem to the suffix.

703. Here *di ci* is a contraction of *di ʔici*.

3.3.4.3.1.7.9 The Final Suffix -yun. The conclusive form is indicated by the final

suffix *-yun*.<sup>704</sup> This suffix has three allomorphs: *-yun* following vowel final stems; *-un*

following consonant final stems; and *-n* following the stative auxiliaries (Section

3.3.4.3.1.6). After consonant final stems, the glide /y/ causes palatalization of the final

consonant of the stem, as in the following examples:<sup>705</sup>

vowel final stems

či-yun	>	čiyun	'wear'
tu-yun	>	tuyun	'take'
ʔuki-yun	>	ʔukiyun	'wake up (v.i.)'
wara-yun	>	warayun	'laugh'

consonant final stems

kand-yun	>	kanžun	'cover (one's head)'
kak-yun	>	kačun	'write'
nas-yun	>	nasyun	'give birth' <sup>706</sup>
tat-yun	>	tačun	'stand'
tub-yun	>	tubun	'fly'
ʔwi:g-yun	>	ʔwi:žun	'swim'
ʔyum-yun	>	ʔyunun	'read' <sup>707</sup>

---

704. Historically, the final /n/ must come from an /m/ plus a high vowel. This cannot be determined from the final form, but from the final question form: when the question suffix *-i* follows this suffix the result is *-yumi* and not *\*-yuni*. I return to this below, when reconstructing the PJ form (Section 4.4.3.39).

705. Adapted from Uemura (1999: 59).

706. Here the /y/ is not deleted following /s/, however, /sy/ is phonetically [š].

707. Presumably, the sequence of labial /m/ plus /y/ results in /N/.

following stative auxiliaries

-a-yun	>	-an	'PST-FIN'
-e:-yun	>	-e:n	'PROG-FIN'
-o:-yun	>	-o:n	'NPS-FIN'
-u-yun	>	-un	'STAT-FIN'

This morpheme is used to indicate the conclusive or final form, as in the following

examples:

wa-ne: 'u-nu tigami kač-a-n  
I-TOP this-GEN letter write-PST-FIN  
I wrote this letter.  
(Arakaki 2000: 2)

tiida-nu 'aga-yun  
sun-GEN rise-FIN  
The sun rises.  
([http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/  
details.php?ID=SN00149](http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/details.php?ID=SN00149))

ni: 'urus-yun  
luggage put down-FIN  
[I] put the luggage down.  
([http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/  
details.php?ID=SN04100](http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/details.php?ID=SN04100))

3.3.4.3.2 Nominalizers

Shuri has one nominalizer, *-i*. It attaches to the verb root to transform the verb into a noun. It is deleted following vowel final roots.

sui-nu ʔu-fanas-i ndi ʔi:-ne:  
Shuri-GEN HON-talk-NML PART say-PART  
Speaking of Shuri stories<sup>708</sup> ...  
(Kokuritsu Kokugo Kenkyūjo 1982: 258)

kure: tu:-i miči ya-n  
this/TOP pass-NML street COP-FIN  
This is the passage.  
(Karimata 2003: 2)

#### 3.3.4.3.3 Summary

Table 3.15 below lists the Shuri inflectional morphemes in alphabetical order, and provides information as to how they affix to verbs and presents their functions.

---

708. Here "stories" is the nominalized form of the verb to talk (*fanas-*).

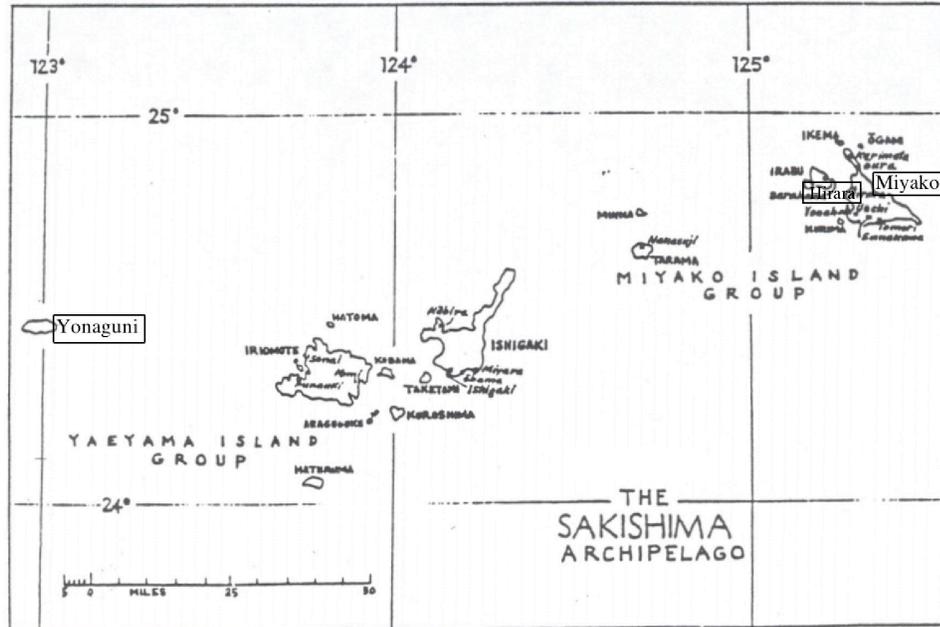
Table 3.15: Summary of Shuri Inflectional Morphemes

Morpheme	Type	Function
-a-	auxiliary (Group IX)	past stative
-asimi-	suffix (Group I)	causative
-e:-	auxiliary (Group IX)	stative
-i	suffix	infinitive
-i	suffix	nominalizer
-na	sentence final suffix (Group X)	negative imperative
-o:-	auxiliary (Group IX)	non-past stative
-ra	clause or sentence final suffix (Group X)	volitional
-ra:	clause final suffix (Group X)	hypothetical conditional
-ran(-)	suffix (Group VII)	negative
-rari-	suffix (Group II)	passive
-re:	clause final suffix (Group X)	conjunctive
-ri	sentence final suffix (Group X)	imperative
-ru	clause or sentence final suffix (Group X)	attributive
-t-	suffix (Group VIII)	perfective
-tai	clause final suffix (Group X)	progressive perfective
-ti	clause final suffix (Group X)	gerund
-u-	auxiliary (Group IX)	stative
-yu:s-	suffix (group II)	potential
-yun	sentence final suffix (Group X)	final

### 3.4 Southern Ryūkyūan Islands: Hirara

I have chosen Hirara, a dialect of Miyako, to represent the languages of the southern Ryūkyūs. A map of Miyako is shown in Figure 3.7.

Figure 3.7: Map of the Miyako Islands<sup>709</sup>



#### 3.4.1 Hirara Primary Source Material

The primary source material for Hirara comes from a number of studies. First, Nevskii (1978) presents the folk tales of the Miyako islands. The first section of this monograph contains translations of the stories into Russian, the second section contains the texts recorded in a phonetic script, and the final section contains interviews and biographic material on the author. This book contains very little linguistic or cultural

---

709. This map was scanned from Thorpe (1983: 73).

detail about the Miyako islands. Initially I thought this would be a significant source for Miyako data, however, the data presented here is problematic: it is not always possible to determine which dialect of Miyako is being presented. Therefore, I have used this source only when I can be sure that the language reflects the Hirara dialect of Miyako.

Next, Nohara (1986: 361-394) presents data collected from seven different speakers from four different locations on the Miyako islands. These examples are mainly random sentences, words, and expressions (i.e., not presented as a real conversation), presented phonetically with glosses in Modern Standard Japanese. Often these glosses are not translated word for word and should not be taken too literally; the Japanese glosses often omit particles presented in the Miyako data and the Japanese translations seem to reflect what is natural in Japanese, and not what was actually said in Miyako. Only examples which represent the Hirara dialect were selected for this study.

In addition to these two sources, the secondary sources (see next section) provide transcribed examples of recorded speech from which the bulk of Hirara data was collected.

### *3.4.2 Hirara Secondary Source Material*

As for secondary sources, Hirayama has written three monographs related to the study of the Miyako dialects. The first, Hirayama (1967), contains a discussion of both Miyako and Yaeyama accent, phonology, and grammar. There is also a word list presenting forms spoken throughout the Ryūkyūs. This manuscript comes with recorded conversations, which Hirayama uses to support his claims. The next monograph, Hirayama (1983), features descriptions of various dialects of Miyako compared to other RK dialects, the phonology of several dialects spoken in the Miyako islands, and a comparison of these dialects. There are also discussions of grammar by adjectives, verbs, and particles, and auxiliaries.<sup>710</sup> Finally, there is a presentation of the special characteristics and uses of vocabulary which Hirayama has organized by categories (e.g., words pertaining to animals). This discussion of vocabulary includes forms for four different dialects spoken in the Miyako islands, including Hirara. The third monograph, Hirayama (1988), is a presentation and discussion of the basic vocabulary of both Miyako and Yaeyama dialects.

---

710. The discussion of "auxiliaries" is in the Japanese notion of auxiliaries (i.e., anything that attaches to a verb), and not the definition of auxiliaries used in the present study (i.e., morphemes which follow the infinitive form of verbs).

In addition to the studies presented by Hirayama, there is a study by Nema (1969) which focuses on the phonetics and phonology of Miyako. Nema presents examples from Miyako with Japanese glosses. Further, there are two other grammars, Nakasone (1987) and Uchima (1984), both of which focus on RK languages and dialects in general, but have a section outlining features of Miyako dialects. Nakasone (1987) focusses on the usage of honorifics in Miyako, presenting examples of how they are used and highlighting the differences between honorific usage in Shuri and Miyako. Uchima (1984) presents examples of Miyako vocabulary and grammatical forms; there are a number of charts but otherwise very little discussion of the forms found in Miyako dialects. Finally, there is the Miyako Dialect Dictionary, published online at <http://133.13.160.25/rlang/myk/index.html>, which contains word lists by topic and by part of speech. There are also sound bites for some, but not all, examples.

### *3.4.3 Hirara Phonology*

#### 3.4.3.1 Hirara Consonants

The Hirara consonant inventory is presented in Table 3.16 below:

Table 3.16: The Hirara Consonant Inventory

		Labial	Labiodental		Dental		Palatal		Velar	Glottal
				dbl		dbl		dbl		
Stops	voiceless	p			t	tt			k	
	voiced	b			d	dd			g	
Fricatives	voiceless		f	ff	s	ss	ç	çç		h
	voiced		v	vv	z	zz				
Nasals		m			n					
Liquids					r					
Glides		w					y			

note: *dbl* = a double consonant

#### 3.4.3.1.1 Voiceless Obstruents

Hirara has the following voiceless obstruents: /p/, /t/, /k/, /f/, /s/, /ç/, and /h/.<sup>711</sup> All of the voiceless obstruents can occur word initially or medially, but cannot occur in final position. The phonetic values and allophones for these phonemes are presented in Table 3.17:

---

711. I discuss the double consonants below (Section 3.4.3.1.3).

Table 3.17: Phonetic Values and Allophones for Voiceless Obstruents in Hirara

Phoneme	Phonetic Value	Allophones
/p/	voiceless unaspirated bilabial stop	[p] in all environments <sup>712</sup>
/t/	voiceless unaspirated dental stop	[t] in all environments
/k/	voiceless unaspirated velar stop	[k] in all environments <sup>713</sup>
/f/	voiceless labiodental fricative	[f] in all environments
/ç/	voiceless dental fricative	[č] preceding /i/ and /y/ [ç] elsewhere
/s/	voiceless dental fricative	[š] preceding /i/ and /y/ [s] elsewhere
/h/	glottal fricative	[h] in all environments

#### 3.4.3.1.1.1 The Historical Development of Voiceless Obstruents

In Thorpe's (1983: 51-110) discussion of the proto-RK consonant system and how those consonants are reflected in the various RK languages, he makes the following observations.

First, proto-RK \*/k/ becomes Hirara /h/ when followed by \*u, is deleted in the sequence C<sub>[+voice]</sub>aka<sup>714</sup>, and is reflected as Hirara /k/ elsewhere. Note that the syllable /ku/ does exist in Hirara, but comes from sources other than proto-RK \*ku; typically, it is the

---

712. In some dialects, /p/ is phonetically [p<sup>s</sup>] preceding /i/ for some speakers (Hirayama 1983: 105-160).

713. In some dialects, /k/ can become [k<sup>s</sup>] for some speakers when followed by the vowel /i/ (Hirayama 1983: 105-160).

714. In other words, the sequence /C<sub>[+voice]</sub>aka/ results in the loss of the medial /k/ resulting in: /C<sub>[+voice]</sub>aa/ (Thorpe 1983: 87).

result of raising of \*/o/ to \*/u/ (see Section 3.4.3.2.1). This implies historical changes in proto-RK/pre-Hirara history at three different stages of the language's development:<sup>715</sup>

1. Stage One: The rule that proto-RK \*/k/ becomes \*/h/ before \*/u/ applies.
2. Stage Two: The previous rule is no longer necessary and is no longer a productive rule in the language.
3. Stage Three: The proto-RK vowel \*/o/ raises to \*/u/. At this time the syllable \*/ko/ becomes \*/ku/. Since the rule described in Stage One is no longer productive, there is no motivation for \*/ku/ to change further.

Another change that Thorpe (1983) discusses is that proto-RK \*/p/ becomes Hirara /h/ when followed by \*/u/.<sup>716</sup> This results in a merger of PRK \*/ku/ and \*/pu/ in Hirara (both resulting in Hirara /hu/). The syllable /pu/ in Hirara develops the same way as discussed for syllable /ku/ above.

The last change involving voiceless obstruents described by Thorpe (1983), is that proto-RK \*/t/ becomes Hirara /ç/ when followed by proto-RK either \*/i/ or \*/u/, and remains /t/ elsewhere; this means that Hirara /ti/ and /tu/ come from proto-RK \*/te/ and \*/to/ respectively (see Section 3.4.3.2.1 for a discussion on vowel raising).

---

715. Serafim (personal communication) has suggested similar time-ordered rules for different processes in the development of other RK languages; he was referring to palatalization occurring with a consonant plus \*/i/ at a time before proto-RK \*/e/ raised to \*/i/ to account for both \*/çi/ (from earlier \*/ki/) and \*/ki/ (from earlier \*/ke/) existing in the same language. I am applying his explanation to a different problem within RK.

716. Proto-RK \*/p/ is reflected as /p/ elsewhere.

### 3.4.3.1.2 Voiced Obstruents

Hirara has the following voiced obstruents: /b/, /d/, /g/, /v/, and /z/. Like their voiceless counterparts, these obstruents can occur word initially or medially. In addition, /v/ can occur in word final position. The phonetic values and allophones for these phonemes are presented in Table 3.18:

Table 3.18: Phonetic Values and Allophones for Voiced Obstruents in Hirara

Phoneme	Phonetic Value	Allophones
/b/	voiced bilabial stop	[b] in all environments
/d/	voiced dental stop	[d] in all environments
/g/	voiced velar stop	[g] in all environments
/v/	voiced labiodental fricative	[v] in all environments <sup>717</sup>
/z/	voiced dental fricative	[ʒ] preceding /i/ and /y/ [z] elsewhere

### 3.4.3.1.3 Double Consonants

Hirara has a number of double consonants which, on a synchronic level, must be seen as phonemically distinct from their non-geminate counterparts. The double consonants that occur in Hirara are: /vv/, /tt/, /dd/, /ss/, /çç/, /zz/, /gg/, and /rr/.<sup>718</sup>

---

717. For some speakers, /v/ in final position can be either [v] or [ʊ]

718. Some scholars in the Japanese linguistic tradition use the symbol Q to indicate a double consonant of moraic length which assimilates to the phonetic value of the following consonant (i.e., /Qp/ represents [pp]). As the symbol Q is not used in this way outside of Japanese linguistics, I have chosen not to use it, and instead write a double consonant to indicate gemination.

Historically, double consonants are typically the result of the loss of a vowel resulting in a consonant cluster which then becomes a double consonant. Below I present some examples from Hirayama (1983) with the proto-RK based on forms reconstructed by Thorpe (1983).

Hirara	<	proto-RK	Gloss
avva	<	*abura	grease, oil, fat
ffa	<	*kuwa	child
fuzza	<	*Guzira <sup>719</sup>	whale
maddī	<	*maziri	to mix
ssu	<	*siro	white
turra	<	*tori-wa	bird-TOP

Many, but not all, double consonants derive from the sequence: consonant + high vowel + \*r. This is further explained below in Section 3.4.3.1.5.

#### 3.4.3.1.4 Nasal Consonants

Hirara has two nasals: a bilabial nasal /m/ and a dental nasal /n/. When the nasal consonants occur before another consonant or word finally, they are phonetically lengthened.<sup>720</sup> The nasals and their allophones are shown in Table 3.19.

---

719. The symbol G indicates either a /k/ or /g/ for cases where the consonant cannot be reconstructed further.

720. Long nasals are typically called "mora nasals" as they represent a mora length consonant. They are often written as /N/ and /M/, but I have chosen not to use these symbols as they are not recognized outside of Japanese linguistics.

Table 3.19: Phonetic Values and Allophones for Nasal Consonants in Hirara

Phoneme	Phonetic Value	Allophones
/m/	[m] - bilabial nasal stop	[m̚] preceding /m/ [m̚] preceding /n/ [m] elsewhere
/n/	[n] - dental nasal stop	[n̚] preceding /s/ and word finally [m] preceding /m/, /p/, and /b/ [ŋ] preceding /k/ and /g/ [n] elsewhere

The nasal consonants /n/ and /m/ that occur before other consonants or in word final position are derived and not original consonants. Thorpe (1983) gives two sources for /n/ and one for /m/. First, Thorpe (1983: 45-46) claims Hirara /n/ comes from a high vowel in proto-RK:

proto-RK	>	Hirara	Gloss
*igok-	>	muyuk-	to move
*Umo <sup>721</sup>	>	m:	sweet potato
*Uma(ga)	>	mmaga	grandchild
*Uma-	>	mma-	tasty

However, Hirayama's (1983) word list and Thorpe's (1983) own data present contradictory evidence. First, \*igok- 'to move' is attested in Hirara both with initial /u/, as in *uyuk-*, and with initial /m/, as in *muyuk-*, but not with initial /n/. It is also not clear what happens to the /g/. The example \*Umo 'sweet potato' is also problematic: Hirayama

---

721. Thorpe (1983) uses the symbol \*/U/ to represent a proto-RK round vowel which can not conclusively be reconstructed as either \*/u/ or \*/o/.

(1983: 377-378) presents this example with a phonetically long /m/, but it is not clear whether the lengthened consonant is the result of the loss of the initial or loss of the final vowel. Finally, the forms for "grandchild" and "tasty" clearly show an initial /m/ and not /n/ as Thorpe's theory predicts. Further, since the initial vowel cannot be reconstructed, and is either /u/ or /o/, it is not possible to make a claim about the initial vowel being high: if the initial vowel is /u/ then it is high and fits Thorpe's theory, if, however, it is /o/ then it contradicts Thorpe's claims. Thus, I am not convinced with Thorpe's (1983) claim that an initial high vowel in proto-RK results in the mora nasal /n/ in Hirara. This claim works in some cases but not in others, and there may be another motivation for this change; this issue will be set aside for further research.

The other source for mora nasals in Hirara discussed by Thorpe (1983: 93-96) is from a nasal consonant plus high vowel. In these cases, the vowel is deleted and the consonant, /n/ or /m/, remains.

<u>proto-RK</u>	<u>&gt;</u>	<u>Hirara</u>	<u>Gloss</u>
* <i>Gani</i>	>	<i>kan</i>	crab
* <i>inu</i>	>	<i>in</i>	dog
* <i>wanu</i>	>	<i>ban</i>	I
* <i>sirami</i>	>	<i>ssam</i>	louse
* <i>umi</i>	>	<i>im</i>	sea

### 3.4.3.1.5 The Liquid

Hirara has one liquid, /r/, which has the allophone [l] (a retroflex lateral) when it occurs before other consonants or in word final position. As a double consonant, /rr/ is phonetically [ll].

There have been a number of phonetic changes involving this phoneme. First, the vowels \*/i/ and \*/u/ become /i/ following the liquid /r/, and then the /r/ is deleted in this environment. In other words, proto-RK \*ri and \*ru > pre-Hirara \*rī > Hirara i.<sup>722</sup> The /r/ must be deleted after the vowel shifts, otherwise there is no motivation for the vowels to shift to /i/. Note that /r/ is also lost before \*ri in cases where \*ri is the result of proto-RK \*/e/ raising to /i/. These changes can only be understood if explained in stages:

1. Stage One: Proto-RK \*/i/ backs to /i/ following /r/, proto-RK \*/u/ fronts to /i/ following /r/<sup>723</sup>
2. Stage Two: The rule in stage one is no longer productive
3. Stage Three: Proto-RK \*/e/ raises to /i/ and \*/o/ raises to /u/
4. Stage Four: Last, /r/ is deleted preceding /i/ and /i/

In addition, Thorpe (1983: 97-104) demonstrates that proto-RK sequences consisting of a consonant plus a high vowel followed by \*/r/ undergo "special changes",

---

722. I discuss vowel changes below (Section 3.4.3.2.1).

723. As discussed below (Section 3.4.3.2.1), this change occurs for proto-RK \*/i/ except following nasal consonants where it remains /i/ and/or is deleted. Proto-RK \*/u/ fronts to /i/ following all coronal consonants.

which often result in double consonants in Hirara. These changes are presented below in

Table 3.20.<sup>724</sup>

Table 3.20: Proto-RK Sequences Involving \*r and Their Reflexes in Hirara

proto-RK	*bir	*bur	*zir	*zur	*gir	*gur	*sir	*sur	*kir	*kur
Hirara	bi(r)	vv	zz	zz~çç	gĩ(r)	vv	ss	ss	kĩs	ff

### 3.4.3.1.6 Glides

Hirara has two glides. The first, /y/, occurs only before /a/, /o/, and /u/. It can occur at the beginning of a syllable or following any consonant. The second, /w/, only occurs before the vowels /a/ and /o/. It can also occur after the velar consonants /k/ and /g/, i.e., *kwa* and *gwa*, but not *kwo* or *gwo*.

### 3.4.3.2 Hirara Vowels

Hirara has both long and short vowels, as shown below in Figure 3.8. Vowel length is indicated by a colon (:). The historical development of the vowel system is presented below in Section 3.4.3.2.1.

---

724. Modified from Thorpe (1983: 100).

Figure 3.8: Hirara Vowels

Short Vowels			
i	i <sup>725</sup>	u	
a			
Long Vowels			
i:	i:	u:	
o:			
a:			

As shown in Figure 3.8, all of the short vowels also have long vowel equivalents.

The vowel /o/, however, only exists as a long vowel. Hirayama (1983: 168-199) claims that long /o:/ historically developed from crasis of /a/ plus /u/ from the sequence /au/. To prove this, he presents data from four dialects of Miyako; some that have /o:/ and some that have /au/, as shown below in Table 3.21.

Table 3.21: Correspondences Between Long /o:/ and /au/ in Miyako Dialects<sup>726</sup>

Dialect Gloss	Hirara	Tarama	Ikema	Nagahama
blue	<b>o:kai</b>	<b>o:sya:r</b>	<b>aukai</b>	<b>aukar</b>
ceiling	<b>tinzo:</b>	<b>tinzyo:</b>	<b>tinzyo:</b>	<b>tinza<u>u</u></b>
learn	<b>naro:</b>	<b>nar<u>u</u>:</b> <sup>727</sup>	<b>nar<u>au</u></b>	<b>nar<u>au</u></b>
sweep	<b>po:kī</b>	<b>po:kī</b>	<b>paucī</b>	<b>paucī</b>
tool	<b>do:v</b>	<b>do:</b>	<b>dau:</b>	<b>dauv</b>

725. The symbol /i/ is used here to indicate a central high vowel [+].

726. Modified from Hirayama (1983: 169).

727. Hirayama does not explain why the vowel is /u:/ here and not /o:/

Hirayama (1983: 168-169) also notes cases of long /o/ formed by crasis of /au/ where *u* is the accusative marker which is affixed to a noun ending in /a/:

<i>fusa</i> 'grass' + <i>u</i> 'ACC'	>	<i>fuso:</i> 'grass-ACC'
<i>avva</i> 'oil' + <i>u</i> 'ACC'	>	<i>avvo:</i> 'oil-ACC'

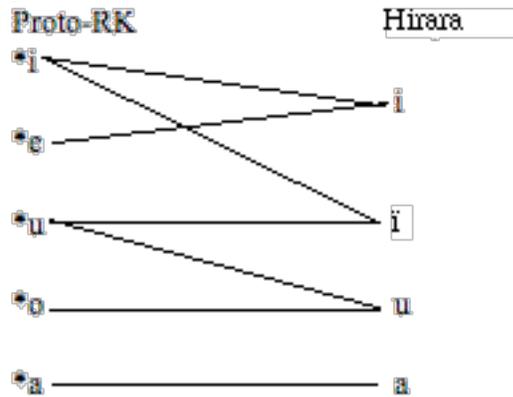
As for the other long vowels, Hirara, like many other RK languages, has a rule that lengthens vowels of monosyllabic words: *ti:* 'hand', *ta:* 'rice field', *ya:* 'house', *zī:* 'letter', *ki:* 'tree', etc. In addition, long vowels occur in other environments: *sī:sī* 'meat, flesh', *yu:kar* 'weak', *ya:rru* 'swing', etc.

#### 3.4.3.2.1 The Historical Development of Hirara Vowels

In order to fully understand Hirara phonology it is necessary to consider an earlier stage of the language; as no complete proto-Hirara reconstruction has been presented to date, I am relying on Thorpe's (1983) reconstruction of proto-RK to further our understanding of the development of Hirara.

Thorpe (1983: 29-51) explains how proto-RK vowels evolved into the modern Hirara vowel system. The changes are presented below in Figure 3.9.

Figure 3.9: Proto-RK Vowels and Their Correspondences in Hirara



As shown in Figure 3.9, proto-RK \*/a/ is realized as /a/ in Hirara, but in the case of the other vowels there are some splits and mergers that occur between proto-RK and Hirara. As for the front vowels \*/i/ and \*/e/ first, proto-RK \*/i/ remains /i/ in Hirara following nasal consonants and in word initial position, and in all other environments it changes to /i/ (Thorpe 1983: 40). Then, proto-RK \*/e/ raises to /i/ in Hirara (Thorpe 1983: 32).<sup>728</sup> Thus, proto-RK \*/i/ and \*/e/ merge as Hirara /i/ in word initial position and following nasal consonants.<sup>729</sup>

As for the back vowels, first proto-RK \*/u/ fronts to /i/ following coronal consonants, and remains /u/ elsewhere. Then, proto-RK \*/o/ raises to /u/.<sup>730</sup> Thus, proto-

728. Proto-RK \*/e/ must raise to /i/ at a time after \*/i/ has changed to either /i/ or /i/; if \*/e/ raises to /i/ before the rule that changes \*/i/ to /i/ or /i/ applies, then \*/e/ would have shifted to /i/ or /i/ with \*/i/.

729. As discussed above (Section 3.4.3.1.4), the sequence of a nasal consonant plus high vowel often result in a reduced vowel and lengthened nasal.

730. Proto-RK \*/o/ must raise to /u/ after \*/u/ has become either /i/ or /u/, for the same reason stated with proto-RK \*/e/ raising to /i/.

RK \*/u/ merges with proto-RK \*/i/ as /i/ in Hirara in some environments, and proto-RK \*/o/ merges with proto-RK \*/u/ as /u/ in Hirara.

### *3.4.4 Hirara Verbal Morphology*

#### 3.4.4.1 The Shape of Pre-Hirara Verb Roots

In order to determine the shape of pre-Hirara verb roots, I compiled a database of Hirara verb roots taken from Hirayama (1967; 1983; 1988), Nakasone (1987), Nevskii (1978), and the Hirara online dictionary at: <http://133.13.160.25/rlang/myk/index.html> I only considered verbs for which a verb root could be reconstructed, which limited the data to verb pairs (i.e., transitive and intransitive forms of the same verb) and verbs that include a derivational morpheme (Section 3.4.4.2) in their formation. Because transitive and intransitive verb pairs are not common in Hirara, the resulting database consists of only twenty-eight reconstructable verb roots. The data show that some verb roots can be reconstructed as consonant final and others as vowel final. The data are presented in Appendix H.

### 3.4.4.2 Derivational Morphemes

#### 3.4.4.2.1 The Derivational Suffix \*-as-

The derivational suffix \*-as- is reconstructed on the basis of the following

examples:

<i>ayakaras-</i>	<	* <i>ayakar-as-</i>	'take or name after (v.t.)'
cf. <i>ayakar-</i>	<	* <i>ayakar-</i>	'take or name after (v.i.)'
<i>idas-</i>	<	* <i>id-as-</i>	'put out'
cf. <i>idi-</i>	<	* <i>id-i-</i>	'go out'
<i>ukus-</i>	<	* <i>uku-as-</i>	'wake up (v.t.)'
cf. <i>uki-</i>	<	* <i>uku-i-</i>	'wake up (v.i.)'

If this suffix follows a verb ending in a vowel root, the vowel of the suffix is deleted. The derivational morpheme \*-as- is used to form a transitive verb from an intransitive or neutral verb root. This morpheme cannot be followed by other derivational suffixes.

#### 3.4.4.2.2 The Derivational Suffix \*-ar-

The derivational suffix \*-ar- is used to form an intransitive verb from a transitive or neutral verb root. It is not used with any other derivational suffixes in Hirara.

Examples of this suffix are presented below:

<i>agar-</i>	<	* <i>ag-ar-</i>	'raise (v.i.)'
cf. <i>agi-</i>	<	* <i>ag-i-</i>	'raise (v.t.)'
<i>batar-</i>	<	* <i>bat-ar-</i>	'cross (v.i.)'
cf. <i>batas-</i>	<	* <i>bat-as-</i>	'cross (v.t.)'
<i>kakar-</i>	<	* <i>kak-ar-</i>	'hang (v.i.)'
cf. <i>kaki-</i>	<	* <i>kak-i-</i>	'hang (v.t.)'

#### 3.4.4.2.3 The Derivational Suffix \*-i- < \*-e-

The derivational suffix \*-i- functions as a transitivity flipper, in most cases changing the verb from either transitive to intransitive or intransitive to transitive, but in some cases the function is unclear (see Section 2.2.5.2.7). This suffix is not used with other derivational suffixes in Hirara.

The derivational suffix \*-i- is reconstructed on the basis of the following verbs:

<i>agi-</i>	<	* <i>ag-i-</i>	'raise (v.t.)'
cf. <i>agar-</i>	<	* <i>ag-ar-</i>	'raise (v.i.)'
<i>kaki-</i>	<	* <i>kak-i-</i>	'hang (v.t.)'
cf. <i>kakar-</i>	<	* <i>kak-ar-</i>	'hang (v.i.)'
<i>idi-</i>	<	* <i>id-i-</i>	'go out'
cf. <i>idas-</i>	<	* <i>id-as-</i>	'put out'

While \*-i- is reconstructed here on the basis of verbs in Hirara, at an earlier stage of the language the vowel was clearly \*-e-. If the vowel was an /i/ at an earlier stage of the

language we would find /i/ following nasal consonants and /i/ in all other environments (see Section 3.4.3.2.1). I return to this below when reconstructing the PJ form of this suffix (Section 4.3.1).

#### 3.4.4.2.4 Summary

Table 3.22 below lists the Hirara derivational morphemes and their functions.

Table 3.22: Summary of Hirara Derivational Morphemes

Morpheme	Function
*-as-	transitivity or causative marker
*-ar-	intransitivity marker
*-i- < *-e-	transitivity flipper in some cases, function unknown in others

#### 3.4.4.3 Inflectional Morphemes

Hirara has a number of inflectional morphemes. For the purpose of this study, however, I will only be discussing those morphemes which have cognates in WOJ and/or EOJ, and which are not Hirara innovations or loans from MJ or later stages of Japanese.<sup>731</sup> Morphemes not treated here include: *-adi* volitional suffix,<sup>732</sup> *-adya:n*

---

731. Although I do not specifically discuss these morphemes, some do occur in examples presented throughout this section.

732. The volitional suffix *-a* is discussed below (Section 3.4.4.3.1.4.1); these suffixes may be related with *-adi* formed from *-a* plus another suffix *-di*. The function of *-a* and *-adi* is identical.

negative volitional suffix; *-fi:-* honorific auxiliary; *-gumata* debitive suffix; *-nya:n* definitive suffix; *-sa:s* < \**samas* honorific form of the verb to do; and *-uisi-*, an honorific auxiliary used to indicate an action performed for someone else.

#### 3.4.4.3.1 Verbal Suffixes and Auxiliaries

Hirara verb stems are bound forms and must be followed by at least one suffix or auxiliary. It is possible for a verb stem to be followed by a string of suffixes, and in this case there is a set order in which the morphemes can occur; some must attach directly to the root and can be followed by other morphemes, while other suffixes may only occur in the final position of a verbal morpheme string.

Following the discussion above in Section 2.2.5.3, I have grouped the morphemes according to where they can occur in a verbal string. The infinitive suffix *-i* is not placed in a group as its ordering is not as restricted as the other suffixes; it can occur both before and after auxiliaries and suffixes, and it is the only morpheme that can occur more than once in a verbal string. If more than one morpheme is present in a verbal string, then a morpheme in Group I occurs before one in Group II, a morpheme in Group II occurs before Group III. Group III morphemes may end a verbal string and they can also be followed by other Group III morphemes. A verbal string does not need to have a

morpheme from Group I-II, but must end in either the infinitive *-i* or a Group III morpheme.

Table 3.23: Classification of Hirara Morphemes Based on Verbal String Ordering

	Ordering	Morphemes discussed in this study	Morphemes not discussed in this study
infinitive <i>-i</i>	suffixes to the verb root, auxiliaries, and some suffixes; can occur in final position; can be followed by a verb or auxiliary	<i>-i</i>	
Group I	suffixes to the verb stem or the infinitive	<i>-as-</i> CAUS <i>-asimi-</i> CAUS <i>-rai-</i> POT <i>-tt-</i> PERF	<i>-fi:-</i> HON <i>-uisi-</i> HON
Group II	follows the verb stem or Group I morpheme	<i>-a</i> STAT <i>-u-</i> STAT	
Group III	suffixes to the verb stem or any Group I-II morpheme; can end a verb string; can be followed by other Group III morphemes	<i>-a</i> VOL <i>-an</i> NEG <i>-ba</i> CONJ <i>-i</i> FIN <i>-i</i> ATT <i>-i/-ru</i> IMP <i>-im</i> FIN <i>-itai</i> PERF/PROG <i>-ittam</i> PERF NEG <i>-na</i> NEG IMP <i>-tti</i> PERF	<i>-adi</i> VOL <i>-adya:n</i> <sup>733</sup> NEG VOL <i>-gumata</i> DEB <i>-nya:n</i> definitive <i>-sa:s</i> HON

The morphemes are discussed below according to this grouping.

---

733. The negative volitional form is historically from *\*adi-aN* > *-adya:N*.

### 3.4.4.3.1.1 The Infinitive -i

The Hirara infinitive, like the OJ infinitive, is suffixed to verb roots and verbal auxiliaries. When used between two verbs or auxiliaries it acts as a connector between the two morphemes. The infinitive can also be in the final position of a verbal string, and in this case it connects the first clause with the second, and may be thought of as English "and" ([clause 1]-and-[clause 2]). This morpheme is deleted when following vowel final stem verbs and auxiliaries in order to prevent a vowel-vowel sequence.

dusī gami-n utaga:-i kumar-i-u-ī  
friend-TERM-LOC doubt-PASS/NML trouble-INF-NPS-FIN  
Being doubted by a friend is troubling.  
(Hirayama 1983: 184)

pīi-nu tanu: mak-as-i-uk-i  
garlic-GEN seed/ACC sow-CAUS-INF-do in advance-IMP  
Sow the garlic seeds in advance.  
(Hirayama 1983: 185)

ib-i mai su:-n kaz-i mai su:-n  
plant-INF EMPH do-NEG cultivate-INF EMPH do-NEG  
[I] don't plant [it], and [I] don't grow [it].  
(Hirayama 1983: 186)

### 3.4.4.3.1.2 Group I Morphemes

Group I morphemes are those suffixes which attach directly to the verb stem or auxiliaries which follow the infinitive suffix but do not follow other inflectional morphemes. The suffixes are presented below in alphabetical order.

#### 3.4.4.3.1.2.1 The Causative Suffix -as- The suffix *-as-* is used to indicate

causative, as in the following examples:

piï-nu tanu: mak-as-i-uk-i  
garlic-GEN seed/ACC sow-CAUS-INF- do in advance-IMP  
Make [him] sow the garlic seeds in advance.  
(Hirayama 1983: 185)

uttu-n kak-as-ï  
younger brother-DAT write-CAUS-ATT  
[I] made my younger brother write [it].  
(Nohara 1986: 384)

#### 3.4.4.3.1.2.2 The Causative Suffix -asimi- The suffix *-asimi-* is also used to

indicate causation. The initial vowel of the suffix presumably is deleted following vowel final verbs stems. I have found only one example of this suffix, and it is not clear what the difference between *-as-* and *-asimi-* is.

kama-nu pisi-gami kug-asimi-ru  
 over there-GEN tide-TERM row-CAUS-IMP  
 Make [them] row up to the shoreline over there.  
 (Hirayama 1983: 185)

3.4.4.3.1.2.3 The Passive and Potential Suffix -rai-. The suffix *-rai-* indicates both passive and potential. Historically, this suffix must come from earlier *\*-rare-* where *\*/e/* has raised to */i/*, *\*-rari-* and then the */r/* deleted before */i/*.<sup>734</sup> Synchronically, the initial consonant of this suffix is deleted following consonant final verb stems and retained following vowel final consonant stems, as shown in the following examples.

passive  
 dusi gami-n utaga:-i kumar-i-ui  
 friend-TERM-LOC doubt-PASS/NML trouble-INF-PROG  
 Being doubted by a friend is troubling.  
 (Hirayama 1983: 184)

ka-nu tigamyu: du an-nam mi:-rai-na:nn-iba  
 this-GEN letter EMPH mother-LOC see-PASS-DEF-CONJ  
 This letter was seen by my mother.  
 (Hirayama 1983: 185)

potential  
 panas-ai-s-u ga zi: ya kak-ai-n  
 talk-POT/INF-do-FIN but letter TOP write-POT-NEG  
 [He] can talk, but he cannot write letters.  
 (Hirayama 1983: 184)

---

734. These phonemic changes are described above (Section 3.4.3.1.5).

asatti ya: ku:-rai-s-u ga atsa: ku:-rai-n  
 day after tomorrow TOP come-POT-do-FIN but tomorrow/TOP  
 come-POT-NEG  
 [I] can come the day after tomorrow, but cannot come tomorrow.  
 (Hirayama 1983: 184)

3.4.4.3.1.2.4 The Perfective Suffix -tt-. The suffix *-tt-* is used to mark the perfective aspect of verbs. It is mostly found with suffixes that historically derive from it such as the perfective progressive suffix *-tai* (Section 3.4.4.3.1.4.9), the negative perfective suffix (Section 3.4.4.3.1.4.11).

hiko:ki-nudu ur-i-tt-i:-u-i  
 plane-NOM go down-INF-PERF-INF-NPS-FIN  
 The plane is going down.  
 (Hirayama 1983: 184)

a-i-ta-i mun:-ba bassi-tt o:  
 say-INF-PERF/PROG-ATT thing-ACC forget-PERF STAT/  
 EMPH  
 [He] will forget the things that were said.  
 (Hirayama 1983: 187)

#### 3.4.4.3.1.3 Group II Morphemes

There are two morphemes in Group II: the stative auxiliary *-a-* and the non-past stative auxiliary *-u-*. The non-past stative tends to indicate progressive actions while the stative auxiliary *-a-* indicates ongoing states.

3.4.4.3.1.3.1 The Stative Auxiliary -a-. The sentence final stative auxiliary *-a*

derives from the verb *ar-* 'to exist'. It indicates the state resulting from the action of a verb.

minaka-ndu am-nu pus-i-a-ï  
garden-LOC net-NOM dry-INF-STAT-FIN  
In the garden the nets are dry.  
(Hirayama 1983: 185)

This form is more common following the infinitive form of adjectives or the perfective progressive suffix (see Section 3.4.4.3.1.4.7 for other examples).

3.4.4.3.1.3.2 The Non-Past Stative Auxiliary -u-. The progressive auxiliary *-u* is

used to indicate the continued effect of the action of the verb it follows. As is expected of an auxiliary, it follows the infinitive form of verbs.

dusi-gami-n utaga:-i kumar-i-u-ï  
friend-TERM-LOC doubt-PASS/NML trouble-INF-NPS-FIN  
Being doubted by a friend is troubling.  
(Hirayama 1983: 184)

taka-nudu biz-i-u-ï  
hawk-NOM stop-INF-NPS-FIN  
The hawk has stopped.<sup>735</sup>  
(Hirayama 1983: 185)

---

735. The implication here is that the hawk is sitting somewhere; it is no longer flying.

#### 3.4.4.3.1.4 Group III Morphemes

Group III consists of clause and/or sentence final suffixes and auxiliaries. These morphemes may attach directly to a verb stem or to any Group I or II morpheme. Verb strings must end with either a morpheme from Group III or the infinitive *-i* (Section 3.4.4.3.1.1).

##### 3.4.4.3.1.4.1 The Volitional Suffix -a. The volitional suffix in Hirara is *-a*;

however, I have found this attested only once, so this form is questionable.<sup>736</sup>

zu: atu ici zikaN sīcika: ik-a  
HES after one hour do-? go-VOL  
Well, after one hour passes [I] will go  
(Hirayama 1983: 184).

##### 3.4.4.3.1.4.2 The Negative Suffix -an. The suffix *-an* is used to indicate negation.

It can be a clause or sentence final suffix. As discussed in Section 3.4.3.1.5, the moraic nasal /n/, in this case the /n/ which occurs in final position, comes from the phoneme /n/ plus a high vowel. Considering that the negative suffix throughout Japonic consistently

---

736. It is attested in both Yamatoma and Shuri, so I include this suffix here; I return to this below (Section 4.4.3.3).

occurs as *-an-*,<sup>737</sup> it is likely that the final vowel comes from another suffix following the negative, possibly the infinitive *-i* or the stative final *-i*.<sup>738</sup>

anci-nu munu-:ba: ta:-ma:i ka-:n  
 that kind-GEN thing-EMPH who-PART buy-NEG/FIN  
 No one buys that kind of thing.<sup>739</sup>  
 (Hirayama 1983: 184)

panas-ai-s-u ga zi:-ya kak-ai-n  
 talk-POT/INF-do-FIN but letter-TOP write-POT-NEG/FIN  
 [He] can talk, but he cannot write letters.  
 (Hirayama 1983: 184)

#### 3.4.4.3.1.4.3 The Conjunctive Suffix *-riba*. The suffix *-riba* is a clause final suffix

used to indicate a fulfilled condition, as in the following examples.<sup>740</sup>

ba-ga ik-iba mai ya:-nna mi:-ttam  
 I-NOM go-CONJ although house-LOC/TOP see/INF-NEG PERF  
 When I went [there], [I] did not see [you] at home.  
 (Hirayama 1983: 186)

---

737. The negative forms in Yamatoma and Shuri have an initial consonant, but, as I discuss below (Section 4.4.3.4) the consonant appears to be related to the passive morpheme.

738. I assume the stative final *-i* and not the active final *-im* because this suffix in OJ is followed by the stative and not the active final. Either final suffix following *-an-* would result in the vowel being deleted and a lengthened /n/.

739. The construction [question word]-*ma:i* ... [verb]-*aN* construction is used to indicate that no one did the action of the verb (c.f., MdJ [question word]-*mo*...[verb]-[*a*]nai).

740. In OJ, the conjunctive suffix follows the evidential form of verbs or suffixes, however, I have found no evidence that the evidential form is used as a free form in Hirara, and have found it only with this suffix.

atsa ja:-n u-iba asipi-ga ku:-yo:  
tomorrow house-LOC exist-CONJ play/NOM-LOC come-IMP  
Since [I] will be at home tomorrow, come over!  
(Hirayama 1983: 186)

3.4.4.3.1.4.4 The Imperative Suffix -i/-ru. The Hirara imperative has two forms:

-i following verbs with consonant final stems and -ru following vowel final verb stems.

At this time it is not clear why there are two different forms and this will have to be left for further research.<sup>741</sup>

pui-nu tanu: mak-as-i-uk-i  
garlic-GEN seed/ACC sow-CAUS-INF-in advance-IMP  
Make [him] sow the garlic seeds in advance.  
(Hirayama 1983: 185)

yu: ara-i-tti kara ni:-ru  
well wash-INF-GER after boil-IMP  
After [you] wash it well, boil it.  
(Hirayama 1983: 186)

kama-nu pisi gami kug-asimi-ru  
over there-GEN tide TERM row-CAUS-IMP  
Make [them] row up to the shoreline over there.  
(Hirayama 1983: 185)

---

741. As discussed in Section 2.2.5.3.3.8.3, the development of the WOJ imperative is also problematic: it is not clear why seemingly unrelated morphemes would affix to consonant final stems and vowel final stems.

3.4.4.3.1.4.5 The Attributive Suffix -i. The attributive suffix in Hirara is often described in the literature as one type of the *shūshikei*, or final form (see e.g., Hirayama 1967, 1983; Nakasone 1987; Nema 1969). However, the differences between the function(s) of these "two types" of the final form are not discussed and this is something that should be researched further. Since the attributive in OJ can be used as a clause or sentence final morpheme, I treat the Hirara attributive as having the same functions.

At first glance the morphophonemic process when suffixation of the attributive form to verb stems occurs seems complicated. Following consonant final verb stems, the suffix remains as expected, however, after verbs like *ara-* 'wash' and *umu-* 'think' which were historically consonant final (*\*arap-* and *\*umup-*) the final vowel /a/ plus the attributive suffix results in a long /o:/ and the final vowel /u/ plus attributive suffix result in a long /u/, i.e., *ara-i* > *aro:* and *umu-i* > *umu:*. This analysis is simplified through a diachronic analysis keeping two points discussed above in mind: one source for /i/ in Hirara is proto-RK /u/ (Section 3.4.3.2.1) and long /o:/ in Hirara comes from /a+u/ (Section 3.4.4.3.1.4.5). For consonant final stems ending in a nasal (/n/ or /m/), the result is in a mora nasal (n or m, respectively), in other words, the high vowel of the attributive suffix is deleted as expected resulting in a mora nasal consonant (Section 3.4.3.1.4). See below:

### Consonant final stems

stem-ATT	>	contraction	raising	gloss
*kak-u	>	*kaku	> kaki	write
*ara-u	>	aro:		wash
*umu-u	>	umu:		think
*num-u	>	num		drink

Following vowel final stems the attributive is *-i*, and is not deleted as expected:

### Vowel final stems

stem-ATT			gloss
mi:-i	>	mi:i	see
uki-i	>	ukii	wake

In addition, the irregular verb *su:-* 'to do' has two attributive forms: *assi* and *ssi*, and the irregular verb *ku:-* 'to come' has the form *kisi*.<sup>742</sup>

As stated above, the Hirara attributive form can be used to mark the verb for nominal modification, as a nominalized form of the verb, or it can be used as a clause or sentence final morpheme. In addition, this form in Hirara can be followed by the negative imperative *-na* (Section 3.4.4.3.1.4.7), or verbs indicating the beginning (*pazimi-*) or ending (*tuzimi-*) of an action; this usage of the attributive form is not found in OJ.<sup>743</sup>

---

742. The development of *ku:-* to *kis-* is problematic. As described in Section 3.4.3.1.6, the sequence *\*kir* > *kis*, this suggests that the underlying stem for the verb 'to come' is *\*kir-* > *kis-* and not *\*ku:-*, or, more likely, that there are two stems for this verb. Only the negative and imperative forms are built off of the stem *\*ku:-* (*ku:N* < *ku:-aN* 'does not come' and *ku:yo* < *ku:-yo* 'come!') in all other cases verbal suffixes are affixed to the stem *\*kis-*.

