Licensing ellipsis

1 The puzzle of ellipsis

Consider an elliptical sentence:

(1) Abby poked the man with the stick, and Kim did [ ], too.
 a. _Meaning_: A poked the man with the stick, and K poked the man with the stick, too.
 b. _Sound:_ Abby poked the man with the stick, and Kim did, too.

Observation: Ellipsis presents a case of (extreme) sound-meaning mismatch.

Question: (1) is ambiguous. How many meanings does it have, and what are they?

Today: Is there syntax in the ellipsis gap site? If so, how does it get there?

2 Types of analyses of ellipsis

Two kinds of analyses of ellipsis in Minimalism:

• WYSIWYG
 What you see is what you get: there is no covert material in ellipsis.

• Covert syntax
 The structure contains a full (unpronounced) representation of the elided material.

$\Big($ A third (hybrid) option: There is _some_ structure, but it's not a full representation of the elided material but instead just part of the material. $\Big)$

2.1 WYSIWYG (the naive approach)

☞ There is nothing more in the syntax than what is expressed phonetically (Dalrymple et al., 1991; Ginzburg and Sag, 2000; Culicover and Jackendoff, 2005; Stainton, 2006).

(2) Someone ate my cake and I think I know who [ ].   _sluicing_

Meaning: Someone ate my cake and I think I know who ate my cake.
Sound: Someone ate my cake and I think I know who.

→ _know_ selects _who_ as its complement, there is no deleted clause.

(3) ... and I think I

Obvious problems:

• **Selection**:
 Inquire selects for a CP, not a DP.

 (4) John inquired what the time was.
 (5) * John inquired the time.

Sluicing:

 (6) I invited someone, and John inquired who.

 ☞ Sluicing is fine with _inquire_: CP, not DP.

• **Agreement**:
 Sentential subject: singular agreement
 DP subject: agreement depends on number of subject

 (7) [CP Which of these problems are solvable] is/*are not obvious.
 (8) [DP These problems] *is/are solvable.

Sluicing:

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

 ☞ Sluicing takes singular agreement: CP, not DP.

2.2 A more sophisticated WYSIWYG approach

(10) **Simpler Syntax Hypothesis (SSH)**
 The most explanatory theory is one that imputes the minimum syntactic structure necessary to mediate between phonology and meaning. (Culicover and Jackendoff, 2005, p. 5)

Ellipsis involves an 'orphan' that needs to be licensed indirectly.

(11) Someone ate my cake and I think I know who.

The sluice is a CP, but only contains the _wh_ phrase. The orphan receives its syntactic and semantic features from the target, but is spelled out as who.

(12)

Question: How does this solve the two problems that the naive approach had?
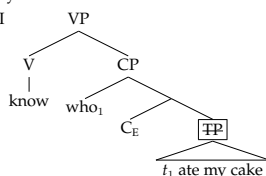
2.3 A syntax approach

There is a full CP in the ellipsis site, which is unpronounced.

(13) Someone ate my cake and I think I know who.

(14) ... and I think I

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              VP
             /  \
            V    CP
            |   /  \
          know who₁  \
                 /  \
                C_E  TP
                    / \
                 t₁ ate my cake
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Merchant (2001): The syntax contains an "E" feature that is hosted by some head. The complement of this head is unpronounced at PF.

3 Evidence for structure in ellipsis

Question: How can we tell if there is or isn't silent structure in a sentence?
Answer: Indirectly.

> Detecting and arguing for 'missing' structures is analogous to searching for a black hole: one can tell it's there only by its effects on surrounding material. The logic of the hunt for elided structure is similar. If one finds effects that seem to be due to missing material, there is an argument that such structure exists. In other words, if effects are found which we would otherwise attribute to properties of structure X in similar, nonelliptical, cases, but structure X is, by hypothesis, internal to the ellipsis site, then X exists. If, on the other hand, expected properties are missing, one could conclude that structure X is absent. (Merchant, 2012, p. 8)

3.1 Island effects

VP-ellipsis and fragment answers are sensitive to island effects, even when the tail of the movement chain (created through different kinds of $\overline{\text{A}}$-movement) is inside an ellipsis site.

3.1.1 VP-ellipsis

(15) * Abby wants to hire someone who speaks a Balkan language, but I don't remember which (Balkan language) Ben does ~~want to hire someone who speaks t~~.   *wh*-movemet

(16) * Abby knows five people who have dogs, but cats, she doesn't ~~know five people who have t~~.   topicalization

3.1.2 Fragment answers

(17) a. Did Abby like the candidate who referred to Chomsky?
      b. * No, to Bresnan.
      c. No, she liked the candidate who referred to Bresnan.

