

# Sluicing

**GOAL:** To show how the presence of an analytic, agglutinating case system may affect the licensing of CLAUSAL ELLIPSIS in ways different from the presence of a clearly fusional case system.

**SLUICING:** Multi-clausal structures in which the only overt element present in the most deeply-embedded clause is commonly a *wh*-phrase:

- (1) John just married someone but we don't know [who ].
- (2) The courier forgot to bring one of the packages. We're trying to work out [which (one) ].

## Major, general works on sluicing:

- Ross, John R. 1969. 'Guess Who?', in R. Binnick, A. Davison, G. Green, and J. Morgan (eds.), *Papers from the 5th Regional Meeting of the Chicago Linguistic Society*. Chicago: Chicago Linguistic Society, 252-86.
- Chung, Sandy, William Ladusaw, and James McCloskey. 1995. Sluicing and Logical Form. *Natural Language Semantics* 3:1-44.
- Merchant, Jason. 2001. *The Syntax of Silence: sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.
- Fox, Danny and Howard Lasnik. 2003. Successive-cyclic movement and island repair: the difference between sluicing and VP-ellipsis. *Linguistic Inquiry* 34:1:143-154.

## Focus of the discussion in this class:

- Nakamura, Masanori. 2005. Case morphology and island repair. Ms. Senshu University.

## Background: common current assumptions about sluicing

- The *wh*-phrase is a "remnant" of the deletion (most of) of a lower clause.
- *Wh*-movement first raises a *wh*-phrase to a SpecCP/high clause-peripheral position, and this is followed by ellipsis of the lower part of the clause/TP constituent:

- (3) Jane just married someone, but I don't know [<sub>CP</sub> who [<sub>TP</sub> ~~she just married~~ ]].

- Alternative hypotheses (now commonly rejected):
- (A) the *wh*-phrase is the object of the verb which precedes it:

- (4) a. ...but we don't [<sub>VP</sub> know [<sub>DP</sub> who]]. similar to:  
 b. 'We don't [<sub>VP</sub> know [<sub>DP</sub> John/him]].

But many verbs possible in sluicing constructions cannot have DP objects:

- (5) a. John has invited someone to dinner? I wonder who.  
 b. \*I wonder Sue/her/the question/the answer.

(B) The elided lower clause is quite different in structure to any preceding clause:

- (6) Someone from Bristol is coming to dinner. Guess [<sub>CP</sub> who [<sub>TP</sub> ~~it is~~ ]].  
 (7) Someone from Bristol is coming to dinner. Guess [<sub>CP</sub> who [<sub>TP</sub> it is ]].

- Patterns supporting *wh*-movement and deletion of a TP parallel in structure to the clause containing the indefinite antecedent of the *wh*-phrase - the "antecedent clause". (Merchant 2001)

### I. Case-matching

- (8) Er will jemandem schmeicheln, aber sie wissen nicht, [wem/\*wen]  
 he wants someone-DAT to-flatter but they know not whom-DAT/whom-ACC  
 'He wants to flatter someone, but they don't know whom.'

### II. Number agreement

- (9) Some of these problems are solvable, but [which problems \_ ] is/\*are not obvious.  
 (10) [Which problems are solvable] is/\*are not obvious.

### III. Preposition pied-piping

- (11) Anna hat mit jemandem gesprochen, aber ich weiss nicht, \*(mit) wem.  
 Anna has with someone spoken but I know not \*(with) whom  
 'Anna spoke with someone, but I don't know who.'

### IV. Different positioning of DP/CP complements

In some languages DP complements regularly precede the verb, whereas CP complements follow the verb (German, Dutch, Hindi, Bangla). In sluices, the *wh*-phrase follows the verb, due to being the residue of a partially-deleted CP complement.

• **General conclusion:** sluicing involves *wh*-movement and PF deletion of a TP largely isomorphic in structure to the TP constituent which contains the antecedent of the *wh*-phrase.