743. In MdJ the verbs 'begin' (*hajimar-/hajime-*) and 'end' (*owar-/oe-*) are used in a similar pattern to

#### Sentence final

zyu: zi-ndu pītu-tu idy-o:  
ten hour-LOC person-COM meet-ATT  
I'm meeting someone at ten o'clock.  
(Hirayama 1983: 187)

#### Nominal modification

a-īta-ī mun:-ba bassi-tt o:  
say-PERF/PROG-ATT thing-ACC forget-PERF EMPH  
[He] will forget the things that were said.  
(Hirayama 1983: 187)

#### Nominalized form of the verb

kak-ī yuīsa yum du masī  
write-ATT COMP read/ATT thing better  
Reading is better than writing.  
(Hirayama 1983: 187)

#### Used with verbs indicating beginning or ending of an action

tabaku: fuk-ī padīmi-ī  
tobacco smoke-ATT begin-ATT  
[I] began smoking.  
(Hirayama 1983: 187)

ma:ciki as-ī tuzīmi-ru  
together do-ATT end-IMP  
Finish it together!  
(Hirayama 1983: 187)

#### 3.4.4.3.1.4.6 The Stative Final Suffix -ī. The stative final suffix follows the the

stative *-a* and non-past stative *-u* and forms built off of these suffixes.

---

indicate the beginning or end of an action, but in MdJ these forms follow the infinitive form of the verb.

minaka-ndu am-nu pus-i-a-ĩ  
garden-LOC net-NOM dry-INF-STAT-FIN  
In the garden the nets are dry.  
(Hirayama 1983: 185)

taka-nudu biz-i-u-ĩ  
hawk-NOM stop-INF-NPS-FIN  
The hawk has stopped.<sup>744</sup>  
(Hirayama 1983: 185)

3.4.4.3.1.4.7 The Final Suffix -im. The suffix *-im* is a sentence final suffix used to indicate the conclusive or final form of the verb.

ba: zĩ:-yu kak-im  
I letter-ACC write-FIN  
I write letters (characters).  
(Hirayama 1983: 188)

uki-im do:  
wake up-FIN EMPH  
[He] is awake!  
(Hirayama 1983: 188)

3.4.4.3.1.4.8 The Negative Imperative Suffix -na. The negative imperative is expressed in Hirara with the sentence final suffix *-na*. Hirayama (1983: 184) lists this suffix as following the attributive form of verbs. However, looking at the examples of

---

744. The implication here is that the hawk is sitting somewhere; it is no longer flying.

this suffix it appears that this suffix follows *-u* and not *-i*.<sup>745</sup> As noted above (Section 3.4.4.3.1.4.5) the attributive suffix can be shown as going back to earlier *\*-u*, so Hirayama's analysis may be correct.<sup>746</sup>

fun-nu mi:-gaciñ munu: fo:-na  
book-NOM see-while thing/ACC eat/ATT-NEG IMP  
Don't eat while reading a book!  
(Hirayama 1983: 187)

tabaku: fuk-igatsin nivv-na  
tobacco smoke-while sleep/ATT-NEG IMP  
Don't sleep while smoking!  
(Hirayama 1983: 187)

mi:-i-na  
see-ATT-NEG IMP  
Don't look!  
(Hirayama 1983: 187)

3.4.4.3.1.4.9 The Perfective Progressive Suffix -tai. The perfective progressive form is indicated by the morpheme *-tai*, which presumably comes from a form of the perfective auxiliary *-tti* (Section 3.4.4.3.1.4.11), the stative auxiliary *-a* (Section 3.4.4.3.1.4.1), and the final suffix *-i* (Section 3.4.4.3.1.4.6). Hirayama (1983: 183-184)

---

745. Following the explanations given above, the first example has /o:/, which in Hirayama is the result of /a+u/ (Section 3.4.3.2). The sequence /vv/, as in the second example, can come from either *\*bur* or *\*gur*, but the vowel reflects earlier /u/.

746. The Yamatoma (Section 3.2.4.3.3.1.5.5) and Shuri (Section 3.3.4.3.1.7.1) forms of the negative imperative suffix always follow the stative suffix PJ *\*-u-*. This is also a possibility.

treats this suffix as affixing to the "second infinitive" (*ren'yōkei 2*) which, according to his analysis, is a mixed paradigm where consonant final verbs are identical to their attributive forms and vowel final verbs are identical to their infinitive forms. However, this second infinitive form does not occur as a free form, and instead only occurs when followed by the suffixes which Hirayama treats as *-tai* 'PERF/PROG' and *-tasa* 'to want to'.<sup>747</sup>

Hirayama's (1967: 131-133) earlier analysis reconstructs this morpheme as *-ita* following consonant final verb stems and *-ita* following vowel final verb stems.

This second infinitive, *-i*, presumably is related to infinitive *-i* discussed above (Section 3.4.4.3.1.1). The problem is, why does the infinitive remain *-i* following consonant final verb stems in all cases *except* when followed by suffixes beginning with /t/. It may be necessary to posit a new rule for /i/ becoming /i/, but this issue will be set aside for further research.

kyu:-ja ma:ciki uki-taï  
today/TOP together wake/INF-PERF/PROG  
Today, we woke up together.  
(Hirayama 1983: 185)

ami-nu fu-itaï  
rain-NOM fall-PERF/PROG  
It rained.  
(Hirayama 1983: 186)

---

747. The suffix *-tasa* does not have a cognate in OJ and is, therefore, not treated in this study.

3.4.4.3.1.4.10 The Negative Perfective Suffix -ttam. The negative perfective

suffix, *-ttam* is presumably formed from the perfective suffix *-tti* (Section 3.4.4.3.1.4.10) followed by the negative suffix *-an* (Section 3.4.4.3.1.4.2), although it is unclear why the final consonant is /m/ here and not /n/.<sup>748</sup>

no:basi: ukus-ya: mai uki-ttam  
whatever wake/NML-TOP EMPH wake-PERF NEG  
No matter what [I] did to wake [him], [he] did not wake up.  
(Hirayama 1983: 184)

ba-ga ik-i-ba mai ya:-nna mi:-ttam  
I-NOM go-EVD-CONJ although house-LOC/TOP see/INF-NEG  
PERF  
Although I went [to his house], [I] did not see [him] at home.  
(Hirayama 1983: 186)

fo:-ttam  
eat-NEG PERF  
[I] did not eat.  
(Hirayama 1983: 187)

miyaku-mna tuyum-ttam  
Miyako-LOC resound-NEG PERF  
[It] did not resound in Miyako.  
(Nevskii 1978: 114)<sup>749</sup>

3.4.4.3.1.4.11 The Subordinative Gerund -tti. The subordinative gerund *-tti* is a

clause final suffix. It can be used to connect either two verbs or two clauses in the pattern

---

748. Perhaps this should be treated as ending in active final *-im*, i.e., *-tti-an-im* > *-ttanim* > *-ttanm* > *-ttam*.

749. Example from Nevskii (1978: 114), gloss modified from Nevskii (1978: 21).

(clause)  $V_1$ -*tti* (clause)  $V_2$ , and indicates that the action of the first verb ( $V_1$ ) began before the action of the second verb ( $V_2$ ).

yu: ara-i-tti kara ni:-ru  
well wash-INF-GER after boil-IMP  
After [you] wash it well, boil it.  
(Hirayama 1983: 186)

mi:-tti kara munu: irab-i  
look/INF-GER ABL thing/ACC choose-IMP  
Look and then choose one.  
(Hirayama 1983: 187)

#### 3.4.4.3.2 Nominalizers

Hirara has one nominalizer, *-i*, which nominalizes the verb it attaches to:

dusi gami-n utaga:-i kumar-i-u-i  
friend-TERM-LOC doubt-PASS/NML trouble-INF-NPS-FIN  
Being doubted by a friend is troubling.  
(Hirayama 1983: 184)

samsin-nu nar-i buduï-bussa  
shamisen-GEN sing-NML dance-DES  
[I] want do dance [at the] sound of the shamisen.  
(Hirayama 1983: 186)

#### 3.4.4.3.3 Summary

Table 3.24 below lists the Hirara inflectional morphemes in alphabetical order, and provides information as to how they affix to verbs and presents their functions.

Table 3.24: Summary of Hirara Inflectional Morphemes

Morpheme	Type	Function
-a-	sentence final auxiliary (Group II)	stative
-an	clause or sentence final suffix (Group III)	negative
-as-	suffix (Group I)	causative
-asimi-	suffix (Group I)	causative
-i	suffix	nominalizer
-i/-ru	sentence final suffix (Group III)	imperative
-i	clause or sentence final suffix (Group III)	attributive
-im	sentence final suffix (Group III)	final
-tai	clause or sentence final suffix (Group III)	perfective progressive
-ttam	sentence final suffix (Group III)	negative perfective
-na	clause or sentence final suffix (Group III)	negative imperative
-rai-	suffix (Group I)	potential
-riba	clause final suffix (Group III)	conjunctive
-tt-	suffix (Group I)	perfective
-tti	clause or sentence final suffix (Group III)	gerund
-u-	clause or sentence final auxiliary (Group II)	progressive

## CHAPTER 4. RECONSTRUCTION OF PROTO-JAPONIC VERBAL MORPHOLOGY

### 4.1 Introduction

In this chapter the derivational and inflectional morphemes presented in Chapters 2 and 3 are compared, and, where possible, a proto-Japonic (PJ) morpheme is reconstructed. In cases where morphemes are not found in both OJ (Western or Eastern) and in at least one of the Ryūkyūan languages it will not be possible to reconstruct a PJ form. In such cases I will discuss the distribution of the morpheme and reconstruct the oldest form possible (i.e., proto-OJ or pre-WOJ).<sup>750</sup> PJ phonology is presented in Section 4.2, the reconstructions for derivational morphemes are presented in Section 4.3, and the reconstructions for inflectional morphemes in Section 4.4.

### 4.2 Proto-Japonic Phonetic Correspondences

In order to reconstruct PJ verbal morphology, it is first necessary to consider the relationship of the phonemes found in the languages and dialects compared in this study. However, our understanding of PJ phonology is far from complete. Thanks to Miyake

---

750. The differences between proto-languages and pre-languages and the methodology for their reconstructions are presented above (Section 1.3.5).

(1999, 2003a, 2003b) we have a strong foundation of WOJ phonology, yet we still do not have a solid grasp of EOJ phonology, which, at this time, must be interpreted through our understanding of WOJ phonology. As for the Ryūkyūan languages and dialects, I am relying mainly on Thorpe's (1983) reconstruction of proto-RK phonology to understand the phonological developments. In this section I present the main developments of PJ phonology; more detail is presented in the phonology sections for each language/dialect.

#### *4.2.1 Proto-Japonic Consonants*

The PJ consonants and how they developed in the Japonic languages are presented below in Table 4.1. Since there is a one-to-one correspondence between WOJ and EOJ consonants I present them all as OJ consonants.

Table 4.1: Proto-Japonic Consonants in the Japonic Languages and Dialects

PJ	OJ	Yam.	Shuri	Hirara
*/p/	/p/	/h/ initial position /f/ before */e/ /p/ elsewhere	/f/ before */i/ /h/ elsewhere	/f/ before */u/ /p/ elsewhere
*/Np/	/Np/	/b/	/w/	/v/ before */u/ /b/ elsewhere
*/t/	/t/	/ç/ before */i/ */u/ /t <sup>h</sup> / before a non-high vowel or between non-high vowels /t/ elsewhere	/č/ before or after */i/ /t/ elsewhere	/ç/ before */i/ */u/ /t/ elsewhere
*/Nd/	/Nt/	/d/	/d/	/d/
*/s/	/s/	/s/	/s/	/s/
*/z/	/z/	/z/	/ž/	/z/
*/k/	/k/	/h/ between non-high vowels /k <sup>h</sup> / before non-high vowels /k/ elsewhere	/č/ before or after */i/ /k/ elsewhere	/f/ before */u/ /k/ elsewhere
*/g/	/Nk/	/g/	/g/	/v/ before */u/ /g/ elsewhere
*/ʔ/		/ʔ/	/ʔ/	
*/m/	/m/	/m/	/m/	/m/
*/n/	/n/	/n/	/n/	/n/
*/r/	/r/	/r/	∅ before */i/ /r/ elsewhere	/r/
*/w/	/w/	/w/	/w/	/w/
*/y/	/y/	/y/	/y/	/y/
*/ʔ/		/ʔ <sup>751</sup> /		

751. In many cases this corresponds to a lost glide (/w/ or /y/) or the consonant /p/ which presumably became /w/ (Section 3.2.3.1.7).

Some comments on the above table are needed. First, more detail regarding the allophones for each of the consonants are presented in the synchronic descriptions for each language and dialect discussed in this study. Second, for the Ryūkyūan languages, a nasal plus a high vowel results in reduction of the vowel, resulting in a syllabic nasal.<sup>752</sup> Finally, the development of some consonants, particularly in the Ryūkyūan languages needs further explanation, which I provide below.

As discussed in the section on Yamatoma phonology (Section 3.2.3.1), it is necessary to think of phonological developments as occurring over time in stages, and not occurring at once. For example, PJ \*/t/ becomes /ç/ before /u/ at a time before \*/u/ fronts to /i/ following coronals. Also, these changes both take place before PJ \*/o/ raises to Yamatoma /u/. Otherwise, PJ \*/o/ would have raised to /u/ and then become /i/ following coronals in Yamatoma, but this is not the case. Yamatoma /tu/, therefore, can only come from PJ \*/to/. Also, aspiration of both \*/t/ and \*/k/ in before a non-high vowel when the consonant is in word initial position or between two non-high vowels when the consonant is in intervocalic position must happen before vowel raising of \*/e/ to /i/ and \*/o/ to /u/; this is discussed in more detail above (Section 3.2.3.1.4).

---

752. In Yamatoma this change occurs with voiced consonants as well as nasal consonants; thus /ri/ > /n/ is also possible (see Section 3.2.3.1.5).

In Shuri, palatalization of PJ \*/t/ and \*/k/ to /č/ when these consonants occur either before or after \*/i/ must occur at a stage in language development before \*/e/ raises to /i/. Note that the syllables /ti/ and /ki/ in Shuri come from earlier \*/te/ and \*/ke/; this will be important to consider in the reconstructions presented here. Similarly, PJ \*/r/ is deleted before \*/i/ at a time before \*/e/ raises to /i/; the Shuri syllable /ri/ comes from earlier \*/re/. Also, although not presented on the chart above, the consonant /p/ occurs in Shuri, but word initially in Chinese loan words or in medial position in onomatopoeic words. Last, there are also double consonants in Shuri which occur as the result of vowel loss (Section 3.3.3.1.3).

Last, Hirara consonants undergo a number of changes, especially with CVC sequences containing \*/r/ (discussed in detail in Section 3.4.3.1.6). In addition, the PJ consonants \*/k/ and \*/p/ both become /f/ following \*/u/.<sup>753</sup> This change must occur at a time before PJ \*/u/ raises to /o/ in Hirara; thus, the syllables /ku/ and /pu/ in Hirara come from earlier \*/ko/ and \*/po/. Further, PJ \*/t/ becomes Hirara /ç/ before PJ \*/i/ and \*/u/, and therefore, the syllables /ti/ and /tu/ in Hirara can only come from earlier \*/te/ and \*/to/, and vowel raising occurs after the shift of \*/t/ to /ç/.

---

753. In other words, the Hirara syllable /fu/ can be reconstructed as coming from earlier \*/ku/ or \*/pu/; this can only be determined by comparison with external data.

#### 4.2.2 Proto-Japonic Vowels

The PJ vowels and how they are reflected in the Japonic languages are presented below in Table 4.2.

Table 4.2: Proto-Japonic Vowels in the Japonic Languages and Dialects

PJ	OJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
*/i/	/î/ [i]	/i/	/î/ <sup>754</sup>	/î/	/î/	i		/i/ after nasals and word initially /i/ elsewhere
*/e/	/ê/ [i+a]	/ê/	E <sup>755</sup>	/ê/	E	/i/ or /e/		/i/
	/ë/ from [a+i] [ö+i]	E		/ë/ or /ö/				
*/o/	/ô/ [o]	/ô/	/ô/ or /u/	/ô/	/ô/	/u/ or /o/		/u/
*/ə/	/ö/ [ə]	/ö/	/ö/	/ë/ or /ö/	/ë/			
*/u/	/u/ [u]	/ô/ after labials /u/ elsewhere	/ô/ or /u/	/ô/ or /u/	/ô/ or /u/	/i/ after coronals /u/ elsewhere	/u/	/i/ after coronals /u/ elsewhere
*/a/	/a/ [a]	/a/	/a/	/a/	/a/	/a/	/a/	/a/

First, there are unsolved correspondences between WOJ and EOJ dialects, presented in each EOJ dialect section. In some cases the correspondence can be

754. There is one example of WOJ initial /i/ corresponding to initial /o/ which is found in both CEOJ and SEOJ: WOJ *îsö* 'rocky shore': EOJ *ôsö* 'id'.

755. I use E as a symbol to indicate a vowel that may be either /ê/ or /ë/.

explained away,<sup>756</sup> and in others they are unpredictable. More research is needed to further our understanding of EOJ phonology.

Second, PJ \*/e/ is reconstructed on the basis of proto-RK \*/e/ but it is not clear what the reflexes of this vowel are in OJ. The Ryūkyūan vowels that come from PJ \*/e/ often correspond to either WOJ /ê/ or /ë/, which developed as follows: WOJ /ê/ comes from monophthongization of pre-WOJ \*/î+a/ and WOJ /ë/ is a monophthong from either pre-WOJ \*/a+î/ or \*/ö+î/.<sup>757</sup> Therefore, PJ \*/e/ may correspond to monophthongization of the same, or similar vowels in proto-RK and pre-WOJ. This issue will be set aside for further research.

Next, there are vowels attested in WOJ that derive from the monophthongization of pre-WOJ vowels that did not come directly from a PJ vowel. The vowels are reconstructed as follows:

WOJ	ï [ɨ]	<	pre-WOJ */ö+î/ or */u+î/
WOJ	ê [e]	<	pre-WOJ */î+a/
WOJ	ë [əy]	<	pre-WOJ */a+î/ or */ö+î/
WOJ	ô [o]	<	pre-WOJ */ô/ or */a+u/ or */u+a/

Next, for Yamatoma vowels, it is not possible to predict when PJ \*/e/ remains /e/ in Yamatoma and when it raises to /i/; the same is true for PJ \*/o/ remaining /o/ or raising

---

756. I have not included examples that can be explained away on the table above.

757. Conditions for monophthongization in WOJ are presented in Section 2.2.4.3.3.2.

to /u/. Thorpe (1983) presents a theory for mid-vowel assimilation, (Section 3.2.3.2.1), which accounts for some but not all cases of this. There are also cases of high vowel assimilation where /i/ > /i/, /u/ > /i/, and /u/ > /i/ assimilating to a high vowel in an adjacent syllable. The conditions for this are not yet known (Section 3.2.3.2.1) and assimilation does not always occur.

For Shuri, it is sometimes possible to determine whether /i/ comes from PJ \*/i/ or \*/e/. If Shuri /i/ causes palatalization of \*/k/ and \*/t/ to /č/, thus the syllable /či/ in Shuri can come from either PJ \*/ki/ or \*/ti/; the vowel must be from PJ \*/i/ and not \*/e/. The syllables /ki/ and /ti/ in Shuri must come from earlier \*/ke/ and /te/. This also means, as discussed above (Section 3.3.3.2.1), that the process which palatalized these consonants before \*/i/ applied before PJ \*/e/ raised to /i/ in Shuri. Long /e:/ and /o:/ in Shuri come from proto-RK \*/ai/ and \*/au/ respectively.

There must also be rule ordering for phonemic changes in Hirara. PJ \*/i/ must become /i/ except in word initial position and following nasal consonants before PJ \*/e/ raises to /i/ – otherwise, /e/ would have also shifted to /i/ in most environments.

Similarly, PJ \*/u/ must front to /i/ in the specified environments at a stage in language development that occurs before \*/o/ raises to /o/. Finally, long /o:/ in Hirara comes from earlier \*/au/.

### 4.3 Derivational Morphemes

In this section I present my reconstructions for PJ derivational morphemes. I first discuss the transitivity flipper, then discuss the remaining morphemes in alphabetical order.

#### 4.3.1 *The Proto-Japonic Transitivity Flipper \*-ai-*

The transitivity flipper is a suffix that typically changes the transitivity of the root, creating either a transitive or intransitive verb stem. However, in some cases, it appears to have no effect on transitivity and its function is unclear.<sup>758</sup> This morpheme can attach either directly to the verb root or to other derivational morphemes in WOJ, Yamatoma, and Shuri. Elsewhere, this morpheme is only found suffixed directly to the verb root. Table 4.3 shows the reconstructed forms for the transitivity flipper in the various Japonic languages and dialects discussed in this study.

---

758. Examples of each morpheme are presented in the discussion for each language/dialect, and only examples relevant to the present discussion are presented in this chapter.

Table 4.3: The Transitivity Flipper in Japonic

pre- WOJ	pre- NEOJ	pre- CEOJ	pre- SEOJ	pre- UEOJ	pre- Yam.	pre- Shuri	pre- Hirara
*- <i>Ai</i> - <sup>759</sup>	*- <i>i</i> /- <i>ê</i> <sup>760</sup>	*- <i>E</i> -	*- <i>e</i> -	*- <i>i</i> /- <i>E</i> - <sup>761</sup>	*- <i>i</i> /- <i>e</i> -	*- <i>i</i> - < *- <i>e</i> -	*- <i>i</i> -

The transitivity flipper for pre-Shuri and pre-Hirara are both reconstructed as \*-*i*- on the basis of internal reconstruction, but, as discussed in Sections 3.3.4.2.4 and 3.4.4.2.3, this vowel can either come from earlier proto-RK \*/*e*/ or \*/*i*/. Yamatoma \*/*i*/ also derives from proto-RK \*-*e*-, however, it is not always possible to predict when \*/*e*/ raises to /*i*/ and when it remains /*e*/.<sup>762</sup> For the RK forms, the transitivity flipper can be reconstructed as proto-RK \*-*e*-. I return to this point below.

The situation for EOJ is more complicated: there are several possible morphemes which could be reconstructed here, and limitations of both data and understanding of EOJ phonology hinder the reconstruction of this morpheme. For WOJ, the transitivity flipper

---

759. As stated above, I use the symbol /*A*/ to represent a vowel which assimilates to either /*a*/ or /*ö*/ depending on the feature plus or minus back of the vowel of the previous syllable. If the vowel is an /*a*/, /*u*/, or /*ö*/ then /*A*/ > /*a*/, if the vowel of the previous syllable is an /*ö*/ then /*A*/ > /*ö*/. However, following /*i*/ it is not possible to predict whether /*A*/ will be realized as /*a*/ or /*ö*/.

760. The transitivity flipper is only found in three verb roots in NEOJ, five verb roots in CEOJ, and one in SEOJ.

761. As stated above, /*E*/ represents /*ê*/, /*ë*/, or /*e*/, where the vowel is /*e*/ following a coronal consonant, and unknown whether it is *kōru* or *otsuri* in other environments.

762. See Section 3.2.3.2.1 for discussion on vowel assimilation for non-high vowels in Yamatoma. Also, as discussed in Section 3.2.4.2.4, the transitivity flipper \*-*e*- only occurs in words where the vowel of the previous syllable is a non-high vowel, but \*-*i*- can also occur in the same environments.

is reconstructed as *\*-Ai-* to account for the derivation of verb stems formed with this suffix ending with either /i/ or /ë/. However, as stated in Section 2.2.5.2.1.1, even this solution does not completely account for all WOJ data, as there remains a problem with verb roots ending in /u/, highlighted in bold below:

<u>root+suffix</u>		<u>assimilation</u>		<u>contraction</u>		<u>monophthongization</u>
<i>*aka-Ai-</i>	>	<i>*aka-aCi-</i>	>	<i>*akaCi-</i>	>	<i>*akë-</i>
<i>*ökö-Ai-</i>	>	<i>*ökö-öCi-</i>	>	<i>*ököCi-</i>	>	<i>*ökï-</i>
<i>*uka-Ai-</i>	>	<i>*uka-aCi-</i>	>	<i>*ukaCi-</i>	>	<i>*ukë-</i>
<i><b>*suNku-Ai-</b></i>	>	<i><b>*suNku-aCi-</b></i>	>	<i><b>*suNkuCi-</b></i>	>	<i><b>*suNkï-</b></i>

This solution works for the WOJ verbs *akë-* 'dawn', *ökï-* 'awaken', and *ukë-* 'float'.

However, this solution fails to produce the correct form for *suNkï-* 'pass (time)'. If the expected vowel is deleted when contraction occurs then *\*suNku-Ai-* > *\*suNku-aCi-* > *\*suNkaCi-* > *\*suNkë-*, thus *\*suNkë-* and not *suNkï-* is formed. One possibility is that /A/ can assimilate to /a/, /ö/, or /u/, but we would need to be able to account for /A/ becoming /a/ in some cases and /u/ in others; no explanation for this can be found within WOJ.

To see if a solution can be found externally, I have compared these verbs as attested in other Japonic languages. I have substituted 'fall' (WOJ *oti-* < *\*oti-*) for 'awaken' (WOJ *oki-*) because it is attested in more languages and the formation of these verbs is the same.

	'dawn'	'fall'	'float'	'pass'
WOJ	<i>akë-</i>	<i>oti-</i>	<i>ukë-</i>	<i>suNki-</i>
NEOJ				<i>suNki-</i>
CEOJ		<i>oti-</i>		
SEOJ				<i>suNki-</i>
UEOJ	<i>akê-</i>		<i>ukë-</i>	
Yam.		<i>ʔutʰi-</i>	<i>ʔukʰi-</i>	
Shuri	<i>ʔaki-</i>	<i>ʔuti-</i>	<i>ʔuki-</i>	<i>siži-</i>
Hirara		<i>uti-</i>		<i>sigi-</i>

First, EOJ data are of little use: they are either identical to the WOJ forms, not attested, or, in the case of UEOJ *akê-* show an unexpected – and unexplainable – /ê/ for /ë/. Next, the Yamatoma examples, *ʔutʰi-* 'fall' and *ʔukʰi-* 'float', can come from two possible proto-RK sources: either *\*ʔotʰe-* and *\*ʔokʰe-* or *\*ʔotʰV-e-* and *\*ʔokʰV-e-*, where V is a non-high vowel which is part of the verb root and is deleted when the transitivity flipper is suffixed.<sup>763</sup> We can be certain that the initial vowel is a case of proto-RK /o/ raising to /u/ in Yamatoma, because the consonant is aspirated, which occurs when /t/ and /k/ are between non-high vowels.<sup>764</sup> The vowel following the consonant must also be non-high in order for the consonant to be aspirated, but it is not possible to determine whether the vowel following the consonant was part of the verb root or whether it was the transitivity

---

763. As discussed above, the aspirated consonant in Yamatoma indicates a non-high vowel. There are several cases for which aspirated consonants indicate the need to reconstruct a vowel final verb root; see Section 3.2.4.1 for examples.

764. Aspiration in Yamatoma also occurs when /t/ or /k/ are in initial position and are followed by a non-high vowel. The point here is that the vowel before and after the consonant cannot be a high vowel.

flipper. In either case, the transitivity flipper can be reconstructed as coming from earlier \*-e- which in pre-Yamatoma rises to \*-i- in some cases and remains \*-e- in others.<sup>765</sup>

Next, the Shuri forms <sup>ʔ</sup>aki-, <sup>ʔ</sup>uti-, and <sup>ʔ</sup>uki- must come from earlier <sup>ʔ</sup>ake-, <sup>ʔ</sup>ute-, and <sup>ʔ</sup>uke- respectively, indicating that the transitivity flipper should be reconstructed as \*-i- < \*-e-. It is possible to determine that pre-Shuri /e/ raises to /i/ and this vowel is not from an original /i/ in these examples because the consonants /k/ and /t/ do not palatalize to /č/. However, *siži-* clearly shows palatalization, /ž/ from proto-RK \*/g/, and it is not possible to determine whether the /i/ before or after the consonant triggers palatalization.<sup>766</sup> In all other cases of the transitivity flipper, including those examples not presented here,<sup>767</sup> the data support the reconstruction of \*-i- < \*-e-, and therefore, I reconstruct the transitivity flipper as coming from an earlier \*-e-.

Finally, Hirara data also show that the transitivity flipper comes from \*-e-. If we reconstruct \*-i- then we would find verb roots ending in /i/ following nasal consonants

---

765. As stated above, it is not yet clear when \*/e/ rises to /i/ and when it does not. This issue must be set aside for further research.

766. The first /i/ must come from earlier \*/u/, because the /s/ is not palatalized; /u/ does not trigger palatalization. The second /i/ could come from earlier \*/i/ or \*/e/, but it is not possible to tell without knowing which /i/ caused /g/ to palatalize to /ž/. This verb, therefore, could either be from *\*sugi-* or *\*suge-*.

767. All Shuri verb roots are presented in Appendix G.

and /i/ in all other environments, and this is clearly not the case.<sup>768</sup> Hirara \*-i- clearly comes from earlier \*-e-.

It does not appear that an explanation for the forms in WOJ can be achieved through external data. The Ryūkyūan languages all support the reconstruction of \*-e- for the transitivity flipper. The EOJ forms are problematic, because of limited data and gaps in our understanding of EOJ phonology, and it is not possible to predict whether the transitivity flipper will result in \*-i/-e/-ê- in NEOJ, \*-e/-ë- in CEOJ, or \*-i/-E- in UEOJ.<sup>769</sup>

Given that the Ryūkyūan languages all support the reconstruction of the same form, I propose that the PJ transitivity flipper developed differently in mainland Japanese languages than in the Ryūkyūan languages. In other words, Japonic splits into two branches, and the form in the Ryūkyūs becomes \*-e-. This proposal is only possible if /e/ is the result of diphthongization of /a/ plus a non-low vowel (Ashworth 1973: 131-132).

Above, I reconstructed the pre-WOJ form as \*-Ai- where /A/ assimilated to either /a/ or

---

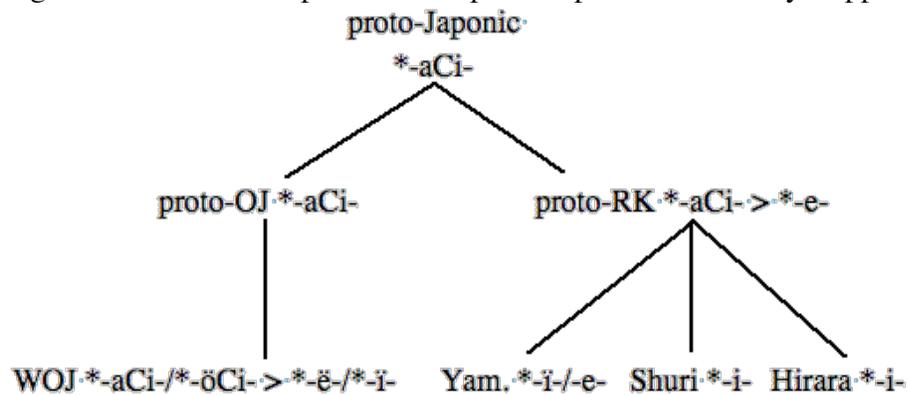
768. As discussed in Section 3.4.3.2.1, proto-RK \*i remains /i/ in Hirara following nasal consonants and in word initial position, and in all other environments it changes to /i/. We can determine that the transitivity flipper is not from proto-RK\*/i/ because if it were, Hirara data would show either /i/ after nasal consonants or /i/ elsewhere. The /i/ in Hirara verb stems show that /i/ is from raising proto-RK \*/e/ > /i/.

769. There is only one example of a verb formed with the transitivity flipper in SEOJ, *wasure-* clearly showing a final /e/. However, one example is not enough to support the reconstruction of a morpheme.

/ö/; based on WOJ data alone it was not possible to determine through internal reconstruction whether the underlying vowel was /a/ or /ö/. Given the Ryūkyūan forms, I reconstruct PJ *\*-ai-*, which becomes *\*-e-* in proto-RK, then raises to *\*-i-* in Shuri and Hirara and either raises to *\*-i-* or remains *\*-e-* in Yamatoma (see Figure 4.1).

For WOJ, when this morpheme is suffixed to a verb root, the initial vowel of the suffix assimilates to /ö/ if the vowel of the preceding syllable of the verb root is non-back, otherwise, the vowel remains /a/. After assimilation occurs, the consonant is lost and the vowels monophthongize to /i/ < /ö+i/ or /ë/ < /a+i/. For EOJ it is not possible to explain the development of the transitivity flipper at this time.

Figure 4.1: The Development of the proto-Japonic Transitivity Flipper



#### 4.3.2 The Pre-WOJ Verbalizer \*-Ak-

The suffix \*-Ak- is a derivational morpheme of unclear function which I tentatively call a verbalizer. This morpheme is only attested in WOJ and the data are too limited to be certain of its function (see Section 2.2.5.2.6). Since this morpheme is only attested in WOJ, it is not possible to reconstruct a PJ form. This morpheme may be an innovation in WOJ or it may be a borrowing from a neighboring language, but, since we are not clear of its function, it is not possible to search for external sources.

#### 4.3.3 The Proto-Japonic Verbalizer \*-am-

The verbalizer \*-am- is typically used to turn adjective and noun roots into verbs. It can affix directly to the verb root and is sometimes followed by the transitivity flipper. It can also be followed by intransitive \*-ar- in WOJ and Yamatoma, and there is one example of it suffixing to the transitive suffix \*-as- in WOJ. This morpheme is found in WOJ, CEOJ, Yamatoma, and Shuri, as shown in Table 4.4.

Table 4.4: The Verbalizer in Japonic

pre-WOJ	pre-NEOJ	pre-CEOJ	pre-SEOJ	pre-UEOJ	pre-Yam.	pre-Shuri	pre-Hirara
*-Am-	—	*-m- <sup>770</sup>	—	—	-am-	-m-	—

---

770. There is only one word formed with this morpheme in CEOJ.

CEOJ and Shuri data do not indicate the need to reconstruct an initial vowel, thus only *\*-m-* was reconstructed. On the other hand, WOJ and Yamatoma data indicate the need for a vowel initial suffix, which is /a/ in Yamatoma and /A/, which assimilates to either /a/ or /ö/ depending on the vowel of the previous syllable (as stated above).

Considering that the WOJ and Yamatoma forms require a vowel initial suffix, and, while the CEOJ and Shuri data do not necessitate reconstructing a vowel initial morpheme, having a vowel initial suffix here would not contradict the data. I therefore reconstruct the PJ form as *\*-am-*. Following the discussion presented above for the transitivity flipper, in WOJ the initial vowel of the suffix assimilates to /ö/ when the morpheme suffixes to a root with a non-back vowel and remains /a/ elsewhere.

#### *4.3.4 The Pre-WOJ Durative Derivational Morpheme \*-Ap-*

The durative suffix *\*-Ap-* is found as a derivational morpheme only in WOJ, although the inflectional morpheme *-ap-* which appears to be a grammaticalized form of the derivational morpheme is found in WOJ, NEOJ, CEOJ, and UEOJ. I discuss the inflectional suffix below (Section 4.4.3.9).

Since the derivational morpheme *\*-Ap-* is only found in WOJ, a PJ form obviously cannot be reconstructed.

#### 4.3.5 The Proto-Japonic Intransitive Derivational Morpheme \*-ar-

The intransitive morpheme can be reconstructed everywhere except for SEOJ. It can be followed by the transitive derivational morpheme in WOJ, NEOJ, CEOJ, and UEOJ.<sup>771</sup> Also, it can be followed by the transitivity flipper in WOJ, CEOJ, and Yamatoma. Last, in WOJ the intransitive morpheme occurs in the derivation of verb roots both before and after pre-WOJ \*-Am-, \*-Ap-, and \*-Ak-. Table 4.5 shows the reflexes of the intransitive derivational morpheme as it is found in Japonic.

Table 4.5: The Intransitive Morpheme in Japonic

pre-WOJ	pre-NEOJ	pre-CEOJ	pre-SEOJ	pre-UEOJ	pre-Yam.	pre-Shuri	pre-Hirara
*-Ar-	*-ör-	*-Vr-	—	*-Vr-	*-ar-	*-ri- < *-re-	*-ar-

The pre-Shuri form is the only one is reconstructed as vowel final. As discussed above (Section 3.3.4.2.2), although internal data indicate \*-ri-, this morpheme in Shuri must come from proto-RK \*-re-. If this morpheme came from proto-RK \*-ri- then the consonant would be deleted as \*/r/ is deleted before \*/i/ resulting in Shuri \*-i- (see Section 3.3.3.1.5). I suggested above that this form in Shuri may be bimorphemic,

---

771. As discussed with each OJ language above, the combination of a transitive and an intransitive morpheme in the formation of the same verb is contradictory. However, this occurs only in one word, WOJ *yösör-* < \**yö-As-Ar-* 'be dressed' (MYS I: 2), which is attested in all OJ languages except SEOJ.

consisting of the intransitive morpheme plus the transitivity flipper. Since this morpheme is consonant final elsewhere, the reconstruction of a final vowel for the form is not warranted, and I treat this form in Shuri as an innovation.

As for the shape of this morpheme in PJ, the OJ forms require this morpheme to be vowel initial. For WOJ the initial vowel is reconstructed as /A/ which assimilates to either /a/ or /ö/ as stated above. In NEOJ only *-ör-* is found, which may indicate that NEOJ had assimilation similar to WOJ; this issue will be set aside for further research. For CEOJ and UEOJ only a vowel of unknown value can be reconstructed as there is not enough evidence to prove whether vowel assimilation occurs, but, for these dialects, /V/ is realized as either /a/ or /ö/, and may assimilate in the same manner that WOJ vowels assimilate. Finally, Yamatoma and Hirara both support the reconstruction of initial \*/a/. I therefore reconstruct the form as *\*-ar-* with the initial vowel /a/ assimilating in WOJ as described above, becoming /a/ or /ö/ in EOJ dialects, and being deleted in Shuri.

#### *4.3.6 The Proto-Japonic Transitive Derivational Morpheme \*-as-*

The transitive derivational morpheme has the same distribution as the intransitive morpheme discussed above; it is attested everywhere except SEOJ. It can be used with other derivational morphemes in the formation of verb stems. In WOJ, NEOJ, CEOJ, and

UEOJ there is one example of this morpheme being used with the intransitive suffix (as mentioned above). It is also used with the transitivity flipper in WOJ, CEOJ, UEOJ, Yamatoma, and Shuri. In WOJ it is also used with the verbalizer pre-WOJ *\*-Am-* and occurs both before and after the verbalizer, and it can be followed by durative pre-WOJ *\*-Ap-*. Table 4.6 presents the shape of the transitive morpheme as it is reconstructed for the Japonic languages and dialects used in this study.

Table 4.6: The Transitive Morpheme in Japonic

<b>pre-WOJ</b>	<b>pre-NEOJ</b>	<b>pre-CEOJ</b>	<b>pre-SEOJ</b>	<b>pre-UEOJ</b>	<b>pre-Yam.</b>	<b>pre-Shuri</b>	<b>pre-Hirara</b>
<i>*-As-</i>	<i>*-ös-</i> <sup>772</sup>	<i>*-s-</i>	—	<i>*-s-</i>	<i>*-as-</i>	<i>*-s-</i>	<i>*-as-</i>

As shown above, the pre-WOJ, pre-Yamatoma, and pre-Hirara forms all support the reconstruction of this morpheme as vowel initial. Following the discussion above, I reconstruct this as *\*-as-*, with the initial vowel assimilating to /ö/ in WOJ and NEOJ when suffixed to a verb root with non-back vowels, and remaining /a/ in Yamatoma and Hirara. In all languages/dialects the initial vowel is deleted when this morpheme is affixed to vowel final verb roots.

---

772. There is only one example of a verb formed with this suffix in NEOJ.

## 4.4 Inflectional Morphemes

In this section I present my reconstructions for the inflectional morphemes. As discussed above, forms are reconstructed for those morphemes that are attested throughout Japonic and not for those that are attested only on the Japanese mainland or only in the Ryūkyūs. Inflectional morphemes are presented in the following order: prefixes and preverbs, the circumfix, and suffixes and auxiliaries.

### 4.4.1 Prefixes and Preverbs

The reciprocal preverb *apî-*, the iterative preverb *ari-*, the goal of motion focus prefix *i-*, and the emphatic prefix *ta-* are only attested in WOJ and it is, therefore, not possible to reconstruct forms for these morphemes. The preverbs likely developed as grammaticalized forms of the verbs *ap-* 'join' and *ar-* 'exist' as discussed above (Sections 2.2.5.3.1.2.1 and 2.2.5.3.1.2.2). The prefixes *i-* and *ta-* may be borrowings from some unknown language or may be WOJ innovations.<sup>773</sup>

As for the other preverbs and prefixes, they are only attested on the Japanese mainland, therefore only proto-OJ forms can be reconstructed. It is, of course, possible that these forms developed in WOJ and appear in the EOJ dialects as a result of

---

773. At this time there is no evidence to support the hypothesis that these forms were borrowed in to WOJ, I am simply offering it as a possibility.

borrowing or linguistic diffusion from WOJ,<sup>774</sup> which means that the forms can really only be reconstructed for pre-WOJ and not proto-OJ. I discuss this for each morpheme below. No prefixes or preverbs can be reconstructed for PJ.

The proto-OJ morphemes are presented in the following order: emphatic preverb *\*kaki-*, prefix *\*sa-*, emphatic preverb *\*uti-*.

#### 4.4.1.1 The Pre-WOJ Emphatic Preverb *\*kaki-*

The emphatic preverb WOJ *kakî-* is also attested in CEOJ as *kakî-*, but it is only attested once in CEOJ and not in any of the other EOJ dialects. The poem it is attested in, MYS XIV: 3404,<sup>775</sup> shows features typical of EOJ vocabulary and phonology (Mizushima 1972: 420), so it is not a case of a Western poem in Book XIV. I reconstruct pre-WOJ *\*kaki-* for this form, and consider the one example in CEOJ as a loan.

---

774. Thomason and Kaufman (1992) and Thomason (2001) set up criteria for language borrowing, in particular, the types of features that are likely to be borrowed from one language to another. In this case, the speakers of the outlying dialects (EOJ) are more likely to borrow from the prestige language (WOJ) than the other way around. WOJ, in this case, can be assumed to be a prestige language since it is the language of the ruling class.

775. This poem is presented above (Section 2.3.5.2.3.1.2).

#### 4.4.1.2 The Proto-OJ Prefix \*sa-

The WOJ prefix *sa-* 'thus, to be so' is attested in CEOJ three times and UEOJ seven times. However, in CEOJ and UEOJ *sa-* is only used with the verb *ne-* 'to sleep',<sup>776</sup> typically used in longing poems where the subject of the poem is thinking of how they once slept with a now absent lover. Although this prefix often occurs with the verb *ne-* in WOJ, it often occurs with other verbs, and also with nouns and adjectives.

The limited distribution of this prefix in CEOJ and UEOJ, where it is only used with one verb, suggests that it was not a productive form in EOJ. This raises two questions: 1) was this morpheme borrowed in CEOJ and UEOJ not as a prefix, but as the compound *sa-ne-*; and 2) was this morpheme productive in EOJ. However, because data are limited, the prefix simply isn't attested with more verbs. Unfortunately, there is no way to be certain whether this form was productive or it was a loan. I, therefore, reconstruct this as proto-OJ \**sa-*.

---

776. There is also one example of *sa-* with a noun in CEOJ (*sa-yuru nö pana* 'the 100 year flower' MYS XX: 4369-Hi) and one in UEOJ (*sa-yeda* 'branch' MYS XIV: 3493). This does not appear to be the same *sa-*.

#### 4.4.1.3 The Proto-OJ Emphatic Preverb \*uti-

The emphatic preverb, WOJ *uti-*, which expresses actions that are completed instantly or thoughtlessly, is attested once in SEOJ (MYS XX: 4345-Su) and once in UEOJ (MYS XIV: 3482). Both of these poems contain EOJ phonology and vocabulary (Mizushima 1972: 420), and are, therefore, not examples of WOJ presented in Books XIV and XX of the *Man'yōshū*. As with the other prefixes and preverbs above, it is possible that this morpheme was borrowed into EOJ from WOJ, I nevertheless reconstruct proto-OJ \**uti-*.

#### *4.4.2 The Proto-OJ Circumfix \*na...sə*

The WOJ negative imperative circumfix *na...sö* 'do not do...' is also found once in CEOJ and once in SEOJ, but not elsewhere in Japonic. In CEOJ it is found in MYS XIV: 3414 which contains characteristics of EOJ vocabulary and phonology, and is not a Western poem. The SEOJ example, from MYS XIV: 3398, contains EOJ vocabulary. I think this is likely to be a borrowing from WOJ to the EOJ dialects, since its usage is not widespread, but nonetheless reconstruct proto-OJ \**na...sə*.<sup>777</sup>

---

777. Below I discuss the relationship of this morpheme to PJ negative imperative \*-*na* (Section 4.4.3.22). As stated above, the WOJ vowel /*ö*/ is phonetically a schwa [ə], thus ə is reconstructed here.

#### 4.4.3 *Suffixes and Auxiliaries*

There are a number of suffixes and auxiliaries which can be reconstructed for PJ, which I present them below in alphabetical order. If an initial vowel is reconstructed, it will be deleted when the suffixes are affixed to vowel final verb stems and preserved following consonant final verb stems. Examples of the morphemes used in this study are presented in the sections corresponding to each language and are only presented in the discussion below when necessary.

I will also be discussing morpheme ordering within a verb string, as I feel the ordering of morphemes sheds light on their development. When morphemes fit in the same slot in a verbal string in all languages and dialects, i.e., it can only occur before or after certain other morphemes, this suggests a fixed ordering at the PJ level. When a morpheme occurs in different slots across related languages, this may be suggestive of either a change in function of the morpheme in one (or more) languages or borrowing from one language into another; the framework is adapted from Rice (2005 and p.c.).

Rice (2005) discusses morpheme ordering in Athapaskan verbs, suggesting that scope and phonologic constraints determine word ordering.<sup>778</sup> Rice (2005: 14) notes that linguistic change in morpheme ordering is restricted by scope and prosody, and this

---

778. Athapaskan refers to a North American language family consisting of Navajo, Apache, Slave, etc.

effects new morphemes, introduced to a language either through borrowing or innovation, and morphemes that change function within a language.

The issue of morpheme ordering in Japonic verb strings has been presented for MJ (see, e.g., Ōno 1994: 1508-1509), and for Shuri (Hattori 1950: 346, Ashworth 1973: 70-71, discussed above Section 3.3.4.3.1), though the implications of morpheme ordering and, more importantly, why morphemes occur in a fixed order within a verbal string has yet to be fully investigated for Japonic languages. The present study is the first to discuss these morphemes in terms of their placement within a verbal string, though the issue of how this morpheme ordering developed, including what features determined the ordering, will have to be set aside for future research.

At this time I can show two pieces of evidence regarding the relationship of verb string ordering and genetic relationship of morphemes. First, one constant throughout the languages and dialects presented here is that clause and sentence final morphemes always fit in the final position of the verb string, i.e., the attributive form, which is a clause final suffix, fits in the final slot of the verb string for each language/dialect. This is not surprising if we follow Rice's (2005) claim that scope is a factor in determining verbal string ordering; these morphemes end clauses or sentences and it is, therefore, logical that they would also be the final element of a verbal string.

The second, and perhaps more significant finding is that of verb string ordering in Shuri. As discussed above (Section 3.3.4.3.1), Shuri has a verbal string that can contain as many as ten morphemes following the verb string. Above I categorized the morphemes in terms of groups based on what position of the verbal string they could fit. Group I morphemes can only occur in the first position of a verbal string, i.e., affixing directly to the verb root. Group II morphemes could affix either to the verbal string or a Group I morpheme, etc. The final slot of a verbal string could only be filled by a Group X morpheme, or the infinitive, which, because it could occur more than once in a verbal string, was not classified as a member of any group. What I found was that there are no morphemes in Groups III-VI in Shuri which have cognates in OJ; these morphemes are either Shuri innovations or borrowings. This distribution is significant, as it shows that the forms in Shuri that are not derived from PJ morphemes were placed in the middle of the verb string, rather than occurring in positions that were already filled by morphemes with PJ origins.

Following the discussion above, I present the reconstructions for Japonic suffixes and auxiliaries, reconstructing as far back as the data will allow. Examples for these morphemes can be found in the synchronic descriptions of these languages and dialects presented in Chapters 2 and 3.

