When Syntax-Semantics mismatches and Syntax-Phonology mismatches go together? Evidence from English, Dutch, and German.

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1 General Background and question.

1.1 Bracketing paradoxes

- Phonology/"spell out" tells us one thing, interpretation tells us another.

(1) a single interpretation, two structures
   a. ungrammaticality
   b. unacceptability

(2) Phonology.
   a. -ity is a level 1 affix
   b. un- is a level 2 affix

(3) Semantics.

- Bracketing paradoxes: "syntax semantics/ syntax phonology mismatches"

- Analysis?
  General solution: some kind of reanalysis/rebracketing, what is reanalysis/rebracketing?

1.2 A syntactic solution

In current syntactic frameworks where the morphology is part of the syntax (DM, and given Kayne (1994)'s antisymmetry):

(4) Syntactic derivation– (reduced it to head-final "relative" "complement).
   a. un grammatical
      (i) -ity [ un grammatical ] semantics
      (ii) Merge "grammatical" with -ity
            [ grammatical [ ity [ un grammatical ] ] ]
      (iii) Merge α with grammaticality :

There is no bracketing paradoxes- its an effect of different steps in a syntactic derivation

1.3 Syntax: interface between sound and meaning

Syntax: a giant collection of bracketing paradoxes:

- wh movement, NP movement, T to C....
  a. [wie] [verdedigt] [d’er vanmiddag] [haar proefschrift] [?] [?]
  b. [verdedigt] [d’er vanmiddag] [wie] [haar proefschrift] [?] [?]
  c. [d’er vanmiddag] [wie] [haar proefschrift] [verdedigt] [?]
1.4 General Questions to explore today

Can an (independent motivated) syntactic derivation always resolve apparent mismatches? (Why is this an interesting question? it bears on the architecture of UG, and the division of labor between the different components)

- Look at a special construction in English that is widespread but has quite restricted properties. It poses many specific puzzles.

  a. I cannot seem to figure this out. SYN HIER:? not > can > seem > to VP
  b. It seems that I cannot figure this out. SYN HIER:? seem > to > not > can > V
  c. # it cannot seem that I figure this out

- Problem: when raising to subject is blocked, we find (6-b), not (6-c).
- This is unexpected, if the syntactic hierarchy is (6-a).... This looks like a syntax semantics mismatch (the syntactic hierarchy corresponds to the compositional semantics/ i.e. the 'scopal' hierarchy) 1.

- Question:

  (7) is (6-a) derived from (6-b)? or are the two unrelated?
  If (6-a) is the output of the syntax, how do we derive the meaning?

- Answer:
  ..requires syntactic groundwork: 'probing the syntax of the construction'
  figuring out what the order of E-Merge is, independently of the 'scope' problem.

  (8) Conclude: The linear order in (6-a) must be derived from the syntactic hierarchy in (6-b).

- There is no syntax semantics mismatch: the syntactic derivation encodes the interpretation

- A syntactic derivation must be assumed. How does it work?

1.5 Comparative syntax: insights from Germanic–OV (Dutch).

- The syntactic problem for English–How to derive: (34-a) from (34-b)

  a. I cannot seem to figure this out
  b. It seems that I cannot figure this out.

We will find out that:
  a big chunk of the embedded complement (not just the subject) must raise into the seem clause.
  But since only constituents can move, it must move as a constituent– the vP must not be part of the raised structure!

  a. seem [ I ..not .. can .. [vP figure this out ] but only constituents can move the vP must be outside the constituent: this is achieved by to.
  b. seem [ to figure this out ] I ..not .. can .. [vP figure this out ]

1 (Langendoen 1970): no mismatch: the syntax derives (6-a) from (6-b); (Jacobson 2006) no mismatch; semantics is read of the surface syntax (Homer 2011): syntax semantics mismatch seem is a PPI which raises in LF syntax (postsyntactic syntax)
How does $\alpha$ move into the *seem* clause? (after 60 years: not part of known English syntax!)

- Just like Dutch verb raising (which goes together with 'restructuring', and IPP !)