**The surprise: lack of island effects in sluices**

(data from Merchant 2001)

Relative clause/CNP islands

- (12) a. They want to hire someone who speaks a Balkan language, but I don't remember which.  
b. \*I don't remember which Balkan language they want to hire someone who speaks.

Adjunct CP islands

- (13) a. Ben left the party because one of the guests insulted him, but he wouldn't tell me which.  
b. \*Which of the guests did Ben leave the party because \_ insulted him?

Sentential Subject islands

- (14) a. That certain countries would vote against the resolution has been widely reported, but I'm not sure which ones.  
b. \*Which countries has [that \_ would vote against the resolution] been widely reported?

• An initial approach to the problem in Merchant 2001: the island part of the antecedent clause may actually not be present in the TP deleted by sluicing. The *wh*-phrase is therefore not extracted from any island.

- (15) a. They want to hire someone who speaks a Balkan language, but I don't remember [which language ~~that person speaks~~ \_].  
not: b. They want to hire someone who speaks a Balkan language, but I don't remember [which language ~~they want to hire someone who speaks~~ \_].

- (16) a. Ben left the party because one of the guests insulted him, but he wouldn't tell me [which ~~guest insulted him~~].  
not: b. Ben left the party because one of the guests insulted him, but he wouldn't tell me [which ~~guest he left the party because~~ \_ ~~insulted him~~].

- (17) a. That certain countries would vote against the resolution has been widely reported, but I'm not sure which ones ~~would vote against the resolution~~.  
not: b. That certain countries would vote against the resolution has been widely reported, but I'm not sure which ones [that \_ ~~would vote against the resolution~~] ~~been widely reported?~~

BUT - Fox and Lasnik 2003: the island constituent must be present in the sluiced clause, due to binding requirements.

- (18) Every linguist<sub>i</sub> met a philosopher who criticized some of his<sub>i</sub> work,  
but I'm not sure [how much of his<sub>i</sub> work [~~every linguist<sub>i</sub> met a philosopher  
who criticized \_~~]].

The bound variable *his<sub>i</sub>* must reconstruct into a position c-commanded by its binder *every linguist<sub>i</sub>* at LF. Therefore *every linguist<sub>i</sub>* and the island it introduces must be present in the underlying structure.

**"PF Island Repair"** - illicit traces of movement resulting from the extraction of *wh*-phrases from within island constituents are eliminated by deletion at PF. PF deletion of the TP source of a *wh*-phrase in sluicing repairs any island violations.

### Sluicing constructions in Japanese

- (19) Mary-ga nanika-o katta rasii ga,  
Mary-NOM something-ACC bought seems but  
boku-wa [nani-o ka] wakaranai.  
I-TOP what-ACC Q not-know  
'It seems that Mary has bought something, but I don't know what.' (Takahashi 1994)
- (20) Mary-ga kubi-ni natta. Boku-wa [naze ka] siritai.  
Mary-NOM was fired I-TOP why Q want-to-know  
'Mary was fired. I want to know why.' (Takahashi 1994)

#### **Selected important works on Japanese sluicing:**

- Takahashi, Daiko. 1994. Sluicing in Japanese. *Journal of East Asian Linguistics* 3:263-300.
- Nishiyama, Kunio, Whitman, John, and Yi Eun-Young. 1996. Syntactic movement of overt *wh*-phrases in Japanese and Korean. *Japanese/Korean Linguistics* 5. Stanford, CA: Centre for the Study of Language and Information, 337-51.
- Nishigauchi, Taisuke. 1998. 'Multiple sluicing' in Japanese and the functional nature of *wh*-phrases. *Journal of East Asian Linguistics* 7(2), 121-152.
- Fukaya, Teruhiko & Hajime Hoji. 1999. "Stripping and Sluicing in Japanese and Some Implications." Proceedings of the West Coast Conference on Formal Linguistics 18, pp.145-158.  
(available at: <http://www.scf.usc.edu/~fukaya/Papers/Fukaya&Hoji.pdf>)
- Hiraiwa, Ken and Shin-ichiro Ishihara. 2001. Missing links: clefts, sluicing and 'no da' construction in Japanese. In *MIT Working Papers in Linguistics* 43: 35-54, Cambridge: MIT.