#### 4.4.3.1 The Proto-OJ Nominalizer \*-aku

The nominalizer *-aku* is found in WOJ, NEOJ, CEOJ, and UEOJ. The main difference between this nominalizer and the nominalizer *\*-i* (Section 4.4.3.15) is that *\*-i* only nominalizes the verb it suffixes to while *-aku* nominalizes the preceding clause. I reconstruct this form as proto-OJ *\*-aku*.

#### 4.4.3.2 The Proto-Japonic Tentative \*-am-

The PJ tentative suffix *\*-am-* is found in Japonic languages and dialects as follows:

Table 4.7: The Proto-Japonic Tentative Suffix *\*-am-*

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>-am-</i>	<i>-am-</i>	<i>-am-</i>	<i>-am-</i>	<i>-am-</i>	<i>-a/-o</i>	<i>-ra</i> <sup>779</sup>	<i>-a</i> <sup>780</sup>

In OJ the suffix *-am-* is a tentative suffix used to indicate volition, supposition, or suggestion. In RK languages, this suffix is used to indicate volition, so there is a clear semantic relationship. However, this form is somewhat problematic. First, the /m/ occurring in OJ but not in RK dialects needs to be accounted for; at this time I have no explanation to offer. Further, this form in the RK languages occurs in the final slot of a

---

779. Explanation for the initial /r/ may be similar to that discussed below (Section 4.4.3.4).

780. I have found only one example of this form in Hirara.

verb string and is used as a sentence final suffix; it is the only morpheme in this study that changes position in the verbal string.<sup>781</sup> Finally, the Yamatoma forms cannot be explained at this time, nor can the initial /r/ for the Shuri form.<sup>782</sup> Despite the problems with this suffix, I tentatively reconstruct PJ *\*-an-* here, and set aside the remaining issues for further research.

#### 4.4.3.3 The Proto-Japonic Negative *\*-an-*

The PJ negative *\*-an-* is found in all Japonic languages and dialects, as shown below in Table 4.8.

Table 4.8: The Negative *\*-an-* in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>-an-</i>	<i>-an-</i>	<i>-an-</i>	<i>-an-</i>	<i>-an-</i>	<i>-yan-</i> < <i>-ran-</i> <sup>783</sup>	<i>-ran-</i>	<i>-an-</i>

- 
781. There are cases where the negative suffix, PJ *\*-an-* (Section 4.4.3.4), occurs in the final position of a verb string in the RK languages – a position it does not occupy in OJ – but I have accounted for this above in the descriptions for each RK language. The final position can be explained by assuming that a suffix, e.g., final *-u* or infinitive *-i*, has been suffixed to the negative and then the high vowel of the suffix is deleted following /n/. This is supported by presence of a mora length nasal in morpheme final position.
782. Explanation for the initial /r/ may be similar to that discussed below (Section 4.4.3.4).
783. As discussed in Section 3.2.4.3.1.2.3, the negative in Yamatoma is attested as both *-yan-* and *-ran-* and the examples of *-ran-* come from older attestations (Osada et al. 1980: 501).

The Yamatoma and Shuri forms indicate an initial /r/, whereas the forms elsewhere do not. The forms in Yamatoma and Shuri appear to be an innovation in these languages, perhaps built off of the potential form, e.g., *-r-an-* 'cannot' instead of *-an-* 'does not'. Further, the lack of an initial /r/ in Hirara shows that this innovation in Yamatoma and Shuri was not widespread throughout the Ryūkyūan languages. I therefore reconstruct this morpheme as *\*-an-*.

#### 4.4.3.4 The Proto-OJ Desiderative *\*-ana*

The proto-OJ desiderative suffix *\*-ana* occurs throughout OJ but is not found in RK languages as shown in Table 4.9:

Table 4.9: The Proto-OJ Desiderative *\*-ana*

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>*-ana</i>	<i>*-ane</i>	<i>*-ana</i>	<i>-ane</i>	<i>*-ane</i>	—	—	—

The final vowel in the NEOJ and UEOJ forms can be explained as the imperative suffix following the desiderative. This usage is also found in WOJ and CEOJ.

許能登理母 宇知夜米許世泥

kō n-ō tōri mō uti-yamē-kōse-n-e

this COP-ATT bird EMPH PREV-quit-DES-DES-IMP

I wish [you would make] those birds would stop [singing] at once.

(KK 2)

However, the desiderative is not attested without the imperative in NEOJ, SEOJ, or UEOJ. I reconstruct proto-OJ *\*-ana* on the basis of the forms in WOJ and CEOJ.

#### 4.4.3.5 The Proto-Japonic Hypothetical Conditional *\*-aNpa*

The PJ hypothetical conditional is attested throughout Japonic as follows:

Table 4.10: The Proto-Japonic Hypothetical Conditional *\*-aNpa*

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>-aNpa</i>	<i>-aNpa</i>	<i>-aNpa</i>	<i>-aNpa</i>	<i>-aNpa</i>	—	<i>-ra:</i>	—

The Shuri form is derived from earlier *\*-raba* > *\*-rawa* > *-ra:* (Ashworth 1973: 84; Section 3.3.4.3.1.7.2). Assuming Ashworth is correct, I reconstruct the hypothetical conditional as *\*-aNpa*, which becomes *\*-raba* in Shuri and remains *-aNpa* elsewhere.

#### 4.4.3.6 The Proto-Japonic Negative *\*-aNs-*

In addition to the PJ negative *\*-an-* discussed above (Section 4.4.3.4), there is a second negative which occurs in the OJ dialects and Yamatoma. The difference between these forms in terms of their functions has yet to be fully investigated and will be set aside for further research. I present these forms below (Table 4.11) and then discuss the reconstruction for PJ.

Table 4.11: The Proto-Japonic Negative \*-aN<sub>s</sub>-

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
-aN <sub>s</sub> -	-azi						

As discussed in the OJ sections for this negative, the prenasalized /s/ (/N<sub>s</sub>/) may indicate the loss of a vowel following the nasal. Martin (1987: 111) suggests this form is derived from the negative suffix *-an-* plus the verb *sö-* 'do', thus, *-aN<sub>s</sub>-* < *\*-an-i-s-* 'NEG-INF-do'. On the other hand, this form may simply come from negative *-an-* plus *-sö-*, i.e., *\*-aN<sub>s</sub>ö-* > *-aN<sub>s</sub>-*.<sup>784</sup> However, upon further consideration, there is no evidence to support the existence of the verb *sö-* 'do' in this suffix as it is unknown what function it serves; until we understand the difference between *\*-an-* and *\*-aN<sub>s</sub>-* in terms of their functions, reconstructing one as bimorphemic without any understanding of the function of the second morpheme is not justified.

Before reconstructing a PJ form, the final vowel of the Yamatoma form needs to be explained. The vowel /i/ can come from either raising of proto-RK *\*/e/* or fronting of proto-RK *\*/u/* which occurs following coronal consonants. The most likely scenario is

---

784. The vowel /ö/ cannot occur following an /a/ in the previous syllable, so it would assimilate to /a/. However, this vowel will always be deleted when another suffix follows. It should be noted that this form in is used with an irregular infinitive *-u*; which makes infinitive and final forms homophonous. The source of this infinitive is unknown.

that Yamatoma borrowed this negative as *-azu* < *-aN<sub>s</sub>-u*, and then /u/ fronted to /i/ following the coronal /z/.<sup>785</sup>

Thus, I reconstruct this negative as PJ *\*-aN<sub>s</sub>-* 'NEG-INF-do'. As stated above, I am not prepared to divide this as bimorphemic consisting of negative *\*-an-* plus the verb *sö-* 'do' until the function of the verb in this morpheme can be determined.

#### 4.4.3.7 The Pre-WOJ Negative Tentative *\*-aN<sub>si</sub>*

The WOJ negative tentative suffix *\*-aN<sub>si</sub>* occurs only once in CEOJ and once in UEOJ, and is not found elsewhere. Given this distribution I treat this form as a loanword into CEOJ and UEOJ. It is likely that this suffix consists of negative *-an-* (Section 4.4.3.4) and some other morpheme, though it is not clear what this other morpheme is. Perhaps this second morpheme is related to the suppositional suffix *-as-*, found in WOJ as *-uras-* < proto-OJ *\*-ur-as-* (Section 4.4.3.36). However, we would then have to explain what happens to the initial vowel: *-an-as-i* 'NEG-SUP-FIN' would form *\*-anasi* not *-aN<sub>si</sub>*. Another possibility is that this form is from tentative *-am-* (Section 4.4.3.3) plus negative *-aN<sub>s</sub>-* (Section 4.4.3.5), but again we would have to account for the deleted /a/,

---

785. Since we do not have historical textual data for Yamatoma, it is not possible to determine when this form entered the language, thus it is not possible to prove whether it was a loan from MJ or a later stage of Japanese. However, other forms are believed to have been introduced to the Ryūkyūs from MJ, and it is likely that *-azī* is a loan from MJ.

and explain why this form is followed by the stative final and not the final *-u-* that is expected to occur with *-aNsi-*. For the purpose of this study, I reconstruct pre-WOJ *\*-aNsi* for the negative tentative suffix.

#### 4.4.3.8 The Proto-Japonic Stative *\*-ʔar-*

The PJ stative *\*-ʔar-* developed from the verb *\*ʔar-* 'to exist'.<sup>786</sup> In the Ryūkyūan languages it became a past tense stative and in OJ and Shuri it became a progressive stative. I discuss these forms below.

##### 4.4.3.8.1 The Past Stative Proto-RK *\*-ʔa-*

The PJ stative in the Ryūkyūan languages indicates the past tense. This distribution of this form is shown in Table 4.12 below.

Table 4.12: The Proto-RK Past Stative *\*-ʔa-*

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
					<i>-ya-</i>	<i>-a-</i>	<i>-a-</i>

---

786. The verb exist must be glottal initial on the basis of Yamatoma which marks a distinction between words beginning with a glottal stop /ʔ/ and those beginning with a glottal onset glide /ʔ/, i.e., *ʔya* 'arrow' : *ʔya* 'house'. See Section 3.2.3.1.7, for discussion regarding why I treat both /ʔ/ and /ʔ/ as phonemes in Yamatoma. Shuri also has a glottal stop /ʔ/ but occurrences of the glide /ʔ/ are predictable and can be analyzed as phonetic and not phonemic, so only /ʔ/ is considered a phoneme in Shuri. Hirara has neither /ʔ/ nor /ʔ/.

I reconstruct this form as proto-RK *\*-ʔa-* on the basis of the verb *\*ʔar-* 'to exist'. In Shuri and Hirara the glottal stop is lost and in Yamatoma it becomes /y/. The motivation for the change of /ʔ/ > /y/ is unknown and will be set aside for further research.

#### 4.4.3.8.2 The Proto-OJ Progressive *\*-ar-*

The PJ stative developed in OJ as a progressive stative, which is also found in Shuri. This distribution of this form is shown in Table 4.13 below.

Table 4.13: The Progressive *\*-ar-* in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
-êr-	-ar-	-ar-/-êr-	-er- <sup>787</sup>	-ar-/-êr-		-e:-	

First I discuss the development of this form in OJ and then explain the Shuri form.

The development of this form in OJ can be explained as follows. First, the vowel of the WOI form, /ê/, must come from earlier pre-WOI /i+a/ thus I treat this form in WOI as deriving from the infinitive -î plus -ar-.<sup>788</sup> The form -ar- in EOJ suggests that either contraction occurs between the infinitive and -ar- in EOJ (i.e., the infinitive -i + -ar- > -ar-) or that -ar- is a suffix and not an auxiliary in EOJ; as a suffix it attaches directly to the verb stem or other auxiliaries without the infinitive morpheme. The form -êr- in EOJ

---

787. There is only one example of this morpheme in SEOJ.

788. Also discussed in Section 2.2.5.3.3.4.1.

is most likely to be a borrowing from WOJ or the WOJ form influenced the development of the EOJ form. I reconstruct this morpheme as proto-OJ *\*-ar-*.

As for the Shuri form, as discussed above (Section 3.3.3.2) the long vowel /e:/ in Shuri derives as a diphthong of /a + i/ (Ashworth 1973: 131-132, discussed above in Section 3.3.3.2). This form in OJ clearly shows /ê/ which can only come from /î+a/ so the vowels are in the "wrong" order to diphthongize to /e:/ in Shuri. Therefore, this form could not have developed from PJ *\*/i+a/*, which also accounts for why this form is lacking in both Yamatoma and Hirara. I treat the progressive stative *-e:-* in Shuri as a borrowing from MJ *-er-*.<sup>789</sup> The loss of the /r/ can be explained if it was borrowed in either the infinitive or the final form, i.e., MJ *-er-i*, then the consonant would have been lost in Shuri, since /ri/ > /i/ in Shuri.<sup>790</sup> The vowel is presumably lengthened because this is a monosyllabic form (Section 3.3.3.2).

---

789. It is not possible to prove when this form was borrowed into Shuri, however, there are a number of MJ forms in Shuri that are not found in WOJ (i.e., the passive/potential *\*-rare-* presented in Section 4.4.3.11), which were likely borrowed from MJ.

790. This is discussed above (Section 3.3.3.1.5).

#### 4.4.3.9 The Pre-WOJ Durative \*-ap-

The WOJ durative suffix *-ap-*, which is used to indicate the long lasting or continued action of the verb, is also attested in NEOJ, CEOJ, and UEOJ as *-ap-* in all dialects, as shown in Table 4.14 below.<sup>791</sup>

Table 4.14: The Durative \*-ap- in OJ

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
<i>-ap-</i>	<i>-ap-</i>	<i>-ap-</i>	—	<i>-ap-</i>	—	—	—

The durative suffix does not occur in any of the Ryūkyūan languages, thus a form cannot be reconstructed. However, before reconstructing this as a proto-OJ form, there are a few things to consider.

First, the inflectional suffix appears to have been derived from the derivational suffix pre-WOJ *\*-Ap-* (Section 4.3.4), which is found only in WOJ verbs. The function of the derivational and inflectional morphemes is the same, except that, by definition, suffixation of the derivational morpheme results in the creation of a new lexical item, while suffixation of the inflectional morpheme does not. The derivational morpheme has either the shape *\*-ap-* or *\*-öp-*, with the initial vowel of the suffix assimilating to the final vowel of the verb root, while the inflectional morpheme has only the shape *-ap-* regardless of the vowel of the verb stem or suffix it affixes to. Yet, given their function,

---

791. It only occurs twice in NEOJ and is better attested in the other dialects.

these morphemes are clearly related; I treat the inflectional morpheme as a grammaticalized form of the derivational morpheme. Since *\*-ap-* is the more common realization of the derivational morpheme it is logical that the inflectional morpheme derived from this form would have the shape *-ap-*, and not the less common *-öp-*.

The problem, then, is that while the inflectional morpheme *-ap-* is attested in EOJ, the derivational morpheme is not.<sup>792</sup> If the inflectional morpheme developed from the derivational morpheme, then how can the inflectional form exist if the derivational morpheme does not? One possibility is that the derivational morpheme existed in EOJ but verbs formed with this morpheme are simply not found in the EOJ poems. Another possibility is that the inflectional morpheme was borrowed from WOJ.

The first possibility cannot be proven either way: it is only realistic to rely on available data, and not speculate about what data may or may not have existed. As for the second possibility, one way to determine that a word is borrowed and not originally in the language is to test the phonemic correspondences, however, the phonemes /a/ and /p/ generally show a one-to-one correspondence between WOJ and EOJ.<sup>793</sup> Thus, the fact

---

792. The durative suffix is not found in SEOJ, but is attested in the other EOJ dialects.

793. There are some exceptions: there is one example of WOJ /a/ : NEOJ /u/ before /m/ which may be a case of nasal assimilation (Section 2.3.4.1.2.4); and 3 examples of WOJ /a/ : UEOJ /ê/ or /e/ which were rejected (see Section 2.3.7.1.2.4).

that this morpheme is attested in both WOJ and EOJ as *-ap-* is not indicative of either a borrowing or of a genetically related form.

Another test to determine whether a morpheme was borrowed from one language into another is to compare its distribution. In WOJ, *-ap-* fills the second slot in the verb string, it can affix only to verb roots or honorific and humble auxiliaries.<sup>794</sup> In EOJ, the suffix *-ap-* only occurs after the negative *-an-*,<sup>795</sup> with one exception in UEOJ where the durative suffix occurs directly following the verb root: *pana tir-ap-u* 'flower scatter-DUR-FIN' 'The flowers are scattered' (MYS XIV: 3448-U).<sup>796</sup> This poem, however, contains EOJ vocabulary, but not grammar or phonology typical of EOJ (Mizushima 1972: 420), so while this is an exception to the rule that the durative always follows the negative in EOJ, it is not a very reliable example.

In WOJ, the durative suffix can occur before, but never after, the negative suffix *-an-*. Further, the negative suffix is optionally used: *-ap-* occurs both with and without *-an-* in WOJ. On the other hand, EOJ *-ap-* is only attested following the negative, i.e., *-an-ap-*, with the one possible exception presented above. In fact, because of this distribution, scholars have often treated the negative plus durative suffixes as a unit (i.e.,

---

794. WOJ has up to seven slots.

795. In NEOJ and CEOJ *-ap-* fills the fourth slot (of five), and in UEOJ it fills the second slot (of four).

796. This example is presented above (Section 2.3.7.2.3.4.3).

*-anap-*), commenting that *-ap-* is likely to be related to WOJ *ap-* 'to join' (see, e.g., Yamada 1954: 624-627, Fukuda 1965: 369-379, Hojō 1966: 485-486, Miller 1971, 258-259).<sup>797</sup> Although the durative *-ap-* must follow the negative suffix *-an-* in EOJ, the negative is also used without the durative suffix.

The distribution of these morphemes in WOJ and EOJ is significant; the scope of *-ap-* in WOJ and EOJ differ, which explains, in part, why these morphemes fill different slots in the verbal string for WOJ and EOJ verbs. The limited function of *-ap-* in EOJ, where it can only be used to indicate the lasting effect of a negated action, suggests that it was borrowed into EOJ with a different scope than in the source language (WOJ). Further, since the inflectional morpheme *-ap-* is derived from the derivational morpheme *\*-Ap-*, which is not used in the formation of EOJ verbs, I argue that EOJ *-ap-* was borrowed from WOJ *-ap-*, and therefore reconstruct pre-WOJ *\*-ap-* for the inflectional durative suffix.

---

797. Semantically, I see no reason to link the durative suffix to the WOJ verb *ap-* 'to join' (see Section 2.2.5.3.3.3.1).

#### 4.4.3.10 The Proto-OJ Honorific \*-as-

The honorific morpheme *-as-* is attested in WOJ, and all EOJ dialects, as shown in Table 4.15 below.<sup>798</sup>

Table 4.15: The Honorific \*-as- in OJ

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
<i>-as-</i>	<i>-as-</i>	<i>-as-</i>	<i>-as-</i>	<i>-as-</i>			

The honorific suffix is a Group I morpheme in EOJ dialects and a Group II morpheme in WOJ. The different morpheme ordering is easily explained: in WOJ, there are examples of the honorific suffix *-as-* occurring after honorific auxiliaries (Group I morphemes) which do not occur and/or are rarely found in EOJ dialects.<sup>799</sup> There are no examples of *-as-* following honorific auxiliaries in CEOJ or UEOJ where they are attested. Since this morpheme is attested in all OJ dialects, and its function is the same in each dialect, I reconstruct this morpheme as proto-OJ *\*-as-*.

#### 4.4.3.11 The Proto-Japonic Causative Suffix -asimai-

The causative suffix *\*-asimai-* is reconstructed on the basis of its forms in the various Japonic languages, presented below in Table 4.14:

---

798. However, it only occurs once in NEOJ and once in SEOJ.

799. The honorific auxiliaries are: *imas-* (honorific); *matur-* (humble); and *tamap-* (respectful).

Table 4.16: The Causative \*-asimai- in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
- <i>asimě</i> -	—	- <i>simě</i> - <sup>800</sup>	—	—	—	- <i>asimi</i> -	- <i>asimi</i> -

In WOJ and CEOJ, the causative suffix fills the second slot of the verbal string, and in Shuri and Hirara it fills the first slot. The Shuri and Hirara forms can either come from an earlier \*-*asimi*- or \*-*asime*- it is not possible to determine in this environment if the final vowel is from earlier PJ \*/i/ or \*/e/ (Section 4.2.2).<sup>801</sup> This form is not attested as a suffix in Yamatoma, however, the verb *simi*- 'make do, let do' is:

ʔurī: 'wa-nin sīmī-ns-yo-rī  
 that/TOP I-LOC let do-HON-NPS-IMP  
 Please let me do that.  
 (Osada et al. 1980: 427)

ʔar-īN na: sīmī-r-as-ar-an  
 He-DAT TOP make do-POT-CAUS-PASS-NEG  
 [You] cannot make him do [it].  
 (Osada et al. 1980: 427)

The Yamatoma verb appears to be related to the inflectional suffix found in the other languages and dialects, though it is not clear why this is a full verb in Yamatoma and not elsewhere.

---

800. This form is attested only once in CEOJ.

801. Typically the sequence of a nasal plus a high vowel would result in the reduction of the high vowel, but this process does not occur in words over three moras long (Sections 3.3.3.1.4 and 3.4.3.1.5).

The final vowel of the verb stem in Yamatoma is /i/, which typically comes from \*/ë/. However, the vowel of the first syllable is also an /i/, which leaves us with two reconstructions for the older form of this verb: 1) either the earlier form of this verb is \**seme-* and both vowels raised; 2) the earlier form is either \**semi-* or \**sime-*, the vowel /e/ raises to /i/, and then high vowel assimilation occurs resulting in both vowels shifting to /i/.<sup>802</sup> However, since the suffix in Hirara has an /i/ in the first syllable which can only come from \*/i/, the initial vowel of the Yamatoma verb must also come from /i/. Thus, the Yamatoma and Hirara forms support the reconstruction of proto-RK \**-asime-*.

However, the final vowel of the WOJ form, *-asimë-*, must come from monophthongization of earlier \*/a+i/ or \*/ö+i/. Although this vowel cannot be reconstructed internally, as both /a/ and /ö/ occur after /i/ in WOJ,<sup>803</sup> one source for proto-RK \*/e/ is diphthongization of /a/ plus a non-high vowel. Thus, external data support the reconstruction of /ë/ in WOJ coming from earlier \*/a+i/.

After considering the forms in the various languages and dialects, I reconstruct this form in PJ as \**-asimai-*.

---

802. High vowel assimilation in Yamatoma is discussed in Section 3.2.3.2.1.

803. It is tempting to claim that the initial vowel of the suffix, /a/, would require the source of /ë/ to be from /a+i/ and not /ö+i/ because of vowel assimilation, but there is no evidence to support this.

#### 4.4.3.12 The Proto-Japonic Passive and Potential: Proto-OJ \*-aye- and Proto-RK \*-rare-

The various forms of PJ passive suffix are presented in Table 4.17:

Table 4.17: The Passive and Potential \*-aye-/-rare- in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
-aye- <sup>804</sup>	-aye-	-aye- <sup>805</sup>	-are-/ -aye-	-aye-	-rar-	-rari- -yu:s-	-rai-

This morpheme appears to have two forms: an OJ form and a Ryūkyūan form, both of which may be found in Shuri; I return to this below. Because of the various phonological and semantic differences, I divide these into two separate morphemes: proto-OJ \*-aye- and proto-RK \*-rare-.

##### 4.4.3.12.1 The Proto-OJ Passive \*-ayai-

This suffix in WOI \*-aye- can indicate either the passive voice or a spontaneous action. In NEOJ it is used as both a passive and a potential. In CEOJ it occurs only once, as a passive suffix in an example that is a questionable source for EOJ data. It occurs as both a passive -aye- and potential -are- in SEOJ but there is only one example of each

---

804. As discussed above (Section 2.2.5.3.3.4) the WOI form is also attested as -raye-, but there are some problems: 1) -raye- only occurs in four examples, all of which are attested in Book XV which is known to have an unreliable history of transmission; 2) all four examples used with the verb *ne-* 'to sleep'; 3) all four examples are followed by the negative suffix. I do not think this constitutes reliable proof that the form -raye- occurred in WOI.

805. This form is only attested once in CEOJ, and in a poem that has misspellings, but lacks EOJ vocabulary or other EOJ features, so this morpheme's existence in CEOJ is questionable.

suffix, both occurring in the same poem (presented above Section 2.3.6.2.3.3.2.3). In UEOJ this suffix occurs only twice, both times with the verb *mî-* 'see'.

The form *-yū:s-* in Shuri is only used as a potential form and not passive.<sup>806</sup>

Further, the phonetic development of this morpheme cannot be explained. Thus, the development of this form and the issue of whether this is really a related form or simply an unrelated morpheme with a similar shape will be left aside for further research. For the purpose of this study, I will reject the Shuri form and not reconstruct this phoneme at the PJ level.

As for the reconstruction of the proto-OJ form, the final vowel /e/ is in a position where the distinction between /ê/ and /ë/ is lost. However, because this morpheme behaves like verbs ending in /ë/,<sup>807</sup> the underlying vowel must be \*ë, which must come from either earlier /a+î/.<sup>808</sup> Therefore, I reconstruct proto-OJ \*-*ayai-* for this morpheme.

---

806. According to Ashworth (1973: 71), when the Shuri suffix *-rari-* is used as a potential suffix it indicates a state which can occur, while *-yūs-* indicates the ability of the agent to perform an action.

807. In other words, when suffixes follow *-aye-*, it follows the same morphophonemic rules as verbs with stems ending in /ë/ (known as *shimo nidan* verbs in the traditional terminology, see Section 2.2.5.1.1).

808. Another source for WOJ /ë/ is pre-WOJ /ö+î/ but, since the initial vowel of the suffix is /a/, the process of vowel assimilation necessitates the reconstruction of /a/ here.

#### 4.4.3.12.2 The Proto-RK Passive \*-rare-

The proto-RK form *\*-rare-* is a passive and also indicates potential. The Ryūkyūan forms indicate the need to reconstruct an initial consonant *\*/r/*. The first vowel */a/* is also constant throughout. The next phoneme must also be an */r/*; loss of the liquid in Hirara is explained above (Section 3.4.3.1.6). The final vowel of this morpheme in the Shuri and Hirara examples can only come from proto-RK *\*/e/*. If this came from proto-RK *\*/i/*, then the Shuri form would be *\*-rai-* and the Hirara form would be *\*-rari-*. And the final vowel is deleted for some unknown reason in Yamatoma. I therefore reconstruct the passive/potential morpheme as proto-RK *\*-rare-*.

Further, this form looks like MJ *-rare-*, which, unlike the WOJ passive *-aye-* functions not only as a passive but also as a potential, which accounts for the different functions in the OJ and proto-RK forms. This is a clear case of borrowing from MJ into the Ryūkyūan languages. We are still left with the question of how did two competing forms develop for this morpheme; which will be set aside for further research.

#### 4.4.3.13 The Proto-Japonic Imperative \*-e, -rə, -re

Reconstructing the imperative in Japonic is difficult, as it has a number of forms, as shown in Table 4.18 below:

Table 4.18: The Imperative \*-e, -rə, -re in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
-ê/-yö		-e/-yö/ -ërö	-ë	-e/-rö	-rî	-ri < re	-i/-ru

I first discuss the forms that follow consonant final verb stems: -ê/-e/-ë/-i depending on the variety of Japonic, and then the forms that follow vowel final verb stems: -yö/-ërö/-rö/-rî/-ri/-ru.<sup>809</sup>

First, the WOJ form -ê must come from monophthongization of \*î+a; î might be the infinitive and -a an auxiliary.<sup>810</sup> There is only one example of CEOJ -e and one of SEOJ -ë. It is not possible to determine if the CEOJ form should be /ê/ or /ë/ and not clear if the /ë/ in SEOJ is a misspelling. Further, it is not clear how /e/ developed in Eoj; it has not yet been demonstrated that monophthongization occurred in the same way that it occurred in WOJ or that it occurred at all. The suffix -i in Hirara must come from proto-RK\*/e/. I tentatively reconstruct PJ \*-e for this suffix, even though it fails to

---

809. Note, however, that Yamatoma -rî and Shuri -ri follow both consonant and vowel final verb stems; the /r/ is deleted after consonant final stems.

810. It has been claimed that /ê/ can also be a monophthong of /î+ö/ (see e.g., Unger 1993: 26, Whitman 1985: 41-42 adapted from Yamaguchi 1971, and Ōno 1974, Russell 2004: 514-515). However, the only evidence for this claim is the formation of the WOJ imperative form. In other words, the WOJ imperative ending in /ê/ can only be explained by claiming that /î+ö/ (from the infinitive -î plus -yö, assuming that the /y/ is deleted and that the /ö/ monophthongizes with the preceding vowel) monophthongize to /ê/ and the only proof that these vowels monophthongize to /ê/ is that the imperative ends in /ê/. This is circular logic and without further evidence that /ê/ can result from monophthongization of /î+ö/ this proposal has been rejected.

account for the WOJ data and may or may not account for the EOJ data; at this time there is no better solution.

As for the forms that suffix to vowel final stems, the OJ forms *-yö*, and *-rö* can be derived from proto-OJ *\*-rö*, assuming that the /r/ lenites to /y/.<sup>811</sup> The CEOJ form *-ërrö* cannot be explained at this time; it is, however, attested only once. Hirara *-ru* can only come from proto-RK *\*-ro* as proto-RK *\*-ru* would result in Hirara *\*-i* (Section 3.4.3.1.6). I therefore reconstruct *\*-rə* for this form of the imperfective.<sup>812</sup> However, this form does not account for the Yamatoma and Shuri forms. Both Yamatoma *-ri* and Shuri *-ri* must come from earlier *\*-re*.<sup>813</sup> Therefore, I reconstruct *\*-re* for these forms.

The imperative, then, has three forms: *\*-e* following consonant final stem verbs; *\*-rə* following vowel stem verbs in OJ and Hirara; and *\*-re* following either consonant or vowel final verb stems in Yamatoma and Shuri. This solution is admittedly awkward, and more research is needed to determine how the imperative forms developed.

---

811. The suffix *-yö* is not always affixed to vowel stem verbs in WOJ, where a bare stem can sometimes indicate the imperative. In addition, *se-* 'do' can either occur with or without *-yö* (Section 2.2.5.3.3.8.4). Also in Yamatoma, the verb *k<sup>h</sup>-* has the imperative form *k<sup>h</sup>o:* (Section 3.2.4.3.1.5.7).

812. As discussed above (Section 4.2.2), PJ *\*/ə/* and PJ *\*/o/* merge corresponding to proto-RK *\*/o/*. Thus, PJ *\*/o/* would result in /*ö*/ in WOJ, while *\*/ə/* results in WOJ /*ö*/. Thus, the vowel *\*/ə/* is reconstructed here.

813. PJ *\*-ri* would result in Yamatoma *\*-ri* and Shuri *\*-i*.

#### 4.4.3.14 The Proto-Japonic Infinitive \*-i

The infinitive is the only suffix in Japonic that can occur more than once in a verb string. The infinitive has several functions: 1) it can be used to connect two verbs; 2) it can be used to connect auxiliaries to verb stems; 3) it can occur at the end of a verb string as a clause final suffix. The infinitive is attested throughout Japonic as a high front vowel (as shown in Table 4.19, and is reconstructed as PJ \*-i.

Table 4.19: The Infinitive \*-i in Japonic

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
-î	-î	-î	-î	-î	-i	-i	-i/-ï

#### 4.4.3.15 The Proto-Japonic Nominalizer \*-i

The PJ nominalizer \*-i is reconstructed on the basis of the following forms:

Table 4.20: The Nominalizer \*-i in Japonic

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
-î	-î	-î	—	-î	-i	-i	-i

As with the infinitive above, the forms found throughout Japonic clearly indicate a high front vowel, thus \*-i is reconstructed for this morpheme. Although this suffix looks identical to infinitive -î, accent data from different stages of Japan indicate that the infinitive and the nominalizer are historically from different morphemes.

#### 4.4.3.16 The Proto-OJ Honorific \*-imas-

The honorific auxiliary *-îmas-* is only attested in WOJ and UEOJ.<sup>814</sup> It occurs as a Group I morpheme in both WOJ and UEOJ meaning that only the infinitive and no other verbal suffixes can occur before it. I reconstruct proto-OJ *\*-imas-* for this morpheme, though it is possible this is an example of a loan from WOJ to UEOJ.

#### 4.4.3.17 The Pre-WOJ Past \*-ki

The WOJ past auxiliary *-kî-* is found only in WOJ, although forms built off of this auxiliary are also found in EOJ: modal past *-kêr-* (Section 4.4.3.19) and tentative past *-kêm-* (Section 4.4.3.18). As discussed in the WOJ section for this morpheme (Section 2.2.5.3.3.5.1.) Omodaka et al. (1967: 236) suggest this form derives from the verb *kö-* 'come' plus the infinitive *-î-*. I accept this as a possible derivation for this form, while noting that even though the verb *kö-* 'come' is well attested in Japonic, its usage as an auxiliary is limited to WOJ. I reconstruct pre-WOJ *\*-ki* for this morpheme.

---

814. In UEOJ it only occurs as *-mas-*. The WOJ form is treated as *-imas-* on the basis of this form when used as a verb and not as an auxiliary (discussed above in Section 2.2.5.3.3.2.1). The initial vowel of the morpheme is deleted following the infinitive, and only *-mas-* remains.

#### 4.4.3.18 The Pre-WOJ Tentative Past Auxiliary \*-ki-am-

The pre-WOJ tentative past auxiliary *\*-kêṃ-* comes from the past auxiliary *-kî* (Section 4.4.3.18) plus the tentative morpheme *\*-am-* (Section 4.4.3.3); the vowels /î+a/ monophthongize to /ê/. The auxiliary *-kêṃ-* is also attested once in CEOJ, once in SEOJ, and three times in UEOJ.

However, the reconstruction of a proto-OJ morpheme is not warranted here for a number of reasons. First, this auxiliary is built off of the past auxiliary *-kî-* which is not found in EOJ as an auxiliary. Second, in EOJ when an auxiliary is suffixed to the infinitive we get contraction and not monophthongization, e.g., the infinitive followed by the progressive morpheme *-ar-* (Section 4.4.3.7.2) in WOJ results in *-êr-* while in EOJ it results in *-ar-*. This suggests that if this auxiliary formed from *-kî+-am-* the EOJ form would be *\*-kam-* (c.f., proto-OJ *\*-kî-ar-*, Section 4.4.3.20) Third, a comparison of the ordering of this morpheme in the verbal string for each dialect shows that this morpheme fills the fourth slot (of seven) in WOJ, the fourth slot (of five) in CEOJ, the second (of four) in SEOJ, and the first slot (of four) for UEOJ. The fact that this morpheme does not fit in the same slot, or relatively close slots, across languages suggests that this morpheme may be a borrowing. Finally, this form is attested in SEOJ and CEOJ, the areas

geographically closest to WOJ.<sup>815</sup> Granted, this is a weak argument given that this form is attested only once in each of these dialects and also NEOJ data are few, however, this distribution may be significant.

Because of the reasons presented above, I reconstruct pre-WOJ *\*-ki-am-* > WOJ *-kêr-*, and treat this morpheme as a borrowing into EOJ.

#### 4.4.3.19 The Proto-OJ Modal Past *\*-ki-ar-*

The modal past suffix is not found in RK languages and is attested in OJ as shown below:

Table 4.21: The Proto-OJ Modal Past *\*-ki-ar-* in OJ

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>-kêr-</i>	—	<i>-kar-/ -kEr-</i>	<i>-kêr-</i>	—	—	—	—

The WOJ form, *-kêr-* must come from the past auxiliary *-kî-* (Section 4.4.3.18) and the stative *-ar-* (Section 4.4.3.8.2).<sup>816</sup> Above I argued against the reconstruction of proto-OJ *\*-kêr-* because, among other reasons, the forms in EOJ "looked like" the WOJ form and not like expected EOJ forms. The modal past form, however, is attested in CEOJ as *-kar-*, *-kêr-*, and *-kër-*, and these various forms would not occur if this suffix had been

815. Assuming, of course, that the UEOJ poems with *-kêr-* are not from NEOJ; their origin is unknown.

816. As explained above, /î+a/ monophthongize in this environment, resulting in /ê/.

borrowed into CEOJ from WOJ; had it been a borrowing, it would have been borrowed as *-kêr-*. SEOJ has only *-kêr-* which may or may not have been a borrowing from WOJ *-kêr-*. On the basis of the CEOJ forms, I reconstruct proto-OJ *\*-kî-ar-*.

#### 4.4.3.20 The Pre-WOJ Humble Auxiliary *\*-matur-*

The WOJ humble auxiliary *-matur-* is only found once outside of WOJ; it is attested once in NEOJ. I assume this is a borrowing from WOJ into NEOJ, and therefore reconstruct pre-WOJ *\*-matur-*.

#### 4.4.3.21 The Proto-OJ Perfective *\*-n-*

The WOJ perfective *-n-* is found in all EOJ dialects as *-n-*, but does not occur in any of the Ryūkyūan languages. This morpheme occurs in the third slot of the verbal string in WOJ, NEOJ, and CEOJ, in the second slot in SEOJ, and the first in UEOJ. Since both SEOJ and UEOJ have only four slots in the verbal string, this distribution is not significant: it appears earlier in the verbal string simply because the verbal strings are shorter in these two dialects. I therefore reconstruct proto-OJ *\*-n-* for this morpheme.

#### 4.4.3.22 The Proto-Japonic Negative Imperative \*-na

The PJ negative imperative is attested in the Ryūkyūan languages, as a suffix.

The forms of this morpheme in Japonic are presented in Table 4.22 below:

Table 4.22: The Negative Imperative \*-na in Japonic

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
( <i>na...sö</i> )	—	( <i>na...sö</i> )	( <i>na...sö</i> )	—	<i>-na</i>	<i>-na</i>	<i>-na</i>

I propose that this negative imperative is related to the proto-OJ circumfix negative imperative \**na...sö* (Section 4.4.2). This can be explained if we treat PJ \*-*na* as an adverb that could occur before or after the verb and later developed into a suffix in the RK languages and as a circumfix in proto-OJ.

#### 4.4.3.23 The Proto-Japonic Conjunctive \*-Npa

The PJ conjunctive suffix is reconstructed as \*-*Npa* on the basis of its forms in Japonic, as presented in Table 4.23. This suffix follows the evidential form of verbs (Section 4.4.3.24).

Table 4.23: The Conjunctive \*-Npa in Japonic

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
<i>-Npa</i>	<i>-Npa</i>	<i>-Npa</i>	<i>-Npa</i>	<i>-Npa</i>	<i>-ba</i>	<i>-re:</i>	<i>-riba</i>

Only the Shuri and Hirara forms need explaining; the forms in other languages/dialects correspond as expected. Ashworth (1973: 84) states that Shuri *-re:* derives from pre-Shuri *\*rewa* < pre-Shuri *\*reba*. Thus, this form consists of the evidential and the conjunctive suffix.<sup>817</sup> Similarly, the Hirara form, *-riba* consists of both the evidential and conjunctive suffix, but the evidential form in Hirara does not otherwise occur. Further, the vowel /i/ in this suffix must come from earlier *\*/e/*. Thus *-riba* can only be explained as consisting of two suffixes, i.e., *-ri-ba* 'EVD-CONJ' < proto-RK *\*-re-ba* < PJ *\*re-Npa-*.

#### 4.4.3.24 The Proto-OJ Concessive *\*-Ntə*

The WOJ concessive suffix *-Ntö* is attested in all EOJ dialects and not in the Ryūkyūan languages, thus I reconstruct proto-OJ *\*-Ntə*.<sup>818</sup> These suffixes follow the evidential form of verbs (Section 4.4.3.25).

#### 4.4.3.25 The Proto-Japonic Evidential *\*-rai-*

In Table 4.24 I present the forms of the evidential suffix, then discuss its reconstruction below.

---

817. Shuri *-re:* and Hirara *\*-riba* are also presented with the PJ evidential *\*rai* (Section 4.4.3.25).

818. The symbol /*ö*/ is used to indicate a mid-central vowel which is phonetically a schwa [ə]. As stated above I use /*ə*/ for PJ and proto-OJ reconstructions, since it is more accurate phonetically.

Table 4.24: The Evidential \*-rai- in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
- <i>ë/-ure</i>	- <i>ë/-ure</i>	- <i>ë/-ure</i>	- <i>E/-ure</i>	- <i>ë/-ure</i>	- <i>i</i>	- <i>re:</i>	- <i>riba</i>

First, I discuss the Ryūkyūan forms and then the OJ forms. Ashworth (1973: 84) claims Shuri *-re:* is from pre-Shuri *\*rewa* < pre-Shuri *\*reba*. Thus, this form consists of the evidential and the conjunctive suffix.<sup>819</sup> However, Ashworth also claims that the long vowel /e:/ comes from a diphthong created by /a+i/ (Ashworth 1973: 131-132). I return to this below. The Hirara form, *-riba* also consists of both the evidential and conjunctive suffix, but the evidential form in Hirara does not otherwise occur, and can only be reconstructed through external data. Thus, *-ri* is the evidential and *-ba* is the conjunctive suffix. Further, both Hirara *-ri* and Yamatoma *-i* must come from earlier *\*-re* and *\*-e*, respectively (Section 4.2.2).

Next, for the OJ forms, I proposed above (Section 2.2.5.3.3.8.12) that the evidential was built from a stative *-ur-* plus the evidential *-ë*. Following consonant final verbs, the /r/ is lost but is preserved following vowel final verb roots.<sup>820</sup> This proposal is

---

819. Shuri *-re:* and Hirara *\*-riba* are also presented with the PJ conjunctive *\*-Npa* (Section 4.4.3.13).

820. This proposal was modified from my treatment of this form in Russell (1997). For consonant final verbs the /r/ is lost due to Whitman's Law (Section 2.2.4.3.2) which states /r/ is deleted following short vowels. The vowel length of vowel stem verbs ending in /i/ or /ë/ and monosyllabic verbs ending in /i/ or /i/ prevents /r/ loss from occurring (Russell 1997: 47).

strengthened by the reconstruction of a PJ stative *\*-<sup>?</sup>ura-* (Section 4.4.3.34).<sup>821</sup> Thus the development of the evidential form in OJ can be explained as follows:

consonant final verb stem: *sak-ur-ë* > *sak-uë* > *sak-ë*<sup>822</sup> 'bloom-EVD'  
 vowel final verb stem: *tukë-ur-ë* 'attach-STAT-EVD'

There is one more issue to consider before reconstructing a PJ form for this morpheme: the WOJ evidential *-ë* must come from monophthongization of either /a+i/ or /ö+i/. Although this cannot be reconstructed internally, the Shuri form, *-re:*, indicates earlier /a+i/ as discussed above. Thus, I reconstruct PJ evidential *\*-rai*.<sup>823</sup>

#### 4.4.3.26 The Proto-Japonic Stative Final *\*-ri*

The stative final is the conclusive form used with stative verbs (i.e., PJ *\*<sup>?</sup>ar-* 'exist') and suffixes. The forms of this final in Japonic are presented in Table 4.25 and the reconstruction for this form is discussed below.

Table 4.25: The Stative Final *\*-ri* in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>-i</i> <sup>824</sup>		<i>-i</i>	<i>-i</i>	<i>-i</i>	<i>-ri</i>	<i>-i</i>	<i>-i</i>

821. A similar proposal is presented below to explain the attributive form in WOJ (Section 4.4.3.32)

822. Contraction happens and not monophthongization because /u+ë/ never monophthongize (Section 2.2.4.3.3).

823. The evidential forms in OJ, then, develop as *\*-ur-rai* > *\*-urai* > *\*-ure*.

824. The stative final in WOJ only occurs after consonants where /i/ and /i/ merge, thus only /i/ is attested.

Looking at these forms, all languages and dialects can come from PJ \*/i/. Further, the Yamatoma stative final must be reconstructed with an initial \*/r/, thus, the Yamatoma form derives from PJ \*-ri. The Hirara form, attested as -i, also must have an initial consonant: if the vowel \*/i/ is in initial position or follows a nasal then it remains /i/ in Hirara, otherwise it backs to /i/. Therefore, I reconstruct the PJ stative final as \*-ri. Note that this reconstruction is necessary to account for the Yamatoma and Hirara data and does not conflict with the forms elsewhere: PJ \*/ri/ becomes /i/ in Shuri, as \*/r/ is deleted in this environment (Section 3.3.3.1.5). The OJ forms always occur following a verb stem or other morpheme ending in a consonant, so the consonant of the stative final would be deleted.

#### 4.4.3.27 The Proto-Japonic Attributive \*-ö and \*-ru

The development of the PJ attributive is complicated, mostly because of the EOJ forms. The various forms for the morpheme are presented below:

Table 4.26: The Attributive \*-ru in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
-u/-uru	-u/-ô/ -uru	-u/-ô/ -uru	-u/-ô/ -uru	-u/-ô/ -uru	-ru <sup>825</sup>	-ru	-i

---

825. As discussed above (Section 3.2.4.3.1.5.5), Yamatoma also has an attributive -n which is considered to be the newer of the two forms (Osada et al. 1980: 501). This is logical since one source for final -n in Yamatoma is a voiced consonant plus a high vowel, thus -ru > -n.

In Section 2.2.5.3.3.8.14, where I discussed the WOJ attributive, I proposed that the attributive form is built off of the stative extension *-ur-* (Section 4.4.3.34) plus *-ö* '[attributive]'.<sup>826</sup> Evidence for the attributive *-ö* comes from the attributive form of the copula: *n-ö* 'COP-ATT' (KK 2). Typologically speaking, copulas tend to preserve older paradigmatic forms (Vovin, p.c.). It follows, then, that the attributive suffix that follows the copula is an older form than the attributive suffix *-u* found following consonant final verb stems. The sequence *\*-ur-ö*, although originally bimorphemic, becomes reanalyzed as a single morpheme. However, as discussed above, the sequence *\*-urö* cannot occur, so I proposed assimilation, where a vowel assimilates to the front or back feature of a vowel in the preceding syllable, occurs. Following the discussion above (Section 2.2.5.1.3.1), we would expect *\*-urö* to become *\*-ura*, which is not the attested form. I also noted in the discussion above correspondences between WOJ /u/ and EOJ /ô/, e.g., WOJ *suNkus-* 'let pass' (MYS V: 804) : UEOJ *suNkôs-* (MYS XIV: 3564-U) and WOJ attributive *-u* : EOJ attributive *-ô/-u*.<sup>827</sup> What I propose for the attributive is a process at

---

826. This proposal developed from discussions with Alexander Vovin concerning problems with WOJ and EOJ attributive data. The idea that a stative extension is involved in the formation of the attributive and evidential forms is based on the analysis presented in Russell (1997), which was further developed by Serafim (2005). The process of vowel assimilation in WOJ is discussed above in 2.2.5.1.3.1, and is based on Russell (2005). The proposal that the attributive is *-ö* based on the attributive form of the copula *n-ö* comes from Vovin (p.c.). The stative extension *\*-ur-* is further discussed below (Section 4.4.3.33).

827. As discussed below, there are cases where the attributive suffix in the various EOJ dialects occurs as /ô/ and cases where the attributive is /u/, see the discussion in Sections 2.3.4.2.3.1.6.9 (NEOJ),

the proto-OJ level where the attributive suffix *-ö*, as found in WOJ in the attributive form of the copula, i.e., *n-ö* 'COP-ATT', assimilates to /*ô*/ and then in WOJ raises to /*u*/ but remains /*ô*/ in EOJ.<sup>828</sup>

	proto-OJ form	assimilation	raising
WOJ	*- <i>urö</i>	*- <i>urô</i>	- <i>uru</i>
EOJ	*- <i>urö</i>	*- <i>urô</i>	

Following consonant final verbs, the /*r*/ of the suffix is lost and only the final vowel remains. This solution accounts for both WOJ *-u* and EOJ *-ô* following consonant final verb stems. However, in NEOJ, the attributive *-ô* raises to *-u*, except after labials where it remains *-ô*. In SEOJ, there are two possible examples of attributive *-ô*, but both are transcribed with 努, which can be read as either *nô* or *nu*.<sup>829</sup> In CEOJ and UEOJ, *-ô* sometimes raises to *-u* and sometimes remains *-ô*; it is likely that raising occurs due to contamination with WOJ since there is contradictory evidence for the environments where *-ô* occurs and where *-u* occurs.<sup>830</sup>

---

2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ) below.