  Two properties:
  1. the embedded verb is outside of the moved constituent at spell out.; 2. the constituents of $\alpha$ show up in the *wil* clause.

  \[
  \text{...dat } [\alpha \text{ Marie Femke niet aan haar ouders } t_{\text{voorstellen}} ] \text{ wil } \text{ voorstellen } t_{\alpha} \\
  \text{...That Mary Femke not to her parents want.PRS introduce.inf} \\
  \text{'...That Mary does not want to introduce Femke to her parents. not > want > PRO =Mary > Femke > aan haar ouders> voor stellen}
  \]

  Assume only leftwards movements (schematically) (Kayne (1994), or Abels and Neeleman (2009) (based on U20 Cinque (2005)))

  (12) \textit{Move} voorstellen:

  \[
  \begin{array}{c}
  \text{wil} \\
  \text{voorstellen} \\
  \alpha \\
  \text{Marie Femke aan haar ouders voorstellen}
  \end{array}
  \]

  (13) \textit{Leftward movement of $\alpha$. (Followed by individual extractions).}

  \[
  \begin{array}{c}
  \alpha \\
  \text{wil} \\
  \text{voorstellen} \\
  \text{Marie Femke aan haar ouders voorstellen} \quad \text{.. } t
  \end{array}
  \]

  \textbf{English:} *Seem to*: forms a complex predicate with a constituent that contains *can*,

  followed by extraction of individual constituents (which show up in the respective positions in the seem clause.)

  \[
  \begin{array}{c}
  \alpha \quad \text{vP} \\
  \text{I ..not .. can .. figure this out} \\
  \text{seem to } \text{vP} \\
  \text{to fix this } \alpha \\
  \end{array}
  \]
1.6 English derivation will give Insights for German

(in appendix). . .suggests a solution for displaced zu Saltzmann (2016). (And a comparison with Dutch will suggest a syntactic solution s necessary. )

2 English: the "cannot seem to" construction

How an (apparent) syntax semantic mismatch turns out to be an (apparent) syntax phonology mismatch, and how neither of them are, as they are resolved by the syntactic derivation. (with crucial insights coming from Germanic OV. )

2.1 A syntax semantics mismatch?

The can't seem construction in English is quite robust and quite restricted. (cf. Langendoen (1970), Jacobson (2006), Homer (2011)), Koopman (2017)).

(14) I cannot seem to fix this

a. Paraphrasable as: It seems that I cannot fix this
b. Not as: #It cannot seem that I fix this

- Raising to subject verb: seem (but not appear)\(^2\) for a proposal.

(15) a. I can no longer seem to get away from verbal complexes
b. #I can no longer appear to get away from verbal complexes

- A downward entailing expression E\(_{DE}\). (Examples from Homer (2011:ex.8))

Note these end up VP external in the seem clause.

(16) a. noone can seem to forget about the vote
b. Few can seem to fathom how he could be so popular. [Jacobson 2006, ex. 9]
c. At most five people can seem to understand this.
d. John can never seem to speak in full sentences. [Jacobson 2006, ex. 7]
e. I just bought this lens, and I can rarely seem to get a clear picture.
f. Only John can seem to stomach watching reruns of the 6th game of the 1986 Series. [Jacobson 2006, ex. 10]

- The ability modal can\(^3\)
- the infinitival marker to (a cognate of Dutch te and German zu

2.1.1 Syntax, first pass

- Phonology/spell out leads us to the syntactic structure in (17) a.

(17) a simplified tree

\(^2\)See Koopman (???)

\(^3\)There is no current account for this restriction. Note that these constructions also seem to have a silent verb manage/ frustrative, which is just below ability can in the Cinque hierarchy, see Koopman (????)
2.1.2 Probing the syntactic hierarchy

(20) Syntax (independently of scope):
  a. **Not** : not > can > seem > [ to VP ]
  b. **Yes** : seem (to) > not > can > VP

If b: then there is no syntax semantics mismatch.

2.1.2.1 Fixed expressions: idioms  

Idiom chunks can be discontinuous in the can’t seem to construction, when the subject raises (Langendoen (1970: ex. 2 and 3))

(21) a. Abe can’t (seem to) afford paying the rent
    b. Tevye couldn’t (seem to) tell the difference between right and left
    c. Sam couldn’t (seem to) stand the sound of jackhammers underneath his bedroom window
    d. Harry can’t (seem to) help falling asleep

* Can afford in (21-a) is an "idiom"; the expression must have two fixed parts can and afford, excluding the complement of afford i.e. pay(ing) rent.

