Research Centre for Japanese Language and Linguistics

University of Oxford

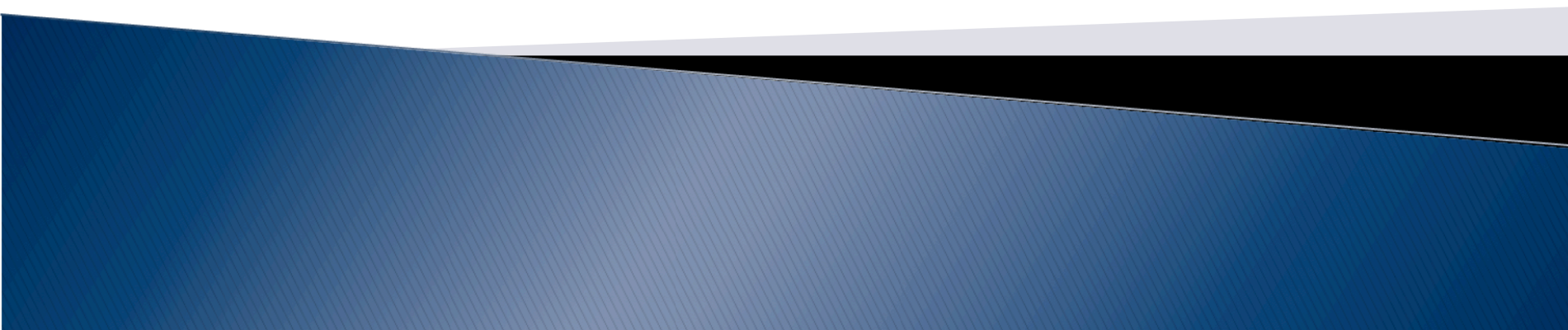オックスフォード大学 日本語研究センター

www.orinst.ox.ac.uk/research/jap-ling/

Semantic roles and case marking in Old Japanese

Stephen Wright Horn and Kerri L Russell

vsarpj@orinst.ox.ac.uk

13th International Conference of EAJS, 24-27 August 2011

Outline

- The Verb Semantics and Argument Realization in Pre-modern Japanese (VSARPJ) project
- The Oxford Corpus of Old Japanese (OCOJ)
- Semantic roles and case marking in Old Japanese (OJ), using the verb *kog-* 'to row'

The VSARPJ Project

- Background
  - http://vsarpj.orinst.ox.ac.uk/
- Funding
  - Arts and Humanities Research Council (AHRC)
- Project goals
  - Create a tool for linguistic analyses
  - Morphological and syntactic tagging
  - Argument structure

The VSARPJ Project

- People
- Principal Investigator: Bjarke Frellesvig
- Co-Investigator: Peter Sells
- Postdocs: Stephen Wright Horn & Kerri L Russell
- DPhil Students: Dan Trott & Zixi You

The VSARPJ Project

- Texts

Kojiki kayō	古事記歌謡	712
Nihon shoki kayō	日本書紀歌謡	720
Fudoki kayō	風土記歌謡	730
Bussokuseki-uta	仏足石歌	after 753
Man'yōshū	万葉集	after 759
Shoku nihongi kayō	続日本紀歌謡	797

The OCOJ

- The Oxford Corpus of Old Japanese (OCOJ)
  - http://vsarpj.orinst.ox.ac.uk/corpus/
- Texts are marked up in XML according to Text Encoding Initiative (TEI) guidelines
  - http://www.tei-c.org/

The OCOJ: Markup

- Texts are marked up for:
  - Orthography
    - Phonographic or logographic
  - Morphology
    - Part of speech, inflection, function, etc.
  - Syntax
    - Phrases, clauses, and sentences
  - Semantic roles
    - Agents, themes, locations, etc.

```xml
<cl>
  <phr role="agent" type="arg">
    <w>
      <w>
        <c type="logo">pikwo</c>
      </w>
      <w>
        <c type="logo">posi</c>
      </w>
    </w>
    <w ana="L000520" function="gen" lemma="28989" subtype="case" type="particle">
      <c type="logo">no</c>
    </w>
  </phr>
  <lb corresp="#MYS.10.2047-orig_3" xml:id="MYS.10.2047-trans_3"/>
  <phr role="location" type="djunct">
    <w>
      <c type="logo">aki</c>
    </w>
  </phr>
  <w ana="L030698a" inflection="adnconc" lemma="12594" type="verb">
    <c type="logo">kogu</c>
  </w>
</cl>
```

The OCOJ: Lexeme identification

- All lexical items are assigned Unique Identification Numbers (UIN)
- This links to an entry in our dictionary which contains:
    - Unique identification number
    - Pronunciation changes
    - Part of speech
    - Usage
        - Start/end
        - Dialect (EOJ)