828. However, the attributive is attested as both *-ô* and *-u* in the EOJ dialects. I discuss this in more detail above in Sections 2.3.4.2.3.1.6.9 (NEOJ), 2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ).

829. All data for this study on the EOJ attributive, including consonant and vowel final stems, are presented in Appendix D.

830. See discussions above Section 2.3.5.2.3.3.6.12 for CEOJ, and 2.3.7.2.3.3.6.12 for UEOJ.

As for the attributive in Ryūkyūan languages, all three indicate the reconstruction of PJ *\*-ru*; the Hirara form can only come from *\*-ru* and not earlier *\*-ro*.<sup>831</sup> This contradicts the OJ data, unless it is possible to account for *\*-ö* assimilating to *\*-ô* and raising to *\*-u* before OJ and RK split from PJ; there is no evidence to support this. The simpler solution is to reconstruct two forms: proto-OJ *\*-ö*, which suffixes to the OJ stative *\*-ur-* (Section 4.4.3.34) and proto-RK *\*-ru*.

#### 4.4.3.28 The Proto-OJ Attributive Past *\*-si*

In addition to WOJ past *-kî* (Section 4.4.3.18), WOJ has a second past auxiliary, *-si*, which occurs in all EOJ dialects, but not in Ryūkyūan.<sup>832</sup> As this form is attested as *-si* in all OJ dialects, I reconstruct proto-OJ *-si* for this suffix.

#### 4.4.3.29 The Proto-Japonic Perfective *\*-t-*

Table 4.27 shows the distribution of the PJ perfective *\*-t-*.

Table 4.27: The Perfective *\*-t-* in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
<i>-t-</i>	<i>-t-</i>	<i>-t-</i>	<i>-t-</i>	<i>-t-</i>	<i>-tʰ-</i>	<i>-t-</i>	<i>-t-</i>

831. Proto-RK *\*/ru/* is expected to result in *\*/i/* (Section 3.4.3.1.6).

832. This morpheme has some special forms: *-si* as an attributive past; *-seNpa* < *\*-se-aNpa* as a hypothetical conditional past; and *-sikaNpa* < *-sika-Npa* when used with the concessive suffix. The forms are discussed in more detail in the grammar sections for each OJ dialect.

The aspiration of this form in Yamatoma is due to the form that suffixes to it – typically a stative morpheme.<sup>833</sup> The function and shape of this morpheme is constant throughout Japonic; I reconstruct this morpheme as PJ \*-t-.

#### 4.4.3.30 The Proto-Japonic Past Progressive \*-t-<sup>2</sup>ar-

The progressive perfective is found in Japonic as follows:

Table 4.28: The Progressive Perfective \*-t-<sup>2</sup>ar- in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
-tar-	-tar-	–	-tar-	-tar-	-t <sup>h</sup> a-	-tai	-taĩ
< -t-ar-	< -t-ar-		< -t-ar-	< -t-ar-	< -t <sup>h</sup> -a-	< -t-a-i	< -t-a-ĩ

The forms of the progressive perfective presented here consist of the PJ perfective \*-t- (Section 4.4.3.27) followed by the PJ stative \*-<sup>2</sup>ar-. The forms in Shuri and Hirara are also followed by the stative final suffix PJ \*-ri- (Section 4.4.3.25).<sup>834</sup>

#### 4.4.3.31 The Proto-OJ Respectful Honorific \*-tamap-

The respectful honorific WOI -tamap- is attested only once in CEOJ (MYS XX: 4389-Ss) is not otherwise found outside of WOI. In both WOI and CEOJ this is a Group

833. The development of this form in Yamatoma is complicated; see Section 3.2.4.3.1.3.1 for details.

834. In Yamatoma this form is often used without a stative final suffix, and in OJ this can either be followed by the infinitive, active final suffix, or attributive suffix.

I morpheme, and only the infinitive and no other verbal suffixes can affix between this morpheme and the verb root. The poems where this verb occurs in CEOJ contains EOJ features and is not an example of poems in the EOJ sections of the *Man'yōshū* that were written in WOJ. Given the low occurrence of this morpheme in EOJ, this auxiliary is likely to be a borrowing from WOJ to CEOJ, however, it is also possible it is not more attested because the context of the EOJ poems do not require it. I tentatively reconstruct proto-OJ \*-*tamap*- for the respectful honorific auxiliary.

#### 4.4.3.32 The Proto-Japonic Subordinative Gerund \*-te

The PJ subordinative gerund \*-*te* is found in all Japonic languages and dialects.

The forms are presented in Table 4.29 and I discuss the reconstruction of this morpheme below.

Table 4.29: The Subordinative Gerund \*-*te* in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
- <i>te</i>	- <i>tʰi</i>	- <i>ti</i>	- <i>tʰi</i>				

Although the OJ forms consistently occur as -*te* it is not possible to determine whether the vowel /e/ is underlying /ê/ and therefore a monophthong of /î+a/, or if it is underlying /ë/ which could derive as either a monophthong of /a+i/ or /ö+i/.

The Ryūkyūan forms must all come from earlier *\*-te*. The consonant in the Yamatoma form would only be aspirated if followed by a non-high vowel, and Yamatoma /i/ can only come from PJ *\*/e/* or */u/*, and since */u/* is high and cannot cause aspiration, the source of Yamatoma /i/ must be *\*/e/*. The Shuri form also must come from earlier *\*-te* as earlier *\*-ti* would result in Shuri *\*-či*. The Hirara form is also derived from *\*-te*, as *\*-ti* would yield Hirara *\*-ti*.<sup>835</sup> At this time it is not clear why the Hirara form has a double consonant.

I reconstruct this form as PJ *\*-te*, noting that the vowel of the WOJ form must come from a diphthong, */a+i/*, */ö+i/*, or */i+a/*, which at this time cannot be reconstructed.

#### 4.4.3.33 The Proto-OJ Coordinative *\*-tutu*

WOJ has a coordinative auxiliary *-tutu-*, which is also found in all EOJ dialects, but is not attested in the Ryūkyūan languages. This morpheme, however, has a number of forms in CEOJ, as shown the table below:

---

835. These phonemic changes are discussed in the phonology sections for each language and also above in Section 4.2.

Table 4.30: The Proto-OJ Coordinative \*-*tutu*

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
<i>-tutu</i>	<i>-tutu</i>	<i>-tutu</i> <i>-tötö</i> <i>-tusi</i> <i>-susu</i>	<i>-tutu</i>	<i>-tutu</i>	—	—	—

Each of the variant CEOJ forms are attested only once and at the present time there is no explanation for these forms.<sup>836</sup> I reconstruct proto-OJ \*-*tutu* for this morpheme, leaving the problem of the CEOJ forms for further research.

#### 4.4.3.34 The Proto-Japonic Non-Past Stative \*-<sup>?</sup>*ura-*

The development of the PJ stative \*-<sup>?</sup>*ura-* is similar to the development of \*-<sup>?</sup>*ar-* presented above (Section 4.4.3.33). This morpheme marks the non-past; it can indicate a present or future event but not a past one. First I present the forms of this morpheme (Table 4.31) and then discuss its development.

Table 4.31: The Non-Past Stative \*-<sup>?</sup>*ura-* in Japonic

<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>Yam.</b>	<b>Shuri</b>	<b>Hirara</b>
<i>-ur-</i>	<i>-ur-</i>	<i>-ur-</i>	<i>-ur-</i>	<i>-ur-</i>	<i>-yo:-</i>	<i>-o:-</i>	<i>-u-</i>

Below I discuss the development of this form in RK languages and then proto-OJ.

---

836. The examples are presented in Section 2.3.5.2.3.3.6.9.

First, the Shuri form clearly shows a long vowel /o:/ which exists in Shuri either as a diphthong of /ua/ or as lengthening of a monosyllabic word (Ashworth 1973: 52).<sup>837</sup> However, since other monosyllabic morphemes in Shuri are not lengthened, /o:/ here must come from diphthongization of /ua/. Note that, as discussed above (Section 4.4.3.7.1), proto-RK *\*-ʔar-* becomes Shuri *\*-a-*: the /r/ is lost. I propose a similar development where PJ *\*-ʔura-* > Shuri *\*-ura-*, the /r/ is lost then /u+a/ diphthongize to /o:/. However, it is not clear why /r/ would be lost between these two vowels. The Hirara form, *-u-* supports the reconstruction for the Shuri form.

Next, the Yamatoma form is problematic. The initial glide may be a Yamatoma innovation or it may be a trace of the glottal stop. Note that the PJ past stative *\*-ʔar-* is realized as Yamatoma *-ya-* (Section 4.4.3.7.2). Further, there are examples of this morpheme in Yamatoma as a long vowel /o:/ and as a short vowel /o/ and the reason for this is unclear (Section 3.2.4.3.1.4.2). I suggest that this form in Yamatoma is a borrowing from Shuri. The long /o:/ cannot otherwise be explained.

---

837. Examples of /o:/ < /ua/ are presented in Section 3.3.3.2.

Finally, the development of the OJ forms is straightforward: PJ glottal stop is lost in OJ; thus PJ *\*-ʔura-* > proto-OJ *\*-ur-*.<sup>838</sup> Assuming that *-ur-* follows the infinitive like stative *-ar-*, /i+u/ does not monophthongize so contraction occurs instead.<sup>839</sup>

There are many forms that are built off of this morpheme in OJ, i.e., the attributive *\*-ur-ö* (Section 4.4.3.27), the evidential *\*-ur-rai* > *\*-ur-ë* (Section 4.4.3.25), the tentative *\*-ur-am* (Section 4.4.3.36), suppositional *\*-ur-as-* (Section 4.4.3.37). The function of the morphemes in these cases is to mark an embedded clause; I explain this in more detail in the sections corresponding to each morpheme built off of this form.

Therefore, I reconstruct PJ *\*-ʔura-* for the non-past stative.

#### 4.4.3.35 The Pre-WOJ Debitive *\*-uNpai-*

The WOJ debitive suffix *-uNpë-* occurs only twice in UEOJ and once in CEOJ, however, in CEOJ it occurs as *-uNpê-*. This form does not occur elsewhere in Japonic.

Because there are so few occurrences in EOJ, I treat this as a loan from WOJ. The final vowel in WOJ is /ë/ which must come from earlier /a+i/.<sup>840</sup>

---

838. There may or may not be a final vowel /a/ here: it would be deleted when suffixation of the next morpheme occurs so it is not possible to prove whether the vowel exists in OJ or not.

839. As discussed in Section 2.2.4.3.3.3, contraction occurs when monophthongization cannot, i.e., when the vowels that come together do not ever monophthongize: the sequence /i+u/ does not monophthongize so contraction occurs instead.

840. The other source for WOJ /ë/ is pre-WOJ /ö+i/, but the vowel of the first syllable of this morpheme is /u/ and the process of vowel assimilation would prevent /ö/ from occurring here, as /ö/ cannot

#### 4.4.3.36 The Proto-OJ Tentative \*-ur-am-/-un-am-

The proto-OJ tentative has two forms: \*-*uram*- and \*-*unam*-; this form is attested in OJ but not found in the Ryūkyūan languages. I first present the distribution of this form across OJ and then reconstruct it for proto-OJ.

Table 4.32: The Proto-OJ Tentative \*-u-ram-

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
- <i>uram</i> -	—	- <i>unam</i> -	- <i>uram</i> -	- <i>uram</i> -/ - <i>unam</i> - <sup>841</sup>	—	—	—

As shown in Table 4.32 above, CEOJ and UEOJ both have the form \*-*unam*- while WOJ, SEOJ, and UEOJ have -*uram*-. This suffix can be analyzed as a compound consisting of the non-past stative suffix \*-*ur*- (Section 4.4.3.34), which marks the verb as a clause, followed by proto-OJ tentative \*-*am*- (Section 4.4.3.3). The correspondence between /r/ and /n/ here has yet to be explained, and will be set aside for further research.<sup>842</sup> For the purpose of this study, I treat these forms as a doublet in proto-OJ: \*-*ur-am*- ~ \*-*un-am*-.

---

follow a back vowel in the same morpheme.

841. UEOJ contains poems from the various dialects, thus it is possible that the form -*uram*- comes from one EOJ dialect and -*unam*- from another. Therefore, it is not clear whether this should be treated as dialect mixing or a doublet.

842. Unger (1993: 33) proposes that /r/ in initial position changes to /n/ before /a/ and uses the example *namë*- 'line up, put in order' (MYS: VI: 948) : *naraNpë*- 'id.' (MYS V: 794) to illustrate his point (the alternation between /m/ and /Np/ is common). Unger claims the initial syllable is reduplicated, thus *naraNpë*- < \**raraNpë*-, and then the initial /r/ > /n/ before /a/. However, a much simpler solution is that that *namë*- < \**naramë*- and that /r/ loss occurs here (Whitman 1985: 23-24, Russell 1997: 6-8).

#### 4.4.3.37 The Proto-OJ Suppositional \*-ur-asi-

The WOJ suppositional suffix *-urasi-*, typically translated as 'it seems that...!', occurs once in SEOJ and twice in UEOJ, but does not occur elsewhere in Japonic. In SEOJ and UEOJ, this form exists only as a final form, *-urasi*.<sup>843</sup> This, however, is not a convincing enough shift of scope to claim that this is a borrowing into EOJ, especially since it is the second to last position of the verbal string in WOJ and is often followed by the stative final WOJ *-i*. From a morphosyntactic perspective, it is logical that this morpheme would occur towards the end of the verb string; its scope is not only the verb it affixes to but the entire clause containing that verb. With only three examples in EOJ, it is difficult to determine whether this form exists in EOJ as the result of borrowing or whether these forms split from the same parent language. Although the distribution of this morpheme in EOJ is limited to SEOJ and UEOJ, which may suggest a borrowing, I tentatively reconstruct proto-OJ *\*-uras-* for this suffix.

Further, it is likely that this morpheme is built off of the proto-OJ non-past stative *\*-ur-* (Section 4.4.3.34). The function of the stative morpheme is to mark the verb as a clause. Therefore, I analyze OJ *\*-uras-* as deriving from proto-OJ *\*-ur-as-*.

---

843. As discussed above, this suffix is followed by the stative final WOJ *-i* (Section 2.2.5.3.3.7.3); where *-urasi-i* becomes *-urasi* in final position in WOJ. The EOJ suffix may also consist of two morphemes, but there is no evidence of *-urasi-* being used with any other suffix in EOJ. In WOJ *-urasi-* is also followed by attributive *-kî* (Section 2.2.5.3.3.7.4).

#### 4.4.3.38 The Proto-Japonic Stative \*-wo-

In addition to the statives discussed above (Sections 4.4.3.7 and 4.4.3.33), PJ has another stative which I reconstruct as \*-wo-. This suffix is found in the Ryūkyūan languages (as shown in Table 4.33), but not in OJ as an auxiliary. I return to this below.

Table 4.33: The Proto-Japonic \*-wo- in Ryūkyūan

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
( <i>wor-</i> )	—	—	—	—	- <i>yu-</i>	- <i>u-</i>	- <i>u-</i>

The Shuri form can come from either proto-RK \*/u/ or \*/o/. However, if the Yamatoma and Hirara forms came from proto-RK \*/u/, then this morpheme would be realized as /i/ following coronal consonants in both dialects. Thus, this morpheme must have derived from proto-RK \*/o/. Further, this suffix has been compared to the WOJ verb *wor-* 'to be, to sit' (K II: 6);<sup>844</sup> although this verb exists in WOJ it does not appear to be used as a stative morpheme. On the basis of the WOJ verb and the evidence for the stative morpheme in the Ryūkyūan languages coming from an earlier /o/, I reconstruct the proto-Japonic stative \*-wo-. Since the vowel /u/ does not occur after /w/ in Japonic, when the vowel raises to /u/ the labial glide is deleted: thus, \*-wo- > \*-wu- > -u-. In Yamatoma, the initial /y/ may be from /w/ or may be a Yamatoma innovation.<sup>845</sup>

---

844. See, e.g., Serafim and Shinzato (2000: 106), who treat this form in Shuri as an animate stative derived from the WOJ verb *wor-*.

845. Note that all Yamatoma statives begin with an initial /y/. It is not clear whether this is a trace of an

#### 4.4.3.39 The Proto-Japonic Final \*-yu-

The PJ final, or conclusive form, is attested in Japonic as follows:<sup>846</sup>

Table 4.34: The Final \*-yu- in Japonic

WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara
-u	-u	-u	-u	-u	——	-yun < *-yum	-im

Because of the Shuri and Hirara forms, an initial consonant must be reconstructed for this morpheme. If a /y/ is reconstructed, as the Shuri form indicates, then there are no problems reconstructing the Hirara form: the vowel \*/u/ would front to /i/ in Hirara following the palatal glide \*/y/.

This form accounts for the Ryūkyūan data, but does it explain the OJ forms? The proto-OJ form for this morpheme would be reconstructed as \*-u, we would therefore have to claim that the initial glide is deleted in OJ; the motivation for this is not known at this time and will be set aside for further research.<sup>847</sup>

---

initial PJ consonant, or whether this is a Yamatoma innovation. This issue will be set aside for further research.

846. In Yamatoma the stative -yu- < PJ \*-wo- is often used as a final form.

847. Serafim (2004) analyzes this form as stative suffix in RK; presumably the final consonant in Shuri can be explained by treating it as a suffix. This idea certainly has merit; however, it should be noted that this suffix functions differently than other statives, i.e., it only appears verb string finally and not both medially and finally like other stative suffixes in RK. More research is needed to further our understanding of these suffixes, especially their distributions and their functions.

## 4.5 Summary

Below I give a series of tables presenting the reconstructed forms of verbal morphemes, shown in bold italics, and the forms found in each Japonic language. First, I present derivational morphemes, and then inflectional morphemes by the oldest form that can be reconstructed, i.e., those for which a PJ form is reconstructed; those for which a proto-OJ form is reconstructed; those for which a proto-RK form is reconstructed; and finally, those for which a pre-WOJ form is reconstructed.

Table 4.35: Proto-Japonic and Pre-WOJ Derivational Morphemes

<b>PJ</b>	<b>pre-WOJ</b>	<b>pre-NEOJ</b>	<b>pre-CEOJ</b>	<b>pre-SEOJ</b>	<b>pre-UEOJ</b>	<b>pre-Yam.</b>	<b>pre-Shuri</b>	<b>pre-Hirara</b>	<b>function</b>
<b>*-ai-</b>	<b>*-Ai-</b>	<b>*-i/-ê</b>	<b>*-E-</b>	<b>*-e-</b>	<b>*-i/-E-</b>	<b>*-i/-e-</b>	<b>*-i-</b> < <b>*-e-</b>	<b>*-i-</b>	transitivity flipper
<b>*-am-</b>	<b>*-Am-</b>	—	<b>*-m-</b>	—	—	<b>-am-</b>	<b>-m-</b>	—	verbalizer
<b>*-ar-</b>	<b>*-Ar-</b>	<b>*-ör-</b>	<b>*-Vr-</b>	—	<b>*-Vr-</b>	<b>*-ar-</b>	<b>*-ri-</b> < <b>*-re-</b>	<b>*-ar-</b>	intransitivity
<b>*-as-</b>	<b>*-As-</b>	<b>*-ös-</b>	<b>*-s-</b>	—	<b>*-s-</b>	<b>*-as-</b>	<b>*-s-</b>	<b>*-as-</b>	transitivity
—	<b>*-Ak-</b>	—	—	—	—	—	—	—	verbalizer
—	<b>*-Ap-</b>	—	—	—	—	—	—	—	durative

Table 4.36: Proto-Japonic Inflectional Morphemes

PJ	WOJ	NEOJ	CEOJ	SEOJ	UEOJ	Yam.	Shuri	Hirara	function
*-am-	-am-	-am-	-am-	-am-	-am-	-a/-o	-ra	-a	tentative
*-an-	-an-	-an-	-an-	-an-	-an-	-yan- < -ran-	-ran-	-an-	negative
*-aNpa	-aNpa	-aNpa	-aNpa	-aNpa	-aNpa	—	-ra:	—	conditional
*-aNs-	-aNs-	-aNs-	-aNs-	-aNs-	-aNs-	-azï	—	—	negative
*-asimai-	-asimë-	—	-simë-	—	—	—	-asimi-	-asimi-	causative
*-e, *-rə, *-re	-ê/-yö	—	-e/-yö/ -ërö	-ë	-e/-rö	-ri	-ri < re	-i/-ru	imperative
*-i	-î	-î	-î	-î	-î	-i	-i	-i/-ï	infinitive
*-i	-î	-î	-î	—	-î	-i	-i	-i	nominalizer
*-na	na...sö <sub>848</sub>	—	na...sö	na...sö	—	-na	-na	-na	negative imperative
*-Npa	-Npa	-Npa	-Npa	-Npa	-Npa	-ba	-re:	-riba	conjunctive
*-rai	-ë/-ure	-ë/-ure	-ë/-ure	-E/-ure	-ë/-ure	-ï	-re:	-riba	evidential
*-ri	-i	—	-i	-i	-i	-ri	-i	-ï	stative final
*-ö, *-ru	-u/-uru	-u/-ô/ -uru	-u/-ô/ -uru	-u/-ô/ -uru	-u/-ô/ -uru	-ru	-ru	-ï	attributive
*-t-	-t-	-t-	-t-	-t-	-t-	-t <sup>h</sup> -	-t-	-t-	perfective
*-t- <sup>?</sup> ar-	-tar- < -t-ar-	-tar- < -t-ar-	—	-tar- < -t-ar-	-tar- < -t-ar-	-t <sup>h</sup> a- < -t <sup>h</sup> -a-	-tai < -t-a-i	-tai < -t-a-ï	perfective progressive
*-te-	-te	-te	-te	-te	-te	-t <sup>h</sup> ï	-ti	-tti	gerund
*- <sup>?</sup> ura-	-ur-	-ur-	-ur-	-ur-	-ur-	-yo:-	-o:-	-u-	non-past stative
*-wo-	(wor-)	—	—	—	—	-yu-	-u-	-u-	stative
*-yu	-u	-u	-u	-u	-u	—	-yun< * -yum	-im	final

848. See also proto-OJ negative imperative *na...sö*.

Table 4.37: Proto-OJ Inflectional Morphemes

proto-OJ	WOJ	NEOJ	CEOJ	SEOJ	UEOJ	function
<i>prefixes</i>						
* <i>sa-</i>	<i>sa-</i>	—	<i>sa-</i>	—	<i>sa-</i>	thus
* <i>uti-</i>	<i>uti-</i>			<i>uti-</i>	<i>uti-</i>	emphatic
<i>circumfix</i>						
* <i>na...sə</i>	<i>na...sö</i>	—	<i>na...sö</i>	<i>na...sö</i>	—	negative imperative
<i>suffixes</i>						
* <i>-aku</i>	<i>-aku</i>	<i>-aku</i>	<i>-aku</i>	—	<i>-aku</i>	nominalizer
* <i>-ana</i>	* <i>-ana</i>	* <i>-ane</i>	* <i>-ana</i>	<i>-ane</i>	* <i>-ane</i>	desiderative
* <i>-ar-</i>	<i>-êr-</i>	<i>-ar-</i>	<i>-ar-/ -êr-</i>	<i>-er-</i>	<i>-ar-/ -êr-</i>	progressive
* <i>-as-</i>	<i>-as-</i>	<i>-as-</i>	<i>-as-</i>	<i>-as-</i>	<i>-as-</i>	honorific
* <i>-aye-</i>	<i>-aye-</i>	<i>-aye-</i>	<i>-aye-</i>	<i>-are-/ -aye-</i>	<i>-aye-</i>	passive
* <i>-imas-</i>	<i>-imas-</i>	—	—	—	<i>-mas-</i>	honorific
* <i>-ki-ar-</i>	<i>-kêr-</i>	—	<i>-kar-/ -kEr-</i>	<i>-kêr-</i>	—	modal past
* <i>-n-</i>	<i>-n-</i>	<i>-n-</i>	<i>-n-</i>	<i>-n-</i>	<i>-n-</i>	perfective
* <i>-Ntə</i>	<i>-Ntö</i>	<i>-Ntö</i>	<i>-Ntö</i>	<i>-Ntö</i>	<i>-Ntö</i>	concessive
* <i>-si</i>	<i>-si</i>	<i>-si</i>	<i>-si</i>	<i>-si</i>	<i>-si</i>	attributive past
* <i>-tamap-</i>	<i>-tamap-</i>	—	<i>-tamap-</i>	—	—	respectful
* <i>-tutu</i>	<i>-tutu</i>	<i>-tutu</i>	<i>-tutu/ -tötö</i> <i>-tusi/ -susu</i>	<i>-tutu</i>	<i>-tutu</i>	coordinative
* <i>-uNpai-</i>	<i>-uNpë-</i>	—	<i>-uNpê-</i>	—	<i>-uNpë-</i>	debitive
* <i>-ur-am-/</i> * <i>-un-am</i>	<i>-uram-</i>	—	<i>-unam-</i>	<i>-uram-</i>	<i>-uram-/</i> <i>-unam-</i>	tentative
* <i>-ur-asi-</i>	<i>-urasi-</i>	—	—	<i>-urasi</i>	<i>-urasi</i>	suppositional

Table 4.38: Proto-RK Inflectional Morphemes

proto-RK	Yamatoma	Shuri	Hirara	function
* <i>-ʔar-</i>	<i>-ya-</i>	<i>-a-</i>	<i>-a-</i>	past stative
* <i>-are-</i>	<i>-rar-</i>	<i>-rari-</i>	<i>-rai-</i>	passive, potential

Table 4.39: Pre-WOJ Inflectional Morphemes

<b>pre-WOJ</b>	<b>WOJ</b>	<b>NEOJ</b>	<b>CEOJ</b>	<b>SEOJ</b>	<b>UEOJ</b>	<b>function</b>
<i>prefixes</i>						
<b>*kaki-</b>	<i>kakî-</i>	—	<i>kakî-</i>	—	—	emphatic
<i>suffixes</i>						
<b>*-aNsi</b>	<i>-aNsi</i>	—	<i>-aNsi</i>	—	<i>-aNsi</i>	negative tentative
<b>*-ap-</b>	<i>-ap-</i>	<i>-ap-</i>	<i>-ap-</i>	—	<i>-ap-</i>	durative
<b>*-ki</b>	<i>-kî</i>	—	—	—	—	past
<b>*-ki-am-</b>	<i>-kêm-</i>	—	<i>-kêm-</i>	<i>-kêm-</i>	<i>-kêm-</i>	tentative past
<b>*-matur-</b>	<i>-matur-</i>	<i>-matur-</i>	—	—	—	humble

## CHAPTER 5. CONCLUSION

This dissertation represents the first reconstruction of the proto-Japonic verbal system ever presented. It is based on five representative languages of the Japonic language family: WOJ, EOJ, Yamatoma, Shuri, and Hirara. My treatment of EOJ was further divided into three dialect areas, NEOJ, CEOJ, and SEOJ, and a fourth group, UEOJ, consisting of data that could not be classified as a member of any of the other dialects.

The goal of this dissertation was to investigate the development of verbal morphology in Japonic languages to further our understanding of the history of the Japonic language family itself. Throughout this study I presented a number of discoveries about the languages and dialects. Below I will highlight some of the major discoveries for each language or dialect and then note the major discoveries for the language family. The discussion in this chapter mirrors the order of the presentation of language data in this text: WOJ, EOJ, Yamatoma, Shuri, Hirara, and PJ verbal morphology.

## 5.1 Western Old Japanese

My discussion of WOJ improved our understanding of WOJ morphophonemics in the following ways:

- The new proposal of the process of vowel assimilation in derivational morphology, which also accounts for previous observations that front and back vowels do not occur in the same morpheme. My analysis of vowel assimilation explains that a vowel assimilates to the feature, plus or minus back, of the vowel in the previous syllable. This process occurs only when derivational morphemes are suffixed but does not occur when inflectional morphemes are suffixed to a verb root. In other words, this process applies only to derivation and not inflection. This was discussed in detail in Section 2.2.5.1.3.1.
- A reanalysis of the attributive form of verbs which accounts for the attributive form found in WOJ with the copula *n-*, i.e., *n-ō*, and the EOJ attributive *-u*. This is discussed in Section 2.2.5.3.3.8.14.

## 5.2 Eastern Old Japanese

My discussion of EOJ improved our understanding in the following ways:

- WOJ poems found in Books XIV and XX of the *Man'yōshū*, the source for EOJ data, were rejected from my analysis of EOJ. Most previous studies included these data, obtaining skewed results.
- Previous studies of EOJ analyzed morphological features as if EOJ constituted one homogeneous dialect. My treatment of EOJ analyzed the various forms of EOJ as separate dialects: NEOJ, CEOJ, and SEOJ. I also analyzed the EOJ poems of unknown origin (UEOJ) separately from the other dialects. Treating these varieties of EOJ as separate dialects belonging to a dialect continuum furthered our understanding of EOJ phonology and morphology.

- Reanalysis of the development of the EOJ attributive, which better accounts for the correspondence between WOJ attributive *-u* and EOJ attributive *-ô* sometimes found after consonant final verb stems. This is discussed in Sections 2.2.5.3.3.8.14 (WOJ), 2.3.4.2.3.1.6.9 (NEOJ), 2.3.5.2.3.3.6.12 (CEOJ), 2.3.6.2.3.3.6.11 (SEOJ), and 2.3.7.2.3.3.6.12 (UEOJ).
- A description and discussion of EOJ derivational morphology, which has not been presented previously.

### **5.3 Yamatoma**

A number of findings were also presented in my analysis of Yamatoma:

- My treatment of Yamatoma is the first morphophonemic analysis of this dialect and the first description of this language in English. It is also the first analysis of Yamatoma derivational and inflectional verbal morphology.
- I presented evidence for the need to analyze the glottal stop /ʔ/ and a glottal glide /ʔ/ as distinct phonemes based on minimal pairs and morphological processes found in verbs which can only be analyzed as consonant final ending in /ʔ/. This is discussed in Section 3.2.3.1.7.
- Aspiration in Yamatoma was used as evidence for reconstructing vowel final verb roots. The vowels in such cases can only be reconstructed as non-high vowels; the exact vowel is not yet reconstructable. This is discussed in Section 3.2.4.1.

### **5.4 Shuri**

A number of findings were presented in my analysis of Shuri, including:

- The first analysis of Shuri derivational verbal morphology.

- Further discussion of the types of verbal statives found in Shuri, and comparison of their functions.
- A deeper understanding of the development of inflectional morphology building on previous research, particularly those published by Ashworth (1973) and Thorpe (1983).

## **5.5 Hirara**

My presentation of Hirara, the first description of the dialect of Miyako presented in English, introduced a number of significant findings, including:

- First discussion of Hirara verbal derivational and inflectional morphology.
- First morphophonemic description according to Western linguistic traditions.

## **5.6 Reconstruction of Proto-Japonic Verbal Morphology**

The final chapter was significant for a number of reasons:

- It presents the first reconstruction of PJ verbal morphology.
- It also provides the first discussion of morpheme ordering in verbal strings as a criterion for determining whether morphemes exist in a particular Japonic language or dialect as part of a natural development as the result of splitting from a parent language, or as the result of borrowing from another Japonic dialect.
- It also furthered understanding of the use of statives in Japonic languages, and especially indicated that the use of statives in OJ was more common than previously thought.

## Appendix A: WOJ Verb Root Data

First I present the roots showing the verbs that support their reconstructions, then present the data for each derivational suffix in the following order: \*-Ai-, \*-Ak-, \*-Am-, \*-Ap-, \*-Ar-, \*-As-.

### Evidence for pre-WOJ Verb Roots

Pre-WOJ root	WOJ verbs	reconstruction	gloss	attestation
*aka- <sup>849</sup>	akas- akar- akë- akaraNp-	*aka-As- *aka-Ar- *aka-Ai- *aka-Ar-ANp- <sup>850</sup>	let brighten, pass the night brighten, redden dawn redden	MYS XV: 3648 MYS XIX: 4266 MYS XV: 3662 Norito
*aka-	akë-	*aka-Ai-	open (v.t.) <sup>851</sup>	MYS IV: 591
*ama-	amas- amar-	*ama-As- *ama-Ar-	leave excess be in excess	K III: 29: 6 K III: 12: 7
*amu-	am- <sup>852</sup> amus-	*amu- *amu-As-	be bathed bathe (v.t.)	Nihonryōiki I: 6 MYS XVI: 3824
*aNka-	aNkar- aNkë-	*aNka-Ar- *aNka-Ai-	rise give	MYS XIV: 4292 KK 55
*apa-	apë- ap-	*apa-Ai- *apa-	join (v.i.) join (v.t.)	MYS XIX: 4189 MYS XVIII: 4106
*ara- <sup>853</sup>	are- aras-	*ara-Ai- *ara-As-	be wasted destroy	MYS I: 194 MYS XX: 4477
*ata-	atar- ate-	*ata-Ar- *ata-Ai-	touch, strike strike, assign (v.t.)	KK 76 KK 42

849. There is also an adjective formed with this root: aka- 'red' (MYS V: 892).

850. It is not clear what the function of -ANp- is.

851. The intransitive verb *ak-* is not attested phonetically in WOJ.

852. The form \**ami-*, usually presented as the intransitive form of the verb 'bathe', is only attested in Nihonryōiki I: 6 and RM, but Nihonryōiki I: 6 clearly shows *amûte* < *am-î-te* 'bathe-INF-GER' "bathing" with a *kōrui î*, so there is no basis for claiming the verb \**ami-* existed in WOJ. In MJ it does occur as *ami-*, which would presumably come from earlier \**ami-*, and behaves as a verb with a vowel final verb stem.

853. The reconstruction of this verb root is also supported by the adjective *arasi-* 'wild' (MYS XV: 3688, MYS XX: 4477-WOJ).

*atapa-	atap- atapë-	*atapa- *atapa-Ai-	give, be able give	K I: 30: 1RM
*iNta-	iNtas- iNte-	*iNta-As- *iNta-Ai-	put out (v.t.) go out (v.i.)	MYS XV: 3582 MYS XVII: 4008
*ira-	ire-ir-	*ira-Ai- *ira-	put in go in	MYS XVI: 3827 KK 10
*ita	itar- itas- <sup>854</sup>	*ita-Ar- *ita-As-	arrive make arrive	MYS XVII: 4011 RM
*ita- <sup>855</sup>	itam-	*ita-Am-	be sick	Shinsenjikyō
*ka-	kas- kar-	*ka-As- *ka-Ar-	loan borrow	MYS XVIII: 4032 MYS XVII: 4016
*kaka	kakë-	*kaka-Ai-	lack	NR, RM
*kaka-	kakar- kak- kakë-	*kaka-Ar- *kaka- *kaka-Ai-	hang (v.i.) hang (v.t.) hang (v.t.)	MYS V: 801 MYS V: 892 MYS V: 904
*kaku-	kakus- kakur-	*kaku-As- *kaku-Ar-	hide (v.t.) be hidden	MYS I: 18 KK 3
*kana- <sup>856</sup>	kane-	*kana-Ai-	be unable	MYS V: 875
*kaNsa-	kaNsas- kaNsar-	*kaNsa-As- *kaNsa-Ar-	adorn (v.t.) adorn (v.i.)	MYS V: 820 MYS XVII: 3965
*kapa-	kapas- kapar- kapë- kap-	*kapa-As- *kapa-Ar- *kapa-Ai- *kapa-	do together, shift (v.t.) change (v.i.) do together, shift (v.t.) be together, shift (v.t.)	MYS V: 804 MYS XIX: 4160 MYS III: 285 Fudoki; Shinsenjikyō
*kara-	karas- kare-	*kara-As- *kara-Ai-	dry (v.t.) wither	K II: 60: 2 MYS XVIII: 4111
*kara-	kare-	*kara-Ai-	be parted	MYS XV: 3731

854. The verb *itas-* is attested as *ITAsi* so only the final syllable is attested phonetically.

855. The reconstruction of this root is supported by the adjectives *itapasi-* 'strained, painful' (MYS V: 884) and *ita-* 'pain' (MYS XV: 3767).

856. Russell (1997) and Unger (1993) both list *kanasibi-* (< *\*kana-si-mopo-Ci-*) 'sad' under this root; I now reject this for semantic reasons.

*kata- <sup>857</sup>	katamë- kate-	*kata-Am-Ai- *kata-Ai-	harden (v.t.) be difficult	MYS XX: 4487 NK 19
*kikö-	kîkös- kîköye-kîk-	*kikö-As- *kikö-Ay-Ai- *kikö-	say (HON) be heard hear	K I: 31: 2 K III: 20: 4 MYS XVII: 3909
*kipa-	kîpamar- kîpam- kîpamë-	*kipam-Ar- *kipam- *kipam-Ai-	reach limit make reach limit make reach limit	RM MYS V: 800 RM
*kira-	kîre-kîr-	*kira-Ai- *kira-	be cut (v.i.) cut (v.t.)	KK 109 MYS V: 892
*kita-	kîtamë-	*kitama-Ai-	punish	Edict 62
*kömö-	kömor- kömî- kömë-	*kömö-Ar- *kömö-Ai- *kömö-Ai-	insert (v.i.) insert (v.t.) insert (v.t.)	MYS XIX: 4283 K II: 45 45: 3 MYS XVII: 3998
*köyö-	köi- < *köyi-	*köyö-Ai-	recline	MYS XVII: 3969
*kuku-	kukur-	*kuku-Ar-	leak out	MYS IV: 507
*kuNtaka-	kuNtak- kuNtakë-	*kuNtaka- *kuNtaka-Ai-	smash (v.t.) smash (v.i.)	NR I NR III: 14th story
*kura- <sup>858</sup>	kuras-kure-	*kura-As- *kura-Ai-	let time pass grow dark, get late	MYS V: 818 MYS IV: 485
*kuraNpa-	kuraNpä-	*kuraNpa-Ai-	compare	NR II: 4th story
*kuta-	kutas-	*kuta-sa-	let rot	MYS V: 900
*kuta- ~ *kuNta	kuNtas- kuNtar- kutat-	*kuNta-As- *kuNta-Ar- *kuta-At-	let down, put downgo downgo down	Fudoki Kayō 11 MYS XVIII: 4094 MYS V: 847
*maka-	makar- mak-	*maka-Ar- *maka-	retreat (v.i.) retreat, dismiss (v.t.)	MYS XV: 3725 KK 3
*maNka-	maNkar- maNkë-	*maNka-Ar- *maNka-Ai-	endure, be bentbend	K 41: 3 MYS V: 892
*maNsi-	maNsipë- maNsir-	*maNsi-Ap-Ai- *maNsi-Ar-	mix (v.t.) mix (v.i.)	MYS XVIII: 4101 MYS V: 849

857. This reconstruction of this root is supported by the adjective *kata-* 'hard' (MYS XX: 4487-WOJ).

858. The reconstruction of this root is further supported by the adjective *kura-* 'dark' (Shinsenjikō), the noun *kure* 'late (of time), lateness' (MYS XVIII: 4053).

*masa-	masar-	*masa-Ar-	excel	MYS XV: 3781
*masa-	mas- mase-	*masa- *masa-Ai-	be, go, come make, be	MYS III: 243 RM
*mita-	mîte-	*mita-Ai-	fill	MYS XVIII: 4057
*mötömö-	motömë-	*mötömö-Ai-	seek	MYS XVII: 4014
*muka-	mukap- mukapë- mukë-	*muka-Ap- *muka-Ap-Ai- *muka-Ai-	face (v.i.) greet face (v.t.)	MYS XVII: 3988 KK 88 MYS XIX: 4191
*naka-	nak-nakë-	*naka- *naka-Ai-	cry make cry	MYS XVII: 3962 MYS XX: 4437 <sup>859</sup>
*nama-	namar- naNp-	*naNpa-Ar- *naNpa-	be hidden be hidden	MYS XVI: 3886 Fudoki
*nama-	namë-	*nama-Ai-	taste	MYS VII: 1323
*nama-	nam- namë-	*nama- *nama-Ai-	line up (v.i.) line up (v.t.)	MYS IX: 1780 MYS VI: 948
*naNka-	naNkas- naNkarapë- naNkare-	*naNka-As- *naNka-Ar-Ap- Ai- *naNka-Ar-Ai-	make flow (rain) falls, (time) passes flow	MYS XVIII: 4094 MYS XIX: 4160 MYS V: 822
*naNku-	naNki- naNkusam-	*naNku-Ai- *naNku-As-Am-	get still be at ease	MYS V: 753 MYS VI: 963
*naNpa-	naNpë-	*naNpa-Ai-	make bow	MYS I: 1
*naNpik-	naNpîkas- naNpîk-	*naNpik- As*naNpîk-	make bow (v.t.) bow	MYS XV: 3705 MYS XX: 4309 <sup>860</sup>
*naNta-	naNte-	*naNta-Ai-	pat	MYS XIX: 4155
*naNtama-	naNtamë-	*naNtama-Ai-	excuse	Edict 53
*nara-	narap- nare-	*nara-Ap- *nara-Ai-	learn, be familiar with get used to	NR III MYS XII: 3048
*naraNpa- <sup>861</sup>	naraNp- naraNpë-	*naraNpa- *naraNpa-Ai-	line up (v.i.) line up (v.t.)	MYS V: 794 MYS XIX: 4264
*niku- <sup>862</sup>	nikum-	*niku-Am-	hate	MYS V: 804

859. This is a WOJ poem presented in Book XX.

860. This is a WOJ poem presented in Book XX.

861. Russell (1997) and Unger (1993) have this with nama- 'line up'.

862. This verb root is also reconstructed on the basis of the adjective *niku*- 'hateful' MYS I: 21.

*niNka-	niNkē-	*niNka-Ai-	flee	K III: 31: 7
*nökō-	nökös- nökör-	*nökō-As- *nökō-Ar-	leave (v.t.)remain, get left behind	MYS XVI: 3794 MYS V: 849
*nura-	nure-	*nura-Ai-	get soaked, stained	MYS V: 855
*nura-	nuras- nure-	*nura-As- *nura-Ai-	unfasten come loose	MYS XI: 2610 MYS II: 112
*ökō-	okī- okös- okör-	*ökō-Ai *ökō-As- *ökō-Ar-	awaken wake, raise begin, awaken	Kenzōzenki (NSK) MYS XIX: 4164 tōaiji yōtoku
*ömöpō- <sup>863</sup>	omop- omopos- omopoye-	*ömöpō- *ömöpō-As- *ömöpō-Ay-Ai-	think, feel think, feel HON be thought	MYS XVII: 4016 MYS XV: 3736 MYS XVII: 3989
*öNtō-	oNti-	*öNtō-Ai-	menace	MYS XV: 3647
*öpō-	opī- opos-	*öpō-Ai- *öpō-As-	grow cultivate	MYS V: 804 MYS XVIII: 4113
*örō-	ori- orös-	*örō-Ai- *örō-As-	go down let down, lower (v.t.)	RM MYS XV: 3603
*ösō-	osō- <sup>864</sup>	*ösō-	push	KK 2
*ötō-	oti- otös- otör-	*ötō-Ai- *ötō-As- *ötō-Ar-	fall drop be lower, inferior decrease	MYS XV: 3647 Nihonryōiki III: 4th story Bussoku 13
*paka-	pakē-	*paka-Ai-	string (bow), dress, wear a sword	KK 23
*pama-	pamē-	*pama-Ai-	put, throw in	MYS XVII: 3941
*paNpu-	paNpur-	*paNpu-Ar-	go away	K 25: 4
*paNtu- <sup>865</sup>	paNti-	*paNtu-Ai-	be ashamed	Shinsenjikyō

863. This root is also reconstructed on the basis of the adjective *omoposi-* 'dear, loving' (MYS XII: 3962). Russell (1997) also reconstructs 'think, feel, love' reconstructed as *mopo-* with *o-* as an honorific prefix (following Unger's [1993] reconstruction), and *mopo-* is used in word formation as well. I am not convinced of the logic of claiming there is an honorific prefix here. Why would only one verb in the lexicon have *o-* as a prefix? Further, why this particular verb, which clearly has to do with one's own thoughts and feelings and not another? I no longer reconstruct *omop-* as consisting of the honorific prefix, and also reject *mopo-* as a verbal formant, as semantically it is not justified in the verb roots reconstructed by Unger (1993) and Russell (1997).

864. This verb is attested as *osō-* in KK 2.

865. This reconstruction of this root is further supported by the adjective *paNtukasi-* 'embarrassed' (MYS

*papa-	papë- pap-	*papa-Ai- *papa-	stretch (v.t.) stretch (v.i.)	MYS V: 894 KK 13
*para-	pare-	*para-Ai-	swell (v.i.) <sup>866</sup>	Nihonryōiki III: 16th story
*parapa- <sup>867</sup>	parap- parapë-	*parapa- *parapa-Ai-	pay, atone (v.t.) atone (v.i.)	Shinsenjikyō MYS XVII: 4031
*paruka-	parukas- paruk-	*paruka-As- *paruka-	dispel (v.t.) dispel (v.i.)	Norito K III: 43: 3
*pata-	patas- pate-	*pata-As- *pata-Ai-	fulfill, finish, accomplish end, finish	NK 89 MYS X: 1843
*paya-	payas-paye-	*paya-As- *paya-Ai-	make grow grow	MYS XVII: 3895 MYS II: 196
*pika-	pîkar-	*pika-Ar-	shine	MYS V: 855
*pikö-	pîkë- <sup>868</sup> pîk-	*pikö-Ai- *pikö-	be pulled pull	K I: 33: 5 KK 2
*pipi-	pîpîk- pîpîrak-	*pipi-Ak- *pipi-Ar-Ak-	be pungent pungent	KK 12 Shinsenjikyō
*pirö- <sup>869</sup>	pîrömë- pîrör-	*pirö-Am-Ai- *pirö-Ar-	widen (v.t.) widen (v.i.)	Edict 28 KK 101
*pökörö-	pokör- poköröp-	*pökör- *pökör-Ap-	boast be proud	MYS XVII: 4011 MYS V: 892
*pöröNpö-	poröNpî- poröNpös-	*pröröNpö-Ai- *pöröNpö-As-	go to ruin ruin	BSK MYS XV: 3724
*puka- <sup>870</sup>	pukamë- pukë-	*puka-Am-Ai- *puka-Ai-	make deep grow late, (night) deepens	MYS XVIII: 4106 MYS XIX: 4163

XVIII: 4108), cf., *paNtukasim-* 'shame' the adjective *paNtukasi-* plus the verbalizer *\*-Am-*.

866. The transitive is only attested phonetically in EOJ.

867. Unger (1997) and Russell (1993) present this under the root *para-* 'clean up'.

868. The verb *pîkë-* has one questionable attestation, where it appears twice in same line. Omodaka et al. (1967) thinks this is the potential of pull: *pikö-* (attested as *pikö* in KK 2). However, the potential form of this verb is expected to be *\*pîkaye-* < *pîk-aye-*.

869. The reconstruction of this verb root is further supported by the adjective and noun *pîrö* 'wide' (MYS V: 892).

870. The reconstruction of this verb root is further supported by the adjective *puka-* 'deep' (MYS XX: 4491-WOJ).

*pura-	pure- pur-	*pura-Ai- *pura-	touch (v.t.), gossip touch	MYS XVII: 3968 KK 78
*puru- <sup>871</sup>	puri- purus-	*puru-Ai- *puru-As-	get old make old	MYS XVII: 3919 MYS VII: 1326
*pusa- <sup>872</sup>	pusane-	*pusa-An-Ai-	bundle	RM
*saka-	sakar- sakë-	*saka-Ar- *saka-Ai-	be apart part; split in two	MYS XV: 3688 MYX XIX: 4236
*saka-	sakë- sakar-	*saka-Ai- *saka-Ar-	shun, avoid, separate separate	MYS XIX: 4236 NK 3
*saku- <sup>873</sup>	sak-	*saku-	bloom	MYS V: 817
*sama-	samas- samë-	*sama-As- *sama-Ai-	open eyes (v.t.) wake (v.i.); sober up	Bussoku 21 NR I: 5th story
saNtuka-	saNtukë-	*saNtuka-Ai-	throw, give	MYS XX: 4465 <sup>874</sup>
*sapa-	sapar-	*sapa-Ar-	hinder (v.i.) <sup>875</sup>	MYS XVII: 3973
*saya	saye-	*saya-Ai-	gleam	MYS XIII: 3281
*siki-	sikîr- sik-	*siki-Ar- *siki-	spread, layerspread out	MYS VI: 937 K II: 10: 8
*sinöpö-	sinöNpî-	*sinöNpö-Ai-	enure, wrap to hide, secret	MYS XVII: 3940
*siNtu-	siNtuk- siNtumar- siNtumë-	*siNtu-Ak- *siNtu-Am-Ar- *siNtu-Am-Ai-	sink (v.i.) get quiet sink (v.t.), quiet (v.t.)	MYS XIX: 4199 RM MYS V: 813
*sira-	sir- sire-	*sira- *sira-Ai-	be known make known	MYS XVIII: 4094 MYS VIII: 1446
*siwa- <sup>876</sup>	siwam-	*siwa-Am-	wrinkle (v.i.)	RM

871. The reconstruction of this root is also supported by the adjective *puru-* 'old' (MYS XVII: 3920). The verb *puri-* conjugates as a vowel final verb stem verb in MJ, but it is not possible to determine if the stem is *pur-* or *puri-* in WOJ, but I have presented it as *puri-* on the basis of its form in MJ.

