Research Centre for Japanese Language and Linguistics University of Oxford オックスフォード大学 日本語研究センター www.orinst.ox.ac.uk/research/iap-ling/

#### Kobe University Brussels Workshop 7 November 2013

#### The Oxford Corpus of Old Japanese

Bjarke Frellesvig University of Oxford

### **Oxford Corpus of Old Japanese**

A comprehensive digital, annotated corpus of all extant texts in Japanese from the Old Japanese period (mainly 8<sup>th</sup> century AD, Nara period)

url: http://vsarpj.orinst.ox.ac.uk/corpus/



#### The Oxford Corpus of Old Japanese オックスフォード上代日本語コーパス

#### Home

#### Texts

Display conventions

Tagging conventions

Searching the OCOJ

Work in progress

Events and news

People and Institutions

Funding bodies

Links

Contact

#### Welcome to the Oxford Corpus of Old Japanese!

The Oxford Corpus of Old Japanese (abbreviated OCOJ) is a long-term research project which aims to develop a comprehensive annotated digital corpus of all extant texts in Japanese from the Old Japanese period. Old Japanese is the earliest attested stage of the Japanese language, largely the Japanese language of the Asuka and Nara periods of Japanese history (7th and 8th century AD). This is the formative literate period upon which the development of Japanese civilization is based, and these texts are of paramount importance for the study and understanding of the origins and development of civilization of Japan, including language, writing, literature, religion, history, and culture.

The OCOJ will contain

- Texts: The corpus will contain all extant texts in Japanese from the Old Japanese period, presented in original script and phonemic transcription. See <u>here</u> for the texts and <u>here</u> for display conventions.
- Annotation: A large amount of information about the texts will be encoded and made searchable. This will include linguistic information (orthographic, phonological, morphological, syntactic, semantic, and lexical information), as well as literary, biographical, historical, geographical and other information. The digital format makes it possible to add information of any kind continuously. See <u>here</u> for tagging conventions.

### Funding and collaboration

#### **External funding**

Arts and Humanities Research Council, UK British Academy JSPS/Tsukuba University

#### **Collaborating institutions**

National Institute for Japanese Language and Linguistics, Tokyo (NINJAL 国立国語研究所) University of York

#### **OCOJ Content**



#### **Translations**

Dictionary

#### Annotation

#### Texts

The corpus will contain all extant texts in Japanese from the Old Japanese period, presented in **original script** and **phonemic transcription**.

### **Texts in the OCOJ**

#### **Poetic texts**

Kojiki kayō (古事記歌謡; 712)(112 poems; 2527 words)Nihon shoki kayō (日本書紀歌謡; 720)(133 poems; 2444 words)Fudoki kayō (風土記歌謡; 730s)(20 poems; 271 words)Bussukoseki-ka (仏足石歌; after 753)(21 poems; 337 words)Man'yōshū (万葉集; after 759)(4685 poems; 83706 words)Shoku nihongi kayō (続日本紀歌謡; 797)(8 poems; 134 words)Jōgū shōtoku hōō teisetsu (上宮聖徳法王帝説) (4 poems; 60 words)

#### **'Prose' texts**

Shoku nihongi Senmyō (続日本紀宣命; 797) Engishiki Norito (延喜式祝詞)

(approx. 14,000 words) (approx. 6,500 words)

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#### Texts

#### **Online digital text**

#### website: http://vsarpj.orinst.ox.ac.uk/corpus/



0	Research Centre for Japanese Language and Linguistics					
vsarpj.orinst.ox.a	<b>ic.uk</b> /corpus/ojcorpus.html#MYS5	☆ マ C Google				
lendar 🔤 DR 💷 BBC	🚦 IKOS 📮 Tools 🔅 Webcat 🏼 🖏 WorldCat	💟 CORPUS 📋 🗾 JSTOR 🚺 OED <table-cell-rows> E-journal 🤾 Je-S 🛃 BA 🗌 ICHL Osaka</table-cell-rows>				
The VSARPJ Corpus × Research Centre for Japanese L × +						
	古之	inisipye no				
	七賢	nana <u>no</u> sakasi-ki				
	人等毛	pito-domo mo				
	欲為物者	pori se-si mono pa				
	酒西有良師	sake ni si aru rasi				
	MYS.3.341					
	賢跡	sakasi-mito				
	物言従者	mono-ipu ywori pa				
	酒飲而	sake nomite				
	酔哭為師	wepi-naki suru si				
	益有良之	masari-taru rasi				
	MYS.3.342					
	将言為便	ipa-mu subye				
	将為便不知	se-mu subye sira-zu				
	極	kipamarite				
	貴物者	taputwo-ki mono pa				
	酒西有良之	sake ni si aru rasi				

#### **Translations**

The texts are being supplied with **translations** into English.



### Dictionary

A bilingual Old Japanese – English dictionary is being developed alongside and as an integrated part of the corpus. The dictionary part of the OCOJ is linked to the texts, making cross-reference in both directions possible.

A large amount of information about the texts is being encoded and made searchable.