(18) a. Did Ben leave the party because Abby referred to Kissinger as a war criminal?
      b. * No, to Milosevic.
      c. No, he left the party because because Abby referred to Milosevic as a war criminal.

3.2 The P-stranding generalization

The distribution of preposition-stranding under *wh*-movement out of putative ellipsis sites correlates with whether a language allows P-stranding in non-elliptical contexts. We would want to capture that under one generalization; this is afforded by a movement analysis. (This, and more, data is from Merchant 2001).

(19) **English (P-stranding)**
      a. Peter was talking with someone, but I don't know (with) who(m)   *ellipsis*
      b. ✓ Who was Peter talking with?   *question*

(20) **Swedish (P-stranding)**
      a. Peter har talat med någon; jag vet inte (med) vem.
          Peter has talked with someone I know not with who
      b. ✓ Vem har Peter talat med?
          who has Peter talked with

(21) **Greek (non P-stranding)**
      a. I Anna milise me kapjon, alla dhe ksero *(me) pjon
          the Anna talked with someone but not I.know *with who
      b. * Pjon milise me?
          who talked.3s with

(22) **Russian (non P-stranding)**
      a. Anja govorila s kem-to, no ne znaju *(s) kem.
          Anja spoke with someone, but not I.know with who
      b. * Kem ona govorila s?
          who she talked with

(23) **German (non P-stranding)**
      a. Er wollte mit jemandem tanzen, aber ich weiss nicht, *(mit) wem.
          he wanted with someone to.dance but I know not with who
      b. * Wem wollte er mit tanzen?
          who wanted he with to.dance

3.3 Case matching

DPs in sluicing show up with Case that we would understand if there is an unpronounced Case-assigner in the ellipsis site, but not otherwise. The example comes from German, where *schmeicheln* 'flatter' assigns dative, while *loben* 'praise' assigns accusative (Ross, 1969):

(24) a. Er will jemande**m** schmeicheln, aber sie wissen nicht, {*wer / *wen / **wem** }
          he wants someone.DAT flatter   but they know not who.NOM who.ACC who.DAT
          'He wants to flatter someone, but they don't know who.'
      b. Er will jemande**n** loben, aber sie wissen nicht, {*wer / **wen** / *wem}
          he wants someone.ACC flatter but they know not who.NOM who.ACC who.DAT
          'He wants to praise someone, but they don't know who.'

3.4 Complementizer deletion

Displaced CPs require overt complementizers. Fragment answers also require an overt complementizer.

(25) a. No-one believes (that) I'm taller than I really am.
      b. *(That) I'm taller than I really am, no-one believes.   *displaced CP*

(26) What does no-one believe?
      *(That) I'm taller than I really am.   *fragment answer*

3.5 Infinitivals: Raising vs. Control

There is a restriction on the distribution of short answers using infinitival clauses: only control infinitivals can be clefted, and only control infinitivals can serve as fragment answers.

(27) **Control:**
      a. It's [to get a job in Europe] that she really wants.   *cleft*
      b. Q: What does she really want?
          A: To get a job in Europe.   *fragment answer*

(28) **Raising:**
      a. * It's [to procrastinate] that people tend.   *cleft*
      b. Q: What do people tend to do?
          A: *To procrastinate.   *fragment answer*

3.6 Binding effects

Binding theory applies in ellipsis as it does in non-ellipsis cases.

(29) Who does Patrick$_i$ like?
      a. Himself$_i$ / *Him$_i$
      b. Patrick$_i$ likes himself$_i$ / *him$_i$

(30) Where is he$_i$ now?
      a. In his$_i$ / *Patrick$_i$'s flat.
      b. He is in his$_i$ / *Patrick$_i$'s flat.

4 Two famous counterexamples from WYSIWYG supporters

WYSIWYG approaches are interested in finding cases where there doesn't appear to be a structural connection between the ellipsis and its antecedent, which would be unexpected if the ellipsis site contained full syntactic structure.

4.1 Lack of island effects

The strongest evidence in favor of the nonstructural approaches comes from the lack of island effects in certain ellipsis contexts, such as in many sluicing structures and in certain fragment answers.[1]

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[1] This is the subject of our class in weeks 8–10.