872. The reconstruction of this root is also supported by the noun *pusa* 'bundle' (MYS XVII: 3943).

873. This root is supported by the noun *sakura* 'flower' (MYS XVII: 3967) which is formed from the root *saku-* plus the nominalizer *ra*.

874. This is a WOJ poem in Book XX.

875. The transitive verb *sapë-* is not attested phonetically in WOJ.

876. The reconstruction of this root is also supported by the noun *siwa* 'wrinkle' (MYS V: 804).

*sökö-	sökë- sök-	*sökö-Ai- *sökö-	separate (v.i.) separate (v.t.)	MYS XVI: 3832 K III: 4: 6
*sömö- <sup>877</sup>	sömë-	*sömö-Ai-	begin	MYS XVIII: 4087
*suku-	sukup-	*sukup-	rescue, save	Bussoku 4
*suma-	sumas-sum-	*suma-As- *suma-	cleanse (v.t.) cleanse (v.i.)	NR I; RM Shokunihongi
*suma-	sum- sumap-	*suma- *suma-Ap-	reside reside	MYS XV: 3748 MYS V: 880
*suNku-	suNki- suNkus- suNkure-	*suNku-Ai- *suNku-As- *suNku-Ar-Ai-	pass time let pass excel	K III: 5: 8-9 MYS V: 804 MYS XIII: 3309
*suNpa-	suNpë-	*suNpa-Ai-	make one	NR III: 30th story
*susu-	susumë- susum-	*susuma-Ai- *susuma-	advance (v.t.) advance (v.i.)	Bussoku 18 Bussoku 6
*suta	sute-	*suta-Ai-	discard	MYS V: 900
*suwa-	suwe-	*suwa-Ai-	make sit	MYS II: 202
*taka- <sup>878</sup>	takar-	*taka-Ar-	be high	KK 101
*taka-	takare-	*taka-Ar-Ai-	collect	K I: 9: 3
*tama-	taNpar- tamapar- tamap- tamapë-	*tamap-Ar- *tamap-Ar- *tamap- *tamap-Ai-	receive (humble) give (to inferior) give receive (humble)	MYS XVIII: 4133 Edict 45 MYS V: 882 MYS XV: 3767
*taNtuna-	taNtune-	*taNtuna-Ai-	ask, seek	Bussoku 8
*tapa-	tapakë- tapare-	*tapa-Ak-Ai- *tapa-Ar-Ai-	commit adultery commit adultery	Shinsenjikyō MYS IX: 1738
*tata-	tatane- tate-	*tata-An-Ai- *tata-Ai-	pile up (v.t.) erect, put up (v.t.)	MYS XV: 3724 K II: 65: 6
*taya-	taye- tat-	*ta-Aya-Ai- *ta-At-	be cut, end (v.i.) cut, end (v.t.)	MYS XV: 3605 MYS XX: 4465 <sup>879</sup>

877. The root *sömö-* is reconstructed here on the basis of *sömösömö* 'to begin with' (Unger [1993]; Russell [1997]).

878. The reconstruction of this root is also supported by the adjective *taka-* 'high' (MYS XV: 3675).

879. This is a WOJ poem in Book XX.

*tira-	tir- tiras-	*tira- *tira-As-	scatter (v.i.) scatter (v.t.)	MYS V: 822 MYS XVIII: 4043
*töma-	tömar- <sup>880</sup> tömë-	*töma-Ar- *töma-Ai-	stop (v.i.) stop (v.t.)	MYS II: 151 MYS XV: 3627
*tömö-	tömos-	*tömö-As-	kindle	MYS XV: 3648
*töNtörö- <sup>881</sup>	töNtörök- töNtörökös-	*töNtörök- *töNtörök-As-	be noisy be noisy	Shinsenjikyō K I: 20: 4
*töpö-	töpos- töpor-	*töpö-As- *töpö-Ar-	let through pass thorough	Kogoshūi MYS V: 905
*tötönöpö-	tötönöpë- tötönöp-	*tötönöpö-Ai- *tötönöpö-	arrange (v.t.) arrange (v.i.)	MYS XIX: 4254Edict 29
*töyömö-	töyöm- töyömë- töyömos-	*töyömö- *töyömö-Ai- *töyömö-As-	resound (v.i.) make a sound make a sound (v.t.)	K III: 31: 1 MYS XV: 3680 MYS XV: 3782
*tuka-	tukë- tuk-	*tuka-Ai- *tuka-	attach (v.t.) attach (v.i.)	MYS XIX: 4162 MYS XV: 3688
*tuka-	tukas- tukë-	*tuka-As- *tuka-Ai-	soak, pickle (v.t.) soak, pickle (v.t.)	MYS XVII: 4024 Shinsenjikyō
*tukapa-	tukapë- tukap-	*tukapa-Ai- *tukapa-	serve make serve, use	MYS XVIII: 4100 KK 2
*tukara- <sup>882</sup>	tukaras- tukare-	*tukara-As- *tukara-Ai-	tire (v.t.) tire (v.i.)	RM NR II: 25th story
*tuku-	tukī- tukus-	*tuku-Ai- *tuku-As-	get exhausted use up	MYS XX: 4458 MYS XVIII: 4094 <sup>883</sup>
*tuNka-	tuNkë-	*tuNka-Ai-	tell, report	MYS XVII: 3918
*tuta-	tutap- tute-	*tuta-Ap- *tuta-Ai-	be communicated communicate	K II: 47: 6 MYS XVII: 3962
*tutuka-	tutukë- tutuk-	*tutuka-Ai- *tutuka-	continue (v.t.) continue (v.i.)	MYS XVIII: 4130 MYS V: 804

880. This verb is attested only in its nominalized form *tömari* 'as in a place where boats stop' < *tömar-i* (MYS II: 151).

881. The reconstruction of this root is also supported by *töNtörö* '[onomatopoea, the sound of falling water, singing birds]' (MYS XV: 3617), also, *töNtörökî* as part of a god's name.

882. The reconstruction of this root is also supported by the adjective *tukarasi-* 'tired' (Edict 45).

883. This is a WOJ poem in Book XX.

*uka-	ukē-	*uka-Ai-	receive	Shinsenjikyō
*uka-	ukat-ukē-	*uka-Ata- *uka-Ai-	make a hole be open, gape	Nihonryōiki I: 4 & Shinsenjikyō MYS V: 800
*uka-	ukaNp- ukaNpë- ukē- uk-	*uka-ANp- *uka-ANp-Ai- *uka-Ai- *uka-	float (v.i.) float (v.t.) float (v.t.) float (v.i.)	MYS V: 852 MYS V: 840 MYS XX: 4398 <sup>884</sup> K III: 34: 2
*uma-	umare- um-	*uma-Ar-Ai- *uma-	be born give birth	Nihonryōiki I: 18 K I: 2: 8
*uta- <sup>885</sup>	utak- utap-	*uta-Ak- *uta-Ap-	roar sing	KK 98 K II:55: 7
uta-	ute-	*uta-ai-	discard	K I: 33: 4
*utu-	utus- utur- uturöp-	*utu-sa- *utu-ra- *utu-ra-pa-	transfer change (v.i.) change (v.t.)	Bussoku 9 Bussoku 10 MYS V: 804
*uwa-	uwe-	*uwa-Ai-	plant	MYS XV: 3746
*uwa-	uwe-	*uwa-Ai-	starve	Fudoki
*waka-	wak- wakas-	*waka- *waka-As-	boil (v.i.) boil (v.t.)	RM MYS XVI: 3824
*waka-	wak- wakē- wakar-	*waka- *waka-Ai- *waka-Ar-	distinguish split (v.t.) split (v.i.)	MYS XVII: 4003 MYS XVII: 4003 MYS V: 891
*waNpu-	waNpī- waNpur-	*waNpu-Ai- *waNpu-Ar-	be disappointed disappoint	K I: 32: 7 MYS XV: 3759
*wasi-	wasise- wasir-	*wasi-As-Ai- *wasi-Ar-	make run run	KK 78 K III 17: 9
*wata-	watas- watar-	*wata-As- *wata-Ar-	make cross go across	Bussoku 4 MYS XV: 3627
*wawa-	wawakē-	*wawak-Ai-	be frayed, worn out	MYS V: 892
*wosama-	wosamē-	*wosama-Ai-	settle, control (v.t.)	MYS XVII: 3969

884. This is a WOJ poem in Book XX.

885. Russell (1997), followed Unger (1993) listing these verbs and 'appeal' all under the same root; this is not warranted semantically. Unger (1993) reconstructs *\*ruta-* for this root; this was rejected in Russell (1997) as there is no evidence for initial /r/ here.

*yaka-	yakē- yak-	*yaka-Ai- *yaka-	be roasted roast	MYS XVII: 3941 Shinsenjikyō
*yama-	yam- yamē-	*yama- *yama-Ai-	stop (v.i.) stop (v.t.)	MYS V: 904 KK 2
*yaNpura-	yaNpur- yaNpure-	*yaNpura- *yaNpura-Ai-	break, defeat be broken	MYS XVI: 3880 Shinsenjikyō
*yasa-	yase-	*yasa-Ai-	get thin	MYS VIII: 1462
*yasuma-	yasumar- yasum- yasumē-	*yasuma-Ar- *yasuma- *yasuma-Ai-	be peaceful rest make rest	Edict 51 MYS VI: 928 MYS V: 794
*yökō-	yökī-	*yökō-Ai-	avoid	MYS IX: 1697
*yura-	yurakas- yurak-	*yurak-As- *yurak-	jingle (v.t.) jingle (v.i.)	K III: 40: 4 K I: 14: 1
*yuru-	yurus- yurup-	*yuru-As- *yuru-Ap-	slacken, pardon go slack	MYS XVII: 4011 MYS XVII: 4015

**Evidence for Reconstruction of Transitivity Flipper \*-Ai-**

<b>Pre-WOJ root</b>	<b>WOJ verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*aka-	akas- akar- akē- akaraNp-	*aka-As- *aka-Ar- *aka-Ai- *aka-Ar-ANp-	let brighten brighten, redden dawn redden	MYS XV: 3648 MYS XIX: 4266 MYS XV: 3662 Norito
*aka-	akē-	*aka-Ai-	open (v.t.)	MYS IV: 591
*aNka-	aNkar- aNkē-	*aNka-Ar- *aNka-Ai-	rise give	MYS XIV: 4292 KK 55
*atapa-	atap- atapē-	*atapa- *atapa-Ai-	give, be able give	K I: 30: 1 RM
*ata-	atar- ate-	*ata-Ar- *ata-Ai-	touch, strike strike, assign (v.t.)	KK 76 KK 42
*apa-	apē- ap-	*apa-Ai- *apa-	join (v.i.) join (v.t.)	MYS XIX: 4189 MYS XVIII: 4106
*ara-	are- aras-	*ara-Ai- *ara-As-	be wasted destroy	MYS I: 194 MYS XX: 4477

*iNta-	iNtas- iNte-	*iNta-As- *iNta-Ai-	put out (v.t.) go out (v.i.)	MYS XV: 3582 MYS XVII: 4008
*ira-	ire- ir-	*ira-Ai- *ira-	put in go in	MYS XVI: 3827 KK 10
*uwa-	uwe-	*uwa-Ai-	plant	MYS XV: 3746
*uwa-	uwe-	*uwa-Ai-	starve	Fudoki
*uka-	ukë-	*uka-Ai-	receive	Shinsenjikyō
*uka-	ukat- ukë-	*uka-Ata- *uka-Ai-	make a hole be open, gape	Nihonryōiki I: 4 MYS V: 800
*uka-	ukaNp- ukaNpë- ukë- uk-	*uka-ANp- *uka-ANp-Ai- *uka-Ai- *uka-	float (v.i.) float (v.t.) float (v.t.) float (v.i.)	MYS V: 852 MYS V: 840 MYS XX: 4398 K III: 34: 2
*uta-	ute-	*uta-Ai-	discard	K I: 33: 4
*uma-	umare- um-	*uma-Ar-Ai- *uma-	be born give birth	Nihonryōiki I: 18 K I: 2: 8
*ökö-	okī- okös- okör-	*ökö-Ai- *ökö-As- *ökö-Ar-	awaken wake, raise begin, awaken	Kenzōzenki (NSK) MYS XIX: 4164 tōaiji yōtoku
*ötö-	oti- otös- otör-	*ötö-Ai- *ötö-As- *ötö-Ar-	fall drop be lower, inferior, decrease	MYS XV: 3647 Nihonryōiki III: 4th Bussoku 13
*öNtö-	oNti-	*öNtö-Ai-	menace	MYS XV: 3647
*öpö-	opī- opos-	*öpö-Ai- *öpö-As-	grow cultivate	MYS V: 804 MYS XVIII: 4113
*ömöpö-	omop- omopos- omopoye-	*ömöpö- *ömöpö-As- *ömöpö-Ay-Ai-	think, feel think , feel HONbe thought	MYS XVII: 4016 MYS XV: 3736 MYS XVII: 3989
*kaka-	kakar- kak- kakë-	*kaka-Ar- *kaka- *kaka-Ai-	hang (v.i.) hang (v.t.) hang (v.t.)	MYS V: 801 MYS V: 892 MYS V: 904
*kata-	katamë- kate-	*kata-Am-Ai- *kata-Ai-	harden (v.t.) be difficult	MYS XX: 4487 NK 19

*kana-	kane-	*kana-Ai-	be unable	MYS V: 875
*kapa-	kapas- kapar- kapë- kap-	*kapa-As- *kapa-Ar- *kapa-Ai- *kapa-	do together, shift (v.t.) change (v.i.) do together, shift (v.t.) be together, shift (v.t.)	MYS V: 804 MYS XIX: 4160 MYS III: 285 Fudoki;Shinsenjikyō
*kara-	karas-kare-	*kara-As- *kara-Ai-	dry (v.t.) wither	K II: 60: 2 MYS XVIII: 4111
*kara-	kare-	*kara-Ai-	be parted	MYS XV: 3731
*kikō-	kîkōs- kîkōye- kîk-	*kikō-As- *kikō-Ay-Ai- *kikō-	say (HON) be heard hear	K I: 31: 2K III: 20: 4MYS XVII: 3909
*kita-	kîtamë-	*kitama-Ai-	punish	Edict 62
*kipa-	kîpamar- kîpam- kîpamë-	*kipam-Ar- *kipam- *kipam-Ai-	reach limit make reach limit make reach limit	RM MYS V: 800 RM
*kira-	kîre- kîr-	*kira-Ai- *kira-	be cut (v.i.) cut (v.t.)	KK 109 MYS V: 892
*kuNtaka-	kuNtak- kuNtakë-	*kuNtaka- *kuNtaka-Ai-	smash (v.t.) smash (v.i.)	Nihonryōki I Nihonryōki III: 14th
*kura-	kuras- kure-	*kura-As- *kura-Ai-	let time pass grow dark, get late	MYS V: 818 MYS IV: 485
*kōmō-	kōmōr- kōmī- kōmë-	*kōmō-Ar- *kōmō-Ai- *kōmō-Ai-	insert (v.i.) insert (v.t.) insert (v.t.)	MYS XIX: 4283 K II: 45: 3 MYS XVII: 3998
*kōyō	kōi < *kōyi	*kōyō-Ai-	recline	MYS XVII: 3969
*saka-	sakar- sakë-	*saka-Ar- *saka-Ai-	be apart be apart; split in two	MYS XV: 3688 MYX XIX: 4236
*saka-	sakë- sakar-	*saka-Ai- *saka-Ar-	shun, avoid, separate separate	MYS XIX: 4236 NK 3
*saNtuka-	saNtukë-	*saNtuka-Ai-	throw, give	MYS XX: 4465
*sama-	samas- samë-	*sama-As- *sama-Ai-	open eyes (v.t.) wake (v.i.); sober up	Bussoku 21 Nihonryōki I: 5th story
*saya	saye-	*saya-Ai-	gleam	MYS XIII: 3281

*siNtu-	siNtuk- siNtumar- siNtumë-	*siNtu-Ak- *siNtu-Am-Ar- *siNtu-Am-Ai-	sink (v.i.) get quiet sink (v.t.), quiet (v.t.)	MYS XIX: 4199 RM MYS V: 813
*sinöpö-	sinöNpï-	*sinöNpö-Ai-	endure, wrap to hide, secret	MYS XVII: 3940
*sira1-	sir-sire-	*sira- *sira-Ai-	be known make known	MYS XVIII: 4094 MYS VIII: 1446
*suwa-	suwe-	*suwa-Ai-	make sit	MYS II: 202
*suNku-	suNkï- suNkus- suNkure-	*suNku-Ai- *suNku-As- *suNku-Ar-Ai-	pass time let pass excel	K III: 5: 8-9 MYS V: 804 MYS XIII: 3309
*susu-	susumë- susum-	*susuma-Ai- *susuma-	advance (v.t.) advance (v.i.)	Bussoku 18 Bussoku 6
*suNpa-	suNpë-	*suNpa-Ai-	make one	Nihonryōiki III: 30th story
*sökö-	sökë- sök-	*sökö-Ai- *sökö-	separate (v.i.) separate (v.t.)	MYS XVI: 3832 K III: 4: 6
*sömö-	sömë-	*sömö-Ai-	begin	MYS XVIII: 4087; MYS XIX: 4175
*taka-	takare-	*taka-Ar-Ai-	collect	K I: 9: 3
*tata-	tatane- tate-	*tata-An-Ai- *tata-Ai-	pile up (v.t.) erect, put up (v.t.)	MYS XV: 3724 K II: 65: 6
taNtuna-	taNtune-	*taNtuna-Ai-	ask, seek	Bussoku 8
*tapa-	tapakë- tapare-	*tapa-Ak-Ai- *tapa-Ar-Ai-	commit adultery commit adultery	Shinsenjikyō MYS IX: 1738
*tama-	taNpar- tamapar- tamap- tamapë-	*tamap-Ar- *tamap-Ar- *tamap- *tamap-Ai-	receive (humble) give (to inferior) give receive (humble)	MYS XVIII: 4133 Edict 45 MYS V: 882 MYS XV: 3767
*taya-	taye- tat-	*ta-Aya-Ai- *ta-At-	be cut, end (v.i.) cut, end (v.t.)	MYS XV: 3605 MYS XX: 4465
*tuka-	tukas-tukë-	*tuka-As- *tuka-Ai-	soak, pickle (v.t.) soak, pickle (v.t.)	MYS XVII: 4024 Shinsenjikyō
*tuka-	tukë- tuk-	*tuka-Ai- *tuka-	attach (v.t.) attach (v.i.)	MYS XIX: 4162 MYS XV: 3688

*tukapa-	tukapë- tukap-	*tukapa-Ai- *tukapa-	serve make serve, use	MYS XVIII: 4100 KK 2
*tukara-	tukaras- tukare-	*tukara-As- *tukara-Ai-	tire (v.t.) tire (v.i.)	Nihonryōki II: 25th story
*tuku-	tukī- tucus-	*tuku-Ai- *tuku-As-	get exhausted use up	MYS XX: 4458 MYS XVIII: 4094
*tuNka-	tuNkë-	*tuNka-Ai-	tell, report	MYS XVII: 3918
*tuta-	tutap- tute-	*tuta-Ap- *tuta-Ai-	be communicated communicate	K II: 47: 6 MYS XVII: 3962
*tutuka-	tutukë- tutuk-	*tutuka-Ai- *tutuka-	continue (v.t.) continue (v.i.)	MYS XVIII: 4130 MYS V: 804
*tötönöpö-	tötönöpë- tötönöp-	*tötönöpö-Ai- *tötönöpö-	arrange (v.t.) arrange (v.i.)	MYS XIX: 4254 Edict 29
*töma-	tömar- tömë-	*töma-Ar- *töma-Ai-	stop (v.i.) stop (v.t.)	MYS II: 151 MYS XV: 3627
*töyömö-	töyöm- töyömë- töyömös-	*töyömö- *töyömö-Ai- *töyömö-As-	resound (v.i.) make a sound make a sound (v.t.)	K III: 31: 1 MYS XV: 3680 MYS XV: 3782
*naNka-	naNkas- naNkarapë- naNkare-	*naNka-As- *naNka-Ar-Ap-Ai- *naNka-Ar-Ai-	make flow (rain) falls flow	MYS XVIII: 4094MYS XIX: 4160MYS V: 822
*naka-	nak- nakë-	*naka- *naka-Ai-	cry make cry	MYS XVII: 3962 MYS XX: 4437
*naNku-	naNkī- naNkusam-	*naNku-Ai- *naNku-As-Am-	get still be at ease	MYS V: 753 MYS VI: 963
*naNta-	naNte-	*naNta-Ai-	pat	MYS XIX: 4155
*naNtama-	naNtamë-	*naNtama-Ai-	excuse	Edict 53
*naNpa-	naNpë-	*naNpa-Ai-	make bow	MYS I: 1
*nama-	namë-	*nama-Ai-	taste	MYS VII: 1323
*nama-	nam- namë-	*nama- *nama-Ai-	line up (v.i.) line up (v.t.)	MYS IX: 1780 MYS VI: 948
*nara-	narap- nare-	*nara-Ap- *nara-Ai-	learn, be familiar with get used to	Nihonryōki III MYS XII: 3048
*niNka-	niNkë-	*niNka-Ai-	flee	K III: 31: 7
*nura-	nure-	*nura-Ai-	get soaked, stained	MYS V: 855

*nura-	nuras- nure-	*nura-As- *nura-Ai-	unfasten come loose	MYS XI: 2610 MYS II: 112
*paka-	pakë-	*paka-Ai-	string (bow), dress, wear sword	KK 23
*pata-	patas- pate-	*pata-As- *pata-Ai-	fulfill, finish end, finish	NK 89 MYS X: 1843
*paNtu-	paNti-	*paNtu-Ai-	be ashamed	Shinsenjikyō
*papa-	papë-pap-	*papa-Ai- *papa-	stretch (v.t.) stretch (v.i.)	MYS V: 894 KK 13
*pama-	pamë-	*pama-Ai-	put, throw in	MYS XVII: 3941
*paya-	payas- paye-	*paya-As- *paya-Ai-	make grow grow	MYS XVII: 3895 MYS II: 196
*parapa-	parap- parapë-	*parapa- *parapa-Ai-	pay, atone (v.t.) atone (v.i.)	Shinsenjikyō MYS XVII: 4031
*para-	pare-	*para-Ai-	swell (v.i.)	Nihonryōiki III: 16th story
*pikō-	pîkë- pîk-	*pikō-Ai- *pikō-	be pulledpull	K I 33: 5KK 2
*pirō-	pîrömë- pîrör-	*pirō-Am-Ai- *pirō-Ar-	widen (v.t.) widen (v.i.)	Edict 28 KK 101
*puka-	pukamë- pukë-	*puka-Am-Ai- *puka-Ai-	make deepgrow late, (night) deepens	MYS XVIII: 4106MYS XIX: 4163
*pusa-	pusane-	*pusa-An-Ai-	bundle	RM
*pura-	pure- pur-	*pura-Ai- *pura-	touch (v.t.), gossip touch	MYS XVII: 3968 KK 78
*puru-	puri- purus-	*puru-Ai- *puru-As-	get old make old	MYS XVII: 3919 MYS VII: 1326
*pöröNpö-	poröNpi- poröNpos-	*pöröNpö-Ai- *pöröNpö-As-	go to ruin ruin	Bussoku MYS XV: 3724
*maNka-	maNkar- maNkë-	*maNka-Ar- *maNka-Ai-	endure, be bent bend	K 41: 3 MYS V: 892
*masa-	mas- mase-	*masa- *masa-Ai-	be, go, come make, be	MYS III: 243 RM
*mita-	mîte-	*mita-Ai-	fill	MYS XVIII: 4057

*muka-	mukap- mukapë- mukë-	*muka-Ap- *muka-Ap-Ai- *muka-Ai-	face (v.i.) greet face (v.t.)	MYS XVII: 3988 KK 88 MYS XIX: 4191
*mötömö-	motömë-	*mötötö-Ai-	seek	MYS XVII: 4014
*yaka-	yakë-yak-	*yaka-Ai- *yaka-	be roasted roast	MYS XVII: 3941 Shinsenjikyō
*yasa-	yase-	*yasa-Ai-	get thin	MYS VIII: 1462
*yasuma-	yasumar- yasum- yasumë-	*yasuma-Ar- *yasuma- *yasuma-Ai-	be peaceful rest make rest	MYS VI: 928 MYS V: 794 RM
*yaNpura-	yaNpur- yaNpure-	*yaNpura- *yaNpura-Ai-	break, defeat be broken	MYS XVI: 3880 Shinsenjikyō
*yama-	yam- yamë-	*yama- *yama-Ai-	stop (v.i.) stop (v.t.)	MYS V: 904 KK 2
*yökö-	yökï-	*yökö-Ai-	avoid	MYS IX: 1697
*waka-	wak- wakë- wakar-	*waka- *waka-Ai- *waka-Ar-	distinguish split (v.t.) split (v.i.)	MYS XVII: 4003 MYS XVII: 4003 MYS V: 891
*wasi-	wasise- wasir-	*wasi-As-Ai- *wasi-Ar-	make run run	KK 78 K III 17: 9
*waNpu-	waNpï- waNpur-	*waNpu-Ai- *waNpu-Ar-	be disappointed disappoint	K I: 32: 7 MYS XV: 3759
*wosama-	wosamë-	*wosama-Ai-	settle, control (v.t.)	MYS XVII: 3969
*suta	sute-	*suta-Ai-	discard	MYS V: 900

**Evidence for Reconstruction of Verbalizer \*-Ak-**

<b>Pre-WOJ root</b>	<b>WOJ verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*uta-	utak- utap-	*uta-Ak- *uta-Ap-	roar sing	KK 98 K II:55: 7
*siNtu-	siNtuk- siNtumar- siNtumë-	*siNtu-Ak- *siNtu-Am-Ar- *siNtu-Am-Ai-	sink (v.i.) get quiet sink (v.t.), quiet (v.t.)	MYS XIX: 4199 RM MYS V: 813
*tapa-	tapakë- tapare-	*tapa-Ak-Ai- *tapa-Ar-Ai-	commit adultery commit adultery	Shinsenjikyō MYS IX: 1738
*pipi-	pîpîk- pîpîrak-	*pipi-Ak- *pipi-Ar-Ak-	be pungent pungent	KK 12 Shinsenjikyō

**Evidence for Reconstruction of Verbalizer \*-Am-**

<b>Pre-WOJ root</b>	<b>WOJ verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*ita-	itam-	*ita-Am-	be sick	Shinsenjikyō
*kata-	katamë- kate-	*kata-Am-Ai- *kata-Ai-	harden (v.t.) be difficult	MYS XX: 4487 NK 19
*siNtu-	siNtuk- siNtumar- siNtumë-	*siNtu-Ak- *siNtu-Am-Ar- *siNtu-Am-Ai-	sink (v.i.) get quiet sink (v.t.), quiet (v.t.)	MYS XIX: 4199 RM MYS V: 813
*siwa-	siwam-	*siwa-Am-	wrinkle (v.i.)	RM
*naNku-	naNkî- naNkusam-	*naNku-Ai- *naNku-As-Am-	get still be at ease	MYS V: 753 MYS VI: 963
*niku-	nikum-	*niku-Am-	hate	MYS V: 804
*pirö-	pîrömë- pîrör-	*pirö-Am-Ai- *pirö-Ar-	widen (v.t.) widen (v.i.)	Edict 28 KK 101
*puka-	pukamë- pukë-	*puka-Am-Ai- *puka-Ai-	make deep grow late, (night) deepens	MYS XVIII: 4106 MYS XIX: 4163

**Evidence for Reconstruction of Durative \*-Ap-**

<b>Pre-WOJ root</b>	<b>WOJ verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*uta-	utak- utap-	*uta-Ak- *uta-Ap-	roar sing	KK 98 K II:55: 7
*utu-	utus- utur- uturöp-	*utu-As- *utu-Ar- *utu-Ar-Ap-	transfer change (v.i.) change (v.t.)	Bussoku 9 Bussoku 10 MYS V: 804
*suma-	sum- sumap-	*suma- *suma-Ap-	reside reside	MYS XV: 3748 MYS V: 880
*tuta-	tutap-tute-	*tuta-Ap- *tuta-Ai-	be communicated communicate	K II: 47: 6 MYS XVII: 3962
*naNka-	naNkas- naNkarapë- naNkare-	*naNka-As- *naNka-Ar-Ap-Ai- *naNka-Ar-Ai-	make flow (rain) falls flow	MYS XVIII: 4094 MYS XIX: 4160 MYS V: 822
*nara-	narap- nare-	*nara-Ap- *nara-Ai-	learn, be familiar with get used to	Nihonryōki III MYS XII: 3048
*pökörö-	pökör- pököröp-	*pökör- *pökör-Ap-	boast be proud	MYS XVII: 4011MYS V: 892
*maNsi-	maNsipë- maNsir-	*maNsi-Ap-Ai- *maNsi-Ar-	mix (v.t.) mix (v.i.)	MYS XVIII: 4101 MYS V: 849
*muka-	mukap- mukapë- mukë-	*muka-Ap- *muka-Ap-Ai- *muka-Ai-	face (v.i.) greet face (v.t.)	MYS XVII: 3988 KK 88 MYS XIX: 4191
*yuru-	yurus- yurup-	*yuru-As- *yuru-Ap-	slacken, pardon go slack	MYS XVII: 4011 MYS XVII: 4015

**Evidence for Reconstruction of Intransitive \*-Ar-**

*aka-	akas- akar- akë- akaraNp-	*aka-As- *aka-Ar- *aka-Ai- *aka-Ar-ANp-	let brighten brighten, redden dawn redden	MYS XV: 3648 MYS XIX: 4266 MYS XV: 3662 Norito
*aNka-	aNkar- aNkë-	*aNka-Ar- *aNka-Ai-	rise give	MYS XIV: 4292 KK 55

*ata-	atar- ate-	*ata-Ar- *ata-Ai-	touch, strike strike, assign	KK 76 KK 42
*utu-	utus- utur- uturöp-	*utu-As- *utu-Ar- *utu-Ar-Ap-	transfer change (v.i.) change (v.t.)	Bussoku 9 Bussoku 10 MYS V: 804
*uma-	umare- um-	*uma-Ar-Ai- *uma-	be born give birth	Nihonryōiki I: 18 K I: 2: 8
*ökö-	okī- okös- okör-	*ökö-Ai- *ökö-As- *ökö-Ar-	awaken wake, raise begin, awaken	Kenzōzenki (NSK) MYS XIX: 4164 tōaiji yōtoku
*ötö-	oti- otös- otör-	*ötö-Ai- *ötö-As- *ötö-Ar-	fall drop be lower, inferior, decrease	MYS XV: 3647 Nihonryōiki III: 4th Bussoku 13
*kaka-	kakar- kak- kakë-	*kaka-Ar- *kaka- *kaka-Ai-	hang (v.i.) hang (v.t.) hang (v.t.)	MYS V: 801 MYS V: 892 MYS V: 904
*kaku-	kakus- kakur-	*kaku-As- *kaku-Ar-	hide (v.t.) be hidden	MYS I: 18 KK 3
*kaNsa-	kaNsas- kaNsar-	*kaNsa-As- *kaNsa-Ar-	adorn (v.t.) adorn (v.i.)	MYS V: 820 MYS XVII: 3965
*ka-	kas- kar-	*ka-As- *ka-Ar-	loan borrow	MYS XVIII: 4032 MYS XVII: 4016
*kapa-	kapas- kapar- kapë- kap-	*kapa-As- *kapa-Ar- *kapa-Ai- *kapa-	do together, shift (v.t.) change (v.i.) do together, shift (v.t.) be together, shift (v.t.)	MYS V: 804 MYS XIX: 4160 MYS III: 285 Fudoki
*kipa-	kîpamar- kîpam- kîpamë-	*kipam-Ar- *kipam- *kipam-Ai-	reach limit make reach limit make reach limit	RM MYS V: 800 RM
kuku-	kukur-	*kuku-Ar-	leak out	MYS IV: 507
*kuta- ~ *kuNta	kuNtas- kuNtar- kutat-	*kuNta-As- *kuNta-Ar- *kuta-At-	let down, put down go down go down	Fudoki Kayō 11 MYS XVIII: 4094 MYS V: 847

*kömö-	kömör- kömī- kömē-	*kömö-Ar- *kömö-Ai- *kömö-Ai-	insert (v.i.) insert (v.t.) insert (v.t.)	MYS XIX: 4283 K II: 45: 3 MYS XVII: 3998
*saka-	sakar- sakē-	*saka-Ar- *saka-Ai-	be apart be apart; split in two	MYS XV: 3688 MYX XIX: 4236
*saka-	sakē- sakar-	*saka-Ai- *saka-Ar-	shun, avoid, separate separate	MYS XIX: 4236 NK 3
*sapa-	sapar-	*sapa-Ar-	hinder (v.i.)	MYS XVII: 3973
*siki-	sikîr- sik-	*siki-Ar- *siki-	spread, layer spread out	MYS VI: 937 K II: 10: 8
*siNtu-	siNtuk- siNtumar- siNtumë-	*siNtu-Ak- *siNtu-Am-Ar- *siNtu-Am-Ai-	sink (v.i.) get quiet sink (v.t.), quiet (v.t.)	MYS XIX: 4199 RM MYS V: 813
*suNku-	suNkî- suNkus- suNkure-	*suNku-Ai- *suNku-As- *suNku-Ar-Ai-	pass time let pass excel	K III: 5: 8-9 MYS V: 804 MYS XIII: 3309
*taka1-	takar-	*taka-Ar-	be high	KK 101
*taka2-	takare-	*taka-Ar-Ai-	collect	K I: 9: 3
*tapa-	tapakë- tapare-	*tapa-Ak-Ai- *tapa-Ar-Ai-	commit adultery commit adultery	Shinsenjikyō MYS IX: 1738
*tama1-	taNpar- tamapar- tamap- tamapë-	*tamap-Ar- *tamap-Ar- *tamap- *tamap-Ai-	receive (humble) give (to inferior) give receive (humble)	MYS XVIII: 4133 Edict 45 MYS V: 882 MYS XV: 3767
*töpö-	töpos- töpor-	*töpö-As- *töpö-Ar-	let through pass thorough	Kogoshūi MYS V: 905
*töma-	tömar- tömë-	*töma-Ar- *töma-Ai-	stop (v.i.) stop (v.t.)	MYS II: 151 MYS XV: 3627
*naNka-	naNkas- naNkarapë- naNkare-	*naNka-As- *naNka-Ar-Ap-Ai- *naNka-Ar-Ai-	make flow (rain) falls flow	MYS XVIII: 4094 MYS XIX: 4160 MYS V: 822
*nama-	namar- naNp-	*naNpa-Ar- *naNpa-	be hidden be hidden	MYS XVI: 3886 Fudoki
*nökö-	nökös- nökör-	*nökö-As- *nökö-Ar-	leave (v.t.) remain, get left behind	MYS XVI: 3794 MYS V: 849

*paNpu-	paNpur-	*paNpu-Ar-	go away	K 25: 4
*pika-	pîkar-	*pika-Ar-	shine	MYS V: 855
*pipi-	pîpîk- pîpîrak-	*pipi-Ak- *pipi-Ar-Ak-	be pungent pungent	KK 12 Shinsenjikyō
*pirō-	pîrōmē- pîrōr-	*pirō-Am-Ai- *pirō-Ar-	widen (v.t.)widen (v.i.)	Edict 28 KK 101
*maka-	makar-mak-	*maka-Ar- *maka-	retreat (v.i.) retreat, dismiss (v.t.)	MYS XV: 3725 KK 3
*maNka-	maNkar- maNkē-	*maNka-Ar- *maNka-Ai-	endure, be bent bend	K 41: 3 MYS V: 892
*masa-	masar-	*masa-Ar-	excel	MYS XV: 3781
*maNsi-	maNsipē- maNsir-	*maNsi-Ap-Ai- *maNsi-Ar-	mix (v.t.) mix (v.i.)	MYS XVIII: 4101 MYS V: 849
*yasuma-	yasumar- yasum- yasumē-	*yasuma-Ar- *yasuma- *yasuma-Ai-	be peaceful rest make rest	MYS VI: 928 MYS V: 794 MR
*waka-	wak- wakē- wakar-	*waka- *waka-Ai- *waka-Ar-	distinguish split (v.t.) split (v.i.)	MYS XVII: 4003 MYS XVII: 4003 MYS V: 891
*wasi-	wasise- wasir-	*wasi-As-Ai- *wasi-Ar-	make run run	KK 78 K III 17: 9
*wata-	watas- watar-	*wata-As- *wata-Ar-	make cross go across	Bussoku 4 MYS XV: 3627
*waNpu-	waNpī- waNpur-	*waNpu-Ai- *waNpu-Ar-	be disappointed disappoint	K I: 32: 7 MYS XV: 3759
*ita	itar- itas-	*ita-Ar- *ita-As-	arrive make arrive	MYS XVII: 4011 KK 10

**Evidence for Reconstruction of Transitive \*-As-**

<b>Pre-WOJ root</b>	<b>WOJ verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*aka-	akas- akar- akë- akaraNp-	*aka-As- *aka-Ar- *aka-Ai- *aka-Ar-ANp-	let brighten brighten, redden dawn redden	MYS XV: 3648 MYS XIX: 4266 MYS XV: 3662 Norito
*ara-	are- aras-	*ara-Ai- *ara-As-	be wasted destroy	MYS I: 194 MYS XX: 4477
*iNta-	iNtas- iNte-	*iNta-As- *iNta-Ai-	put out (v.t.) go out (v.i.)	MYS XV: 3582 MYS XVII: 4008
*utu-	utus- utur- uturöp-	*utu-As- *utu-Ar- *utu-Ar-Ap-	transfer change (v.i.) change (v.t.)	Bussoku 9 Bussoku 10 MYS V: 804
*ökö-	oki- ökös- ökör-	*ökö-Ai- *ökö-As- *ökö-Ar-	awaken wake, raise begin, awaken	Kenzōzenki MYS XIX: 4164 tōaiji yōtoku
*ötö-	oti- otös- otör-	*ötö-Ai- *ötö-As- *ötö-Ar-	fall drop be lower, inferior, decrease	MYS XV: 3647 Nihonryōiki III Bussoku 13
*öpö-	opi- opos-	*öpö-Ai- *öpö-As-	grow cultivate	MYS V: 804 MYS XVIII: 4113
*ömöpö-	omop- omopos- omopoye-	*ömöpö- *ömöpö-As- *ömöpö-Ay-Ai-	think, feel think, feel be thought	MYS XVII: 4016 MYS XV: 3736 MYS XVII: 3989
*kaku-	kakus- kakur-	*kaku-As- *kaku-Ar-	hide (v.t.) be hidden	MYS I: 18 KK 3
*kaNsa-	kaNsas- kaNsar-	*kaNsa-As- *kaNsa-Ar-	adorn (v.t.) adorn (v.i.)	MYS V: 820 MYS XVII: 3965
*ka-	kas- kar-	*ka-As- *ka-Ar-	loan borrow	MYS XVIII: 4032 MYS XVII: 4016
*kapa-	kapas- kapar- kapë- kap-	*kapa-As- *kapa-Ar- *kapa-Ai- *kapa-	do together, shift (v.t.) change (v.i.) do together, shift (v.t.) be together, shift (v.t.)	MYS V: 804 MYS XIX: 4160 MYS III: 285 Fudoki

*kara-	karas- kare-	*kara-As- *kara-Ai-	dry (v.t.) wither	K II: 60: 2 MYS XVIII: 4111
*kikö-	kikös- kiköye- kîk-	*kikö-As- *kikö-Ay-Ai- *kikö-	say (HON)be heard hear	K I: 31: 2 K III: 20: 4 MYS XVII: 3909
*kuta- ~ *kuNta	kuNtas- kuNtar- kutat-	*kuNta-As- *kuNta-Ar- *kuta-At-	let down, put down go down go down	Fudoki Kayō 11 MYS XVIII: 4094 MYS V: 847
*kura 1-	kuras-kure-	*kura-As- *kura-Ai-	let time pass grow dark, get late	MYS V: 818 MYS IV: 485
*sama-	samas- samë-	*sama-As- *sama-Ai-	open eyes (v.t.) wake (v.i.); sober up	Bussoku 21 Nihonryōki I: 5th story
*suNku-	suNki- suNkus- suNkure-	*suNku-Ai- *suNku-As- *suNku-Ar-Ai-	pass time let pass excel	K III: 5: 8-9 MYS V: 804 MYS XIII: 3309
*suma-	sumas- sum-	*suma-As- *suma-	cleanse (v.t.) cleanse (v.i.)	Nihonryōiki I; RM Shokunihongi
*tira-	tir-tiras-	*tira- *tira-As-	scatter (v.i.)scatter (v.t.)	MYS V: 822 MYS XVIII: 4043
*tuka-	tukas- tukë-	*tuka-As- *tuka-Ai-	soak, pickle (v.t.) soak, pickle (v.t.)	MYS XVII: 4024 Shinsenjikyō
*tukara-	tukaras- tukare-	*tukara-As- *tukara-Ai-	tire (v.t.) tire (v.i.)	MR Nihonryōki II: 25th
*tuku-	tuki- tucus-	*tuku-Ai- *tuku-As-	get exhausted use up	MYS XX: 4458 MYS XVIII: 4094
*töNtörö-	töNtörök- töNtörökös-	*töNtörök- *töNtörök-As-	be noisy be noisy	Shinsenjikyō K I: 20: 4
*töpö-	töpos- töpor-	*töpö-As- *töpö-Ar-	let through pass thorough	Kogoshūi MYS V: 905
*tömö-	tömos-	*tömö-As-	kindle	MYS XV: 3648
*töyömö-	töyöm- töyömë- töyömos-	*töyömö- *töyömö-Ai- *töyömö-As-	resound (v.i.) make a sound make a sound (v.t.)	K III: 31: 1 MYS XV: 3680 MYS XV: 3782

*naNka-	naNkas- naNkarapë- naNkare-	*naNka-As- *naNka-Ar-Ap-Ai- *naNka-Ar-Ai-	make flow (rain) falls flow	MYS XVIII: 4094 MYS XIX: 4160 MYS V: 822
*naNku-	naNki- naNkusam-	*naNku-Ai- *naNku-As-Am-	get still be at ease	MYS V: 753 MYS VI: 963
*nura-	nuras-nure-	*nura-As- *nura-Ai-	unfasten come loose	MYS XI: 2610 MYS II: 112
*nökö-	nökös- nökör-	*nökö-As- *nökö-Ar-	leave (v.t.) remain, get left behind	MYS XVI: 3794 MYS V: 849
*pata-	patas- pate-	*pata-As- *pata-Ai-	fulfill, finish end, finish	NK 89 MYS X: 1843
*paya-	payas- paye-	*paya-As- *paya-Ai-	make grow grow	MYS XVII: 3895 MYS II: 196
*paruka-	parukas- paruk-	*paruka-As- *paruka-	dispel (v.t.) dispel (v.i.)	Norito K III: 43: 3
*puru-	puri- purus-	*puru-Ai- *puru-As-	get old make old	MYS XVII: 3919 MYS VII: 1326
*pöröNpö-	poröNpi- poröNpos-	*pröröNpö-Ai- *pöröNpö-As-	go to ruin ruin	Bussoku MYS XV: 3724
*yura-	yurakas- yurak-	*yurak-As- *yurak-	jingle (v.t.) jingle (v.i.)	K III: 40: 4 K I: 14: 1
*yuru-	yurus- yurup-	*yuru-As- *yuru-Ap-	slacken, pardon go slack	MYS XVII: 4011 MYS XVII: 4015
*waka-	wak- wakas-	*waka- *waka-As-	boil boil (v.t.)	RM MYS XVI: 3824
*wasi-	wasise- wasir-	*wasi-As-Ai- *wasi-Ar-	make run run	KK 78 K III 17: 9
*wata-	watas- watar-	*wata-As- *wata-Ar-	make cross go across	Bussoku 4 MYS XV: 3627
*ita	itar- itas-	*ita-Ar- *ita-As-	arrive make arrive	MYS XVII: 4011 KK 10

## Appendix B: EOJ Syllables by Dialect

### NEOJ Syllables by Location

#### NEOJ: Kazusa

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	yes	no	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	no	yes	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	no	no	yes	no		no
	Nt	yes		yes		yes	yes	yes	yes
	Ns	no		no		no	no	no	yes
	Nk	yes	yes	no	no	yes	yes	no	yes
nasals	m	yes	no	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	no	yes
liquid	r	yes		yes		yes	yes	no	yes
glides	w	yes		no		yes	yes		
	y			no		no	yes	yes	yes
zero	Ø	yes		no		yes	yes		yes

#### NEOJ: Mutsu

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	no	no	no	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	no	yes
	k	yes	no	no	no	yes	no	no	yes
prenasalized voiced obstruents	Np	no	no	no	no	yes	no		no
	Nt	no		no		yes	no	yes	yes
	Ns	yes		no		no	no	no	no
	Nk	no	no	no	no	no	no	no	no
nasals	m	yes	no	yes	no	yes	yes		yes
	n	yes		yes		yes	yes	yes	no
liquid	r	yes		yes		yes	no	no	yes
glides	w	no		yes		no	yes		no
	y	no		no		no	no	no	yes
zero	Ø	yes		no		yes	yes		no

**NEOJ: Shimotsuke**

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	no	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	no	yes	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	yes	yes	yes	no		yes
	Nt	no		yes		yes	no	yes	yes
	Ns	yes		no		no	yes	no	yes
	Nk	no	no	no	no	yes	no	no	no
nasals	m	yes	no <sup>886</sup>	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	yes
liquid	r	yes		yes		yes	yes	no	yes
glides	w	no		no		yes	yes		
	y			no		yes	yes	yes	yes
zero	∅	yes		no		yes	yes		yes

---

886. MYS XIV 3349 - might show one example of the syllable *mĩ*, but Mizushima believes this should be ma (末) and not mi (未) (1984a: 441).