**One possible approach to sluicing in Japanese: null copula, null demonstrative subject forms (and no *wh*-movement).** Nishiyama, Whitman, and Yi (1996)

- The copula can optionally occur in sluicing constructions:

(21) Boku-wa [ \_ nani-o (dearu) ka] wakaranai  
 I-TOP pro what-ACC be Q do-not-know  
 'I don't know what (it is).' (Takahashi 1994)

• Similar, full, non-deletion forms with overt demonstrative subject:

(22) Boku-wa [sore-ga nani-o dearu ka] wakaranai  
 I-TOP that-NOM what-ACC be Q do-not-know  
 'I don't know what it/that is.'

**However, a surprise: island effects are found:**

Relative clause

(23) a. Mary-ga [John-ni nanika-o ageta onna]-ni atta sooda.  
 Mary-NOM John-DAT something-ACC gave woman-DAT met I-heard  
 'I heard that Mary met a woman who had given something to John.'  
 b. ?\*Boku-wa [nani-o ka] siritai naa  
 I-TOP what-ACC Q want-to-know PRT  
 'I want to know what.' (Takahashi 1994)

Adjunct CP

(24) a. Mary-ga [dareka-ga kubi-ni natta kara] okotteru sooda.  
 Mary-NOM someone-NOM was fired because is-angry I-heard  
 'Mary is angry because someone got fired.'  
 b. ?\*Boku-wa [dare-ga ka] sitteru yo.  
 I-TOP who-NOM Q know PRT  
 'I know who.' (Takahashi 1994)

Wh-island

(25) a. Mary-ga Bill-ni [John-ga nanika-o katta kadooka] kiita sooda.  
 Mary-NOM Bill-DAT John-NOM something-ACC bought Q asked I-heard  
 'I heard Mary asked Bill whether John bought something.'  
 b. ??Boku-wa [nani-o ka] siritai naa  
 I-TOP what-ACC Q want-to-know PRT  
 'I want to know what.' (Takahashi 1994)

**Revised conclusion:** some kind of movement must occur in Japanese sluices.

- Takahashi (1994): optional overt *wh*-movement
- Fukaya and Hoji (1999), Hiraiwa and Ishihara (2001): Japanese sluices result from clefting.

**A further, relevant observation:** island effects are present when the *wh*-phrase is case-marked, and absent (or significantly reduced) when no case-marker is present. (Takahashi 1994, Fukaya and Hoji 1999).

- (26) John-wa [[otooto-ni nanika-o okutte-ita hito]-o syootai-sita rasii-ga,  
 John-TOP brother-DAT something-ACC sent person-ACC invited seems but  
 boku-wa [nani(\*-o) ka] siranai.  
 I-TOP what-ACC Q not-know  
 'It seems that John invited a person who had sent something to his brother,  
 but I don't know what.' (Fukaya and Hoji 1999)
- (27) John-ga [[dareka-ga naku-sita hon]-o motte-ita ga,  
 John-TOP someone-NOM lost book-ACC had but  
 boku-wa [?\*dare-ga/?dare ka] wakaranakatta.  
 I-TOP who-NOM who Q not-knew  
 'John had a book that someone lost, but I didn't know who.' (Takahashi 1994)

→ **Two types of sluicing in Japanese**

- Fukaya and Hoji 1999 suggest that non-case-marked sluicing is derived from null copula, null demonstrative subject forms (and no *wh*-movement), and that case-marked sluicing is derived from clefting and cleft reduction (and so restricted by islands).

