

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 [_{CP} who [_{TP} ~~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 [_{VP} know [_{DP} who]]. similar to:
 b. 'We don't [_{VP} know [_{DP} 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 [_{CP} who [_{TP} ~~it is~~]].
 (7) Someone from Bristol is coming to dinner. Guess [_{CP} who [_{TP} 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_i met a philosopher who criticized some of his_i work,
but I'm not sure [how much of his_i work [~~every linguist_i met a philosopher
who criticized _~~]].

The bound variable *his_i* must reconstruct into a position c-commanded by its binder *every linguist_i* at LF. Therefore *every linguist_i* 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).

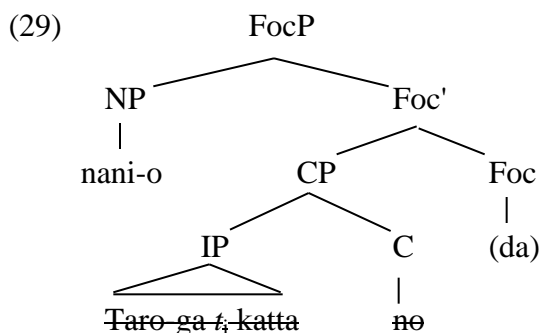
The problem now: island effects in Japanese but not English

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) Taroo-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_i is looking for a person who his_i relative saw, but I don't know which
relative of his_i.'

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_i criticized a claim which contrasted with his_i opinion, but I don't know
with which opinion of his_i.'

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_i is looking for a horse which got out of his_i ranch, but I don't know
which ranch of his_i.'
- 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_i is looking for a horse which got out of his_i ranch, but I don't know
from which ranch of his_i.'

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_i quit a company which panicked due to his_i blunder, but I don’t know
 due to which blunder of his_i.’

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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