(22) can > afford
a. *I afford paying rent
b. *I don’t afford paying rent
(23) \( \text{DE} > \text{can} > \text{stand} \)
   a. I can’t stand this noise
      Sam can stand this noise
   b. I can’t help falling asleep
      I can help falling asleep

What does this show about the syntactic hierarchy?
(24) a. \( \text{can} \) V i.e. (can afford, can tell the difference, can take a joke, ...)
    b. \( \text{de} \text{ can} \) V (i.e. can’t stand, can’t help, can’t bear the sight..)
If so, idiomatic \( \text{can afford or not can help} \) must form a sequence of heads, i.e. the hierarchy that underlies these idioms must correspond to the following sequence of E-merge.\(^4\)
(26) The following must be an uninterrupted sequence of heads:
    \( \text{(DE)>CAN}>\text{V/v} \)
Therefore: \( \text{seem to must be outside this sequence:} \)
(27) \( \text{seem (DE)>CAN}>\text{V/v} \)
(To which we can add raising to subject:)
(28) Syntactic hierarchy: final ... seem to > DP >DE>CAN>VP
   • This fixes the syntactic hierarchy as (28), independent of any scope considerations.
   • This hierarchy turns out to correspond to the scope order: there is therefore no syntax semantics mismatch.

2.1.3 Lifting of Aspectual restrictions
A second argument further confirms this hierarchy...
(29) Syntactic hierarchy: final ... seem to > DP >DE>CAN>VP
   • Present tensed \( \text{seem to} \) imposes an aspectual restriction on the main embedded predicate: it must be stative or receive a non episodic reading.
(30) \( \text{T}_{\text{pres}} \text{ seem to} > \text{DP ASP } \text{stative } \text{vP} \)
(31) * she seems to sleep / ✓ she seems to be sleeping
     * He seems to loose weight / ✓ he seems to be loosing weight
   • But this restriction is lifted in the cannot seem construction Homer (2011)\(^5\).

\(^4\)\(\text{(to pull one’s leg, has a fixed sequence of heads V D } ’\text{s N with [SPEC, }’\text{s] as an open position. Idioms can therefore be taken to be informative about the merge sequence of heads (subject to semantic composition).}\)
\(^5\)\(\text{It might be the case that this is a flag for language learners to conclude there must be raising. Early examples of the cannot seem to construction can be found in CHILDES (insert citation, and age 2.5?). Examples like I cannot seem to do this don’t seem infrequent, often with a whiny/frustrated tone; (I think there is a hidden manage/frustrative predicate as well in the construction), see Koopman (2018).}\)
(32)  
|   a. No one can seem to sleep                        | * he seems to sleep |
|       b. He can never seem to lose weight            | * he seems to lose weight |

- With ASP > CAN, this is expected, given what idioms show. CAN should satisfy the aspectual restrictions on the infinitival imposed by present tense seem - however this is ultimately accounted for - by virtue of the structure, which it does, as we can see below.

(33)  
|   a. .. T_{PRES} seem to <they not ASP can> sleep   |
|       b. .. T_{PRES} seem to <he not ASP can> swim the butterfly |

2.2 Dutch (and German) V raising and restructuring

- The syntactic problem for English–How to derive: (34-a) from (34-b)?

(34)  
|   a. I cannot seem to figure this out                      |
|       b. It seems that I cannot figure this out. |

What we found out:

- independent evidence for the hierarchy of merge:

(35)  
|   T_{PRES} seem to <they not ASP can> sleep; |

- ... A big chunk of the embedded complement (not just the subject) must raise into the seem clause.

(36)  
|   a. seem [ I .. not ASP can .. [vP figure this out ] but only constituents can move the vP must be outside the constituent: this is achieved by to. |
|       b. seem [ to figure this out [α I .. not .. ASP .. can .. [vP figure this out ] ] |

- players: the syntax of to matters!

(37)  
|   a. to does not form an underlying constituent with the VP. (Kayne (2000, 2005), Koopman and Szabolicsi (2000)) |
|       b. what follows to is the result of I-merge. |
|       c. what precedes to is the result of I-merge. |

This yields the following intermediate structure:
..which explains why the the complement of to does not need to be stative: 
the moved vP is not the E-merged complement of to: α is!

But it raises a question: why doesn’t the closer vP can merge with to

a. Answer: *to can?

b. can must form a complex predicate formator: This 'lifts'('smuggles') the complement past can.

Exceptional morphology (is necessary) for this construction to be possible.