## CEOJ Syllables by Location

### CEOJ: Hitachi

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	yes	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	no	yes	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	no	no	yes	no	yes	no		no
	Nt	yes		yes		yes	yes	yes	yes
	Ns	yes		yes		yes	yes	no	yes
	Nk	yes	yes	yes	yes	yes	yes	no	yes
nasals	m	yes	yes	yes	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	yes
liquid	r	yes		yes		yes	yes	no	yes
glides	w	yes		yes		yes	yes		
	y			yes		yes	yes	yes	yes
zero	∅	yes		no		yes	yes		yes

### CEOJ: Kōzuke

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	yes	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	no	yes	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	no	no	yes	no		no
	Nt	yes		yes		yes	yes	yes	yes
	Ns	yes		yes		yes	no	no	yes
	Nk	no	yes	no	no	yes	no	yes	yes
nasals	m	yes	yes	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	yes
liquid	r	yes		yes		yes	yes	yes	yes
glides	w	yes		yes		yes	yes		
	y			yes		yes	yes	yes	yes
zero	∅	yes		no		yes	yes		yes

**CEOJ: Musashi**

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	yes	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	yes	yes	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	no	no	yes	no		yes
	Nt	yes		yes		yes	yes	yes	yes
	Ns	no		yes		yes	yes	yes	yes
	Nk	yes	yes	no	no	yes	no	yes	yes
nasals	m	yes	no	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	yes
liquid	r	yes		yes		yes	yes	no	yes
glides	w	yes		no		yes	yes		
	y			yes		yes	yes	yes	yes
zero	∅	yes		no		yes	yes		yes

**CEOJ: Sagami**

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	yes	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	yes	yes	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	no	yes	yes	no		yes
	Nt	yes		yes		yes	yes	yes	yes
	Ns	yes		yes		yes	no	no	yes
	Nk	yes	yes	no	yes	yes	no	yes	yes
nasals	m	yes	yes	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	no
liquid	r	yes		yes		yes	yes	no	yes
glides	w	no		no		yes	yes		
	y			yes		yes	yes	yes	yes
zero	∅	yes		no		yes	yes		yes

**CEOJ: Shimōsa**

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	no	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	no	yes
	k	yes	no	no	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	yes	no	yes	no		no
	Nt	no		no		no	yes	no	yes
	Ns	no		no		no	no	no	yes
	Nk	yes	yes	no	no	yes	no	yes	yes
nasals	m	yes	yes	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	no	yes
liquid	r	yes		yes		yes	yes	no	yes
glides	w	yes		yes		yes	yes		
	y			no		yes	yes	yes	yes
zero	∅	yes		no		yes	yes		yes

**SEOJ Syllables by Location**

**SEOJ: Shinano**

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	no	no	no	yes	yes		yes
	t	yes		yes		yes	yes	no	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	no	yes	yes	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	no	no	yes	no		no
	Nt	yes		yes		no	no	no	no
	Ns	no		no		yes	no	no	yes
	Nk	yes	yes	no	no	yes	no	yes	yes
nasals	m	yes	yes	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	yes
liquid	r	yes		yes		yes	yes	no	yes
glides	w	yes		yes		yes	yes		
	y			yes		yes	yes	no	yes
zero	∅	yes		no		yes	yes		yes

**SEOJ: Suruga**

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	no	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	no	yes	yes
	k	yes	no	yes	yes	yes	no	yes	yes
prenasalized voiced obstruents	Np	no	yes	yes	no	yes	no		no
	Nt	yes		yes		yes	yes	no	yes
	Ns	yes		no		no	yes	no	yes
	Nk	yes	no	no	yes	yes	yes	no	yes
nasals	m	yes	no	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	yes
liquid	r	yes		yes		yes	yes	no	yes
glides	w	yes		no		yes	yes		
	y			yes		yes	yes	no	yes
zero	∅	yes		no		yes	yes		yes

**SEOJ: Tōtōmi**

		front				central		back	
		î	ĩ	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	yes	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	no	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	no	no	no	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	no	no	yes	no		yes
	Nt	no		yes		yes	yes	no	yes
	Ns	yes		no		no	no	no	yes
	Nk	no	no	no	no	yes	yes	no	yes
nasals	m	yes	no	no	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	no
liquid	r	yes		yes		yes	no	no	yes
glides	w	yes		no		yes	yes		
	y			yes		yes	yes	no	yes
zero	∅	yes		no		yes	no		yes

## UEOJ Syllables

		front				central		back	
		î	ï	ê	ë	a	ö	ô	u
voiceless obstruents	p	yes	yes	yes	yes	yes	yes		yes
	t	yes		yes		yes	yes	yes	yes
	s	yes		yes		yes	yes	yes	yes
	k	yes	yes	yes	no	yes	yes	yes	yes
prenasalized voiced obstruents	Np	yes	no	yes	yes	yes	no		yes
	Nt	yes		yes		yes	yes	yes	yes
	Ns	yes		yes		yes	no	no	yes
	Nk	no	yes	yes	yes <sup>887</sup>	yes	yes	yes	yes
nasals	m	yes	yes	yes	yes	yes	yes		yes
	n	yes		yes		yes	yes	yes	yes
liquid	r	yes		yes		yes	yes	yes	yes
glides	w	yes		yes		yes	yes		
	y			yes		yes	yes	yes	yes
zero	∅	yes		no		yes	yes		yes

---

887. This syllable is only attested once.

## Appendix C: EOJ Verb Root Data

First I present the roots showing the verbs that support their reconstructions, then present the data for each derivational suffix in the following order: \*-i-/-E-, \*-m-, \*-Vr-, \*-ös-/-Vs-. In my discussion on EOJ derivational morphology, I used data from only one dialect where possible, but in some cases had to rely on data from another dialect to support the reconstruction of the root or verbal morphemes. The following tables show verbal data from all EOJ dialects.

**Evidence for proto-EOJ Verb Roots**

Proto-EOJ root	EOJ verbs	reconstruction	gloss	attestation
*ap-	ap-	*ap-	join; meet	MYS XX: 4324-To; MYS XX: 4354-Ka; MYS XIV: 3477-U
	apê-	*ap-ê-	meet	MYS XIV: 3413-Ko; MYS XX: 4377-St
*iNt-	iNte-	*iNt-e-	go out	MYS XIV: 3368-Sa; MYS XX: 4323-To; MYS XIV: 3474-U
	ite-	*it-	go out	MYS XX: 4326-To
*kap-	kapar-	*kap-ar-	change	MYS XX: 4342-Su
	kapë-	*kap-ë-	change	MYS XIV: 3482-U
	kapê-	*kap-ê-	change	MYS XIV: 3494-U
*kôp-	kôpî-	*kôp-î-	love, feel	MYS XX: 4321-To; MYS XX: 4347-Ka; MYS XIV: 3477-U
	kôp-	*kôp-	love, feel	MYS XX: 4386-Ss; MYS XIV: 3382-Ka; MYS XIV: 3476-U
*maku- <sup>888</sup>	mak-	*maku-	pillow (someone)	MYS XX: 4331-U; MYS XIV: 3369

---

888. Reconstruction of this root is supported by this word in its nominalized form *maku-ra* (MYS XX: 4406-Ko).

*muka- <sup>889</sup>	muk-	*muka-	turn, face	MYS XX: 4331-U
*nak-	nak-	*nak-	cry (tears)	MYS XX: 4356-Ka; MYS XIV: 3458-U
	nakE-	*nak-E-	cry	MYS XIV: 3471-U
*narap-	narapê-	*narap-ê-	line up	MYS XIV: 3450-U
	na(N)pë-	*narap-ë- > *nanap-ë- > *naNp-ë-	line up	MYS XIV: 3485-U
*nar-	nare-	*nar-e-	tame	MYS XIV: 3576-U
*niNkor-	niNköre-	*niNkor-e-	get muddy	MYS XIV: 3544-U
*op-	opï-	*op-ï-	live	MYS XIV: 3359-Su; MYS XIV: 3452-U
	op-	*op-	live	MYS XIV: 3488-U
*panar-	panar-	*panar-	separate	MYS XIV: 3496-U; MYS XX: 4338-Su
	panare-	*panar-e-	separate	MYS XIV: 3480-U
*pap-	pap-	*pap-	stretch (v.i.)	MYS XIV: 3507-U
	papê-	*pap-ê-	stretch (v.t.)	MYS XIV: 3525-U
*pur-	pur-	*pur-	touch (v.i.)	MYS XX: 4328-Sa
	pure-	*pur-e-	touch (v.t.)	MYS XX: 4418-Mu; MYS XIV: 3537-U
*sak-	sakë-	*sak-ë-	separate, dispersese	MYS XIV: 3420-Ko; MYS XX: 4367-St; MYS XIV: 3465-U
	sakar-	*sak-ar-	parate (v.i.)	MYS XIV: 3420-Ko; MYS XIV: 3502-U
*tok-	tök-	*tök-	untie (v.t.)	MYS XIV: 3361-Sa; MYS XIV: 3465-U
	tökê-	*tök-e-	untie (v.i.)	MYS XIV: 3483-U

889. Reconstruction of this root is supported by this word in its nominalized form *muka* (MYS XIV: 3448).

*tuk-	tukê-	*tuka-ê-	attach	MYS XX: 4366-Hi
	tukë-	*tuka-ë-	attach	MYS XX: 4420-Ms
*tuk-	tuk-	*tuk-	attach; stick	MYS XIV: 3408-Ko; MYS XX: 4358-Ka
	tukë-	*tuka-ë-	attach	MYS XX: 4404-Ko
*tukur-	tukure-	*tukur-e-	make	MYS XX: 4342-Su
	tukur-	*tukur-	make	MYS XIV: 3373-Mu
*wasur-	wasur-	*wasur-	forget	MYS XIV: 3419-Ko; MYS XX: 4344-Su
	wasure-	*wasur-e-	forget	MYS XX: 4344-Su; MYS XIV: 3515-U
*yö-	yösör-	*yö-s-ör-	pass	MYS XIV: 3408-Ko; MYS XX: 4379-St; MYS XIV: 3468-U
	yör-	*yö-Vr-	pass	MYS XIV: 3446-UEOJ
	yöse-	*yö-s-e-	pass	MYS XIV: 3384-Ss; MYS XX: 4411-U
	yös-	*yö-s-	pass	MYS XIV: 3454-U

**Evidence for Reconstruction of Transitivity Flipper \*-i/-E-**

Proto- EOJ root	EOJ verbs	reconstruction	gloss	attestation
*ap-	ap-	*ap-	join; meet	MYS XX: 4324-To; MYS XX: 4354-Ka; MYS XIV: 3477
	apê-	*ap-ê-	meet	MYS XIV: 3413-Ko; MYS XX: 4377-St
*iNt-	iNte-	*iNt-e-	go out	MYS XIV: 3368-Sa; MYS XX: 4323-To; MYS XIV: 3474-U
	ite-	*it-	go out	MYS XX: 4326-To
*kap-	kapar-	*kap-Vr-	change	MYS XX: 4342-Su
	kapë-	*kap-ë-	change	MYS XIV: 3482-U
	kapê-	*kap-ê-	change	MYS XIV: 3494-U

*kôp-	kôpî-	*kôp-î-	love, feel	MYS XX: 4321-To; MYS XX: 4347-Ka; MYS XIV: 3477-U
	kôp-	*kôp-	love, feel	MYS XX: 4386-Ss; MYS XIV: 3382-Ka; MYS XIV: 3476-U
*nak-	nak-	*nak-	cry (tears)	MYS XX: 4356-Ka; MYS XIV: 3458-U
	nakE-	*nak-E-	cry	MYS XIV: 3471-U
*nar-	nare-	*nar-e-	tame	MYS XIV: 3576-U
*niNkör-	niNköre-	*niNkor-e-	get muddy	MYS XIV: 3544-U
*op-	opî-	*op-î-	live	MYS XIV: 3359-Su; MYS XIV: 3452-U
	op-	*op-	live	MYS XIV: 3488-U
*panar-	panar-	*panar-	separate	MYS XIV: 3496-U; MYS XX: 4338-Su
	panare-	*panar-e-	separate	MYS XIV: 3480-U
*pap-	pap-	*pap-	stretch (v.i.)	MYS XIV: 3507-U
	papê-	*pap-ê-	stretch (v.t.)	MYS XIV: 3525-U
*pur-	pur-	*pur-	touch (v.i.)	MYS XX: 4328-Sa
	pure-	*pur-e-	touch (v.t.)	MYS XX: 4418-Mu; MYS XIV: 3537-U
*sak-	sakê-	*saka-ê-	separate, dispersese	MYS XIV: 3420-Ko; MYS XX: 4367-St; MYS XIV: 3465-U
	sakar-	*sak-ar-	parate (v.i.)	MYS XIV: 3420-Ko; MYS XIV: 3502-U
*tok-	tök-	*tök-	untie (v.t.)	MYS XIV: 3361-Sa; MYS XIV: 3465-U
	tökê-	*tök-e-	untie (v.i.)	MYS XIV: 3483-U
*tuk-	tukê-	*tuka-ê-	attach	MYS XX: 4366-Hi
	tukê-	*tuka-ê-	attach	MYS XX: 4420-Ms
*tukur-	tukure-	*tukur-e-	make	MYS XX: 4342-Su
	tukur-	*tukur-	make	MYS XIV: 3373-Mu

*wasur-	wasur-	*wasur-	forget	MYS XIV: 3419-Ko; MYS XX: 4344-Su
	wasure-	*wasur-e-	forget	MYS XX: 4344-Su; MYS XIV: 3515-U
*yö-	yösör-	*yö-s-ör-	pass	MYS XIV: 3408-Ko; MYS XX: 4379-St; MYS XIV: 3468-U
	yör-	*yö-ar-	pass	MYS XIV: 3446-UEOJ
	yöse-	*yö-s-e-	pass	MYS XIV: 3384-Ss; MYS XX: 4411-U
	yös-	*yö-s-	pass	MYS XIV: 3454-U

**Evidence for Reconstruction of Intransitive \*-ör-/\*-Vr-**

Proto- EOJ root	EOJ verbs	reconstruction	gloss	attestation
*kap-	kapar-	*kap-Vr-	change	MYS XX: 4342-Su
	kapë-	*kap-ë-	change	MYS XIV: 3482-U
	kapê-	*kap-ê-	change	MYS XIV: 3494-U
*sak-	sakë-	*saka-ë-	separate, dispersese	MYS XIV: 3420-Ko; MYS XX: 4367-St; MYS XIV: 3465-U
	sakar-	*sak-ar-	parate (v.i.)	MYS XIV: 3420-Ko; MYS XIV: 3502-U
*yö-	yösör-	*yö-s-ör-	pass	MYS XIV: 3408-Ko; MYS XX: 4379-St; MYS XIV: 3468-U
	yör-	*yö-ar-	pass	MYS XIV: 3446-UEOJ
	yöse-	*yö-s-e-	pass	MYS XIV: 3384-Ss; MYS XX: 4411-U
	yös-	*yö-s-	pass	MYS XIV: 3454-U

**Evidence for Reconstruction of Transitive \*-s-**

<b>Proto-EOJ root</b>	<b>EOJ verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*yö-	yösör-	*yö-s-ör-	pass	MYS XIV: 3408-Ko; MYS XX: 4379-St; MYS XIV: 3468-U
	yör-	*yö-ar-	pass	MYS XIV: 3446-UEOJ
	yöse-	*yö-s-e-	pass	MYS XIV: 3384-Ss; MYS XX: 4411-U
	yös-	*yö-s-	pass	MYS XIV: 3454-U

### Appendix D: EOJ Attributive Form Data

Area	Location	Example	Gloss	ATT	Function	Attestation
NEOJ	Kazusa	ar-aNs-u pa	as for not being....	-u	nominalized form	MYS XX: 4347
NEOJ	Kazusa	pakë-r-u	put on (a sword)	-u	modifies noun	MYS XX: 4347
NEOJ	Kazusa	ne-m-u kamo	surely will sleep	-u	nominalized form	MYS XX: 4348
NEOJ	Kazusa	yuk-am-u	probably will go	-u	kakari musubi	MYS XX: 4349
NEOJ	Kazusa	k-u (maNte ni)	until (I) come	-u	nominalized form	MYS XX: 4350
NEOJ	Kazusa	pap-o	lit. crawl; here "papo mame" a kind of bean	-o	modifies noun	MYS XX: 4352
NEOJ	Kazusa	yuk-am-u	will go	-u	kakari musubi	MYS XX: 4352
NEOJ	Kazusa	k-uru	coming	-uru	modifies noun	MYS XX: 4353
NEOJ	Kazusa	wasure-se-n-u kamo	has forgotten	-u	nominalized form	MYS XX: 4354
NEOJ	Kazusa	mî-y-uru	have seen	-uru	modifies noun	MYS XX: 4355
NEOJ	Kazusa	wasura-e-n-u kamo	can be forgotten	-u	nominalized form	MYS XX: 4356
NEOJ	Kazusa	[o]mop-ay-u	be thought/felt	-u	kakari musubi	MYS XX: 4357
NEOJ	Kazusa	mukar-u	turn around	-u	modifies noun	MYS XX: 4359
NEOJ	Kazusa	muk-am-o	turn around	-o	sentence final, may be kakari musubi but no trigger	MYS XX: 4359
NEOJ	Mutsu	sinôp-în-i-se-m-o tö	will have thought	-o	nominalized form	MYS XIV: 3426

NEOJ	Mutsu	pak-am-ê kamo	arming one's self	-ê	nominalized form	MYS XIV: 3437
NEOJ	Shimotsuke	mot-am-u	will probably hold	-u	kakari musubi	MYS XIV: 3424
NEOJ	Shimotsuke	tat-u	stand	-u	modifies noun	MYS XX: 4373
NEOJ	Shimotsuke	yuk-u	go	-u	modifies noun	MYS XX: 4374
NEOJ	Shimotsuke	nam-î-t-ar-u	lined up	-u	nominalized form	MYS XX: 4375
NEOJ	Shimotsuke	m-i-okur-u tö	see off	-u	nominalized form	MYS XX: 4375
NEOJ	Shimotsuke	yuk-u tö	go	-u	nominalized form	MYS XX: 4376
NEOJ	Shimotsuke	yösör-u	pass by	-u	modifies noun	MYS XX: 4379
NEOJ	Shimotsuke	kamî saNp-uru	devine	-uru	modifies noun	MYS XX: 4380
NEOJ	Shimotsuke	tanaNpîk-u	(clouds) trail	-u	kakari musubi	MYS XX: 4380
NEOJ	Shimotsuke	wakar-u wo	separating	-u	nominalized form	MYS XX: 4381
NEOJ	Shimotsuke	s-uru	do	-uru	modifies noun	MYS XX: 4382
NEOJ	Shimotsuke	tas-i-Nte-m-o	set out	-o	modifies noun	MYS XX: 4383
CEOJ	Hitachi	pos-ar-u kamo	dry	-u	nominalized form	MYS XIV: 3351
CEOJ	Hitachi	nak-u	singing	-u	modifies noun	MYS XIV: 3351
CEOJ	Hitachi	ikî-N-tuk-u	breathing	-u	modifies noun	MYS XIV: 3388
CEOJ	Hitachi	ne-te-m-u kamo	will have slept	-u	nominalized form	MYS XIV: 3395
CEOJ	Hitachi	n-ar-u	being	-u	modifies noun	MYS XIV: 3397
CEOJ	Hitachi	taye-se-m-u	ceasing	-u	kakari musubi	MYS XIV: 3397
CEOJ	Hitachi	mî-m-u	seeing	-u	kakari musubi	MYS XIV: 3397
CEOJ	Hitachi	kök-î-n-u tö	(completed ) rowing and	-u	nominalized form	MYS XX: 4363
CEOJ	Hitachi	tat-am-u	probably will stand	-u	modifies noun	MYS XX: 4364

CEOJ	Hitachi	ipa-s-u k-î-n-u kamo	without saying (...) came	-u	nominalized form	MYS XX: 4364
CEOJ	Hitachi	ter-u ya	shine	-u	nominalized form	MYS XX: 4365
CEOJ	Hitachi	köNk-î-n-u tö	rowed	-u	nominalized form	MYS XX: 4365
CEOJ	Hitachi	yuk-am-u	probably will go	-u	modifies noun	MYS XX: 4366
CEOJ	Hitachi	wasure-m-o	probably forget	-o	modifies noun	MYS XX: 4367
CEOJ	Hitachi	puk-u	blow	-u	modifies noun	MYS XX: 4371
CEOJ	Hitachi	kaNk-u	smell	-u	modifies noun	MYS XX: 4371
CEOJ	Hitachi	paNpakar-u	fear, awe	-u	kakari musubi	MYS XX: 4372
CEOJ	Hitachi	yuk-u	go	-u	modifies noun	MYS XX: 4372
CEOJ	Kōzuke	kōy-uru	passing	-uru	modifies noun	MYS XIV: 3402
CEOJ	Kōzuke	ak-an-u wo	get tired of	-u	nominalized form	MYS XIV: 3404
CEOJ	Kōzuke	se-m-u	will do	-u	kakari musubi	MYS XIV: 3404
CEOJ	Kōzuke	nar-u	become	-u	modifies noun	MYS XIV: 3408
CEOJ	Kōzuke	kanōmatuNk-u	[unknown]	-u	modifies noun	MYS XIV: 3409
CEOJ	Kōzuke	ap-u nōsu	like (as if) meeting	-u	nominalized form	MYS XIV: 3413
CEOJ	Kōzuke	apê-r-u	meeting	-u	modifies noun	MYS XIV: 3413
CEOJ	Kōzuke	tat-u	standing	-u	modifies noun	MYS XIV: 3414
CEOJ	Kōzuke	arapar-ô maNte	standing	-ô	nominalized form	MYS XIV: 3414
CEOJ	Kōzuke	kôpî-m-u töya	will surely love	-u	nominalized form	MYS XIV: 3415
CEOJ	Kōzuke	motömë-kêm-u	will have sought	-u	kakari musubi	MYS XIV: 3415
CEOJ	Kōzuke	se-m-o	will do	-o	kakari musubi	MYS XIV: 3418
CEOJ	Kōzuke	sakar-u	separated	-u	modifies noun	MYS XIV: 3420
CEOJ	Kōzuke	puk-u	blowing	-u	modifies noun	MYS XIV: 3422

CEOJ	Kōzuke	puk-an-u	not blowing	-u	modifies noun	MYS XIV: 3422
CEOJ	Kōzuke	yuk-i-suNkī- kate-n-u	went past	-u	modifies noun	MYS XIV: 3423
CEOJ	Kōzuke	taye-se-m-u	will surely end	-u	kakari musubi	MYS XIV: 3434
CEOJ	Kōzuke	siratōpop-u	[unknown] far white topped (mountains )	-u	modifies noun	MYS XIV: 3436
CEOJ	Kōzuke	mor-u	guard	-u	modifies noun	MYS XIV: 3436
CEOJ	Kōzuke	taye-n-i-kēr-u kamo	has ended	-u	nominalized form	MYS XX: 4404
CEOJ	Kōzuke	yuk-am-o	will probably go	-o	modifies noun	MYS XX: 4406
CEOJ	Kōzuke	wasurae-n-u kamo	forget	-u	nominalized form	MYS XX: 4407
CEOJ	Musashi	nōr-an-u	wasn't said	-u	modifies noun	MYS XIV: 3374
CEOJ	Musashi	pur-am-u wo	shaking	-u	nominalized form	MYS XIV: 3376
CEOJ	Musashi	mî-ru nōsu mo	like seeing	-uru	nominalized form	MYS XX: 4415
CEOJ	Musashi	n-ar-u	being	-u	modifies noun	MYS XX: 4416
CEOJ	Musashi	kōp-usikē-mop- am-o	will probably feel loving	-o	sentence final, maybe kakari musubi but no trigger	MYS XX: 4419
CEOJ	Musashi	pap-o	crawl, grovel	-o	modifies noun	MYS XX: 4421
CEOJ	Musashi	ne-m-o	will surely sleep	-o	sentence final, maybe kakari musubi but no trigger	MYS XX: 4422

CEOJ	Musashi	n-ar-u	being in	-u	modifies noun	MYS XX: 4423
CEOJ	Musashi	mî-m-o kamo	will probably see	-o	nominalized form	MYS XX: 4423
CEOJ	Sagami	sas-u	set	-u	modifies noun	MYS XIV: 3361
CEOJ	Sagami	mat-u	waiting	-u	modifies noun	MYS XIV: 3363
CEOJ	Sagami	mît-unam-u ka	be filled	-u	nominalized form	MYS XIV: 3366
CEOJ	Sagami	iNt-uru	going out	-uru	modifies noun	MYS XIV: 3368
CEOJ	Sagami	mak-as-am-u	will be pillowing	-u	modifies noun	MYS XIV: 3369
CEOJ	Sagami	tok-aNsu-ne-m-u	will not untie	-u	kakari musubi	MYS XIV: 3370
CEOJ	Sagami	pîk-ô	pulling	-ô	modifies noun	MYS XIV: 3431
CEOJ	Sagami	kaNtusane-m-o	[unknown]	-o	sentence final, maybe kakari musubi but no trigger	MYS XIV: 3432
CEOJ	Sagami	kaNtusak-aNs-u tōmo	[unknown]	-u	nominalized form	MYS XIV: 3432
CEOJ	Sagami	watar-u	cross	-u	modifies noun	MYS XX: 4328
CEOJ	Sagami	se-m-u	will do	-u	modifies noun	MYS XX: 4329
CEOJ	Sagami	makar-am-u	will probably leave	-u	kakari musubi	MYS XX: 4330
CEOJ	Shimōsa	kōNk-u	rowing	-u	modifies noun	MYS XIV: 3349
CEOJ	Shimōsa	yuk-ô	go	-ô	modifies noun	MYS XX: 4385
CEOJ	Shimōsa	k-î-n-u	came	-u	kakari musubi	MYS XX: 4387
CEOJ	Shimōsa	tamap-o ka	serve, honor	-o	nominalized form	MYS XX: 4389
CEOJ	Shimōsa	kōp-î-s-unam-u	will probably love (Q)	-u	modifies noun	MYS XX: 4391
CEOJ	Shimōsa	watar-am-u	will surely cross	-u	kakari musubi	MYS XX: 4394

SEOJ	Shinano	tay-u tömo	ceasing	-u	nominalized form	MYS XIV: 3398
SEOJ	Shinano	n-ar-u	being in	-u	modifies noun	MYS XIV: 3400
SEOJ	Shinano	uk-î-wor-u	floating	-u	modifies noun	MYS XIV: 3400
SEOJ	Shinano	nak-u	cry	-u	modifies noun	MYS XX: 4401
SEOJ	Shinano	k-î-n-u ya	has come	-u	nominalized form	MYS XX: 4401
SEOJ	Shinano	tipayap-uru	awe inspiring	-uru	modifies noun	MYS XX: 4402
SEOJ	Shinano	ipap-u	pray, celebrate	-u	modifies noun	MYS XX: 4402
SEOJ	Shinano	tönöpîk-u	(clouds) trailing	-u	modifies noun	MYS XX: 4403
SEOJ	Shinano	k-î-n-u kamo	has come	-u	nominalized form	MYS XX: 4403
SEOJ	Suruga	op-uru	living	-uru	modifies noun	MYS XIV: 3359
SEOJ	Suruga	yuk-u Nka	going	-u	nominalized form	MYS XX: 4338
SEOJ	Suruga	měNk-uru	go around	-uru	modifies noun	MYS XX: 4339
SEOJ	Suruga	n-ar-u	being	-u	modifies noun	MYS XX: 4340
SEOJ	Suruga	yukî-kate-n-ô kamô	unable to go	-ô	kakari musubi	MYS XX: 4341
SEOJ	Suruga	tukur-er-u	make	-u	modifies noun	MYS XX: 4342
SEOJ	Suruga	yasur-am-u	thining	-u	modifies noun	MYS XX: 4343
SEOJ	Suruga	se-n-ô kamô	don't do	-ô	kakari musubi	MYS XX: 4344
SEOJ	Suruga	wasure-kane-t- uru	cannot have forgotten	-uru	kakari musubi	MYS XX: 4346
SEOJ	Tôtômi	ne-m-u	probably will sleep	-u	kakari musubi	MYS XX: 4321
SEOJ	Tôtômi	tö-p-u < tö ipu	that is called	-u	modifies noun	MYS XX: 4323
SEOJ	Tôtômi	sak-î-Nte-kö- Ns-ukêm-u	surely could not bloom	-u	kakari musubi	MYS XX: 4323

SEOJ	Tôtômi	yuk-am-u	will go	-u	kakari musubi	MYS XX: 4325
SEOJ	Tôtômi	k-î-t-ar-u maNte	untill [I] came	-u	nominalized form	MYS XX: 4326
SEOJ	Tôtômi	yuk-u	I who go (on a trip)	-u	modifies noun	MYS XX: 4327
UEOJ		ne-m-u mo	will surely sleep	-u	nominalized form	MYS XIV: 3442
UEOJ		n-ar-u	being	-u	modifies noun	MYS XIV: 3445
UEOJ		op-uru Nka ni	living	-uru	nominalized form	MYS XIV: 3452
UEOJ		sikëk-u tömo	thicken	-u	nominalized form	MYS XIV: 3456
UEOJ		ipap-u	celebrating	-u	modifies noun	MYS XIV: 3460
UEOJ		akê-n-u	dawn; brighten	-u	modifies noun	MYS XIV: 3461
UEOJ		ap-êr-u	meeting	-u	modifies noun	MYS XIV: 3463
UEOJ		n-uru Nka	sleeping	-uru	nominalized form	MYS XIV: 3466
UEOJ		pat-u	begining (first)	-u	modifies noun	MYS XIV: 3468
UEOJ		kî-mas-an-u	came (HON)	-u	kakari musubi	MYS XIV: 3469
UEOJ		ip-am-u	saying	-u	kakari musubi	MYS XIV: 3472
UEOJ		kî-nap-am-o	will surely not wear	-o	kakari musubi	MYS XIV: 3472
UEOJ		ut-u ya	hiting	-u	nominalized form	MYS XIV: 3473
UEOJ		ne-m-o tö ka	sleeping	-o	nominalized form	MYS XIV: 3473
UEOJ		mîe-t-uru	visible	-uru	kakari musubi	MYS XIV: 3473
UEOJ		nakëk-am-u	lament	-u	kakari musubi	MYS XIV: 3474
UEOJ		kôp-u namo	will love	-u	nominalized form	MYS XIV: 3476
UEOJ		tat-ô	standing	-ô	modifies noun	MYS XIV: 3476

UEOJ		kôp-usikar-u namo	loving	-u	nominalized form	MYS XIV: 3476
UEOJ		kôpî-m-u na	loving	-u	nominalized form	MYS XIV: 3477
UEOJ		apî-n-u tömo	met	-u	nominalized form	MYS XIV: 3477
UEOJ		ap-o	meeting	-o	modifies noun	MYS XIV: 3478
UEOJ		ap-anöp-ê	not meeting	-ê	modifies noun	MYS XIV: 3478
UEOJ		kî-n-o kamo	came	-o	nominalized form	MYS XIV: 3480
UEOJ		tökê-nap-ë	not untied	-ë	modifies noun	MYS XIV: 3483
UEOJ		yör-u töka mo	pass	-u	nominalized form	MYS XIV: 3483
UEOJ		um-aNs-u tömo	not spun	-u	nominalized form	MYS XIV: 3484
UEOJ		sôp-u	accompany ing	-u	modifies noun	MYS XIV: 3485
UEOJ		nak-î-t-uru	crying	-uru	kakari musubi	MYS XIV: 3485
UEOJ		parap-u mo	swept	-u	nominalized form	MYS XIV: 3489
UEOJ		kapê-r-u tenö	are changing	-u	nominalized form	MYS XIV: 3494
UEOJ		omop-u	think	-u	kakari musubi	MYS XIV: 3494
UEOJ		k-î-mas-an-u	come (HON)	-u	kakari musubi	MYS XIV: 3495
UEOJ		omop-u namu	thinking	-u	nominalized form	MYS XIV: 3496
UEOJ		kar-u	cutting	-u	modifies noun	MYS XIV: 3499
UEOJ		wop-uru	ending	-uru	kakari musubi	MYS XIV: 3500
UEOJ		opar-u	living	-u	modifies noun	MYS XIV: 3501
UEOJ		sakar-u Nkapë	separated	-u	nominalized form	MYS XIV: 3502
UEOJ		sak-u	blooming	-u	modifies noun	MYS XIV: 3504
UEOJ		n-uru	sleeping	-u	modifies noun	MYS XIV: 3504

UEOJ		n-uram-u	will sleep	-u	kakari musubi	MYS XIV: 3505
UEOJ		mie-n-u	seen	-u	modifies noun	MYS XIV: 3506
UEOJ		tanaNpîk-u	trailing	-u	modifies noun	MYS XIV: 3511
UEOJ		omop-u	feeling	-u	kakari musubi	MYS XIV: 3511
UEOJ		ip-ar-u	saying	-u	modifies noun	MYS XIV: 3512
UEOJ		yösör-i	passing by	-i	modifies noun	MYS XIV: 3512
UEOJ		sara-n-u	left	-u	modifies noun	MYS XIV: 3513
UEOJ		taye-m-u tö	ending	-u	nominalized form	MYS XIV: 3513
UEOJ		tuk-u nösu	wearing	-u	nominalized form	MYS XIV: 3514
UEOJ		wasure-m-u	surely will forget	-u	modifies noun	MYS XIV: 3515
UEOJ		tat-u	rising	-u	modifies noun	MYS XIV: 3515
UEOJ		tanapîk-u	trailing	-u	modifies noun	MYS XIV: 3516
UEOJ		kakar-u	hanging	-u	modifies noun	MYS XIV: 3518
UEOJ		kanômaNtuk-u	[unknown]	-u	modifies noun	MYS XIV: 3518
UEOJ		otapap-u	[unknown]	-u	kakari musubi	MYS XIV: 3518
UEOJ		wasure-m-u	forget	-u	modifies noun	MYS XIV: 3520
UEOJ		tanabîk-u	trailing	-u	modifies noun	MYS XIV: 3520
UEOJ		k-î-mas-an-u	didn't come (HON)	-u	modifies noun	MYS XIV: 3521
UEOJ		nak-u	sing	-u	kakari musubi	MYS XIV: 3521
UEOJ		wi-ru	sitting	-uru	modifies noun	MYS XIV: 3523
UEOJ		s-uru	doing	-uru	kakari musubi	MYS XIV: 3524
UEOJ		pap-o nösu	like crawling	-o	nominalized form	MYS XIV: 3525
UEOJ		ne-nap-u mo	not sleeping	-u	nominalized form	MYS XIV: 3525
UEOJ		kayôp-a	passing	-a	modifies noun	MYS XIV: 3526
UEOJ		yuk-u namo to	going	-u	nominalized form	MYS XIV: 3526
UEOJ		sum-o	living (residing)	-o	modifies noun	MYS XIV: 3527
UEOJ		ikîNtuk-u	breathing	-u	modifies noun	MYS XIV: 3527

UEOJ		k-î-n-ô kamo	came	-ô	nominalized form	MYS XIV: 3527
UEOJ		tat-am-u	surely will stand	-u	modifies noun	MYS XIV: 3528
UEOJ		omop-î-kane-t-u mo	certainly think	-u	nominalized form	MYS XIV: 3528
UEOJ		ne-n-ap-ê	not sleeping	-ê	modifies noun	MYS XIV: 3529
UEOJ		pus-u ya	throw on ground	-u	nominalized form	MYS XIV: 3530
UEOJ		mîye-N-s-u tömo	not visible	-u	nominalized form	MYS XIV: 3530
UEOJ		omop-êr-u	thinking	-u	kakari musubi	MYS XIV: 3531
UEOJ		pam-u	eating	-u	modifies noun	MYS XIV: 3532
UEOJ		sinôp-uram-u	remembering	-u	modifies noun	MYS XIV: 3532
UEOJ		nayum-u	worried	-u	modifies noun	MYS XIV: 3533
UEOJ		nar-u	being	-u	modifies noun	MYS XIV: 3536
UEOJ		kö-m-u tö	will come	-u	nominalized form	MYS XIV: 3536
UEOJ		ip-u	say	-u	kakari musubi	MYS XIV: 3536
UEOJ		pam-u	eating	-u	modifies noun	MYS XIV: 3537
UEOJ		s-uru	doing	-uru	sentence final, maybe kakari musubi but no trigger	MYS XIV: 3539
UEOJ		yuk-ô nösu	going	-ô	nominalized form	MYS XIV: 3541
UEOJ		mayukaserap-u mo	[unknown]	-u	nominalized form	MYS XIV: 3541
UEOJ		nar-i-n-u Nka ni	becoming	-u	nominalized form	MYS XIV: 3543
UEOJ		niNkör-er-u wo	get muddy	-u	nominalized form	MYS XIV: 3544
UEOJ		par-ar-ô	stretching	-ô	modifies noun	MYS XIV: 3546

UEOJ		mat-u tö	waiting	-u	nominalized form	MYS XIV: 3546
UEOJ		naras-u mo	leveling	-u	nominalized form	MYS XIV: 3546
UEOJ		nar-u	singing	-u	modifies noun	MYS XIV: 3548
UEOJ		yös-u nasu	like passing	-u	nominalized form	MYS XIV: 3548
UEOJ		yös-u mo	passing	-u	nominalized form	MYS XIV: 3548
UEOJ		kayôp-am-u	passing by	-u	kakari musubi	MYS XIV: 3549
UEOJ		sak-u	blooming	-u	modifies noun	MYS XIV: 3551
UEOJ		tok-u	untie	-u	modifies noun	MYS XIV: 3551
UEOJ		omop-os-unam-o ro	feeling	-o	nominalized form	MYS XIV: 3552
UEOJ		[o]mop-o nösu mo	like feeling	-o	nominalized form	MYS XIV: 3552
UEOJ		ir-u	entering	-u	modifies noun	MYS XIV: 3553
UEOJ		ne-n-ap-ê	not sleeping	-ê	modifies noun	MYS XIV: 3555
UEOJ		si-m-u	will surely do	-u	kakari musubi	MYS XIV: 3556
UEOJ		köNk-u	rowing	-u	modifies noun	MYS XIV: 3557
UEOJ		mas-u ni	increasing	-u	nominalized form	MYS XIV: 3557
UEOJ		mat-ô nösu	like waiting	-ô	nominalized form	MYS XIV: 3561
UEOJ		mat-u namo	waiting	-u	nominalized form	MYS XIV: 3563
UEOJ		puk-u	blowing	-u	modifies noun	MYS XIV: 3564
UEOJ		suNkôs-am-u	will surely pass	-u	kakari musubi	MYS XIV: 3564
UEOJ		yör-u mo	passing	-u	nominalized form	MYS XIV: 3565

UEOJ		op-ose-m-u	will be able to bear	-u	kakari musubi	MYS XIV: 3566
UEOJ		k-î-n-uru	came	-uru	kakari musubi	MYS XIV: 3571
UEOJ		yu[N]tur-u	moving	-u	modifies noun	MYS XIV: 3572
UEOJ		pupum-ar-u	including	-u	modifies noun	MYS XIV: 3572
UEOJ		puk-aN-s-u kamo	not blowing	-u	nominalized form	MYS XIV: 3572
UEOJ		tat-er-u	standing	-u	modifies noun	MYS XIV: 3575
UEOJ		nar-uru manimani	taming	-uru	nominalized form	MYS XIV: 3576
UEOJ		mî-ru ga	seeing	-uru	nominalized form	MYS XX: 4425
UEOJ		yuk-u pa	going	-u	nominalized form	MYS XX: 4425
UEOJ		tôp-u	asking	-u	modifies noun	MYS XX: 4425
UEOJ		ne-m-u	will probably sleep	-u	kakari musubi	MYS XX: 4428
UEOJ		kanar-u	hold	-u	modifies noun	MYS XX: 4430
UEOJ		[i]mas-er-u	exist (HON)	-u	modifies noun	MYS XX: 4431
UEOJ		sapê-napê-n-u	have not avoided	-u	modifies noun	MYS XX: 4432

## Appendix E: Yamatoma Verb Root Data

First I present the roots showing the verbs that support their reconstructions, then present the data for each derivational suffix in the following order: \*-i-/e-, \*-am-, \*-ar-, \*-as-. The page numbers in the charts below refer to Osada et al. (1980), unless otherwise stated. The symbol "V" is used to indicate a non-high vowel; it is reconstructed following aspirated consonants, where non-high vowels trigger aspiration.

### Evidence for pre-Yamatoma Verb Roots

Pre-Yam. root	Yamatoma verb	reconstruction	gloss	attestation
*hag-	hagī-	*hag-ī-	peel off (v.i.)	p. 258
	hag-	*hag-	peel off (v.t.)	p. 347-348
*haga-	hagare-	*haga-ar-e-	torn off (v.i.)	p. 275
	hagas-	*haga-as-	tear off (v.t.)	p. 275
*hana-	hanare-	*hana-ar-e-	separate (v.i.)	p. 276
	hanas-	*hana-as-	separate (v.t.)	p. 276
*har-	har-	*har-	flow (v.i.)	p. 245
	haras-	*har-Vs-	flow (v.t.), slip	p. 342
*hasam-	hasamar-	*hasam-ar-	be between (v.i.)	p. 271
	hasam-	*hasam-	put between (v.t.)	p. 271
*hazimar-	hazimar-	*hazimar-	begin (v.i.)	p. 308
	hazimare-	*hasimar-e-	begin (v.t.)	p. 308
*hazī-	hazīrī-	*hazī-ar-ī	come off (v.i.)	p. 274
	hazīs-	*hazī-as-	come off (v.t.)	p. 274
	hazī-	*hazī-	take off (v.t.)	p. 352
*hezam-	hezam-	*hezam-	be distant (v.i.)	p. 277
	hezamī-	*hezam-ī-	make distant (v.t.)	p. 277
*hing-	hing-	*hing-	run away	p. 298
	hingyas-	*hingy-as-	set free	p. 298
*hikum-	hikum-	*hikum-	withdraw, keep indoors (v.i.)	p. 285
	hikumī-	*hikum-ī-	withdraw, keep indoors (v.t.)	p. 285

*hirug-	hirugar- hirugī-	*hirug-ar- *hirug-ī-	widen (v.i.) widen (v.t.)	p. 259 p. 363
*hirum-	hirumī- hirumar-	*hirum-ī- *hirum-ar-	widen (v.t.) widen (v.i.)	p. 363-364 p. 259
*hog-	hoge- hogas-	*hog-e- *hog-as-	rip (fabric) (v.i.) rip, tear (v.t.)	p. 251 p. 357
*hukk-	hukkī- hukk-	*hukk-ī- *hukk-	untie (v.i.) untie (v.t.)	p. 251-252 p. 346
*hukur-	hukuram- hukurī-	*hukur-am- *hukur-ī-	swell (v.i.) swell (v.i.)	p. 254 p. 254
*hwe:-	hwe:s- hwe:-	*hwe:-as- *hwe:-	dawn; brighten (v.t.) become bright	p. 363 p. 258, 362
*hwī:-	hwī:- hwī:s-	*hwī:- *hwī:-as-	wake (v.i.) wake (v.t.)	p. 288 p. 288-289, 412
*k <sup>h</sup> ah-	k <sup>h</sup> ahar- k <sup>h</sup> ehe-	*k <sup>h</sup> ah-ar- *k <sup>h</sup> eh-e-	hang (v.i.) hang (v.t.)	p. 268 p. 268-269
*k <sup>h</sup> ak <sup>h</sup> V-	k <sup>h</sup> ehe- k <sup>h</sup> ak-	*k <sup>h</sup> ak <sup>h</sup> -e- *k <sup>h</sup> ak <sup>h</sup> -	lack (v.i.) lack (v.t.)	p. 251, 302 p. 302, 358
*k <sup>h</sup> aku-	k <sup>h</sup> akurī- k <sup>h</sup> akus-	*k <sup>h</sup> aku-ar-ī- *k <sup>h</sup> aku-as-	hide (v.i.) hide (v.t.)	p. 274 p. 274
*k <sup>h</sup> asam-	k <sup>h</sup> asam- k <sup>h</sup> asamī-	*k <sup>h</sup> asam- *k <sup>h</sup> asam-ī-	increase (v.i.) increase (v.t.)	p. 260 p. 364
*k <sup>h</sup> at <sup>h</sup> V-	k <sup>h</sup> at <sup>h</sup> amar- k <sup>h</sup> at <sup>h</sup> amī-	*k <sup>h</sup> at <sup>h</sup> V-am-ar- *k <sup>h</sup> at <sup>h</sup> V-am-ī-	harden (v.i.) harden (v.t.)	p. 256 p. 361
*k <sup>h</sup> at <sup>h</sup> açik-	k <sup>h</sup> at <sup>h</sup> açik- k <sup>h</sup> at <sup>h</sup> açikī-	*k <sup>h</sup> at <sup>h</sup> açik- *k <sup>h</sup> at <sup>h</sup> açik-ī-	settle, clean (v.i.) settle, clean (v.t.)	p. 315 p. 315
*k <sup>h</sup> om-	k <sup>h</sup> omar- k <sup>h</sup> omī-	*k <sup>h</sup> om-ar- *k <sup>h</sup> om-ī-	confine (v.i.) confine (v.t.)	p. 273 p. 273-274
*k <sup>h</sup> ubu-	k <sup>h</sup> uburī- k <sup>h</sup> ubus-	*k <sup>h</sup> ubu-ar-ī- *k <sup>h</sup> ubu-as-	overflow (v.i.) overfill (v.t.)	p. 277-278 p. 278
*kik-	kik- kikyar-	*kik- *kik-ar-	hear, listenaudible	p. 329 p. 329
*kim-	kimar- kimī-	*kim-ar- *kim-ī-	decide (v.i.) decide (v.t.)	p. 312 p. 312

*kir-	kir- kiras-	*kir- *kir-as-	cut, break (v.i.) but break (v.t.)	p. 250, 310, 356-357 p. 302
*kuda-	kudar- kudas-	*kuda-ar- *kuda-as-	go down (v.i.) put down (v.t.)	p. 264 p. 264
*kye:-	kye:- kye:s-	*kye:- *kye:-as-	go out, extinguish (v.i.) put out (v.t.)	p. 243 p. 363
*kyo:-	kyo(:)re- kyo:s-	*kyo:-ar-e- *kyo:-as-	break (v.i.) break (v.t.)	p. 250 p. 356
*mag-	magar- magi-	*mag-ar- *mag-i-	bend (v.i.) bend (v.t.)	p. 252-253 p. 360
*magir-	magir- magiras-	*magir- *magir-as-	mix (v.i.) mix (v.t.)	p. 406 p. 406
*mat <sup>h</sup> omar-	mat <sup>h</sup> omar- mat <sup>h</sup> omas-	*mat <sup>h</sup> omar- *mat <sup>h</sup> omar-as-	get together (v.i.) put together (v.t.)	p. 313-314 p. 314
*ma'wa-	ma'war- ma'was-	*ma'wa-ar- *ma'wa-as-	turn (v.i.) turn (v.t.)	p. 283 p. 283
*me:-	me:- me:s-	*me:- *me:-as-	burn (v.i.) burn (v.t.)	p. 244 p. 363
*mo:-	mo:r- mo:s-	*mo:-ar- *mo:-as-	turn (v.i.) turn (v.t.)	p. 248 p. 342
*mor-	mor- moras-	*mor- *mor-as-	leak (v.i.) leak (v.t.)	p. 277 p. 277
*na-	nar- nas-	*na-ar- *na-as-	become (v.i.) make (v.t.)	p. 289, 312 p. 289
*naga-	nagare- nagas-	*nagar-e- *naga-as-	flow (v.i.) flow (v.t.)	p. 279 p. 279
*narab-	narab- narabi-	*narab- *narab-i-	line up (v.i.) line up (v.t.)	p. 268 p. 268
*no:-	no:r- no:s-	*no:-ar- *no:-as-	fix (v.i.) fix (v.t.)	p. 284 p. 284
*noho-	nohor- nohos-	*noho-ar- *noho-as-	remain (v.i.) remain (v.t.)	p. 303-304 p. 304
*nu-	nur- nusī-	*nu-ar- *nu-as-i-	ride (v.i.) ride (v.t.)	p. 262 p. 262

