

Multiple Sluicing in English?

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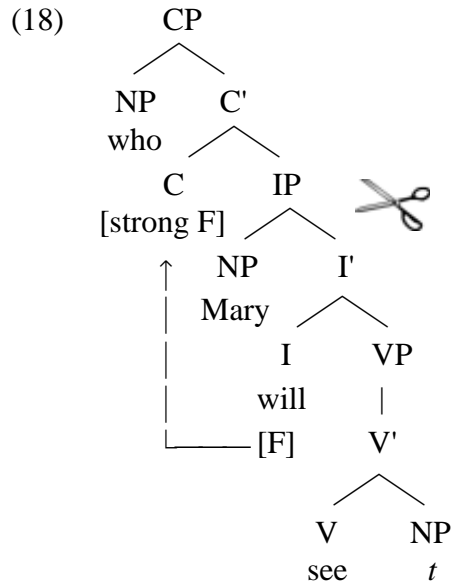
I. Sluicing and Repair: Islands

- (1) Ellipsis in general and sluicing in particular are known to be able to 'repair' certain kinds of syntactic violations. For instance, Ross (1969), the classic study of sluicing, contains the very important observation that island violations are significantly improved when sluicing takes place. The following examples are Ross's:
- (2) I believe that he bit someone, but they don't know who (I believe that he bit)
- (3)a *I believe the claim that he bit someone, but they don't know who I believe the claim that he bit
[Complex NP Constraint, noun complement]
b (??)I believe the claim that he bit someone, but they don't know who
- (4)a *Irv and someone were dancing together, but I don't know who Irv and were dancing together
[Coordinate Structure Constraint]
b (??)Irv and someone were dancing together, but I don't know who
- (5)a *She kissed a man who bit one of my friends, but Tom doesn't realize which one of my friends she kissed a man who bit
[Complex NP Constraint, relative clause]
b (??)She kissed a man who bit one of my friends, but Tom doesn't realize which one of my friends
- (6)a *That he'll hire someone is possible, but I won't divulge who that he'll hire is possible
[Sentential Subject Constraint]
b (??)That he'll hire someone is possible, but I won't divulge who
- (7) I will return to possible accounts of such repair.

II. Sluicing and Repair: Failure to Perform Obligatory Movement

- (8) Speaker A: Mary will see someone.
Speaker B: I wonder who ~~Mary will see~~.
- (9) The construction is very plausibly analyzed as WH-movement followed by IP ellipsis (essentially Ross's account, taken up again by Saito and Murasugi (1990) and Merchant (2001).)
- (10) Sluicing is not limited to embedded questions. It can also occur in matrix wh-questions:
- (11) Speaker A: Mary will see someone.
Speaker B: Who ~~Mary will see~~?
- (12) The relevant fact here is that the normally obligatory raising of Infl to C (in matrix interrogatives) does not apply:
- (13) *Who Mary will see?
(14) Who will Mary see?
(15) A 'repair' account:

- (16) Assume that matrix interrogative C contains the strong feature that triggers the overt raising of T, with the matching feature of Infl (presumably a tense feature) raising overtly to check it.
- (17) Now, roughly following Ochi (1999), suppose that this leaves behind a phonologically defective Infl, which will cause a PF crash unless either pied-piping or deletion of a category containing that Infl (sluicing) takes place. (18) illustrates the latter option.



III. Sluicing and Repair?: Moving When You Shouldn't

- (19) Not surprisingly, in languages with multiple wh-fronting (such as Bulgarian and Serbo-Croatian), multiple Sluicing (Sluicing with multiple survivors) is possible:
- (20) Njakoj vidja njakogo, no ne znam koj kogo [vidja]
 someone saw someone but not I-know who whom (saw) Bulgarian
 Richards (1997)
- (21) Neko je vidio nekog, ali ne znam ko koga [je vidio]
 someone is seen someone but not I-know who whom (is seen) Serbo-Croatian
 Stjepanovic (2003)
- (22) Surprisingly, at least some multiple Sluicing is allowed in at least some **non-** multiple wh-fronting languages:
- (23) I know that in each instance one of the girls got something from one of the boys.
 ?But which from which Bolinger (1978)
- (24) I know that in each instance one of the girls got something from one of the boys.
 ?But they didn't tell me which from which Nishigauchi (1998)

Compare:

- (25) *They didn't tell me which from which got something

A further example:

- (26) ?One of the students spoke to one of the professors, but I don't know which to which