The OCOJ: Lexeme identification

- UINs allow us to:
    - Retrieve information about words regardless of shape both synchronically and diachronically
        - OJ: *kogu*, *kogi*, *kogamu*
        - OJ *kwopwi* > 800 *kwopi* > before 950 *kopi* > 950-1000 *kowi* > 1100 *koi*
    - Investigate syntactic environments for each word

From the 8th century: **kog-**
Part of speech: **verb**
Conjugation class: **quadrigrade**

1 Gloss: **row**

statistics attestations clause structure semantic roles

From the 8th century: **kogi**
Part of speech: **noun**

statistics attestations

[kog-]{.underline} row

Number of attestations in COJ: 135
Number of attestations written phonographically: 61
Number of attestations written logographically: 74
Number of attestations with no orthographic representation in the text: 0

Number of attestations in EOJ: 6
Number of attestations written phonographically: 6
Number of attestations written logographically: 0
Number of attestations with no orthographic representation in the text: 0

Inflected forms in COJ:
stem : 86
adnconc : 41
gerund : 2
infinitive : 4
continuative : 2

Inflected forms in EOJ:
adnconc : 2
stem : 4

Clause Structure	Verb ▾
NP-manner NP-yu-source	kogi
NP-wo-theme	kogi
NP-pye-goal	kogi
NP-ni-goal	kogi
NP-path NP-location	kogi
NP-path NP-wo-theme	kogite
NP-wo-path	kogitutu
NP-ni-location NP-path	kogu
NP-theme NP-pye-goal	kogu
NP-pye-goal	kogu
NP-path	kogu
NP-ni-goal NP-location	kogu
NP-path	kogu
NP-wo-path	kogu
NP-wo-path	kogu
NP-wo-path	kogu
NP-path NP-ka-location	kogu
NP-ni-goal NP-theme	kogu
NP-path NP-theme	kogu
NP-no-agent NP-location	kogu
NP-no-agent NP-manner	kogu

13

Semantic roles for *kog-*

- We investigated *kog-* 'row' in isolation and in then compounds, since compounding may affect semantic role assignment and/or case marking.
- Roles found with the verb *kog-* 'row' are:
  - Agent: a volitional participant
  - Theme: a non-volitional participant
  - Source: a starting point of motion
  - Path: a space along which motion occurs
  - Goal: an end point of motion (a destination)
  - Location: a spatial or temporal reference point
  - Instrument: a means for carrying out an action

Semantic roles for *kog-*: Agent

- Marked with case particle *no*

  牽牛之　　　秋　滂　船　之　浪　　　足參　香
  pikwoposi no aki kogu pune no nami <u>no</u> sawaki *ka*
  [name] GEN fall row boat GEN wave GEN noise FOC
  [Is that] the noise of the waves from the boat, which
  Pikoposi rows in the autumn?
  (MYS 10.2047)

Semantic roles for *kog-*: Agent

- Unmarked for case

人　　　不榜　　有雲　　　知之
pito　　koga-zu ara*ku mo*　siru*si*
people row-NEG exist TOP evident
Even people not rowing is evident…
(MYS 3.258)

Semantic roles for *kog-*: Agent

- In isolation the role agent occurs 4 times
    - the agent is case marked with genitive *no* twice, both times in a relative clause
    - the agent is unmarked for case twice

Semantic roles for *kog-*: Agent

- In compounds the role agent occurs 13 times
  - the agent is case marked with genitive *ga* 7 times (kogi-ko- 'row-come', kogi-yuk- 'row-go')
  - the agent is case marked with gentive *no* 3 times (*kogi-(i)de-* 'row-go.out' and *kogi-ko-* 'row-come')
  - it is unmarked for case 3 times (kogi-(i)de- 'row-go.out' and kogi-ko- 'row-come')

Semantic roles for *kog-*: Theme

- Marked with case particle *wo*

  於保夫祢　乎　　　許芸　和　我　　　由気婆
  opopune　wo　kogi　wa　ga　　　yukeba
  HON.boat ACC　row　I　NOM　　go.PROV
  Although I go, rowing the boat…
  (MYS.15.3627)

Semantic roles for *kog-*: Theme

- Unmarked for case
- Grammatical subject of *kog-*

山下　　　　赤　乃　曽保船　　奥　　　　　　榜　　所見

yamasita <u>no</u> ake *no*　*sopo*pune oki <u>pye</u>　　kogu miyu

[place] GEN red GEN boat　　　ocean ALL row　EVID

It seems the red boat of Yamashita rows to the ocean.
(MYS 3.270)

Semantic roles for *kog-*: Theme

- In isolation the role theme occurs 10 times
  - the theme is unmarked for case 8 times
  - the theme is marked with accusative *wo* twice

Semantic roles for *kog-*: Theme

- In compounds the role theme occurs 11 times
    - the theme is unmarked for case 8 times (kogi-(i)de- 'row-go.out', kogi-kakur- 'row-hide', kogi-ko- 'row-come', kogi-watar- 'row-cross')
    - the theme is marked with genitive *no* twice (kogi-(i)de- 'row-go.out')
    - the theme is marked with accusative *wo* once (*kogi-(i)de-* 'row-go.out')

Semantic roles for *kog-*: Source

- Marked with ablative *ywo/ywori/yu/yuri*

  從　　浦　　榜　　将會

  ura　yu　　kogi　apa-mu

  bay　ABL　row　meet-CONJ

  [The pilot boat] will probably meet [my boat],

  rowing from the bay.