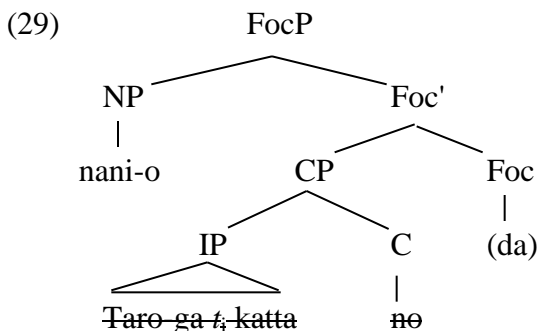
**The problem now: island effects in Japanese but not English**

If island 'violations' in sluicing constructions are repaired by PF deletion in English (and various other languages, Merchant 2001), why does PF Island Repair not occur in Japanese as well?

**Towards a possible solution: Nakamura (2005) and the licensing of case in Japanese.**

Assumptions about the syntax of sluicing: the *wh*-phrase moves to the specifier of a Focus Phrase above CP (Hiraiwa and Ishihara 2001).  $C^0$  contains the nominalizing element 'no',  $Foc^0$  optionally contains the copula:

- (28) Taro-ga nanika-o katta ga, boku-wa [nani-o (da) ka] sira-nai.  
 Taro-NOM something-ACC bought but I-TOP what-ACC COP Q not-know  
 'Taro bought something, but I don't know what.'



### Island effects

- Clearly present with subjects and objects (as per Takahashi 1994, Fukaya & Hoji 1999).
- In order to ensure that the island is present in the underlying structure, a bound variable (*zibun* 'self') is introduced with the *wh*-phrase.

- (30) \*Daremo-ga [[zibun-no sinseki-ga mita] hito]-o sagasiteiru ga,  
everyone-NOM self-GEN relative-NOM saw person-ACC looking.for but  
boku-wa [[dono zibun-no sinseki-ga] (da)] ka sira-nai.  
I-TOP which self-GEN relative-NOM COP Q know-NEG  
'Everyone<sub>i</sub> is looking for a person who his<sub>i</sub> relative saw, but I don't know which  
relative of his<sub>i</sub>.'

**An important new observation** - island effects do NOT occur with PP arguments:

- (31) Daremo-ga [[zibun-no iken-to kotonaru] syuchoo]-o hihansita ga,  
everyone-NOM self-GEN opinion-with differ claim-ACC criticized but  
boku-wa [[dono zibun-no iken-to] (da)] ka sira-nai.  
I-TOP which self-GEN opinion-with COP Q know-NEG  
'Everyone<sub>i</sub> criticized a claim which contrasted with his<sub>i</sub> opinion, but I don't know  
with which opinion of his<sub>i</sub>.'

A minimal pair - *deru* 'get out (of/from)' has either an accusative DP or a source PP as its complement. Island effects occur when a DP complement occurs as a sluiced *wh*-phrase (32a) but not when a PP complement is sluiced (32b):

- (32) a. \*Daremo-ga [[zibun-no bokujyoo-o deta] uma]-o sagasiteiru ga,  
everyone-NOM self-GEN ranch-ACC got.out horse-ACC looking.for but  
boku-wa [[dono zibun-no bokujyoo-o] (da)] ka sira-nai.  
I-TOP which self-GEN ranch-ACC COP Q know-NEG  
'Everyone<sub>i</sub> is looking for a horse which got out of his<sub>i</sub> ranch, but I don't know  
which ranch of his<sub>i</sub>.'
- b. Daremo-ga [zibun-no bokujyoo-kara deta] uma-o sagasiteiru ga,  
everyone-NOM self-GEN ranch-from got.out horse-ACC looking.for but  
boku-wa [[dono zibun-no bokujyoo-kara] (da)] ka sira-nai.  
I-TOP which self-GEN ranch-from COP Q know-NEG  
'Everyone<sub>i</sub> is looking for a horse which got out of his<sub>i</sub> ranch, but I don't know  
from which ranch of his<sub>i</sub>.'