This will include **linguistic** information (orthographic, phonological, morphological, syntactic, semantic, and lexical information), as well as **literary**, **biographical**, **historical**, **geographical** and other information. The digital format makes it possible to add information of any kind continuously.

XML mark-up following the internationally recognized standards of the Text Encoding Initiative (TEI)

Manual mark-up



# Linguistic information



Writing 原文の表記法

Part-of-speech 品詞 Lexeme and morpheme UID 語彙素と形態素のID番号 Morphology, inflection 活用

Syntax シンタクス (要素•構造)

Syntactic analysis marks and delimits **sentences**, **clauses**, and **phrases**.

### Man'yōshū (万葉集) 3.341

賢跡 物言従者 酒飲而 酔哭為師 益有良之

### Man'yōshū (万葉集) 3.341

賢跡 物言従者 酒飲而 酔哭為師 益有良之

sakasi-mi*to* サカシミト mono-ipu ywori pa モノイフヨリハ sake nomite サケノミテ wepi-naki suru *si* エヒナキスルシ masari-taru *rasi* マサリタルラシ

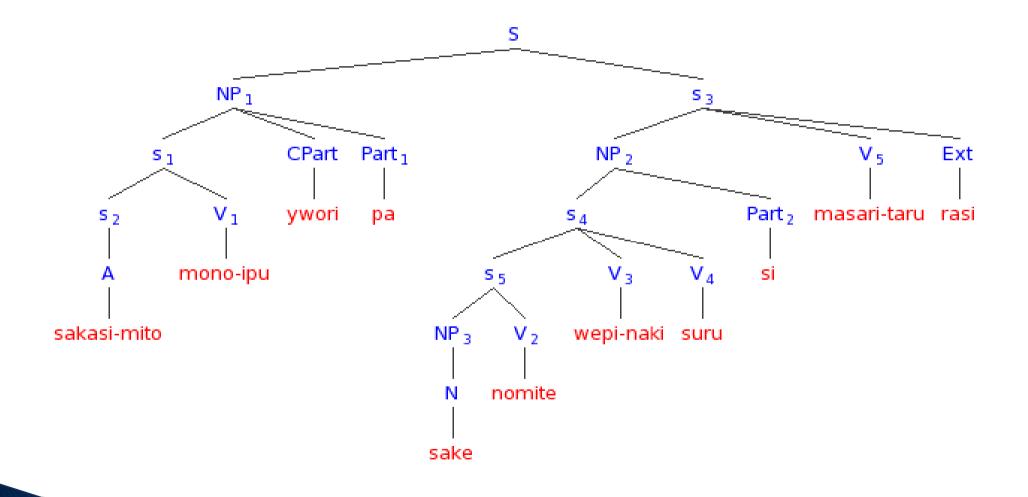
"It should be better to drink saké and weep drunkenly than talking in a clever fashion"

```
\leq s >
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     < cl >
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         </w>
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          <c type="logo">mi</c>
          <c type="phon">to</c>
         </m>
       </w>
     </cl>
     lb corresp="#MYS.3.341-orig_1" xml:id="MYS.3.341-trans 1"/>
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       <w lemma="L050042">
        <c type="logo">mono</c>
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       <w inflection="adnconc" lemma="L030199a" lemmaRef="1571" type="verb">
        <c type="logo">ipu</c>
       </w>
     </w>
   </cl>
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     <c type="logo">ywori</c>
   </w>
   <w lemma="L000522" lemmaRef="29321" subtype="top" type="particle">
     <c type="logo">pa</c>
   </w>
 </phr>
 corresp="#MYS.3.341-orig 2" xml:id="MYS.3.341-trans 2"/>
```

## Man'yōshū (万葉集) 3.341

sakasi<sub>(adjective)</sub>-mito<sub>(adjcop, gerund)</sub> mono<sub>(noun)</sub>-ipu<sub>(verb, adnconc)</sub> ywori<sub>(abl case particle )</sub> pa<sub>(top particle )</sub> sake<sub>(noun)</sub> nomite<sub>(verb, gerund)</sub> wepi<sub>(verb, stem)</sub>-naki<sub>(verb, infinitive)</sub> suru<sub>(verb, adnominal)</sub> si<sub>(res particle )</sub> masari<sub>(verb, stem)</sub>-taru<sub>(auxiliary, stative, adnominal)</sub> rasi<sub>(extension, conclusive)</sub>

### Man'yōshū (万葉集) 3.341





# Searching

# The key to using an annotated text corpus is searchability.



Lemmatization allows us to search the corpus for words regardless of their inflected form by doing a simple KWIC (KeyWord In Context) search:

nomu	drink.conclusive	'I drink'
nomite	drink.gerund	'I am drinking and'
noma-nu	drink-negative.adnominal	'I who am not drinking'