*nub-	nub- nubas-	*nub- *nub-as-	stretch (v.i.) stretch (v.t.)	p. 252 p. 359
*nug-	nugī- nug-	*nug-ī*nug-	fall off (v.i.) take off (v.t.)	p. 274 p. 274, 352
*sag-	sagar- sagī-	*sag-ar- *sag-ī-	lower (v.i.) lower (v.t.)	p. 263 p. 263
*sam-	samī- samās-	*sam-ī- *sam-as-	get cold (v.i.) make cold (v.t.)	p. 257 p. 362
*sum-	sum- sumī-	*sum- *sum-ī-	dye, permeate (v.i.) dye (v.t.)	p. 258 p. 362
*sībum-	sībum- sībumī-	*sībum- *sībum-ī-	shrink (v.i.) shrink (v.t.)	p. 254 p. 254, 361
*t <sup>h</sup> a-	t <sup>h</sup> ar- t <sup>h</sup> as-	*t <sup>h</sup> a-ar- *t <sup>h</sup> a-as-	suffice (v.i.) make sufficient (v.t.)	p. 303 p. 303
*t <sup>h</sup> am-	t <sup>h</sup> amar- t <sup>h</sup> amī-	*t <sup>h</sup> am-ar- *t <sup>h</sup> am-ī-	stop (v.i.) stop (v.t.)	p. 279 p. 279
*t <sup>h</sup> ar-	t <sup>h</sup> ar- t <sup>h</sup> are- t <sup>h</sup> aras-	*t <sup>h</sup> ar- *t <sup>h</sup> ar-e- *t <sup>h</sup> ar-as-	hang (v.i.) hang (v.t.) make hang (v.t.)	p. 244-245 p. 255, 271 p. 270
*t <sup>h</sup> at <sup>h</sup> V-	t <sup>h</sup> at <sup>h</sup> - t <sup>h</sup> at <sup>h</sup> ī-	*t <sup>h</sup> at <sup>h</sup> V- *t <sup>h</sup> at <sup>h</sup> V-ī-	stand (v.i.) stand (v.t.)	p. 285-287, 301-302 p. 287
*t <sup>h</sup> o:-	t <sup>h</sup> o:re- t <sup>h</sup> o:s-	*t <sup>h</sup> o:-ar-e- *t <sup>h</sup> o:-as-	fall (v.i.) knock down (v.t.)	p. 292 p. 292
*t <sup>h</sup> om-	t <sup>h</sup> omar- t <sup>h</sup> umī-	*t <sup>h</sup> om-ar- *t <sup>h</sup> om-ī-	stop (v.i.) stop (v.t.)	p. 300 p. 300, 343
*t <sup>h</sup> u:-	t <sup>h</sup> u:r- t <sup>h</sup> u:s-	*t <sup>h</sup> u:-ar- *t <sup>h</sup> u:-as-	pass (v.i.) pass (v.t.)	p. 243, 298 p. 298, 338
*t <sup>h</sup> ubu-	t <sup>h</sup> ubur- t <sup>h</sup> ubus-	*t <sup>h</sup> ubu-ar- *t <sup>h</sup> ubu-as-	burn (v.i.) burn, light (v.t.)	p. 243 p. 363
*t <sup>h</sup> uduk-	t <sup>h</sup> uduk- t <sup>h</sup> udukī-	*t <sup>h</sup> uduk- *t <sup>h</sup> uduk-ī-	deliver (v.i.) deliver (v.t.)	p. 282-283 p. 283
*ut <sup>h</sup> u-	ut <sup>h</sup> ī- ut <sup>h</sup> us-	*ut <sup>h</sup> u-ī- *ut <sup>h</sup> u-as-	fall (v.i.) drop (v.t.)	p. 264-265, 307-308 p. 265
*çir-	çir- çiras-	*çir- *çir-as-	fall, scatter (v.i.) fall, scatter (v.t.)	p. 258, 279-280 p. 280

*çizim-	çizim- çizimar- çizimi-	*çizim- *çizim-ar- *çizim-ï-	shrink (v.i.) shrink (v.i.) shrink (v.t.)	p. 255 p. 255 p. 361
*çik-	çik- çiki-	*çik- *çik-ï	attach (v.i.) attach (v.t.)	p. 271 p. 271-272, 362, 365
*çim-	çimar- çimi-	*çim-ar- *çim-ï-	be full (v.i.) fill (v.t.)	p. 259 p. 364
*çizik <sup>h</sup> V-	çizik <sup>h</sup> - çizik <sup>h</sup> ï-	*çizik <sup>h</sup> V- *çizik <sup>h</sup> V-ï-	continue (v.i.) continue (v.t.)	p. 309 p. 309
*ʔabur-	ʔaburï- ʔaburas-	*ʔabur-ï- *ʔabur-as-	overflow (v.i.) overflow (v.t.)	p. 278 p. 278
*ʔag-	ʔagar- ʔagi-	*ʔag-ar- *ʔag-ï-	rise (v.i.) rise (v.t.)	p. 253, 261, 310 p. 261, 310
*ʔarat <sup>h</sup> am-	arat <sup>h</sup> amar- arat <sup>h</sup> ami-	*ʔarat <sup>h</sup> V-am-ar- *ʔarat <sup>h</sup> V-am-ï-	be renewed renew (v.t.)	p. 249 p. 356, 381-382
*ʔat <sup>h</sup> V-	ʔat <sup>h</sup> ar- ʔat <sup>h</sup> ï-	*ʔat <sup>h</sup> V-ar- *ʔat <sup>h</sup> V-ï-	strike (v.i.) strike (v.t.)	p. 272-273 p. 273
*ʔazar-	ʔazar- ʔazari-	*ʔazar- *ʔazar-ï-	alignment changes change alignment (v.t.)	p. 268 p. 268
*ʔaçim-	ʔaçimar- ʔaçimi-	*ʔaçim-ar- *ʔaçim-ï-	gather (v.i.) gather (v.t.)	p. 281 p. 281
*ʔir-	ʔir- ʔiri-	*ʔir- *ʔir-ï-	enter (v.i.) put in (v.t.)	p. 284 p. 284-285
*ʔiz-	ʔizi- ʔizyas-	*ʔiz-ï- *ʔiz-as-	go out (v.i.) put out (v.t.)	p. 284 p. 284
*ʔo:’-	ʔo:’- ʔo:s-	*ʔo:’- *ʔo:’-as-	join, meet put together	p. 306, 412 p. 306
*ʔo’-	ʔo’- ʔo:s-	*ʔo’- *ʔo’-as-	carry on back (v.i.) carry on back (v.t.)	p. 337 p. 337
*ʔuk <sup>h</sup> V-	ʔuk <sup>h</sup> - ʔuk <sup>h</sup> ï-	*ʔuk <sup>h</sup> V- *ʔuk <sup>h</sup> V-ï-	float (v.i.) float (v.t.)	p. 265 p. 265
*ʔuru-	ʔurï- ʔurus-	*ʔuru-ï- *ʔuru-as-	go down (v.i.) go down (v.t.)	p. 264 p. 264

*ʔuçi-	ʔuçir-	*ʔuçi-ar-	move, change (color) (v.i.)	p. 282
	ʔuçis-	*ʔuçi-as-	move, change (color) (v.t.)	p. 282
*ʔuçik-	ʔuçik-	*ʔuçik-	look down (v.i.)	p. 290
	ʔuçiki-	*ʔuçik-ï-	look down, prostrate oneself (v.t.)	p. 290
*'osam-	'osamar-	*'osam-ar-	govern (v.i.)	p. 310
	'osamï-	*'osam-ï-	govern (v.t.)	p. 310
*'ur-	'urï-	*'ur-ï-	break, fold (v.i.)	p. 251, 424
	'ur-	*'ur-	break, fold (v.t.)	p. 358
*'wak-	'wak-	*'wak-	boil (v.i.)	p. 257
	'wa <sup>h</sup> as-	*'wak-as-	boil (v.t.)	p. 362
*'wak <sup>h</sup> V-	'wahare-	*'wak <sup>h</sup> V-ar-e-	separate (v.i.)	p. 276
	'wehe-	*'wak <sup>h</sup> V-	separate (v.t.)	p. 276
	'wahas-	*'wak <sup>h</sup> V-as-	separate (v.t.)	p. 277
	'wak <sup>h</sup> are-	*'wak <sup>h</sup> V-ar-e-	separate (v.i.)	p. 413-414
*'war-	'ware-	*'war-e-	break (v.i.)	p. 251
	'war-	*'war-	break (v.t.)	p. 357
*'wat <sup>h</sup> a-	'wat <sup>h</sup> ar-	*'wat <sup>h</sup> a-ar-	cross (v.i.)	p. 298
	'wat <sup>h</sup> as-	*'wat <sup>h</sup> a-as-	cross (v.t.)	p. 298
*'yogam-	'yogam-	*'yogam-	warp (v.i.)	p. 253
	'yogamï-	*'yogam-ï-	warp (v.t.)	p. 360
*'yu-	'yur-	*'yu-ar-	pass (v.i.)	p. 280
	'yusi-	*'yu-as-ï-	pass (v.t.)	p. 280

**Evidence for Reconstruction of Transitivity Flipper \*-ï/-e-**

<b>Pre-Yam. root</b>	<b>Yamatoma verb</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*hag-	hagi-	*hag-ï-	peel off (v.i.)	p. 258
	hag-	*hag-	peel off (v.t.)	p. 347-348
*haga-	hagare-	*haga-ar-e-	torn off (v.i.)	p. 275
	hagas-	*haga-as-	tear off (v.t.)	p. 275
*hana-	hanare-	*hana-ar-e-	separate (v.i.)	p. 276
	hanas-	*hana-as-	separate (v.t.)	p. 276

*hazimar-	hazimar- hazimare-	*hazimar- *hasimar-e-	begin (v.i.) begin (v.t.)	p. 308 p. 308
*hezam-	hezam- hezamî-	*hezam- *hezam-i-	be distant (v.i.) make distant (v.t.)	p. 277 p. 277
*hikum-	hikum- hikumî-	*hikum- *hikum-i-	withdraw, keep indoors (v.i.) withdraw, keep indoors (v.t.)	p. 285 p. 285
*hirug-	hirugar- hirugî-	*hirug-ar- *hirug-i-	widen (v.i.) widen (v.t.)	p. 259 p. 363
*hirum-	hirumî- hirumar-	*hirum-i- *hirum-ar-	widen (v.t.) widen (v.i.)	p. 363-364 p. 259
*hog-	hoge- hogas-	*hog-e- *hog-as-	rip (fabric) (v.i.) rip, tear (v.t.)	p. 251 p. 357
*hukk-	hukkî- hukk-	*hukk-i- *hukk-	untie (v.i.) untie (v.t.)	p. 251-252 p. 346
*hukur-	hukuram- hukuri-	*hukur-am- *hukur-i-	swell (v.i.) swell (v.i.)	p. 254 p. 254
*k <sup>h</sup> ah-	k <sup>h</sup> ahar- k <sup>h</sup> ehe-	*k <sup>h</sup> ah-ar- *k <sup>h</sup> eh-e-	hang (v.i.) hang (v.t.)	p. 268 p. 268-269
*k <sup>h</sup> ak <sup>h</sup> V-	k <sup>h</sup> ehe- k <sup>h</sup> ak-	*k <sup>h</sup> ak <sup>h</sup> -e- *k <sup>h</sup> ak <sup>h</sup> -	lack (v.i.) lack (v.t.)	p. 251, 302 p. 302, 358
*k <sup>h</sup> aku-	k <sup>h</sup> akurî- k <sup>h</sup> akus-	*k <sup>h</sup> aku-ar-i- *k <sup>h</sup> aku-as-	hide (v.i.) hide (v.t.)	p. 274 p. 274
*k <sup>h</sup> asam-	k <sup>h</sup> asam- k <sup>h</sup> asamî-	*k <sup>h</sup> asam- *k <sup>h</sup> asam-i-	increase (v.i.) increase (v.t.)	p. 260 p. 364
*k <sup>h</sup> at <sup>h</sup> V-	k <sup>h</sup> at <sup>h</sup> amar- k <sup>h</sup> at <sup>h</sup> amî-	*k <sup>h</sup> at <sup>h</sup> V-am-ar- *k <sup>h</sup> at <sup>h</sup> V-am-i-	harden (v.i.) harden (v.t.)	p. 256 p. 361
*k <sup>h</sup> at <sup>h</sup> açik-	k <sup>h</sup> at <sup>h</sup> açik- k <sup>h</sup> at <sup>h</sup> açikî-	*k <sup>h</sup> at <sup>h</sup> açik- *k <sup>h</sup> at <sup>h</sup> açik-i-	settle, clean (v.i.) settle, clean (v.t.)	p. 315 p. 315
*k <sup>h</sup> om-	k <sup>h</sup> omar- k <sup>h</sup> omî-	*k <sup>h</sup> om-ar- *k <sup>h</sup> om-i-	confine (v.i.) confine (v.t.)	p. 273 p. 273-274
*k <sup>h</sup> ubu-	k <sup>h</sup> uburî- k <sup>h</sup> ubus-	*k <sup>h</sup> ubu-ar-i- *k <sup>h</sup> ubu-as-	overflow (v.i.) overflow (v.t.)	p. 277-278 p. 278

*kim-	kimar- kimī-	*kim-ar- *kim-ī-	decide (v.i.) decide (v.t.)	p. 312 p. 312
*kyo:-	kyo(:)re- kyo:s-	*kyo:-ar-e- *kyo:-as-	break (v.i.) break (v.t.)	p. 250 p. 356
*mag-	magar- magī-	*mag-ar- *mag-ī-	bend (v.i.) bend (v.t.)	p. 252-253 p. 360
*naga-	nagare- nagas-	*nagar-e- *naga-as-	flow (v.i.) flow (v.t.)	p. 279 p. 279
*narab-	narab- narabī-	*narab- *narab-ī-	line up (v.i.) line up (v.t.)	p. 268 p. 268
*nu-	nur- nusi-	*nu-ar- *nu-as-ī-	ride (v.i.) ride (v.t.)	p. 262 p. 262
*sag-	sagar- sagī-	*sag-ar- *sag-ī-	lower (v.i.) lower (v.t.)	p. 263 p. 263
*sam-	samī- samas-	*sam-ī- *sam-as-	get cold (v.i.) make cold (v.t.)	p. 257 p. 362
*sum-	sum- sumī-	*sum- *sum-ī-	dye, permeate (v.i.) dye (v.t.)	p. 258 p. 362
*sibum-	sibum- sibumī-	*sibum- *sibum-ī-	shrink (v.i.) shrink (v.t.)	p. 254 p. 254, 361
* <sup>h</sup> am-	<sup>h</sup> amar- <sup>h</sup> amī-	* <sup>h</sup> am-ar- * <sup>h</sup> am-ī-	stop (v.i.) stop (v.t.)	p. 279 p. 279
* <sup>h</sup> ar-	<sup>h</sup> ar- <sup>h</sup> are- <sup>h</sup> aras-	* <sup>h</sup> ar- * <sup>h</sup> ar-e- * <sup>h</sup> ar-as-	hang (v.i.) hang (v.t.) make hang (v.t.)	p. 244-245 p. 255, 271 p. 270
* <sup>h</sup> at <sup>h</sup> V-	<sup>h</sup> at <sup>h</sup> - <sup>h</sup> at <sup>h</sup> ī-	* <sup>h</sup> at <sup>h</sup> V- * <sup>h</sup> at <sup>h</sup> V-ī-	stand (v.i.) stand (v.t.)	p. 285-287, 301-302 p. 287
* <sup>h</sup> o:-	<sup>h</sup> o:re- <sup>h</sup> o:s-	* <sup>h</sup> o:-ar-e- * <sup>h</sup> o:-as-	fall (v.i.) knock down (v.t.)	p. 292 p. 292
* <sup>h</sup> om-	<sup>h</sup> omar- <sup>h</sup> umī-	* <sup>h</sup> om-ar- * <sup>h</sup> um-ī-	stop (v.i.) stop (v.t.)	p. 300 p. 300, 343
* <sup>h</sup> uduk-	<sup>h</sup> uduk- <sup>h</sup> udukī-	* <sup>h</sup> uduk- * <sup>h</sup> uduk-ī-	deliver (v.i.) deliver (v.t.)	p. 282-283 p. 283

*ut <sup>h</sup> u-	ut <sup>h</sup> i- ut <sup>h</sup> us-	*ut <sup>h</sup> u-ï- *ut <sup>h</sup> u-as-	fall (v.i.) drop (v.t.)	p. 264-265, 307-308 p. 265
*çizim-	çizim- çizimar- çizimi-	*çizim- *çizim-ar- *çizim-ï-	shrink (v.i.) shrink (v.i.) shrink (v.t.)	p. 255 p. 255 p. 361
*çim-	çimar- çimi-	*çim-ar- *çim-ï-	be full (v.i.) fill (v.t.)	p. 259 p. 364
*çizik <sup>h</sup> V-	çizik <sup>h</sup> - çizik <sup>h</sup> i-	*çizik <sup>h</sup> V- *çizik <sup>h</sup> V-ï-	continue (v.i.) continue (v.t.)	p. 309 p. 309
*?abur-	?aburï- ?aburas-	*?abur-ï- *?abur-as-	overflow (v.i.) overflow (v.t.)	p. 278 p. 278
*?ag-	?agar- ?agi-	*?ag-ar- *?ag-ï-	rise (v.i.) rise (v.t.)	p. 253, 261, 310 p. 261, 310
*?arat <sup>h</sup> am-	?arat <sup>h</sup> amar- ?arat <sup>h</sup> ami-	*?arat <sup>h</sup> V-am-ar- *?arat <sup>h</sup> V-am-ï-	be renewedrenew (v.t.) , investigate	p. 249 p. 356, 381-382
*?at <sup>h</sup> V-	?at <sup>h</sup> ar- ?at <sup>h</sup> i	*?at <sup>h</sup> V-ar- *?at <sup>h</sup> V-ï-	strike (v.i.) strike (v.t.)	p. 272-273 p. 273
*?azar-	?azar- ?azarï-	*?azar- *?azar-ï-	change alignment (v.i.) change alignment (v.t.)	p. 268 p. 268
*?açim-	?açimar- ?açimi-	*?açim-ar- *?açim-ï-	gather (v.i.) gather (v.t.)	p. 281 p. 281
*?ir-	?ir- ?iri-	*?ir- *?ir-i-	enter (v.i.) put in (v.t.)	p. 284 p. 284-285
*?iz-	?izi- ?izyas-	*?iz-ï- *?iz-as-	go out (v.i.) put out (v.t.)	p. 284 p. 284
*?uk <sup>h</sup> V-	?uk <sup>h</sup> - ?uk <sup>h</sup> i-	*?uk <sup>h</sup> V- *?uk <sup>h</sup> V-ï-	float (v.i.) float (v.t.)	p. 265 p. 265
*?uru-	?urï- ?urus-	*?uru-ï- *?uru-as-	go down (v.i.) go down (v.t.)	p. 264 p. 264
*?uçik-	?uçik- ?uçiki-	*?uçik- *?uçik-ï-	look down (v.i.) look down, prostrate oneself (v.t.)	p. 290 p. 290

*'osam-	'osamar- 'osamī-	*'osam-ar- *'osam-ī-	govern, be at peace (v.i.) govern (v.t.)	p. 310 p. 310
*'ur-	'urī- 'ur-	*'ur-ī- *'ur-	break, fold (v.i.) break, fold (v.t.)	p. 251, 424 p. 358
*'wak <sup>h</sup> V-	'wahare- 'wehe- 'wahas- 'wak <sup>h</sup> are-	*'wak <sup>h</sup> V-ar-e- *'wak <sup>h</sup> V- *'wak <sup>h</sup> V-as- *'wak <sup>h</sup> V-ar-e-	separate (v.i.) separate (v.t.) separate (v.t.) separate (v. i.) pass away	p. 276 p. 276 p. 277 p. 413-414
*'war-	'ware- 'war-	*'war-e- *'war-	break (v.i.) break (v.t.)	p. 251 p. 357
*'yogam-	'yogam- 'yogamī-	*'yogam- *'yogam-ī-	warp (v.i.) warp (v.t.)	p. 253 p. 360
*'yu-	'yur- 'yusi-	*'yu-ar- *'yu-as-ī-	pass (v.i.) pass (v.t.)	p. 280 p. 280

**Evidence for Reconstruction of Verbalizer \*-am-**

<b>Pre-Yam. root</b>	<b>Yamatoma verb</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*'hukur-	hukuram- hukuri-	*'hukur-am- *'hukur-ī-	swell (v.i.) swell (v.i.)	p. 254 p. 254
*'k <sup>h</sup> at <sup>h</sup> V-	k <sup>h</sup> at <sup>h</sup> amar- k <sup>h</sup> at <sup>h</sup> amī-	*'k <sup>h</sup> at <sup>h</sup> V-am-ar- *'k <sup>h</sup> at <sup>h</sup> V-am-ī-	harden (v.i.) harden (v.t.)	p. 256 p. 361
*?arat <sup>h</sup> V-	?arat <sup>h</sup> amar- ?arat <sup>h</sup> amī-	*?arat <sup>h</sup> V-am-ar- *?arat <sup>h</sup> V-am-ī-	be renewed renew (v.t.)	p. 249 p. 356, 381-382

**Evidence for Reconstruction of Intransitive \*-ar-**

<b>Pre-Yam. root</b>	<b>Yamatoma verb</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*haga-	hagare-	*haga-ar-e-	torn off (v.i.)	p. 275
	hagas-	*haga-as-	tear off (v.t.)	p. 275
*hana-	hanare-	*hana-ar-e-	separate (v.i.)	p. 276
	hanas-	*hana-as-	separate (v.t.)	p. 276
*hasam-	hasamar-	*hasam-ar-	be between (v.i.)	p. 271
	hasam-	*hasam-	put between (v.t.)	p. 271
*hazi-	haziri-	*hazi-ar-i-	come off (v.i.)	p. 274
	hazis-	*hazi-as-	come off (v.t.)	p. 274
	hazi-	*hazi-	take off (v.t.)	p. 352
*hirug-	hirugar-	*hirug-ar-	widen (v.i.)	p. 259
	hirugi-	*hirug-i-	widen (v.t.)	p. 363
*hirum-	hirumi-	*hirum-i-	widen (v.t.)	p. 363-364
	hirumar-	*hirum-ar-	widen (v.i.)	p. 259
*k <sup>h</sup> ah-	k <sup>h</sup> ahar-	*k <sup>h</sup> ah-ar-	hang (v.i.)	p. 268
	k <sup>h</sup> ehe-	*k <sup>h</sup> eh-e-	hang (v.t.)	p. 268-269
*k <sup>h</sup> aku-	k <sup>h</sup> akuri-	*k <sup>h</sup> aku-ar-i-	hide (v.i.)	p. 274
	k <sup>h</sup> akus-	*k <sup>h</sup> aku-as-	hide (v.t.)	p. 274
*k <sup>h</sup> at <sup>h</sup> V-	k <sup>h</sup> at <sup>h</sup> amar-	*k <sup>h</sup> at <sup>h</sup> V-am-ar-	harden (v.i.)	p. 256
	k <sup>h</sup> at <sup>h</sup> ami-	*k <sup>h</sup> at <sup>h</sup> V-am-i-	harden (v.t.)	p. 361
*k <sup>h</sup> om-	k <sup>h</sup> omar-	*k <sup>h</sup> om-ar-	confine (v.i.)	p. 273
	k <sup>h</sup> omi-	*k <sup>h</sup> om-i-	confine (v.t.)	p. 273-274
*k <sup>h</sup> ubu-	k <sup>h</sup> uburi-	*k <sup>h</sup> ubu-ar-i-	overflow (v.i.)	p. 277-278
	k <sup>h</sup> ubus-	*k <sup>h</sup> ubu-as-	overflow (v.t.)	p. 278
*kik-	kik-	*kik-	hear, listen	p. 329
	kikyar-	*kik-ar-	audible	p. 329
*kim-	kimar-	*kim-ar-	decide (v.i.)	p. 312
	kimī-	*kim-i-	decide (v.t.)	p. 312
*kuda-	kudar-	*kuda-ar-	go down (v.i.)	p. 264
	kudas-	*kuda-as-	put down (v.t.)	p. 264
*kyo:-	kyo(:)re-	*kyo:-ar-e-	break (v.i.)	p. 250
	kyo:s-	*kyo:-as-	break (v.t.)	p. 356

*mag-	magar- magi-	*mag-ar- *mag-i-	bend (v.i.) bend (v.t.)	p. 252-253 p. 360
*ma'wa-	ma'war- ma'was-	*ma'wa-ar- *ma'wa-as-	turn (v.i.) turn (v.t.)	p. 283 p. 283
*mo:-	mo:r- mo:s-	*mo:-ar- *mo:-as-	turn (v.i.) turn (v.t.)	p. 248 p. 342
*na-	nar- nas-	*na-ar- *na-as-	become (v.i.) make (v.t.)	p. 289, 312 p. 289
*no:-	no:r- no:s-	*no:-ar- *no:-as-	fix (v.i.) fix (v.t.)	p. 284 p. 284
*noho-	nohor- nohos-	*noho-ar- *noho-as-	remain (v.i.) remain (v.t.)	p. 303-304 p. 304
*nu-	nur- nusi-	*nu-ar- *nu-as-i-	ride (v.i.) ride (v.t.)	p. 262 p. 262
*sag-	sagar- sagi-	*sag-ar- *sag-i-	lower (v.i.) lower (v.t.)	p. 263 p. 263
*t <sup>h</sup> a-	t <sup>h</sup> ar- t <sup>h</sup> as-	*t <sup>h</sup> a-ar- *t <sup>h</sup> a-as-	suffice (v.i.) make sufficient (v.t.)	p. 303 p. 303
*t <sup>h</sup> am-	t <sup>h</sup> amar- t <sup>h</sup> ami-	*t <sup>h</sup> am-ar- *t <sup>h</sup> am-i-	stop (v.i.) stop (v.t.)	p. 279 p. 279
*t <sup>h</sup> o:-	t <sup>h</sup> o:re- t <sup>h</sup> o:s-	*t <sup>h</sup> o:-ar-e- *t <sup>h</sup> o:-as-	fall (v.i.) knock down (v.t.)	p. 292 p. 292
*t <sup>h</sup> om-	t <sup>h</sup> omar- t <sup>h</sup> umi-	*t <sup>h</sup> om-ar- *t <sup>h</sup> um-i-	stop (v.i.) stop (v.t.)	p. 300 p. 300, 343
*t <sup>h</sup> u:-	t <sup>h</sup> u:r- t <sup>h</sup> u:s-	*t <sup>h</sup> u:-ar- *t <sup>h</sup> u:-as-	pass (v.i.) pass (v.t.)	p. 243, 298 p. 298, 338
*t <sup>h</sup> ubu-	t <sup>h</sup> ubur- t <sup>h</sup> ubus-	*t <sup>h</sup> ubu-ar- *t <sup>h</sup> ubu-as-	burn (v.i.) burn, light (v.t.)	p. 243 p. 363
*çizim-	çizim- çizimar- çizimi-	*çizim- *çizim-ar- *çizim-i-	shrink (v.i.) shrink (v.i.) shrink (v.t.)	p. 255 p. 255 p. 361
*çim-	çimar- çimi-	*çim-ar- *çim-i-	be full (v.i.) fill (v.t.)	p. 259 p. 364
*ʔag-	agar- agi-	*ʔag-ar- *ʔag-i-	rise (v.i.) rise (v.t.)	p. 253, 261, 310 p. 261, 310

*ʔarat <sup>h</sup> V-	ʔarat <sup>h</sup> amar- ʔarat <sup>h</sup> amī-	*ʔarat <sup>h</sup> V-am-ar- *ʔarat <sup>h</sup> V-am-ī-	be renewed renew (v.t.)	p. 249 p. 356, 381-382
*ʔat <sup>h</sup> V-	ʔat <sup>h</sup> ar- ʔat <sup>h</sup> ī	*ʔat <sup>h</sup> V-ar- *ʔat <sup>h</sup> V-ī-	strike (v.i.) strike (v.t.)	p. 272-273 p. 273
*ʔaçim-	ʔaçimar- ʔaçimi-	*ʔaçim-ar- *ʔaçim-ī-	gather (v.i.) gather (v.t.)	p. 281 p. 281
*ʔuçi-	ʔuçir-  ʔuçis-	*ʔuçi-ar-  *ʔuçi-as-	move, change (color) (v.i.) move, change (color) (v.t.)	p. 282 p. 282
*ʔosam-	ʔosamar- ʔosamī-	*ʔosam-ar- *ʔosam-ī-	govern (v.i.) govern (v.t.)	p. 310 p. 310
*ʔwak <sup>h</sup> V-	ʔwahare- ʔwehe- ʔwahas- ʔwak <sup>h</sup> are-	*ʔwak <sup>h</sup> V-ar-e- *ʔwak <sup>h</sup> V- *ʔwak <sup>h</sup> V-as- *ʔwak <sup>h</sup> V-ar-e-	separate (v.i.) separate (v.t.) separate (v.t.) separate (v. i.) pass away	p. 276 p. 276 p. 277 p. 413-414
*ʔwat <sup>h</sup> a-	ʔwat <sup>h</sup> ar- ʔwat <sup>h</sup> as-	*ʔwat <sup>h</sup> a-ar- *ʔwat <sup>h</sup> a-as-	cross (v.i.) cross (v.t.)	p. 298 p. 298
*ʔyu-	ʔyur- ʔyusi-	*ʔyu-ar- *ʔyu-as-ī-	pass (v.i.) pass (v.t.)	p. 280 p. 280

**Evidence for Reconstruction of Transitive \*-as-**

<b>Pre-Yam. root</b>	<b>Yamatoma verb</b>	<b>reconstruction</b>	<b>gloss</b>	<b>attestation</b>
*haga-	hagare- hagas-	*haga-ar-e- *haga-as-	torn off (v.i.) tear off (v.t.)	p. 275 p. 275
*hana-	hanare- hanas-	*hana-ar-e- *hana-as-	separate (v.i.) separate (v.t.)	p. 276 p. 276
*hazī-	hazirī- hazīs- hazī-	*hazī-ar-ī- *hazī-as- *hazī-	come off (v.i.) come off (v.t.) take off (v.t.)	p. 274 p. 274 p. 352
*hog-	hoge- hogas-	*hog-e- *hog-as-	rip (fabric) (v.i.) rip, tear (v.t.)	p. 251 p. 357
*hwe:-	hwe:s- hwe:-	*hwe:-as- *hwe:-	dawn; brighten (v.t.) become bright	p. 363 p. 258, 362

*hwī:-	hwī:- hwī:s-	*hwī:- *hwī:-as-	wake (v.i.) wake (v.t.)	p. 288 p. 288-289, 412
*k <sup>h</sup> aku-	k <sup>h</sup> akurī- k <sup>h</sup> akus-	*k <sup>h</sup> aku-ar-ī- *k <sup>h</sup> aku-as-	hide (v.i.) hide (v.t.)	p. 274 p. 274
*k <sup>h</sup> ubu-	k <sup>h</sup> uburī- k <sup>h</sup> ubus-	*k <sup>h</sup> ubu-ar-ī- *k <sup>h</sup> ubu-as-	overflow (v.i.) overflow (v.t.)	p. 277-278 p. 278
*kir-	kir- kiras-	*kir- *kir-as-	cut, break (v.i.) but break (v.t.)	p. 250, 310, 356-357 p. 302
*kuda-	kudar- kudas-	*kuda-ar- *kuda-as-	go down (v.i.) put down (v.t.)	p. 264 p. 264
*kye:-	kye:- kye:s-	*kye:- *kye:-as-	go out, extinguish (v.i.) put out (v.t.)	p. 243 p. 363
*kyo:-	kyo(:)re- kyo:s-	*kyo:-ar-e- *kyo:-as-	break (v.i.) break (v.t.)	p. 250 p. 356
*magir-	magir- magiras-	*magir- *magir-as-	mix (v.i.) mix (v.t.)	p. 406 p. 406
*mat <sup>h</sup> omar-	mat <sup>h</sup> omar- mat <sup>h</sup> omaras-	*mat <sup>h</sup> omar- *mat <sup>h</sup> omar-as-	get together (v.i.) put together (v.t.)	p. 313-314 p. 314
*ma'wa-	ma'war- ma'was-	*ma'wa-ar- *ma'wa-as-	turn (v.i.) turn (v.t.)	p. 283 p. 283
*me:-	me:- me:s-	*me:- *me:-as-	burn (v.i.) burn (v.t.)	p. 244 p. 363
*mo:-	mo:r- mo:s-	*mo:-ar- *mo:-as-	turn (v.i.) turn (v.t.)	p. 248 p. 342
*mor-	mor- moras-	*mor- *mor-as-	leak (v.i.) leak (v.t.)	p. 277 p. 277
*na-	nar- nas-	*na-ar- *na-as-	become (v.i.) make (v.t.)	p. 289, 312 p. 289
*naga-	nagare- nagas-	*nagar-e- *naga-as-	flow (v.i.) flow (v.t.)	p. 279 p. 279
*no:-	no:r- no:s-	*no:-ar- *no:-as-	fix (v.i.) fix (v.t.)	p. 284 p. 284
*noho-	nohor- nohos-	*noho-ar- *noho-as-	remain (v.i.) remain (v.t.)	p. 303-304 p. 304

*nub-	nub- nubas-	*nub- *nub-as-	stretch (v.i.) stretch (v.t.)	p. 252 p. 359
*sam-	samī- samas-	*sam-ī- *sam-as-	get cold (v.i.) make cold (v.t.)	p. 257 p. 362
*t <sup>h</sup> a-	t <sup>h</sup> ar- t <sup>h</sup> as-	*t <sup>h</sup> a-ar- *t <sup>h</sup> a-as-	suffice (v.i.) make sufficient (v.t.)	p. 303 p. 303
*t <sup>h</sup> ar-	t <sup>h</sup> ar- t <sup>h</sup> are- t <sup>h</sup> aras-	*t <sup>h</sup> ar- *t <sup>h</sup> ar-e- *t <sup>h</sup> ar-as-	hang (v.i.) hang (v.t.) make hang (v.t.)	p. 244-245 p. 255, 271 p. 270
*t <sup>h</sup> o:-	t <sup>h</sup> o:re- t <sup>h</sup> o:s-	*t <sup>h</sup> o:-ar-e- *t <sup>h</sup> o:-as-	fall (v.i.) knock down (v.t.)	p. 292 p. 292
*t <sup>h</sup> u:-	t <sup>h</sup> u:r- t <sup>h</sup> u:s-	*t <sup>h</sup> u:-ar- *t <sup>h</sup> u:-as-	pass (v.i.) pass (v.t.)	p. 243, 298 p. 298, 338
*t <sup>h</sup> ubu-	t <sup>h</sup> ubur- t <sup>h</sup> ubus-	*t <sup>h</sup> ubu-ar- *t <sup>h</sup> ubu-as-	burn (v.i.) burn, light (v.t.)	p. 243 p. 363
*ut <sup>h</sup> u-	ut <sup>h</sup> i- ut <sup>h</sup> us-	*ut <sup>h</sup> u-ī- *ut <sup>h</sup> u-as-	fall (v.i.) drop (v.t.)	p. 264-265 p. 265
*çir-	çir- çiras-	*çir- *çir-as-	fall, scatter (v.i.) fall, scatter (v.t.)	p. 258, 279-280 p. 280
*ʔabur-	ʔaburī- ʔaburas-	*ʔabur-ī- *ʔabur-as-	overflow (v.i.) overflow (v.t.)	p. 278 p. 278
*ʔiz-	ʔizi- ʔizyas-	*ʔiz-ī- *ʔiz-as-	go out (v.i.) put out (v.t.)	p. 284 p. 284
*ʔo:ʔ	ʔo:ʔ- ʔo:s-	*ʔo:ʔ*ʔo:ʔ-as-	join, meet put together	p. 306, 412 p. 306
*ʔoʔ-	ʔoʔ- ʔo:s-	*ʔoʔ- *ʔoʔ-as-	carry on back (v.i.) carry on back (v.t.)	p. 337 p. 337
*ʔuru-	ʔurī- ʔurus-	*ʔuru-ī- *ʔuru-as-	go down (v.i.) go down (v.t.)	p. 264 p. 264
*ʔuçi-	ʔuçir- ʔuçis-	*ʔuçi-ar- *ʔuçi-as-	move, change (color) (v.i.) move, change (color) (v.t.)	p. 282 p. 282

*'wak <sup>h</sup> V-	'wahare- 'wehe- 'wahas- 'wak <sup>h</sup> are-	*'wak <sup>h</sup> V-ar-e- *'wak <sup>h</sup> V- *'wak <sup>h</sup> V-as- *'wak <sup>h</sup> V-ar-e-	separate (v.i.) separate (v.t.) separate (v.t.) separate (v. i.) pass away	p. 276 p. 276 p. 277 p. 413-414
*'wat <sup>h</sup> a-	'wat <sup>h</sup> ar- 'wat <sup>h</sup> as-	*'wat <sup>h</sup> a-ar- *'wat <sup>h</sup> a-as-	cross (v.i.) cross (v.t.)	p. 298 p. 298

## Appendix F: Yamatoma Inflectional Suffixes not Included in the Present Study

### Prefixes

<i>si(t)ta-</i>	emphatic; affixes to nominalized forms of verbs
<i>çya:-</i>	emphatic, not as strong as <i>sitta-</i> ; affixes to nominalized forms of verbs
<i>hurî-</i>	emphatic, not as strong as <i>çya:-</i> ; affixes to nouns and nominalized forms of verbs
<i>ʔatta-</i>	'quickly, suddenly'; affixes to nominalized forms of verbs

### Suffixes

#### Group I

<i>-iNsyor-</i>	honorific suffix
<i>-kir-</i>	potential auxiliary

#### Group II

(none)

#### Group III

(none)

#### Group IV

<i>-a, -ya</i>	person who does [verb]; suffix
<i>-adana</i>	because (I) don't [verb]; suffix
<i>-attu</i>	conditional; suffix
<i>-be</i>	person who does/specialist who does; auxiliary
<i>-bosyari</i>	want to do [verb]; auxiliary
<i>-do, -ato</i>	copula (following a negative); suffix
<i>-gaççyana</i>	do [verb] while doing [verb]; auxiliary
<i>-gamarasyari</i>	hate doing [verb]; auxiliary
<i>-gurusyari</i>	hard to do [verb]; auxiliary
<i>-hana, -bana</i>	start to do [verb]; auxiliary
<i>-huNde</i>	all you can [verb]; auxiliary

<i>-k<sup>h</sup>at<sup>h</sup>a</i>	1) way to do [verb]; 2) appearance; 3) in the process of doing [verb]; auxiliary
<i>-made</i>	harmful to [verb]; auxiliary
<i>-ma'ye (do)</i>	must do [verb]; auxiliary
<i>-miçyuraN</i>	don't know how to do [verb]; auxiliary
<i>-na:, -nya(:)</i>	question particle following the negative
<i>-nogori</i>	ok not to do [verb]; auxiliary]
<i>-sira</i>	time, chance; auxiliary
<i>-t<sup>h</sup>e</i>	one who does [verb]; auxiliary
<i>-t<sup>h</sup>e(:)N</i>	even though; follows negative
<i>-tyagesari</i>	looks like [verb]; auxiliary
<i>-tyasari</i>	want to do [verb]; auxiliary
<i>-uk<sup>h</sup>a:zi</i>	the extent of doing [verb]
<i>-'yassari</i>	easy to do [verb]; auxiliary
<i>-?agumasyari</i>	don't want to do [verb]; auxiliary

## Appendix G: Shuri Verb Root Data

First I present the roots showing the verbs that support their reconstructions, then present the data for each derivational suffix in the following order: \*-i- < \*-e-, \*-m-, \*-ri- < \*-re-, \*-s-.

### Evidence for pre-Shuri Verb Roots

Pre-Shuri root	Shuri verbs	reconstruction	gloss	source
*ʔa:-	ʔa:-	*ʔa:-	join (v.i.)	online dictionary
	ʔa:s-	*ʔa:-s-	join (v.t.)	online dictionary
*ʔa:ka-	ʔa:ki-	*ʔaka-i-	break (v.i.)	online dictionary
	ʔa:kas-	*ʔaka-s-	break (v.t.)	online dictionary
*ʔačim-	ʔačimi-	*ʔačim-i-	gather (v.t.)	online dictionary
	ʔačima-	*ʔačim-	gather (v.i.)	online dictionary
*ʔačira-	ʔačiri-	*ʔačira-i-	get hot (v.i.)	online dictionary
	ʔačiras-	*ʔačira-s-	heat (v.t.)	online dictionary
*ʔaga-	ʔaga-	*ʔaga-	rise (v.i.)	online dictionary
	ʔagi-	*ʔaga-i-	rise (v.t.)	online dictionary
*ʔak-	ʔak-	*ʔak-	open (v.i.)	online dictionary
	ʔaki-	*ʔak-i-	open (v.t.)	online dictionary
*ʔaka-	ʔaki-	*ʔaka-i-	dawn (v.i.)	online dictionary
	ʔake:-	*ʔaka-i-	dawn, redden (v.i.)	online dictionary
	ʔakas-	*ʔaka-s-	brighten (v.t.)	online dictionary
*ʔaka-	ʔakari-	*ʔaka-ri-	separate (v.i.)	online dictionary
	ʔa:kas-	*ʔaka-s-	separate (v.t.)	online dictionary
*ʔama-	ʔama-	*ʔama-	be in excess (v.i.)	online dictionary
	ʔamas-	*ʔama-s-	excess (v.t.)	online dictionary
*ʔara-	ʔari-	*ʔara-i-	get wild; get bigger	online dictionary
	ʔaras-	*ʔara-s	make wild (v.t.)	online dictionary
*ʔarata-	ʔaratama-	*ʔarata-m-	renew (v.i.)	online dictionary
	ʔaratami-	*ʔarata-m-i	renew (v.t.)	online dictionary
*čik-	čič-	*čik-	attach (v.i.)	online dictionary
	čiki-	*čik-i-	attach (v.t.)	online dictionary

*čim-	čimi- čin- čim-	*čim-i- *čim- *čim-	pile up (v.i.) pile up (v.t.) pile up (v.t.)	online dictionary online dictionary online dictionary
*čima-	čima- čimi-	*čima- *čima-i-	be full (v.i.) fill (v.t.)	online dictionary online dictionary
*čira-	čiri- čiras-	*čira-i- *čira-s-	scatter (v.i.) scatter (v.t.)	online dictionary online dictionary
*čiwama-	čiwama- čiwami-	*čiwama- *čiwama-i-	decide (v.i.) decide (v.t.)	online dictionary online dictionary
*čuma-	ču:ma- ču:mi-	*ču:ma- *ču:ma-i-	strengthen (v.i.) strengthen (v.t.)	online dictionary online dictionary
*fuka-	fuk- fukas-	*fuka- *fuka-s-	boil (v.i.) boil (v.t.)	online dictionary online dictionary
*furu-	furun- furumi-	*furu-m- *furu-m-i-	get old (v.i.) age (v.t.)	online dictionary online dictionary
*ha-	hari- ha-	*ha-ri- *ha-	stretch (v.i.) stretch (v.t.)	online dictionary online dictionary
*hana-	hanari- hanas-	*hana-ri- *hana-s-	separate (v.i.) separate (v.t.)	online dictionary online dictionary
*hara-	hari- haras-	*hara-i- *hara-s-	clear up (v.i.) clear up (v.t.)	online dictionary online dictionary
*hačima-	hačima- hačimi-	*hačima- *hačima-i-	begin (v.i.) begin (v.t.)	online dictionary online dictionary
*kak-	kaki- kac-	*kak-i- *kak-	lack (v.i.) lack (v.t.)	online dictionary online dictionary
*kaka-	kaka- kaki-	*kaka- *kaka-i-	hang (v.i.) hang (v.t.)	online dictionary online dictionary
*ke:-	ke:- ke:s-	*ke:- *ke:-s-	return (v.i.) return (v.t.)	online dictionary online dictionary
*ma:-	ma:- ma:s-	*ma:- *ma:-s-	turn around (v.i.) turn around (v.t.)	online dictionary online dictionary
*maga-	maga- magi-	*maga- *maga-i-	bend (v.i.) bend (v.t.)	online dictionary online dictionary
*maži-	maži- mažiri-	*maži- *maži-ri-	mix (v.i.) mix (v.t.)	