– How does α move into the seem clause? (not part of known English syntax!)
– Just like Dutch verb raising (going together with "restructuring", and IPP !)
  Two properties:
  1. the embedded verb is outside of the moved constituent.
  2. the constituents of α show up in the wil clause.

...dat [α Marie Femke niet aan haar ouders t_{voorstellen}] wil voorstellen t_{α}...that Mary Femke not to her parents want.PRS introduce.inf
'...that Mary does not want to introduce Femke to her parents.

Only leftwards movements (schematically):

Move voorstellen (and merge wil):

Leftward movement of α. (Followed by extractions of individual constituents).
Marie Femke aan haar ouders voorstellen

English: *Seem to*: forms a complex predicate with a constituent that contains *can*.
followed by extraction of individual constituents (which show up in their respective positions in the *seem* clause.)

But: why is *can* now merging with *T*, why not *seem*? (cf as *wil* does in Dutch ((40)).

This looks like a Syntax phonology mismatch! in the sense that the finite *T* should combine with the main *V* (i.e. *seem*).

− Here is where DE entailment element is a necessary actor: it pied-pipes α to the neg/Focus region, which is outside the vP, so that the DE constituent can be 'licensed'. As we can see can is now closer to T. (this answers the question why DE is obligatory)

(45) NO Syntax phonology mismatch!

*can* is closest to *T* at the point where *T* is merged.

3 Back to general question

(46) Can an (independent motivated) syntactic derivation (always) resolve apparent mismatches?
Yes for: two apparent mismatches. These fall out from the syntactic derivation in the expected fashion:

(47) a. A syntax semantics mismatch
    b. A syntax phonology mismatch (*how come T can combine with the second V in the hierarchy?*)

- "All the pieces matter! https://www.youtube.com/watch?v=y1JJ0AINp-w To quote Lester Freamon (from the Wire), who lectures Prez (the young detective), when Prez decides some intercepted conversation is not pertinent).

  "All the pieces matter!"

- *seemingly marginal phenomena can hold important lessons about questions of architecture of UG.*

(48) a. narrow syntax .... no
    b. where is morphology? presyntactic?, or syntactic and postsyntactic, or postsyntactic? (only in the syntax)
    c. postsyntactic readjustements no (see appendices)?

- phrases like to VP and to DP are the output of the syntactic derivation. They don’t start out as constituents (as in earlier phrase structure rule rules), or start out fully inflected, but end up in a local syntactic environment (locality of selection, of feature checking). This is an effect of the point where the probes are E- merged, and what they can attract via Attract closest.

- In so far as the phenomena in English and Dutch are similar, English (VO) shows that it is likely that the analysis for Dutch that UG imposes must also involve overt leftwards movement.
  This restricts the type of analyses that are appropriate for Dutch and German to the same type. Analyses should extend to yield insight into closely related phenomena.

- The derivations involve overt leftwards movements only.
  ..can be coded up in Stabler’s Minimalist Grammars (just as Koopman and Szabolcsi (2000))
  Minimalist Grammars does not imply technical Minimalist Implementations, or feature nbundles, or starting out with fully inflected forms.

- Smuggling (i.e. phrasal remnant movement from which constituents are subsequently extracted) plays an important role in the derivations.

- Pied-piping.
  Constituents can 'travel' together in a single remnant constituent, with different elements driving the movement to reach landing sites, from which constituents can debark, or continue their common journey until all properties are satisfied.

- The analysis gives rise to new research questions. Dutch and English are more alike from the perspective of antisymmetry, than from earlier perspectives of phrase strutures, X-bar structure or headedness parameters (see also Koopman (2010)). This is a good thing!

- Appendices: Importance of Comparative syntax. Insights into the derivations for English came from Dutch (and German).
  In turn, the English data provide insight into a possible account for a syntax morphology mismatch in German, (which lead to an investigate of the same configurations in Dutch, showing similar effects on amore abstract level, and providing new insights into the variables that are involved in the conditions that underly potential mismatches: constructions with unexpected morphology, like missing participial forms, surprising infinitives, or missing infinitivals (like English can). Regular morphology, however, appears to behave in the expected ways.
A Insights from the English derivation illuminates a problem in German: displaced "zu"

The English derivation provides new insights in a possible syntactic treatment of the difficult problem of "displaced" zu in German: the infinitival marker zu shows up on the "wrong" infinitival verb in a subset of verbal complexes in German.