- (27) *One of the students spoke to one of the professors, but I don't know which to which spoke
- (28) Richards (1997), Richards (2001) offers an intriguing account of this surprising possibility, involving a sort of repair by ellipsis, of these apparent multiple sluicing constructions:
- (29) PF must receive unambiguous instructions about which part of a chain to pronounce (and only a single member of the chain will be pronounced).
- (30) A strong feature instructs PF to pronounce the copy in a chain in which it is in a feature-checking relation.
- (31) Suppose a weak feature overtly attracts an item. The resulting chain would then contain two members, with no instruction about which to pronounce. The derivation crashes at PF.
- (32) When the attracting feature is strong, PF is instructed to pronounce the head of the chain.
- (33) As Richards notes, his approach does not absolutely bar overt weak feature driven movement. Suppose a weak feature drives movement out of what will become an ellipsis site. In this case PF only has to consider a single position for pronunciation (the head of the chain), since nothing in the ellipsis site will be pronounced.
- (34) This is the basis of Richards's analysis of apparent multiple sluicing in languages lacking overt multiple wh-movement. Richards gives the following example, adapted from Bolinger (1978):
- (35) I know that in each instance one of the girls got something from one of the boys. But they didn't tell me which from which.
- (36) I know that in each instance one of the girls got something from one of the boys. *But they didn't tell me which from which got.
- (37) In a language like English, some of the features on C⁰ driving wh-movement are weak. (36) is correctly ruled out, as the representation will contain two copies of the second wh-phrase, with no instruction as to which to pronounce.
- (38) When the IP is elided, as in (35), the wh-chain will be legitimate, containing only a single candidate for pronunciation.
- (39) Merchant (2001) offers a rather similar account: Procrastinate is a 'local' requirement, encoded as a feature of a trace. Moving overtly when covert movement would have been possible leaves this feature on the trace (perhaps ultimately resulting in a PF crash). If the IP containing the trace is deleted, the defective feature is no longer present at the PF interface, so the violation is repaired.
- (40) Nishigauchi (1998) concludes that these are not really multiple sluicing: While the first wh-phrase is in Spec of CP, the second occupies some other position.
- (41) "One striking fact about multiple sluices in the languages above is that they tend not to be

separated by a tensed clause boundary..." Merchant (2001)

- (42) Which one of the professors did the students say that Mary spoke to
- (43) The students said that Mary spoke to one of the professors, but I can't remember which professor ~~the students said that Mary spoke to~~
- (44) *One of the students said that Mary spoke to one of the professors, but I don't know which student to which professor
- (45) As mentioned earlier, in languages with multiple wh-fronting (such as Bulgarian), multiple sluicing (sluicing with multiple survivors) is rather freely possible, as seen in the following two examples from Richards (1997), and Stjepanovic (2003) respectively:
- (46) Njakoj vidja njakogo, no ne znam koj kogo [vidja]
someone saw someone but not I-know who whom (saw) [Bulgarian]
- (47) Neko je vidio nekog, ali ne znam ko koga [je vidio]
someone is seen someone but not I-know who whom (is seen) [Serbo-Croatian]
- (48) The important question now is whether such multiple sluicing is possible across a clause boundary. I do not yet have a great deal of data, but what I do have is suggestive. One of my two Serbo-Croatian informants reports that the following example is quite good (though perhaps a shade short of perfect):
- (49) a. Neko misli da je Ivan nesto pojeo.
someone thinks that is Ivan something ate
'Someone thinks that Ivan ate something.'
b. ?Pitam se ko sta.
Ask self who what
'I wonder who what.'
- (50) However, the second informant rejects the example. Perhaps significantly, these judgments track their judgments for multiple wh-movement without sluicing. The first speaker accepts the following example while the second rejects it:
- (51) Ko sta misli da je Petar pojeo?
who what thinks that is Petar eaten
'Who thinks that Petar ate what?'
- (52) Another requirement on the English construction: The second wh strongly prefers to be a PP:
- (53) ?Someone talked about something, but I can't remember who about what
- (54) ?*Someone saw something, but I can't remember who what
- (55) ?Mary showed something to someone, but I don't know exactly what to whom
- (56) ?*Mary showed someone something, but I don't know exactly who what
- (57) This combination of constraints is reminiscent of what we find in rightwards focus movement.