*me:	me:- me:s-	*me:- *me:-s-	burn (v.i.) burn (v.t.)	Thorpe and online dictionary
*mudu-	mudu- mudus-	*mudu- *mudu-s-	return (v.i.) return (v.t.)	Ashworth, p. 111 Ashworth, p.111
*naga-	nagari- nagas-	*naga-ri- *naga-s-	flow (v.i.) flow (v.t.)	online dictionary online dictionary
*naga-	nugi- nugas-	*nuga-i- *nuga-s-	run away (v.i.) run away (v.t.)	online dictionary online dictionary
*narab-	narab- narabi-	*narab- *narab-i-	line up (v.i.) line up (v.t.)	online dictionary online dictionary
*nda-	ndi- ndas-	*nda-i- *nda-s-	get wet (v.i.) wet (v.t.)	Ashworth, p.112 online dictionary
*ni-	ni- nisi-	*ni- *ni-s-i-	resemble (v.i.) resemble (v.t.)	online dictionary online dictionary
*nu-	nu- nusi-	*nu- *nu-s-i-	ride (v.i.) ride (v.t.)	online dictionary online dictionary
*nubu-	nubu- nubusi-	*nubu- *nubu-s-i-	climb (v.i.) climb (v.t.)	online dictionary online dictionary
*nuku-	nuku- nukus-	*nuku- *nuku-s-	remain (v.i.) reamain (v.t.)	online dictionary; online dictionary
* <sup>?</sup> nža-	<sup>?</sup> nži- <sup>?</sup> n as-	* <sup>?</sup> nža-i- * <sup>?</sup> nža-s-	go out (v.i.) put out (v.t.)	Ashworth, p.112 Ashworth, p.112
*sama-	sama- samas-	*sama- *sama-s-	cool (v.i.) cool (v.t.)	online dictionary online dictionary
*sama-	samas- sami-	*sama-s- *sama-i-	wake up (v.t.) wake up (v.i.)	online dictionary online dictionary
*sida-	sidam-	*sida-m-	cool (v.i.)	online dictionary
*sigu-	siži- sigus-	*sigu-i- *sugu-s-	exceed (v.i.) exceed (v.t.)	Ashworth, p.112 Ashworth, p.112
*sira-	siran-	*sira-m-	whiten (v.i.)	online dictionary
*sudat-	sudati- sudac-	*sudat-i- *sudat-	raise [person] (v.t.) raise [person] (v.i.)	online dictionary online dictionary
*sum-	sum- sumi-	*sum- *sum-i-	dye (v.i.) dye (v.t.)	online dictionary online dictionary

*tama-	tama- tame:-	*tama- *tama-i-	stop (v.i.) stop (v.t.)	online dictionary online dictionary
*tat-	tac- tati-	*tat- *tat-i-	stand (v.i.) stand (v.t.)	online dictionary online dictionary
*to:-	to:ri- to:s-	*to:-ri- *to:-s-	fall (v.i.) drop (v.t.)	online dictionary online dictionary
*tu:-	tu:- tu:s-	*tu:- *tu:-s-	pass (v.i.) pass (v.t.)	online dictionary online dictionary
*tuma-	tuma- tumi-	*tuma- *tuma-i-	stop (v.i.) stop (v.t.)	online dictionary online dictionary
* <sup>?</sup> u-	<sup>?</sup> u- <sup>?</sup> uri-	* <sup>?</sup> u- * <sup>?</sup> u-ri-	sell sell (v.i.)	online dictionary online dictionary
* <sup>?</sup> uču-	<sup>?</sup> u i- <sup>?</sup> u us-	* <sup>?</sup> uču-i- * <sup>?</sup> uču-s-	move, transmit (v.i.) move (v.t.)	Ashworth, p.111 Ashworth, p.111
* <sup>?</sup> uk-	<sup>?</sup> uki- <sup>?</sup> uk-	* <sup>?</sup> uk-i- * <sup>?</sup> uk-	float (v.t.) float (v.i.)	online dictionary online dictionary
* <sup>?</sup> ukab-	<sup>?</sup> ukabi- <sup>?</sup> ukab-	* <sup>?</sup> ukab-i- * <sup>?</sup> ukab-	float (v.t.) float (v.i.)	online dictionary online dictionary
* <sup>?</sup> uku-	<sup>?</sup> uki- <sup>?</sup> ukus- <sup>?</sup> uku-	* <sup>?</sup> uku-i- * <sup>?</sup> uku-s- * <sup>?</sup> uku-	wake up (v.i.) wake up (v.t.) wake up, occur (v.i.)	online dictionary online dictionary online dictionary
* <sup>?</sup> uru-	<sup>?</sup> uri- <sup>?</sup> urus-	* <sup>?</sup> uru-i- * <sup>?</sup> uru-s-	go down (v.i.) put down (v.t.)	online dictionary online dictionary
*utu-	<sup>?</sup> uti- <sup>?</sup> utus-	*utu-i- *utu-s-	fall (v.i.) drop (v.t.)	online dictionary online dictionary
*wa-	wari- wa-	*wa-ri- *wa-	break (v.i.) break (v.t.)	online dictionary online dictionary
*waka-	waka- wakas-	*waka- *waka-s-	separate (v.i.) separate (v.t.)	online dictionary online dictionary
*wata-	wata- watas-	*wata- *wata-s-	cross (v.i.) cross (v.t.)	Ashworth, p.111 Ashworth, p.111
*wu:-	wu:- wu:ri-	*wu:- *wu:-ri-	fold (v.t.) fold (v.i.)	online dictionary online dictionary
*ya-	yari- ya-	*ya-ri- *ya-	break (v.i.) break (v.t.)	online dictionary online dictionary

*yak-	yaki- yak-	*yak-i- *yak-	fry, bake (v.i.) fry, bake (v.t.)	online dictionary online dictionary
*yam-	yam- yami-	*yam- *yam-i-	quit (v.i.) quit (v.t.)	online dictionary online dictionary
*yasima-	yasima- yasimi-	*yasima- *yasima-i-	rest (v.i.) rest (v.t.)	online dictionary online dictionary

**Evidence for Reconstruction of Transitivity Flipper \*-i- < \*-e-**

<b>Pre-Shuri root</b>	<b>Shuri verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>source</b>
*ʔa:ka-	ʔa:ki- ʔa:kas-	*ʔaka-i- *ʔaka-s-	break (v.i.) break (v.t.)	online dictionary online dictionary
*ʔačim-	ʔačimi- ʔačima-	*ʔačim-i- *ʔačim-	gather (v.t.) gather (v.i.)	online dictionary online dictionary
*ʔačira-	ʔa iri- ʔa iras-	*ʔačira-i- *ʔačira-s-	get hot (v.i.) heat (v.t.)	online dictionary online dictionary
*ʔaga-	ʔaga- ʔagi-	*ʔaga- *ʔaga-i-	rise (v.i.) rise (v.t.)	online dictionary online dictionary
*ʔak-	ʔak- ʔaki-	*ʔak- *ʔak-i-	open (v.i.) open (v.t.)	online dictionary online dictionary
*ʔaka-	ʔaki- ʔake:- ʔakas-	*ʔaka-i- *ʔaka-i- *ʔaka-s-	dawn (v.i.) dawn, redden (v.i.) brighten (v.t.)	online dictionary online dictionary online dictionary
*čik-	čič- čiki-	*čik- *čik-i-	attach (v.i.) attach (v.t.)	online dictionary online dictionary
*čim-	čimi- čin- čim-	*čim-i- *čim- *čim-	pile up (v.i.) pile up (v.t.) pile up (v.t.)	online dictionary online dictionary online dictionary
*čima-	čima- čimi-	*čima- *čima-i-	be full (v.i.) fill (v.t.)	online dictionary online dictionary
*čira-	čiri- čiras-	*čira-i- *čira-s-	scatter (v.i.) scatter (v.t.)	online dictionary online dictionary
*čiwama-	čiwama- čiwami-	*čiwama- *čiwama-i-	decide (v.i.) decide (v.t.)	online dictionary online dictionary

*ču:ma-	ču:ma- ču:mi-	*ču:ma- *ču:ma-i-	strengthen (v.i.) strengthen (v.t.)	online dictionary online dictionary
*furu-	furun- furumi-	*furu-m- *furu-m-i-	get old (v.i.) age (v.t.)	online dictionary online dictionary
*hara-	hari- haras-	*hara-i- *hara-s-	clear up (v.i.) clear up (v.t.)	online dictionary online dictionary
*hačima-	hačima- hačimi-	*hačima- *hačima-i-	begin (v.i.) begin (v.t.)	online dictionary online dictionary
*kak-	kaki- kač-	*kak-i- *kak-	lack (v.i.) lack (v.t.)	online dictionary online dictionary
*kaka-	kaka- kaki-	*kaka- *kaka-i-	hang (v.i.) hang (v.t.)	online dictionary online dictionary
*maga-	maga- magi-	*maga- *maga-i-	bend (v.i.) bend (v.t.)	online dictionary online dictionary
*naga-	nugi- nugas-	*nuga-i- *nuga-s-	run away (v.i.) run away (v.t.)	online dictionary online dictionary
*narab-	narab- narabi-	*narab- *narab-i-	line up (v.i.) line up (v.t.)	online dictionary online dictionary
*nda-	ndi- ndas-	*nda-i- *nda-s-	get wet (v.i.) wet (v.t.)	Ashworth, p.112 online dictionary
*ni-	ni- nisi-	*ni- *ni-s-i-	resemble (v.i.) resemble (v.t.)	online dictionary online dictionary
*nu-	nu- nusi-	*nu- *nu-s-i-	ride (v.i.) ride (v.t.)	online dictionary online dictionary
*nubu-	nubu- nubusi-	*nubu- *nubu-s-i-	climb (v.i.) climb (v.t.)	online dictionary online dictionary
*?nža-	?nži- ?n as-	*?nža-i- *?nža-s-	go out (v.i.) put out (v.t.)	Ashworth, p.112 Ashworth, p.112
*sama-	samas- sami-	*sama-s- *sama-i-	wake up (v.t.) wake up (v.i.)	online dictionary online dictionary
*sigu-	si i- sigus-	*sigu-i- *sugu-s-	exceed (v.i.) exceed (v.t.)	Ashworth, p.112 Ashworth, p.112
*sudat-	sudati- sudac-	*sudat-i- *sudat-	raise [person] (v.t.) raise [person] (v.i.)	online dictionary online dictionary

*sum-	sum- sumi-	*sum- *sum-i-	dye (v.i.) dye (v.t.)	online dictionary online dictionary
*tama-	tama- tame:-	*tama- *tama-i-	stop (v.i.) stop (v.t.)	online dictionary online dictionary
*tat-	tac- tati-	*tat- *tat-i-	stand (v.i.) stand (v.t.)	online dictionary online dictionary
*tuma-	tuma- tumi-	*tuma- *tuma-i-	stop (v.i.) stop (v.t.)	online dictionary online dictionary
*ʔuču-	ʔuči- ʔučus-	*ʔuču-i- *ʔuču-s-	move, transmit(v.i.) move (v.t.)	Ashworth, p.111 Ashworth, p.111
*ʔuk-	ʔuki- ʔuk-	*ʔuk-i- *ʔuk-	float (v.t.) float (v.i.)	online dictionary online dictionary
*ʔuru-	ʔuri- ʔurus-	*ʔuru-i- *ʔuru-s-	go down (v.i.) put down (v.t.)	online dictionary online dictionary
*utu-	ʔuti- ʔutus-	*utu-i- *utu-s-	fall (v.i.) drop (v.t.)	online dictionary online dictionary
*yak-	yaki- yak-	*yak-i- *yak-	fry, bake (v.i.) fry, bake (v.t.)	online dictionary online dictionary
*yam-	yam- yami-	*yam- *yam-i-	quit (v.i.) quit (v.t.)	online dictionary online dictionary
*yasima-	yasima- yasimi-	*yasima- *yasima-i-	rest (v.i.) rest (v.t.)	online dictionary online dictionary

#### Evidence for Reconstruction of Verbalizer \*-m-

Pre-Shuri root	Shuri verbs	reconstruction	gloss	source
*ʔarata-	ʔaratama- ʔaratami-	*ʔarata-m- *ʔarata-m-i	renew (v.i.) renew (v.t.)	online dictionary online dictionary
*furu-	furun- furumi-	*furu-m- *furu-m-i-	get old (v.i.) age (v.t.)	online dictionary online dictionary
*sida-	sidam-	*sida-m-	cool (v.i.)	online dictionary
*sira-	siran-	*sira-m-	whiten (v.i.)	online dictionary

**Evidence for Reconstruction of Intransitive \*-ri- < \*-re-**

<b>Pre-Shuri root</b>	<b>Shuri verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>source</b>
*ʔaka-	ʔakari- ʔa:kas-	*ʔaka-ri- *ʔaka-s-	separate (v.i.) separate (v.t.)	online dictionary online dictionary
*ha-	hari- ha-	*ha-ri- *ha-	stretch (v.i.) stretch (v.t.)	online dictionary online dictionary
*hana-	hanari- hanas-	*hana-ri- *hana-s-	separate (v.i.) separate (v.t.)	online dictionary online dictionary
*maži-	maži- mažiri-	*maži- *maži-ri-	mix (v.i.) mix (v.t.)	online dictionary online dictionary
*naga-	nagari- nagas-	*naga-ri- *naga-s-	flow (v.i.) flow (v.t.)	online dictionary online dictionary
*to:-	to:ri- to:s-	*to:-ri- *to:-s-	fall (v.i.) drop (v.t.)	online dictionary online dictionary
*ʔu-	ʔu- ʔuri-	*ʔu- *ʔu-ri-	sell sell (v.i.)	online dictionary online dictionary
*wa-	wari- wa-	*wa-ri- *wa-	break (v.i.) break (v.t.)	online dictionary online dictionary
*wu:-	wu:- wu:ri-	*wu:- *wu:-ri	fold (v.t.) fold (v.i.)	online dictionary online dictionary
*ya-	yari- ya-	*ya-ri- *ya-	break (v.i.) break (v.t.)	online dictionary online dictionary

**Evidence for Reconstruction of Transitive \*-s-**

<b>Pre-Shuri root</b>	<b>Shuri verbs</b>	<b>reconstruction</b>	<b>gloss</b>	<b>source</b>
*ʔa:-	ʔa:- ʔa:s-	*ʔa:- *ʔa:-s-	join (v.i.) join (v.t.)	online dictionary online dictionary
*ʔa:ka-	ʔa:ki- ʔa:kas-	*ʔaka-i- *ʔaka-s-	break (v.i.) break (v.t.)	online dictionary online dictionary
*ʔačira-	ʔačiri- ʔačiras-	*ʔačira-i- *ʔačira-s-	get hot (v.i.) heat (v.t.)	online dictionary online dictionary

*ʔaka-	ʔaki- ʔake:- ʔakas-	*ʔaka-i- *ʔaka-i- *ʔaka-s-	dawn (v.i.) dawn, redden (v.i.) brighten (v.t.)	online dictionary online dictionary online dictionary
*ʔaka-	ʔakari- ʔa:kas-	*ʔaka-ri- *ʔaka-s-	separate (v.i.) separate (v.t.)	online dictionary online dictionary
*ʔama-	ʔama- ʔamas-	*ʔama- *ʔama-s-	be in excess (v.i.) excess (v.t.)	online dictionary online dictionary
*čira-	čiri- čiras-	*čira-i- *čira-s-	scatter (v.i.) scatter (v.t.)	online dictionary online dictionary
*fuka-	fuk- fukas-	*fuka- *fuka-s-	boil (v.i.) boil (v.t.)	online dictionary online dictionary
*hana-	hanari- hanas-	*hana-ri- *hana-s-	separate (v.i.) separate (v.t.)	online dictionary online dictionary
*hara-	hari- haras-	*hara-i- *hara-s-	clear up (v.i.) clear up (v.t.)	online dictionary online dictionary
*ke:-	ke:- ke:s-	*ke:- *ke:-s-	return (v.i.) return (v.t.)	online dictionary online dictionary
*ma:-	ma:- ma:s-	*ma:- *ma:-s-	turn around (v.i.) turn around (v.t.)	online dictionary online dictionary
*me:	me:- me:s-	*me:- *me:-s-	burn (v.i.) burn (v.t.)	Thorpe online dictionary
*mudu-	mudu- mudus-	*mudu- *mudu-s-	return (v.i.) return (v.t.)	Ashworth, p. 111 Ashworth, p.111
*naga-	nagari- nagas-	*naga-ri- *naga-s-	flow (v.i.) flow (v.t.)	online dictionary online dictionary
*naga-	nugi- nugas-	*nuga-i- *nuga-s-	run away (v.i.) run away (v.t.)	online dictionary online dictionary
*nda-	ndi- ndas-	*nda-i- *nda-s-	get wet (v.i.) wet (v.t.)	Ashworth, p.112 online dictionary
*ni-	ni- nisi-	*ni- *ni-s-i-	resemble (v.i.) resemble (v.t.)	online dictionary online dictionary
*nu-	nu- nusi-	*nu- *nu-s-i-	ride (v.i.) ride (v.t.)	online dictionary online dictionary
*nubu-	nubu- nubusi-	*nubu- *nubu-s-i-	climb (v.i.) climb (v.t.)	online dictionary online dictionary

*nuku-	nuku- nukus-	*nuku- *nuku-s-	remain (v.i.) reain (v.t.)	online dictionary online dictionary
*ʔnža-	ʔnži- ʔnžas-	*ʔnža-i- *ʔnža-s-	go out (v.i.) put out (v.t.)	Ashworth, p.112 Ashworth, p.112
*sama-	sama- samās-	*sama- *sama-s-	cool (v.i.) cool (v.t.)	online dictionary online dictionary
*sama-	samas- sami-	*sama-s- *sama-i-	wake up (v.t.) wake up (v.i.)	online dictionary online dictionary
*sigu-	siži- sigus-	*sigu-i- *sugu-s-	exceed (v.i.) exceed (v.t.)	Ashworth, p.112 Ashworth, p.112
*to:-	to:ri- to:s-	*to:-ri- *to:-s-	fall (v.i.) drop (v.t.)	online dictionary online dictionary
*tu:-	tu:- tu:s-	*tu:- *tu:-s-	pass (v.i.) pass (v.t.)	online dictionary online dictionary
*ʔuču-	ʔuči- ʔučus-	*ʔuču-i- *ʔuču-s-	move, transmit (v.i.) move (v.t.)	Ashworth, p.111 Ashworth, p.111
*ʔuku-	ʔuki- ʔukus- ʔuku-	*ʔuku-i- *ʔuku-s- *ʔuku-	wake up (v.i.) wake up (v.t.) wake up, occur (v.i.)	online dictionary online dictionary online dictionary
*ʔuru-	ʔuri- ʔurus-	*ʔuru-i- *ʔuru-s-	go down (v.i.) put down (v.t.)	online dictionary online dictionary
*utu-	ʔuti- ʔutus-	*utu-i- *utu-s-	fall (v.i.) drop (v.t.)	online dictionary online dictionary
*waka-	waka- wakas-	*waka- *waka-s-	separate (v.i.) separate (v.t.)	online dictionary online dictionary
*wata-	wata- watas-	*wata- *wata-s-	cross (v.i.) cross (v.t.)	Ashworth, p.111 Ashworth, p.111

## Appendix H: Hirara Verb Root Data

First I present the roots showing the verbs that support their reconstructions, then present the data for each derivational suffix in the following order: \*-i-, \*-ar-, \*-as-. The verbs presented here are from Hirayama (1983).

### Evidence for pre-Hirara Verb Roots

Pre-Hirara root	Hirara verb	reconstruction	gloss
*ag-	agar-	*ag-ar-	raise (v.i.)
	agi-	*ag-i-	raise (v.t.)
*ak-	aki-	*ak-i-	open (v.t.)
	ak-	*ak-	open (v.i.)
*ayakar-	ayakaras-	*ayakar-as-	take or name after (v.t.)
	ayakar-	*ayakar-	take or name after (v.i.)
*baka-	baka:r-	*baka-ar-	divide (v.i.)
	baki:-	*baka-i-	divide (v.t.)
*bata-	batas-	*bata-as-	cross (v.t.)
	batar-	*bata-ar-	cross (v.i.)
*id-	idas-	*id-as-	put out
	idi-	*id-i-	go out
*kaffu-	kaffus-	*kaffu-as-	hide (v.t.)
	kaffi-	*kaffu-as-	hide (v.i.)
*kak-	kakar-	*kak-ar-	hang (v.i.)
	kaki-	*kak-i-	hang (v.t.)
*kar-	karas-	*kar-as-	loan
	kai-	*kar-i-	borrow
*mag-	magar-	*mag-ar-	bend (v.i.)
	magi-	*mag-i-	bend (v.t.)
*na-	nas-	*na-as-	give birth
	nar-	*na-ar-	be born
*pan-	panari-	*pan-ar-i-	separate (v.i.)
	panas-	*pan-as-	separate (v.t.)
*sag-	sagar-	*sag-ar-	go down; lower (v.i.)
	sagi-	*sag-i-	lower (v.t.)

*sig-	sigi-	*sig-i-	pass (v.i.)
*tik-	tik- tiki-	*tik- *tik-i-	attach (v.i.) attach (v.t.)
*tum-	tumar- tumi-	*tum-ar- *tum-i-	stop (v.i.) stop (v.t.)
*uku-	uki- ukus-	*uku-i- *uku-as-	wake upwake up (v.t.)
*uru-	uri- urus-	*uru-i- *uru-as-	go downput down; let down
*utu-	uti- utus-	*utu-i- *utu-as-	fall drop
*utu-	uči- utus-	*utu-i- *utu-as-	fall; scatter drop
*yak-	yak- yaki-	*yak- *yak-i-	roast (v.t.) roast (v.i.)

**Evidence for Reconstruction of Transitivity Flipper \*-i-**

<b>Pre-Hirara root</b>	<b>Hirara verb</b>	<b>reconstruction</b>	<b>gloss</b>
*ag-	agar- agi-	*ag-ar- *ag-i-	raise (v.i.) raise (v.t.)
*baka-	baka:r- baki:-	*baka-ar- *baka-i-	divide (v.i.) divide (v.t.)
*id-	idas- idi-	*id-as- *id-i-	put out go out
*kak-	kakar- kaki-	*kak-ar- *kak-i-	hang (v.i.) hang (v.t.)
*kar-	karas- kai-	*kar-as- *kar-i-	loan borrow
*mag-	magar- magi-	*mag-ar- *mag-i-	bend (v.i.) bend (v.t.)
*pan-	panari- panas-	*pan-ar-i- *pan-as-	separate (v.i.) separate (v.t.)

*sag-	sagar- sagi-	*sag-ar- *sag-i-	go down; lower (v.i.) lower (v.t.)
*sīg-	sīgi-	*sīg-i-	pass (v.i.)
*tīk-	tīk- tīki-	*tīk- *tīk-i-	attach (v.i.) attach (v.t.)
*tum-	tumar- tumi-	*tum-ar- *tum-i-	stop (v.i.) stop (v.t.)
*uku-	uki- ukus-	*uku-i- *uku-as-	wake up wake up (v.t.)
*uru-	uri- urus-	*uru-i- *uru-as-	go down put down; let down
*utu-	uti- utus-	*utu-i- *utu-as-	fall drop
*utu-	u i- utus-	*utu-i- *utu-as-	fall; scatter drop
*yak-	yak- yaki-	*yak- *yak-i-	roast (v.t.) roast (v.i.)

**Evidence for Reconstruction of Intransitive \*-ar-**

<b>Pre-Hirara root</b>	<b>Hirara verb</b>	<b>reconstruction</b>	<b>gloss</b>
*ag-	agar- agi-	*ag-ar- *ag-i-	raise (v.i.) raise (v.t.)
*baka-	baka:r- baki:-	*baka-ar- *baka-i-	divide (v.i.) divide (v.t.)
*bata-	batas- batar-	*bata-as- *bata-ar-	cross (v.t.) cross (v.i.)
*kak-	kakar- kaki-	*kak-ar- *kak-i-	hang (v.i.) hang (v.t.)
*mag-	magar- magi-	*mag-ar- *mag-i-	bend (v.i.) bend (v.t.)
*na-	nas- nar-	*na-as- *na-ar-	give birth be born

*sag-	sagar- sagi-	*sag-ar- *sag-i-	go down; lower (v.i.) lower (v.t.)
*tum-	tumar- tumi-	*tum-ar- *tum-i-	stop (v.i.) stop (v.t.)

**Evidence for Reconstruction of Transitive \*-as-**

<b>Pre-Hirara root</b>	<b>Hirara verb</b>	<b>reconstruction</b>	<b>gloss</b>
*ayakar-	ayakaras- ayakar-	*ayakar-as- *ayakar-	take or name after (v.t.) take or name after (v.i.)
*bata-	batas- batar-	*bata-as- *bata-ar-	cross (v.t.) cross (v.i.)
*id-	idas- idi-	*id-as- *id-i-	put out go out
*kaffu-	kaffus- kaffi-	*kaffu-as- *kaffu-as-	hide (v.t.) hide (v.i.)
*kar-	karas- kai-	*kar-as- *kar-i-	loan borrow
*na-	nas- nar-	*na-as- *na-ar-	give birth be born
*pan-	panari- panas-	*pan-ar-i- *pan-as-	separate (v.i.) separate (v.t.)
*uku-	uki- ukus-	*uku-i- *uku-as-	wake up wake up (v.t.)
*uru-	uri- urus-	*uru-i- *uru-as-	go down put down; let down
*utu-	uti- utus-	*utu-i- *utu-as-	fall drop
*utu-	u i- utus-	*utu-i- *utu-as-	fall; scatter drop

## References

- Amami Dialect Dictionary. 1998-2006. <http://www.ocls.u-ryukyu.ac.jp/r/lang/amm/index.html>
- Arakaki Tomoko. 2000. "Aspect and Modality in Luchuan – In the Case of the Shuri dialect." Paper presented at The University of Edinburgh Postgraduate Conference. May 31, 2000. Downloaded from: <http://www.ling.ed.ac.uk/~pgc/archive/2000/subs/tomoko.ps>
- Arisaka Hideyo. 1955. *Jōdai on'in kō* [A Study of Old Japanese Phonology]. Tokyo: Sanseidō.
- Ariyoshi Tamotsu, ed. 1982. *Waka bungaku jiten* [Waka literary dictionary]. Tōkyō : Ōfusha.
- Asato Susumu and Doi Naomi. 1999. *Okinawajin wa doko kara kita ka: Ryūkyū = Okinawajin no kigen to seiritsu* [Where did the Okinawans come from?: The origin and establishment of the Ryukyuan = Okinawans]. Naha: Bōdā Inku.
- Ashworth, David Edward. 1973. A Generative Study of the Inflectional Morphophonemics of the Shuri Dialect of Ryukyuan. Cornell University. Ph.D. Dissertation.
- Bentley, John R. 1997. /mo/ and /po/ in Old Japanese. University of Hawai'i at Mānoa. MA Thesis.
- \_\_\_\_\_. 1999. "The Verb *Toru* in Old Japanese." *Journal of East Asian Linguistics*, 8.2: 131-146.
- \_\_\_\_\_. 2001. *A Descriptive Grammar of Early Old Japanese Prose*. Brill's Japanese Studies Library, Vol. 15. Leiden, Netherlands: Brill.
- Comrie, Bernard. 1989 [1981]. *Language Universals & Linguistic Typology*. The University of Chicago Press.

- Campbell, Lyle. 1999. *Historical Linguistics: An Introduction*. Cambridge, MA; The MIT Press.
- Clark, John and Yallop, Colin. 1996. *An Introduction to Phonetics and Phonology*. Cambridge: Blackwell.
- Crowley, Terry. 1997. *An Introduction to Historical Linguistics*. Oxford University Press.
- FOTW: Flags Of The World. <http://flagspot.net/flags/>
- Fox, Anthony. 1995. *Linguistic Reconstruction: An Introduction to Theory and Method*. Oxford University Press.
- Fukuda Konshi. 1982. *Nihon Arutai hikaku bunpō josetsu* [An Introduction to Comparative Grammar of Japanese and Altaic]. Yokohama: FLL.
- Fukuda Yoshisuke. 1965. *Nara jidai tōgoku hōgen no kenkyū* [Study of the Nara Period Eastern Province's Dialect]. Tokyo: Kazama Shobō.
- Frellesvig, Bjarke. 2003. "Pre-Old Japanese Verbal Morphology." Handout. International Conference on Historical Linguistics. Aug. 15, 2003. Proto-Japanese workshop.
- Hattori Shirō. 1959. *Nihongo no keitō* [The Lineage of Japanese]. Tokyo: Iwanami Shoten.
- \_\_\_\_\_. 1976a. "Jōdai nihongo no boin onso wa muttsu de atte yattsu de wa nai [Old Japanese has Six Vowels, not Eight]." *Gekkan gengo*, 57(5.12): 69-79.
- \_\_\_\_\_. 1976b. "Jōdai nihongo no boin taikai to boin chōwa [Vowel System and Vowel Harmony in Old Japanese]." *Gekkan gengo*, 51(5.6): 2-14.
- \_\_\_\_\_. 1978-79. "Nihon sogo ni tsuite 1-22 [On Proto-Japanese]." *Gekkan gengo*, 73-76.

- Hino Sukenari. 2004. "Nihon sogo no boin taikei – Jōdai Azuma hōgen shiryō ni yoru saikō/A Reconstruction of the Proto-Japanese Vowel System on the Basis of the Data from Eastern Old Japanese." In *Nihongo keitooron no genzai/Perspectives on the Japanese Language Origins*, eds. Toshiki Osada and Alexander Vovin, 187-206. Kyoto: Nichibunken.
- Hiraizumi, H. H. Hiraizumi's Birding Page. <http://www.asahi-net.or.jp/~sg4h-hriz/dic/>
- Hirayama Teruo. 1967. *Ryūkyū Sakishima hōgen no sōgōteki kenkyū* [A General Study of the Ryūkyūan Sakishima Dialects]. Tokyo: Meiji Shoin.
- \_\_\_\_\_. 1983. *Ryūkyū Miyako shotō hōgen kiso goi no sōgōteki kenkyū* [A General Study of the Basic Vocabulary of the Dialect of the Miyako Islands of Ryūkyū]. Tokyo: Ōfūsha.
- \_\_\_\_\_. 1988. *Minami Ryūkyū no hōgen kiso goi* [Basic Vocabulary of the Southern Ryūkyūan Dialects]. Tokyo: Ōfūsha.
- Hirayama Teruo, Ōshima Ichirō, and Nakamoto Masachie. 1966. *Ryūkyū hōgen no sōgōteki kenkyū* [A General Study of Ryūkyūan Dialects]. Tokyo: Meiji Shoin.
- Hirayama Teruo and Nakamoto Masachie. 1964. *Ryūkyū Yonaguni hōgen no kenkyū* [The Study of Yonaguni, a Ryūkyūan Dialect]. Tokyo: Tōkyōdō.
- Hōjō Tadao. 1966. *Jōdai tōgoku hōgen no kenkyū* [A Study of the dialect of the Eastern Province of the Ancient Period]. Tokyo: Maruzen.
- \_\_\_\_\_. 1983. *Kokugo bunnō ronsō* [Discussions on the Grammar of Japanese]. Tokyo: Meiji Shoin.
- Hokama Shuzen et al., eds. 1995. *Okinawa kogo daijiten* [Dictionary of the Old Okinawan Language]. Tokyo: Kadokawa Shoten.
- Hudson, Mark J. 1994. "The Linguistic Prehistory of Japan: Some Archaeological Speculations." *Anthropological Science*, 102.3: 231-255.

- \_\_\_\_\_. 2001. *Agriculture and Language Change in the Japanese Islands*. Unpublished presentation at the conference *Examining the farming/language dispersal hypothesis*, McDonald Institute for Archaeological Research, University of Cambridge, Cambridge, England.
- Iitoyo Kiichi, Hino Sukezumi, and Satō Ryōichi, eds. 1984. *Okinawa, Amami no hōgen* [Dialects of Okinawa and Amami]. Tokyo: Tosho Kankōkai.
- Ikeda, Tadashi. 1980 [1975]. *Classical Japanese Grammar Illustrated with Texts*. Tokyo: Tōhō Gakkai.
- Ikier, Steven D. 2006. *On the Attributive and Final Predicate Forms in Eastern Old Japanese*. University of Hawai‘i at Mānoa. MA Thesis.
- Ichikawa Sanki, Kōzu Harushige, and Hattori Shirō. 1955. *Sekai gengo gaisetsu* [An Introduction to the Languages of the World]. Tokyo: Kenkyūsha.
- Japanese Text Initiative*. 1992. University of Virginia Electronic Text Center. <http://etext.lib.virginia.edu/japanese/index.html>
- Jeffers, Robert J. and Lehiste, Ilse. 1984. *Principles and Methods for Historical Linguistics*. Cambridge, MA: Massachusetts Institute of Technology.
- Kanehisa Tadashi, ed. 1963. *Amami ni ikiru nihon kodai bunka* [The Culture of the Ancient Period of Japan that Lives in Amami]. Tokyo: Tōkō Shoin.
- Karimata Shigehisa. 2003. *Amami Ōshima kasari chō Sani hōgen no onsei to goi/The Phonetics and Vocabulary of the Sani Dialect, Amami Oshima Island*. ELPR Publications Series A4-001.
- \_\_\_\_\_. 2003. *Wakai hito no tame no Uchināguchi nyūmon* [Introduction to Uchinaguchi for Young People]. Ryūkyūs: Ryūkyū daigaku.
- Kiyose Gisaburō Norikura. 1991. *Nihongogaku to Arutai gogaku* [Japanese Linguistics and Altaic Linguistics]. Tokyo: Meiji Shoin.

- Kokuritsu Kokugo Kenkyūjo. 1982. *Hōgen danwa shiryō/Texts of tape-recorded conversation in Japanese dialects*. Vol. 6. Tokyo: Kokuritsu Kokugo Kenkyūjo.
- \_\_\_\_\_. 1985. *Hōgen danwa shiryō/Texts of tape-recorded conversation in Japanese dialects*. Vol. 8. Tokyo: Kokuritsu Kokugo Kenkyūjo.
- \_\_\_\_\_. 1987a. *Hōgen danwa shiryō/Texts of tape-recorded conversation in Japanese dialects*. Vol. 9. Tokyo: Kokuritsu Kokugo Kenkyūjo.
- \_\_\_\_\_. 1987b. *Hōgen danwa shiryō/Texts of tape-recorded conversation in Japanese dialects*. Vol. 10. Tokyo: Kokuritsu Kokugo Kenkyūjo.
- \_\_\_\_\_. 1999 [1963]. *Okinawago jiten* [Dictionary of the Okinawan Language]. Tokyo: Ōkurashō Insatsukyoku.
- Kurano Kenji and Takeda Yūkichi, eds. 1958. *Kojiki*. Nihon koten bungaku taikai [A Survey of Japanese Classical Literature]. Vol. 1. Tokyo: Iwanami Shoten.
- Ladefoged, Peter. 1993. *A Course in Phonetics*. 3rd ed. London: Harcourt Brace College Publishers.
- Lass, Roger. 1993. *Phonology: An Introduction to Basic Concepts*. Cambridge: Cambridge University Press.
- Mabuchi Kazuo. 1970. *Jōdai no kotoba* [The Language of the Ancient Period]. Tokyo: Shibundō.
- Martin, Samuel E. 1966. "Lexical Evidence Relating Korean to Japanese." *Language*, 42: 185-251.
- \_\_\_\_\_. 1975. *A Reference Grammar of Japanese*. New Haven and London: Yale University Press.
- \_\_\_\_\_. 1987. *The Japanese Language Through Time*. New Haven: Yale University Press.

- McNicoll, Matthew. 2005. The Auxiliary *-ker-* in Western Old Japanese. University of Hawai'i at Mānoa. MA Thesis.
- Miller, Roy Andrew. 1967. *The Japanese Language*. Chicago: University of Chicago Press.
- \_\_\_\_\_. 1971. *Japanese and the Other Altaic Languages*. Chicago: The University of Chicago Press.
- \_\_\_\_\_. 1975. *"The Footprints of the Buddha": An Eighth-century Old Japanese Poetic Sequence*. New Haven, CT: American Oriental Society.
- \_\_\_\_\_. 1980. *Origins of the Japanese Language: Lectures in Japan During the Academic Year 1977-78*. University of Washington Press.
- \_\_\_\_\_. 1991. "Genetic Connections Among the Altaic Languages" in Lamb, Sydney M. and Mitchell, E. Douglas, ed. *Sprung From Some Common Source: Investigations into the Prehistory of Languages*. Stanford University Press.
- Miyake, Marc H. 1995. The Phonetic Values of Old Japanese \*/s/ and \*/z/. University of Hawai'i at Mānoa. MA Thesis.
- \_\_\_\_\_. 1999. The Phonology of Eighth Century Japanese Revisited: Another Reconstruction Based upon Written Records. University of Hawai'i at Mānoa. Ph.D. Dissertation.
- \_\_\_\_\_. 2003a. Philological Evidence for \**e* and \**o* in Pre-Old Japanese. *Diachronica*, 20(1): 81-135.
- \_\_\_\_\_. 2003b. *Old Japanese: A Phonetic Reconstruction*. New York: RoutledgeCurzon.
- Miyako Dialect Dictionary. 1998-2006. <http://www.ocls.u-ryukyu.ac.jp/rlang/myk/index.html>

- Mizushima Yoshiharu. 1972 [1950]. *Man'yōshū: Azumauta, sakimoriuta* [Man'yōshū: The Songs of Azuma and Songs of the Border Guards]. Tokyo: Kasama Shoin.
- \_\_\_\_\_. 1984a. *Man'yōshū Azumauta honbun kenkyū narabi ni sōsakuin* [The Study of the Book of Azuma Songs and a Complete Index]. Tokyo: Kasama Shoin.
- \_\_\_\_\_. 1984b. *Azumauta kokugogakuteki kenkyū* [A Linguistic Study of the Azuma Songs]. Tokyo: Kasama Shoin.
- \_\_\_\_\_. 2003. *Man'yōshū sakimoriuta zenchūshaku* [A Complete Commentary on the Man'yōshū Border Guard Songs]. Tokyo: Kasama Shoin.
- Murayama Shichirō. 1974. *Nihongo no gogen* [The Etymology of the Japanese Language]. Tokyo: Kōbundō.
- \_\_\_\_\_. 1981. *Ryūkyūgo no himitsu* [The Secrets of the Ryūkyūan Languages]. Tokyo: Chikuma Shobō.
- Murayama Shichirō and Ōbayashi Taryō. 1973. *Nihongo no kigen* [The Origin of the Japanese Language]. Tokyo: Kōbundō.
- Nakamoto Masachie. 1976. *Ryūkyū hōgen on'in no kenkyū* [A Study of Ryūkyūan Dialect Phonology]. Tokyo: Hōsei Daigaku.
- \_\_\_\_\_. 1983. *Ryūkyū goishi no kenkyū* [The Study of the History of Ryūkyūan Vocabulary]. Tokyo: San'ichi Shobō.
- Nakasone Seizen. 1983. *Nakijin hōgen jiten* [A Dictionary of the Nakijin Dialect]. Tokyo: Kadokawa Shoten.
- \_\_\_\_\_. 1987. *Ryūkyū hōgen no kenkyū* [The Study of Ryūkyūan Dialects]. Tokyo: Shinsensha.
- Nema Hiromi. 1969. *Miyako hōgen ni okeru bunsetsu onso no kenkyū*. [The Study of Sound Segments in Miyako Dialects]. Naha: Okinawa Women's Community College.

- Nishioka Satoshi, Nakahara Jōcho, Ikari Fumiko, Nakajima Yumi. 2000. *Okinawago no nyūmon: Tanoshii Uchināguchi* [Introduction to the Okinawan Language: Fun Uchināguchi]. Tokyo: Hakusuisha.
- Omodaka Hisataka, ed. 1967. *Jidai betsu kokugo dai jiten: Jōdai hen* [A Dictionary of the Japanese Language by Periods: Old Japanese Volume]. Tokyo: Sanseidō.
- \_\_\_\_\_. 1984 [1957-1977]. *Man'yōshū chūshaku* [Commentary on the *Man'yōshū*]. volumes 1-22. Revised edition. Tokyo: Chuō kōronsha.
- Ōno Susumu. 1953a. *Nihongo no dōshi no katsuyōkei no kigen ni tsuite* [On the Origin of Japanese Verb Conjugation Patterns]. *Kokugo to kokubungaku*, 350: 47–56.
- \_\_\_\_\_. 1953b. *Jōdai kanazukai no kenkyū* [A Study of Orthography in the Ancient Period]. Tokyo: Iwanami Shoten.
- \_\_\_\_\_. 1957. *Nihongo no kigen* [The Origin of the Japanese Language]. Tokyo: Iwanami Shoten.
- \_\_\_\_\_. 1982. *Kanazukai to jōdaigo* [Orthography and the Ancient Period Language]. Tokyo: Iwanami Shoten.
- Ōno Susumu, et al, eds. 1994. *Iwanami Kogo Jiten* [Dictionary of the Old Language]. Tokyo: Iwanami Shoten.
- Osada Suma, Suyama Nahoko, and Fuji Misako. 1977. *Amami hōgen bunrui jiten* [A Dictionary of the Amami Dialect Classified by Subject]. Vol 1. Tokyo: Kasama Shoin.
- \_\_\_\_\_. 1980. *Amami hōgen bunrui jiten* [A Dictionary of the Amami Dialect Classified by Subject]. Vol 2. Tokyo: Kasama Shoin.
- Poppe, Nicholas. 1965. *Introduction to Altaic Linguistics*. Wiesbaden: Otto Harrassowitz.

- Ramstedt, G. J. 1952. *Einführung in die Altaische Sprachwissenschaft, II Formenlehre* [Introduction to Altaic Linguistics, II Morphology]. Helsinki: Suomalais-Ugrilainen Seura.
- Rice, Keren. 2005. "The role of prosody in Contrasting Language Change: Word Formation in the Athapaskan Verb." Paper presented at the XVIIth International Conference on Historical Linguistics. Madison, WI. July 31-August 5, 2005.
- Russell, Kerri L. 1995. "The Derivation of Intransitive and Transitive Verbs." Paper for Class on the History of the Japanese Language.
- \_\_\_\_\_. 1996. "Adjectival Morphology in Old Japanese and Pre-Old Japanese." Paper for Seminar on Historical Change in Japanese.
- \_\_\_\_\_. 1997. *The Origin of Early Japanese Verbs and Verbal Conjugations*. University of Hawai'i at Mānoa. MA Thesis.
- \_\_\_\_\_. 1998. "The Relationship between /r/, /d/, and /y/ in Ryūkyūan." Paper for Seminar in Ryūkyūan Linguistics.
- \_\_\_\_\_. 2003. "Review of *A Descriptive Grammar of Early Old Japanese Prose* by John R. Bentley." *Diachronica*, 20.2: 363-365.
- \_\_\_\_\_. 2004. "Contraction and Monophthongization in Old Japanese." In *Nihongo keitooron no genzai/Perspectives on the Japanese Language Origins*, eds. Toshiki Osada and Alexander Vovin, 511-539. Kyoto: Nichibunken.
- \_\_\_\_\_. 2005. "Vowel Assimilation in Western Old Japanese Derivational Morphology" Paper presented at the XVIIth International Conference on Historical Linguistics. Madison, WI. July 31-August 5, 2005.
- Saeki Umetomo. 1972 [1947]. *Nara jidai no kokugo* [Nara Period Japanese]. Tokyo: Sanseidō.

- Sakakura Atsuyoshi. 1990. "Kodai Nihongo no naiteki saikō [Internal Reconstruction of the Ancient Japanese Language]." In *Nihongo no keisei* [The Formation of the Japanese Language], ed. Sakiyama Osamu, 279–304. Tokyo: Sanseidō.
- Serafim, Leon A. 1976. *Early Japanese Vocalism and Vowel Concord*. University of Hawai'i. MA Thesis.
- \_\_\_\_\_. 1977a. "The Relationship of Pre-Japanese and Proto-Japanese". Paper Presented at the Symposium on Historical Relationships of Japanese and Korean 1977 Linguistic Institute, Honolulu.
- \_\_\_\_\_. 1977b. "Front Vocalism and Palatalization in the Omoro Soshi: The Philological and Modern Dialectal Evidence." Unpublished paper presented upon completion of the Monbusho program.
- \_\_\_\_\_. 1984. *Shodon: The Prehistory of a Northern Ryukyuan Dialect of Japanese*. Yale University. Ph.D. Dissertation.
- \_\_\_\_\_. 2003. "When and From Where Did the Japonic Language Enter the Ryukyus? – A Critical Comparison of Language, Archaeology, and History." In *Nihongo keitooron no genzai/Perspectives on the Japanese Language Origins*, eds. Toshiki Osada and Alexander Vovin, 463-476. Kyoto: Nichibunken.
- \_\_\_\_\_. 2004. "The Uses of Ryukyuan in Understanding Japonic Language History" Presented at the Cornell University East Asia Council, October 2004.
- \_\_\_\_\_. 2005. "A Test of Rapid Language Change Through Language Adoption, Utilizing the Westward Spread of the Ryukyuan Dialect of Japonic." Paper presented at the XVIIth International Conference on Historical Linguistics. Madison, WI. July 31-August 5, 2005.
- Serafim, Leon A. and Shinzato, Rumiko. 2000. "Reconstructing the Proto-Japonic *kakari musubi*, ...*ka* ...*(a)m-wo*." *Gengo Kenkyu: Journal of the Linguistic Society of Japan*, 118: 81-117.

- \_\_\_\_\_. 2005. "On the Old Japanese *Kakari* (focus) Particle *koso*: Its Origin and Structure." *Gengo Kenkyū*, 127: 1-4
- Shibata Takeshi, ed. 1966-1967. *Zenkoku hōgen shiryō* [Dialect Data for the Whole Country]. Nihon Hōsō Kyōkai.
- \_\_\_\_\_. 1984. *Amami Ōshima no kotoba: Bunpo kara rekishi e* [Language of the Amami Islands: From Distribution to History]. Musashino: Akiyama Shoten.
- Shimabukuro, Moriyo. 2002. A Reconstruction of the Accentual History of the Japanese and Ryukyuan Languages. University of Hawai'i at Mānoa. Ph.D. Dissertation.
- Shinpen Kokka Taikan*. 2003. *Shinpen kokka taikan* [New Edition of a Survey of Japanese Poetry]. CD-ROM. Tokyo: : Kadokawa Shoten.
- Shinzato, Rumiko. 1985. "Okinawa hōgen kako no jodōshi, *aN*, *taN* ni tsuite [About the Okinawa dialect past tense auxiliaries, *aN*, *taN*]." *Kokugogaku*, 140: 57-59.
- Shinzato, Rumiko and Serafim, Leon A. 2003. "Kakari Musubi in Comparative Perspective: Old Japanese *ka/ya* and Okinawan *-ga/-i*." *Japanese/Korean Linguistics* 11. Stanford: Center for the Study of Language and Information.
- Shirafuji Noriyuki. 1987. *Nara jidai no kokugo* [Nara Period Japanese]. Tokyo: Tōkyōdō.
- Shuri-Naha Dialect Dictionary. 1998-2006. <http://ryukyu-lang.lib.u-ryukyu.ac.jp/srnh/index.html>
- Takagi Ichinosuke, Gomi Tomohide, and Ōno Susumu, eds. 1958-1962. *Man'yōshū*. Nihon koten bungaku taikai [A Survey of Japanese Classical Literature]: 4-7. Tokyo: Iwanami Shoten.
- Takagi Ichinosuke and Toyama Tamizō. 1974a. *Kojiki sōsakuin/sōsakuin hen: Kojiki taisei* [Index to the *Kojiki*/index volume: The complete series on *Kojiki*]. Vol. 8. Tokyo: Heibonsha.

- \_\_\_\_\_. 1974b. *Kojiki sōsakuin/honbun hen: Kojiki taisei* [Index to the *Kojiki*/text volume: The complete series on *Kojiki*]. Vol. 7. Tokyo: Heibonsha.
- \_\_\_\_\_. 1977. *Kojiki sōsakuin/sōsakuin hoi: Kojiki taisei* [Index to the *Kojiki*/supplement: The complete series on *Kojiki*]. Tokyo: Heibonsha.
- Thomason, Sarah Grey. 2001. *Language Contact: An Introduction*. Georgetown University Press.
- Thomason, Sarah Grey and Kaufman, Terrence. 1992. *Language Contact, Creolization, and Genetic Linguistics*. University of California Press.
- Thorpe, Maner L. 1983. *Ryūkyūan Language History*. University of Southern California. Ph.D. Dissertation.
- Tsuchihashi Yutaka and Konishi Jin'ichi. 1957. *Kodai kayōshū* [A Collection of Songs of the Ancient Period]. *Nihon koten bungaku taikai* [A Survey of Japanese Classical Literature]. Vol. 3. Tokyo: Iwanami Shoten.
- Tsukishima Hiroshi. 1969. *Heian jidai go shinron* [A new study of Heian Period Japanese]. Tokyo: Tōkyō Daigaku Shuppankai.
- Uchima Chokujin. 1984. *Ryūkyū hōgen bunpō no kenkyū* [A Study of Ryūkyū Dialect Grammar]. Tokyo: Kasama Shoin.
- Uemura Yukio. 1977. "Ryūkyū hōgen kenkyū no gendai no kadai: Toku ni sono hikaku rekishi hōgengakuteki kenkyū ni tsuite [Current issues in research on Ryukyuan dialects, especially, concerning their comparative historical- dialectological study]". In *Shin-Okinawa bungaku*, 35:226- 237.
- \_\_\_\_\_. 1999 [1963]. "Kaisetsuhen [Introduction]." In *Okinawago jiten* [Dictionary of the Okinawan Language], Kokuritsu Kokugo Kenkyūjo, 11-86. Tokyo: Ōkurashō Insatsukyoku.

- Unger, J. Marshall. 1993 [1977]. *Studies in Early Japanese Morphophonemics*.  
Bloomington: Indiana University Linguistics Club Publications. 2nd revised  
edition.
- Vance, Timothy J. 1987. *An Introduction to Japanese Phonology*. New York: State  
University of New York Press.
- Vovin, Alexander. 2001a. "North East Asian Historical-Comparative Linguistics on the  
Threshold of the Third Millenium" in *Diachronica*, XVIII.1:93-137.
- \_\_\_\_\_. 2001b. "Japanese, Korean, and Tungusic Verbal Morphology." In *Altaic  
Affinities* (Proceedings of the 40th meeting of the Permanent International  
Conference (PIAC), Provo, Utah 1997), ed. David B. Honey and David C.  
Wright, 183-202. Indiana University, Research Institute for Inner Asian Studies
- \_\_\_\_\_. 2003. *A Reference Grammar of Classical Japanese Prose*. London:  
RoutledgeCurzon.
- \_\_\_\_\_. 2005a. "'The End of the Altaic Controversy' a review article of Sergei Starostin,  
Anna Dybo, and Oleg Mudrak's Etymological dictionary of the Altaic  
Languages." *Central Asiatic Journal*, 49.1: 71-132.
- \_\_\_\_\_. 2005b. *A Descriptive and Comparative Grammar of Western Old Japanese,  
Volume 1: Introduction, Writing System and Phonology, Lexicon, Nominals*.  
Folkestone, UK: Global Oriental Press.
- \_\_\_\_\_. forthcoming. *A Descriptive and Comparative Grammar of Western Old  
Japanese, Volume 2: Adjectives and Verbs*. Folkestone, UK: Global Oriental  
Press.
- \_\_\_\_\_. n.d. "Database of OJ texts." Unpublished database.
- Whitman, John B. 1985. *The Phonological Basis for the Comparison of Japanese and  
Korean*. Harvard University. Ph.D. Dissertation.

- \_\_\_\_\_. 1990. "A Rule of Medial \*-r- Loss in Pre-Old Japanese." In *Linguistic Change and Reconstruction Methodology*, ed. Philip Baldi, 511-545. Berlin and New York: Walter de Gruyter.
- \_\_\_\_\_. 2003. "The Source of the Bigrade Conjugation and Stem Shape in pre-Old Japanese." Handout. International Conference on Historical Linguistics. Aug. 15, 2003. Proto-Japanese workshop.
- Yamada Minoru. 1973. *Nihon bogo no tankyū: Nichi-ryūgo no hikaku* [The Search for the Mother Tongue of Japan: A Comparison of Japanese and Ryūkyūan]. Tokyo: Kasama Shoin.
- \_\_\_\_\_. 1979. *Ryūkyūgo dōshi no keitaironteki kōzō* [The Morphological Structure of Ryūkyūan Verbs]. Tokyo: Kokusho Kankōkai.
- \_\_\_\_\_. 1983. *Ryūkyūgo keiyōshi no keitaironteki kōzō* [The Morphological Structure of Ryūkyūan Adjectives]. Tokyo: Ōfusha.
- Yamada Yoshio. 1954. *Narachō bunpō shi* [A History of the Grammar of the Nara Period]. Tokyo: Hōbunkan Shuppan.
- Yamaguchi Yoshinori. 1978. "Dōshi katsuyō no seiritsu [The Origin of Verbal Conjugations]." *Kokugo to kokubungaku*: 53.12: 48–60.
- Yoshida Kanehiko. 1973. *Jōdaigo jodōshi no shiteki kenkyū* [A Historical Study of Old Japanese Auxiliary Verbs]. Tokyo: Meiji shoin.