Saltzmann (2016): argued that zu placement should be treated in the postsyntactic component through local dislocation Embick and Noyer (2001), a process that applies at a late stage in the postsyntactic morphological component that interfaces between the syntactic derivation and the phonology, after PF linearization of a 123 syntactic verbal complex.

A.1 German verbal complexes

The general case

German verbal complexes generally occur in a strict V3 V2 V1 order, corresponding to the hierarchical order, where V1 c-commands V2, etc, and V1 and V2 must form verb clusters/complex predicates.

(49)  .. lesen müssen kan
     . read.inf must.inf can.PRS
     .. can have to read
     ....V3 V2 V1.T

IPP

But some three member verb clusters show a different linear order. These clusters show exceptional morphology a IPP effect (Infinitive Pro Participle)

(50)  T>Have> Mod >V
     a.  ... lesen hat können
         ... read.inf had.3s be.able.IPP
         .. had been able to read.
     b.  .... hat lesen können
         .... had read.inf be.able.IPP

This construction raises the following questions:

(51)  a. why does the V2 shows up with the infinitive instead of the participle, i what blocks the participles and what allows the infinitive? is there a notion of a default?
     b. why do the clusters show up in a different order (see Koopman and Szabolcsi (2000) for a proposal).

A.2 embedding in adjunct clauses "ohne ... zu"

What happens when we embed these clusters in infinitival complements, like ohne ... zu 'without to', where ohne requires the infinitival marker zu?

With a regular 321 cluster, as shown in (52), zu precedes the highest verb in the cluster, as expected. zu/inf attracts the highest verb in the complex, and the remnant verbal complex appears in VP+ (if there is one), yielding a [ 32 [ zu [1] output:

(52)  Hierarchy of Merge:
     ohne ...... zu .... > 3 < 2< 1
     a.  ... ohne das buch lesen müssen zu können
         ... without the book read.inf must.inf to can.inf
         ... without being able to have to read the book

In IPP clusters, however, 'zu' cannot precede the auxiliary have, the highest verb in the underlying hierarchy. It shows up instead on the verb that carries the infinitive, instead of the participle.
hierarchy of Merge: zu>have1> can2 >3V

a. ... lesen haben zu können
   ... read.inf have.inf to be.able.IPP
b. ... haben lesen zu können
   ... have.inf read.inf to be.able.IPP
c. *... lesen zu haben können
   * V3 zu V1.inf V2.IPP
d. *... zu haben lesen können
   *zu V1.inf V3 V2.IPP
e. *... zu lesen haben können

Zu cannot appear on the verb that carries finite morphology in the corresponding sentences (53-c), or (53-d). Instead zu precedes V2, the IPP infinitive.

This suggest
a. the exceptional infinitival morphology is licensed by zu
b. the change in linear order in (50) is due to the hidden participle and the fake infinitive.

Putting the insights from English together with German, this now suggests that we should pursue the following analysis:

The IPP-infinitive können must be closest to zu, at the point where infinitival zu is merged.

If so, we have a syntax semantics mismatch: the highest verb is interpreted below have.

And clearly, this must in turn be related to a derivation that yields the change in linear order, and the absent participial morphology that have demands (see Koopman and Szabolcsi (2000) for a proposal).

B Dutch

That (56) is to be related to the IPP effect perhaps finds further support from Dutch.

- The Dutch infinitival marker te precedes the highest infinitive in the 123 cluster in the same contexts as in German, and is well behaved in this respect.

- Surprising! the order where the participle-pretending-to-be-an-infinitive, with te immediately preceding the IPP infinitive, (i.e. kunnen or other modals), is also quite acceptable for me, (contrary to expectations!)

zonder dat boek te hebben kunnen lezen
without that book to have.inf can.IPP read.inf .. te V1(have) V2-(inf)- V3

zonder dat boek te kunnen hebben lezen
without that book to can.IPP have.inf read.inf .. te V2-(inf)- V1(have) - V3

Moreover, I find such orders quite degraded in regular clusters.

zonder dat boek te zullen kunnen lezen
without that book to will.inf can.inf read.inf

Note that the acceptability of the order in (58-b) must be based on a syntactic derivation where können is the highest at the point where we merge zu, and ultimately, this is a problem how V2 (the modal) 'escapes' the requirement of building a participle.
References


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