- (58) "Right Roof Constraint"
Any rule whose structural index is of the form ... A Y B, and whose structural change specifies that A be adjoined to the right of B, is upward bounded. Ross (1967)
- (59) The superior acceptability of PP over DP as the second wh-remnant is also similar to what is found with rightwards movement.
- (60) a. Some students met yesterday with the professors
b. *Some students met yesterday the professors
- (61) 'Heaviness' is a factor in extraposition, as discussed by Ross (1967) and Fiengo (1980) among many others. However, that requirement seems limited to situations where it is a DP that tries to extrapose:
- (62) a. *Mary saw yesterday Harry
b. Mary saw yesterday her old friend Harry
c. Mary saw yesterday Harry Hetherington
- (63) Mary spoke yesterday to him
- (64) Multiple sluicing tracks extraposition quite well:
- (65) a. Who was talking yesterday to who
b. Someone was talking (yesterday) to someone, but I don't know who to who
- (66) a. ?*Who bought yesterday what
b. ?*Someone bought something, but I don't know who what
- (67) a. Which linguist criticized yesterday which paper about sluicing
b. ?Some linguist criticized (yesterday) some paper about sluicing, but I don't know which linguist which paper about sluicing
- (68) Finally, rightwards DP movement is well known not to affect the object of a preposition, as first discussed by Ross (1967):
- (69) *A linguist spoke about yesterday a paper on sluicing
Compare:
- (70) A linguist criticized yesterday a paper on sluicing
- (71) The second wh in multiple sluicing seems subject to the same constraint, though the effect is perhaps less pronounced:
- (72) Some linguist spoke about some paper on sluicing, but I don't know which linguist
?*(about) which paper on sluicing
- (73) There are certain exemptions to the Right Roof Constraint. One involves control clauses:
- (74) ?Mary wanted to go until yesterday to the public lecture
- (75) Significantly, apparent multiple sluicing tracks both the constraint and the exemption quite well:
- (76) *Some of the students wanted John to go to some of the lectures, but I'm not sure which to which
- (77) ?Some of the students wanted to go to some of the lectures, but I'm not sure which to

which

- (78) All of this is quite suggestive that the second wh in these multiple constructions has actually undergone extraposition, rather than wh-movement.

OR

- (79) Fox and Pesetsky (2003) propose that at each spell-out domain, linear ordering statements are added to an ever growing Ordering Table.
- (80) When ellipsis takes place, it can have a salvation effect by eliminating all statements involving deleted material, including the contradictory statements that can result from moving too far. Island violation repair is one such situation; possibility of multiple wh-fronting is another (similar to the account of Richards mentioned earlier).
- (81) When two wh-phrases are not phase mates, they are not ordered directly. Rather, their relative order is determined by transitivity via elements at the edge of the intervening phases. "If these connecting links are deleted, phonology doesn't know what to do with the remaining elements." Thus, we get a phasemate condition on multiple sluicing, accounting for the clausemate effects seen earlier.
- (82) The F&P account, unlike the Right Roof one, would allow multiple sluicing even out of an embedded clause, as long as the two wh-phrases both originate in the same embedded clause (at which point their linear ordering would be directly established).
- (83) Fred thinks a certain boy talked to a certain girl.
I wish I could remember which boy to what girl
- (84) A certain boy said that Fred talked to a certain girl.
*I wish I could remember which boy to what girl

On the other hand, suppose that the source of the sluice in (83) is actually (85)a rather than (85)b.

- (85) a. I wish I could remember which boy talked to what girl
b. I wish I could remember which boy Fred thinks it is certain talked to what girl
- (86) This would require a sort of accommodation, since it was never actually asserted that a boy talked to a girl, merely that Fred thinks that it happened.
- (87) When accommodation is more difficult, multiple sluicing seems considerably less available:
- (88) Fred denied that a certain boy talked to a certain girl.
???I wish I could remember which boy to what girl
- (89) Standard simple sluicing is not adversely affected:
- (90) Fred denied that a certain boy talked to a Mary
a. I wish I could remember which boy
b. I wish I could remember what girl
- (91) Fred doubts that a certain boy talked to a certain girl.
?*I wish I could remember which boy to what girl
- (92) Fred doubts that a certain boy talked to a Mary

- a. I wish I could remember which boy
 b. I wish I could remember what girl
- (93) An anaphor binding test: (94) indicates that the remnant remaining after sluicing can contain an anaphor, bound via 'reconstruction', whose antecedent was in the deleted context.
- (94) ?Everyone said that some pictures of himself hung on certain walls, but I'm not sure how many pictures of himself
- (95) With multiple sluicing, however, acceptability degrades considerably:
- (96) ?*Everyone said that some pictures of himself hung on certain walls, but I'm not sure how many pictures of himself on which walls
- (97) Potential problem:
- (98) Who_i did Mary talk to t_i t_j yesterday [about phonology]_j
- (99) I know who Mary talked to yesterday about phonology,
 ?*but I don't know who about semantics
- (100) I know that in each instance one of the girls got something from one of the boys. But they didn't tell me which from which
- (101) Possibly the 'normal' rightwards focus site is not high enough to escape deletion under sluicing, and only a WH-element can move high enough (i.e., into essentially the same kind of geometric relation with a wh-Comp that Spec of such a Comp has, as suggested to me by Milan Rezac).

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