Lexi	ical Item:	lemma search L031386a	Lexical Item In	formation	Search Result Information	italic phonologically attested
	ography phonographically logographically a all[default]	attested ○ cOJ	Search lemma Lexical class Stem form Inflection type Definition	L031386a verb <i>nom-</i> QD drink	Source all Orthography all Number of attestations 22 Constituent boundaries sentence clause phrase	plain     logographically attested       bold     verb       ★     link to tree images       «,»     sentence boundary       {,}     clause boundary       more
¢No	◆No. Source ◆Before			Search lemma	<b>\$</b> After	[Updzted: 2012-Dec-0
1	MYS.3.338	<pre>ijna-ki}mono W0jomopa-zupa) [{[pito-tuki]n0} {nigor-eru}sake W0] </pre>		nomu	be-ku <b>aru</b> <i>rasi</i> }»	
2	MYS.3.341	«[{{sakasi-mito}mono- <b>ipu</b> }ywori pa]{[{[sake]		nomite	)wepi-naki suru)si]masari-taru rasi}»	
3	MYS.3.344	$(ana) \min(u) \approx (((sakasi-ra wo) su to) (sake))$		noma	-nu)pito W0] (yo-ku) mireba) ) [saru ni ka m0] (ni-mu)»	
4	MYS.3.346	«{{{[{] woru] pikaru}tama]Ø to} ipu	nomite	<pre>&gt;[{[kokoro W0]yaru}ni][ani]sika-me ya mo}»</pre>		
5	MYS.3.350	«[{{[moda]worite}[sakasi-ra]suru}pa]{[{{[sake]		nomite	<pre>&gt;wepi-naki suru &gt;ni] [napo] sika-zu-kyeri &gt;&gt;</pre>	
6	MYS.4.555	«{[[{[kimi ga tame] kami-si}mati-zake][yasu no nvo ni][pito-ri ya]		noma	-mu}{{[tomo]na-si} <i>nisite</i> }»	
7	MYS.5.821	<pre>«[{{{[[awo-yanagwi][ume to]]no pana wo]wori}kazasi}</pre>		nomite	<pre>&gt;no noti pa1 {{tiri-nu tomo}yo-si}»</pre>	
8	MYS.5.833	ru noj <b>ki</b> -taraba) [kaku si koso] ( [ume wo] <b>kazasite</b> ) (tanwosi-ku) ∢ IIII ►		noma	-me}»	
9	MYS.6.973	<pre>ipu}»«{{uti-nade so}negwi-tamapu}»«{[{[{kapye &lt;</pre>	eri-ko-mu}pi]a ∭ ▶	noma	-mu)ki]Ø S0) [ko no toyo-mi-ki pa]»	
10	MYS.6.995	«{{[kaku]situtu]aswobi		nomi	-koso)»«([kusa-kwi sura] ([paru pa] (	opwi <i>tutu</i> }}}[aki pa]{tiri-yuk
11	MYS.7.1128	<pre>((asibi)nasu)sakaye-si)kimi ga]pori-si)wi no ipa-wi no midu pa] {{</pre>		nomedo	} <b>aka</b> -nu kamo}»	
12	MYS.7.1142	) saki- <i>ku</i> ) yo-kye-mu to) [{ipabasiru}tarumi no midu wo] musubite} ∢		nomi	-tu}»	
13	MYS.7.1295	I) <i>mikasa no</i> yama <i>ni</i> ] [{[tukwi] <u>no</u> }pune] <b>idu</b> }»«{[{[miyabwi-wo no]}		nomu	<pre>&gt;sakaduki ni] { [kage] ni } mi-yetutu } »</pre>	
14	MYS.8.1656	«[{{[saka-duki ni] [ume <u>no</u> pana] <b>ukabe</b> }[{ <b>omopu</b> }doti]		nomite	<pre>&gt;<u>no</u> noti pa] {{tiri-nu tomo}yo-si}»</pre>	
15	MYS.8.1657 -	«[tukasa <i>ni mo</i> ] { <b>yurusi-tamap-</b> yeri}»«{[{[k	ko-yopi nomwi]	noma	-mu}sake]Ø kamo}»«{ <b>tiri-kosu</b> na [y	ume]}»
16	MYS.12.2925	«{{{{[midori-kwo no tame koso]}[0m0 pa]{motom	nu <u>to</u> }} <b>ipe</b> }[ti]	nome	ya}»«{[kimi ga][0m0]motomu ramu	<i>I</i> }»
17	MYS.13.3260	$1-na-ku SO}$ [pito pa] {kumu $\underline{to}$ } ipu} $({(tokizi-ku)})$	SO} } [pito pa] {	nomu	to})ipu}»«{{{{{{{{{{{{{{{{{{{{{{{{{{{{{{{{{{{{	na-ki ga}goto}{{{{ <b>nomu</b> }pite

### Searching

# More importantly, any combination of information contained in the corpus can be searched.

## 'Other' information



The annotation is being expanded to include amongst other information such as the following, both *in* and *about* the texts

- literary
- biographical
- historical
- geographical
- other information

What can we do for the next generation of Japanese studies scholars?



What can we do for the next generation of Japanese studies scholars?

#### And what can they do for us?

## ご清聴ありがとうございました