4.1.1 Sluicing

As Ross (1969) famously observed, the putative *wh*-extraction out of ellipsis sites in sluicing appears insensitive to islands:

(31) They want hire someone who speaks a Balkan language, but I don't remember which ~~they want to hire someone who speaks~~.

(32) Every linguist$_1$ argued with a philosopher who took issue with one of his$_1$ claims, but I can't remember which one (of his$_1$ claims) ~~every linguist argued with a philosopher who took issue with~~.

4.1.2 Fragment answers

(33) Is Sviatoslav pro-communist or anti-communist these days?
      —Pro. [*Pro, Sviatoslav is [*t*-communist these days.]

(34) A: John met a woman who speaks French.
      B: And Bengali? [*And Bengali, did John meet a woman who speaks *t*?]

4.2 Exceptions to the P-stranding generalization

Some languages allow P-stranding in ellipsis, even though they do not allow them in questions.

(35) **Italian**
      a. Pietro ha parlato con qualcuno, ma non so   ?(con) chi.
          Pietro has spoken with someone   but not I.know with who
          'Pietro has spoken with someone, but I don't know (with) who.'
      b. * Chi ha parlato Pietro con?
            who has spoken Pietro with
          'Who has Pietro spoken with?'

(36) **Hebrew**[2]
      a. Dani diber im mišehu, aval ani lo yoda'at ?(im) mi.
          Dani spoke with someone but I   not know   with who
          'Danny spoke with someone, but I don't know (with) who.'
      b. * Mi   Dani diber im?
            who Danny spoke with
          'Who did Danny speak with?'

However note: as far as we know, there is no language with the opposite pattern:

(37) **Italian'**
      a. **Preposition stranding in questions**
          Who did he speak with? *With whom did he speak?
      b. **No preposition stranding in sluicing**
          He spoke with someone, but I don't know *who / with whom

This would be difficult to explain if the two phenomena are unrelated, but we are at least partway towards a solution if we assume they *are* related. This is a subject of much current research.

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[2] The literature reports that Hebrew does not allow P-stranding at all, but I find it to be quite acceptable in sluicing. It's completely ungrammatical in questions.

5 Deep and Surface anaphora

Hankamer and Sag (1976):

(38) Hankamer: I'm going to [$_{VP}$ stuff this ball through this hoop]
      Sag: It's not clear that you'll be able to [$_{VP}$].
      Sag': It's not clear that you'll be able to [$_{VP}$ do it].

Observation: The three instances of VP in (38) seem to "mean" the same thing.

Question: Does this mean that the forms in (39) can have the same LF representation[3]?

(39) a. You'll be able to.
      b. You'll be able to do it.
      c. You'll be able to stuff this ball through this hoop.

Answer: No. (39a) and (39c) can have the same LF representation (i.e. "VP ellipsis" (VPE) can be thought of as involving a silent VP interpreted as a copy of the antecedent VP, for instance), but (39a) and (39b) do not. VPE and *do it* in English are different.

Two kinds of anaphora: DEEP ANAPHORA, in which the anaphor is present in underlying representations and not derived through a transformation; and SURFACE ANAPHORA, in which the anaphor is derived transformationally by deletion.

(40) (Hankamer attempts to stuff a 9-inch ball through a 6-inch hoop.)
      a. # Sag: It's not clear that you'll be able to.
      b. ✓ Sag: It's not clear that you'll be able to do it.

(41) a. Phonetic form (PF) representation for (38B) : ... [$_{VP}$].
      b. LF representation for (38B) : ... [$_{VP}$ stuff this ball through this hoop].

(42) a. Phonetic form (PF) representation for (38BB') : ... [$_{VP}$ do it].
      b. LF representation for (38BB') : ... [$_{VP}$ do it].

5.1 Diagnostics for covert syntactic structure

Hankamer and Sag show several diagnostics for the presence of covert syntax in surface anaphora:

(43) **Pronouns require syntactic antecedents but are possible with VPE:**
      a. I've never ridden a camel, but Ivan's ridden a camel$_1$, and he says it$_1$ stank horribly.
      b. I've never ridden a camel, but Ivan has, and he says it$_1$ stank horribly.
      c. I've never ridden a camel, but Ivan has done it, and he says it$_1$ stank horribly.

(44) **Agreement facts consistent with silent material in VPE:**
      We can't prove that there are such rules, but there { are, *is }.

(45) **Missing antecedents are possible with VPE, not *do it***
      a.   My uncle didn't buy anything for Christmas, but my aunt did, and it was bright red.
      b. * My uncle didn't buy anything for Christmas, so my aunt did it for him, and it was bright red.