  (MYS 7.1200)

Semantic roles for *kog-*: Source

- In isolation the role source occurs once
    - the source is marked with the ablative particle once

- In compounds the role source occurs 6 times
    - the source is marked with the ablative particle 4 times (kogi-de-ko- 'row-go.out-come, kogi-ko- 'row-come', and kogi-yuk- 'row-go')
    - The source is marked with particle *wo* once (kogi-de- 'row-go.out')
    - the source is unmarked for case once (kogi-de- 'row-go.out')

Semantic roles for *kog-*: Path

- Marked with accusative particle *wo*

多流比女　　能　　宇良乎　　　許具　　　不祢
Tarupimye no　　ura　wo　　kogu　　　pune
[place]　　　GEN　bay　ACC　row.ADN　boat
The boat, rowing along Taruhime Bay…
(MYS.18.4048)

Semantic roles for *kog-*: Path

- Marked with ablative ywo/ywori/yu/yuri

毛美知婆　能　　　知良布　山辺　　　　由　許具　布祢
momidiba no　　　tirapu　yamabye　yu　kogu　pune
Maple leaf GEN fall　　　mountains ABL row　boat
The boat, which rows along the mountains where the maple leaves are falling…
(MYS 15.3704)

Semantic roles for *kog-*: Path

- Unmarked for case

  射水　河　　　朝　　　己藝　思都追
  imidu kapa　　asa　　　*kogi　situtu*
  [place name] morning row　　do
  [The boat] is rowing   along Imizu River in the morning...
  (MYS 19.4150)

Semantic roles for *kog-*: Path

- In isolation the role path occurs 27 times
    - the path is unmarked for case 17 times
    - the path is marked with accusative particle *wo* 9 times
    - the path is marked with the ablative particle once

Semantic roles for *kog-*: Path

- In compounds the role path occurs 18 times
    - the path is unmarked for case 10 times (kogi-(i)de- 'row-go.out', kogi-ko- 'row-come', kogi-megur- 'row-go.around', kogi-mwi- 'row-turn', kogi-tamotopor- 'row-go.back.and.forth', kogi-tamwi-yuk- 'row-turn-go', kogi-watar- 'row-cross')
    - the path is marked with accusative particle *wo* 7 times (*kogi-ko-* 'row-come', *kogi-mwi-* 'row-turn', *kogi-sugwi-* 'row-pass', and *kogi-watar-* 'row-cross')
    - the path is marked with the ablative particle once (*kogi-tamwi-yuk-* 'row-turn-go')

Semantic roles for *kog-*: Goal

- Marked with dative particle *ni*

  於伎　　敞　　許芸 辺　 爾　　 己伎 見礼婆
  oki　　*pye*　*kogi* pye *ni*　　*kogi* mi*reba*
  ocean ALL　row　area DAT row　see
  As I look, rowing to the ocean, rowing to the
  shore…
  (MYS 17.3991)

Semantic roles for *kog-*: Goal

- Marked with allative particle *pye*

山下　　　　赤　乃 曽 保 船　　奥　　　　　　榜 所　見

yamasita <u>no</u> ake *no sopo*pune oki pye　　kogu miyu

[place] GEN red GEN boat　　ocean ALL row　EVID

It seems the red boat of Yamashita rows to the ocean.

(MYS 3.270)

Semantic roles for *kog-*: Goal

- In isolation the role goal occurs 6 times
  - the goal is marked with dative particle *ni* 3 times
  - the goal is marked with allative particle *pye* 3 times

Semantic roles for *kog-*: Goal

- In compounds the role goal occurs 10 times
  - the goal is marked with dative particle *ni* 7 times (*kogi-(i)de- 'row-go.out', kogi-kakur-* 'row-hide', *kogi-ko-* 'row-come', *kogi-pate-* 'row-anchor', and *kogi-watar-* 'row-cross')
    - *kogi-mukap-* the goal marked with *ni* is a person
  - the goal is unmarked for case twice (kogi-kakur- 'row-hide' and kogi-ko- 'row-come')
  - the goal is marked with allative particle *pye* once (kogi-(i)de- 'row-go.out')