However, PPs which are adjuncts DO show island effects (33 - a reason adverbial PP). Hence it is not true that PPs are always island-insensitive.

THE IMPORTANT GENERALISATION: among arguments, DPs show an island sensitivity not shared by PPs

- (33) \*Daremo-ga [[zibun-no hema-de awateta] kaisya]-o yameta ga,  
 everyone-NOM self-GEN blunder-for panicked company-ACC quit but  
 boku-wa [[dono zibun-no hema-de] (da)] ka sira-nai.  
 I-TOP which self-GEN blunder-for COP Q know-NEG  
 ‘Everyone<sub>i</sub> quit a company which panicked due to his<sub>i</sub> blunder, but I don’t know  
 due to which blunder of his<sub>i</sub>.’

### THE PROPOSAL

- PF island repair of syntactic movement violations is NOT subject to variation.
- PF ellipsis of islands containing the extraction-site of movement repairs syntactic violations of the movement of arguments (but not adjuncts) in all languages.
- The ungrammaticality which occurs in Japanese sluicing when argument DPs are extracted from islands results from a failure to license CASE on these argument DPs.

### CASE-licensing in Japanese

Suggestion: in Japanese, case is licensed/assigned at PF (Fukui and Sakai 2003).  
 DPs are introduced into syntactic derivations "unmarked"/bare - with no case-markers attached. (Kuroda 1965)

At PF, Morphology (Halle and Marantz 1993) adds case-morphemes to DP arguments in structures built by syntax.

CASE-TRANSFER: where arguments have undergone movement, they must retain appropriate connections with their base-positions: it is the tail of an argument chain which is case-marked, and the case-feature is transferred to each member of the chain.

CASE-TRANSFER is suggested to be subject to locality considerations, as other morphological operations, and must not violate island constraints.

### Results

- I. DP arguments, which require case, will show island sensitivity in sluicing constructions. Case-transfer will be blocked when the head and tail of an argument chain are separated by an island constituent.
- II. Arguments that are PPs will NOT show island sensitivity in sluicing constructions, because PPs do not require case.

### How are Japanese and English different?

- a. Syntactic movement in both (all) languages is subject to Subjacency/the ECP/islands.
- b. Movement violations made by argument DPs can be repaired by PF deletion in both (all) languages.
- c. The assignment/licensing of case is different in Japanese and English.

- In English, a 'fusional' language, case is assumed to be present on lexical items within pre-Spell-Out syntax, and checked/licensed during the syntactic derivation.
- In Japanese, an agglutinating language, case-markers are added to lexical hosts only at PF, by post-Spell-Out Morphology. Case-marking is copied to members of movement chains via case transfer. The mechanism of case transfer is subject to island restrictions and is NOT repairable by ellipsis.

## **GENERAL CONCLUSIONS**

**Differences in the well-formedness of sluicing constructions involving islands are suggested to reduce to differences in the morphological profile of a language, and the different ways that case may be licensed in an agglutinating and a fusional-type language.**

**Agglutinating languages may have greater potential to allow for late-derivational insertion of inflectional affixes than fusional languages do.**

## **QUESTIONS FOR FURTHER RESEARCH/THOUGHT**

- Do other agglutinating languages pattern like Japanese with regard to island sensitivity in sluicing constructions? Not yet known.
- If Japanese case-marking is possible at PF, what forces it to occur at PF rather than in the syntax like English? If Japanese could have English-style syntactic case-licensing, it might be expected not to exhibit island effects in sluicing. Is this an occurrence of Procrastinate forcing rule application to occur as late in a derivation as possible? If so, does this mean that the insertion of any analytic-agglutinating morphology should be delayed to PF if possible? Can the effects of this be detected elsewhere?
- Is late insertion of lexical material really restricted to agglutinating languages, and not available in fusional languages?
- Is 'late insertion' of the type proposed in Neeleman and Szendroi (2005) the same as that in Nakamura (2005)?

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