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[3]Much of the contemporary literature discusses semantics in terms of "LF representations". At the time of Hankamer and Sag, the question was put in terms of "semantic representations". In its most general form the question is about *compositionality*: is the relation between syntax and semantics the same in all three cases? One could answer "yes", for instance, if one believed that there was a superficial deletion rule at work, or some phonologically empty "copies" of the antecedent material in the elliptical or anaphoric forms

5.2 Syntactic and pragmatic control

Claim: Only deep anaphors allow for 'pragmatic' control (that does not involve a linguistic antecedent).   Hankamer and Sag (1976, p. 406)

Verb phrase ellipsis does not allow pragmatic control

(46) [Sag produces a cleaver and prepares to hack off his left hand]
      Hankamer: # Don't be alarmed, ladies and gentlemen, we've rehearsed this act several times, and he never actually does.

(47) [Hankamer attempts to stuff a 9-inch ball through a 6-inch hoop]
      Sag: # It's not clear that you'll be able to.

Do it allows pragmatic control

(48) [Sag produces a cleaver and prepares to hack off his left hand]
      Hankamer: Don't be alarmed, ladies and gentlemen, we've rehearsed this act several times, and he never actually does it.

(49) [Hankamer attempts to stuff a 9-inch ball through a 6-inch hoop]
      Sag: It's not clear that you'll be able to do it.

Sluicing does not allow pragmatic control

(50) [Hankamer produces a gun, points it offstage and fires, whereupon a scream is heard]
      Sag: #Jesus, I wonder who.

Null complement anaphora allows pragmatic control

(51) [Indulgent father feeds baby chocolate bar for dinner]
      Mother: I don't approve.

(52) [Two people are disturbed by loud noises of popcorn-eating in adjacent row]
      One to the other: Don't you think we should complain?

The conclusion from this is that Null complement anaphora is not the same as VPE: it's deep anaphora that differs from other deep anaphors in not having any pronounced material in the 'ellipsis' site.

(53) [Observing Hankamer attempting to stuff a 9" ball through 6' hoop]
      a. Sag: I don't see why you even try.
      b. # I don't see why you even try to.

(54) a. Hankamer: Because I'm convinced that I'll succeed.
      b. Because I'm convinced that I'll be able to.

If there is syntactic context, both types of anaphora are possible:

(55) Sag: Why don't you stuff that ball through that hoop?
      Hankamer: I'm trying.
               I'm trying to.

Question: what about other types of anaphora?

Hankamer and Sag's conclusions

(56) Classification:

surface	deep
VPE	'do it' and sentential 'it'
sluicing	'one'-anaphora
stripping	Null Complement Anaphora
gapping	NP ellipsis after determiner-'one'
sentential 'so'	'it' pronominalization

5.3 What have we learned?

☞ Two types of anaphora

- **SURFACE ANAPHORA** requires licensing by a *linguistic* antecedent.

- **DEEP ANAPHORA** can be licensed by the preceding discourse.

Deep anaphors can also be licensed via a linguistic antecedent, but the parallelism they require is less strict than with surface anaphors.

(57) Somebody [took the oats down to the bin].
   a. Bill did.   *verb phrase ellipsis*
   b. Bill did it.   *do it anaphora*
   c. I know who.   *sluicing*
   d. Bill had volunteered.   *null complement anaphora*

(58) [The oats were taken down to the bin] by someone.
   a. # Bill did.   *verb phrase ellipsis*
   b.   Bill did it.   *do it anaphora*
   c. # I know who.   *sluicing*
   d.   Bill had volunteered.   *null complement anaphora*

Coherence relations matter (Kehler, 2001):

(59) a. In March, four fireworks manufacturers asked that the decision be reversed, and on Monday the ICC did.
   b. Of course this theory could be expressed using SDRSs, but for the sake of simplicity we have chosen not to.

(60) a. # In March, the decision was reversed by the ICC, and on Monday the ICC did again.
   b. # This theory was expressed using SDRs by Smith, and Jones did too.

The null hypothesis of discourse structure

> We know that discourses have some kind of structure, but in general the structure of a discourse can be viewed as a pragmatic entity defined on the meanings of its constituent sentences. We can call this the null hypothesis, since the only restriction imposed is that the discourse "make sense," and even this restriction is imposed only by the ethics of cooperative endeavor.

The data discussed in Hankamer and Sag (1976) pose a problem for this hypothesis. Why?

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