Semantic roles for *kog-*: Location

- Marked with dative particle *ni*

安佐奈芸　　爾　倍　牟気　許我牟　　等
asanagi　　*ni*　*pe*　*muke*　*koga-mu*　*to*
morning calm DAT bow turn　row-CONJ CNJ
In the morning calm turning the bow intending to
row…
(MYS 20.4398)

Semantic roles for *kog-*: Location

- Unmarked for case

牽牛之　　　秋　滂　船　之　浪　　　足參　香
pikwoposi no aki kogu pune no nami   no   sawaki *ka*
[name] GEN fall row   boat GEN wave GEN noise FOC
[Is that] the noise of the waves from the boat, which
Pikoposi rows in the autumn?
(MYS 10.2047)

Semantic roles for *kog-*: Location

- In isolation the role location occurs 7 times
    - the location is unmarked for case 5 times
    - the location is marked with dative particle *ni* twice

Semantic roles for *kog-*: Location

- In compounds the role location occurs 9 times
    - the location is unmarked for case 5 times (kogi-(i)de- 'row-go.out', kogi-in- 'row-depart', kogi-ko- 'row-come')
    - the location is marked with dative particle *ni* 4 times (*kogi-ko-* 'row-come' and *kogi-watar-* 'row-cross')

Semantic roles for *kog-*: Instrument

- Only found once: in a compound with *kogi-(i)de-* 'row-go.out'
- Unmarked for case

真梶　　榜出而

ma-kadi kogi-dete

PFX-oar row-go.out

[They] start rowing at full oar, and…
(MYS 7.1185)

Case particles for *kog-*

- Case particle usage for *kog-* in isolation

Genitive *no*	agent
Accusative *wo*	theme, path
Ablative *ywo, ywori, yu, yuri*	source, path
Dative *ni*	goal, location
Allative *pye*	goal

Case particles for *kog-*

- Case particle usage for *kog-* in compounds

Genitive *ga*	agent
Genitive *no*	agent, theme
Accusative *wo*	theme, path
Ablative *ywo, ywori, yu, yuri*	source, path
Dative *ni*	goal, location
Allative *pye*	goal

Role ordering for *kog-*

• Role ordering for more than one NP in a clause for *kog-* in isolation

NP-location NP-path   NP-ni-goal NP-location

NP-ni-goal NP-theme   NP-ni-location NP-path

NP-no-agent NP-location   NP-path NP-location (2)

NP-path NP-theme   NP-path NP-wo-theme

NP-theme NP-path (2)   NP-wo-path NP-location

NP-theme NP-pye-goal

• NPs marked with *ni* occur first in these examples, otherwise, role ordering appears to be free.

Role ordering for *kog-*

• Role ordering for more than one NP in a clause for *kog-* in compounds

NP-yu-source NP-ga-agent   NP-agent NP-theme
NP-theme NP-ni-goal   NP-theme NP-goal
NP-theme NP-agent   NP-wo-theme NP-ni-goal
NP-wo-path NP-location   NP-no-agent NP-theme
NP-ni-location NP-path NP-theme   NP-theme NP-location
NP-ywo-source NP-agent   NP-no-agent NP-path

• NPs marked with *ni* can be in first or second position.
• NP sources and NPs marked with *wo* are in first position.
• Other roles and case particles appear to have free ordering.

Purposive motion construction

- There are 2 examples of *kog-* in a purposive motion construction (cf. modern Japanese *kaimono ni iku*)

蘆　刈　　　爾　保里江　許具　奈流

asi　kari　　*ni*　*poriye*　*kogu*　*naru*

reed　harvest　DAT　canal　row　　EVID

It seems [they] are rowing along the canal to harvest reed.
(MYS 20.4459)

Purposive motion construction

- There are 2 examples of *kog-* in a purposive motion construction (cf. modern Japanese *kaimono ni iku*)

水門　　入　尔　　船　　己具　如久
minatwo iri　　*ni*　　pune　*kogu*　goto-*ku*
harbor　go.in DAT　boat　row　be.like-ACOP
[It] is like the boat rowing to enter the harbor…
(MYS 9.1807)

Summary of data

• 58 of the 124 (47%) NPs occurring with *kog-* either in isolation or in compounds are not case marked.

• All semantic roles may appear without case marking.

Conclusions

• There is no one-to-one correspondence between semantic roles and case particle:

- a given role can be case marked by different particles
- a given particle can mark different roles.

Conclusions

- Because both themes and agents can be marked with genitive *no*, which marks grammatical subjects, the verb OJ *kog-* 'row' appears to be more similar to English *sail*

  - He sails the boat. The boat sails.

  than to modern Japanese *kog-* 'row'

  - Tarō ga fune o kogu. ?Fune ga kogu.

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/jap-ling/

Questions and Comments Welcome

Stephen Wright Horn & Kerri L Russell

vsarpj@orinst.ox.ac.uk