The Syntax of Phrasal Stress "Exceptions"

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1. Introduction

- Since SPE, **syntax has been known to have a (near) deterministic effect on phrasal stress** (PS):
  - ↳ Long-standing assumption: lexical/interpretive properties can cause exceptions to PS assignment
  - ↳ **This is a problem**:
    - ↳ it obscures the connection between signal and syntactic structure,
    - ↳ and requires the learner to posit complex lists of exceptions
    - ↳ "exceptional" phrases aren't always exceptional
- Four types of 'exceptional' phrases will be investigated here:
  - ↳ Given material, reflexive anaphors, indefinites, and verb particles: (1)

(1)
a. given material
(Sara cooked chícken, so...)
Bill ***áte*** chicken.
b. reflexive anaphors
Sara glued ***Jóhn*** to herself.
c. indefinites
We will ***cóok*** something.
d. verb particles
I threw ***fóod*** away.

(2)
a. given material
(Sara cooked chícken, so...)
Bill ate beans and ***chícken***.
b. reflexive anaphors
Sara glued John to ***himsélf***.
c. indefinites
We will cook some ***fóod***.
d. verb particles
While Bill cooked food, I threw food ***awáy***.

  - ↳ Note these classes are **not consistently** exceptional: (2)

The Problem

What determines whether constituent can be "exceptional"?

- For "exceptional" approaches, **this kind of variable behavior is unexpected**
  - ↳ ***Either*** more complex definitions are needed for stipulating the exact kind of constituent that can/cannot be exceptional (weighing down the theory, making the learning task more difficult)
  - ↳ ***Or*** we need a different approach to these "exceptions"

Proposal

- ↳ **There are no exceptions to the PS assigning mechanism**
- ↳ The apparent problem of "exceptions" is strictly the result of:
  (i) the appropriate kind of phrasal stress theory, and
  (ii) the appropriate syntactic representations

- Closer analysis of (2a-d) has previously revealed structures more complex than first meets the eye
  - ↳ These revised structures allow PS to be predicted by an exception-less PS assignment rule

Conclusions To Be Made

- PS always distributes to the most embedded element in the Spell-Out Domain
  - ↳ **Predicting behavior of constituents previously considered "exceptional"**
  - ↳ **Providing evidence for richer clausal structure**
  - ↳ **Simplifying the interfaces and learning problem**

2. Model of PS Assignment

- Contemporary theories of phrasal stress generally agree that **syntactic hierarchy (and not linearization) is the input to PS assignment**
  - ↳ Depth of embedding is what matters (Cinque 1993, Zubizarreta 1998, Kahnemuyipour 2009, a.o.)

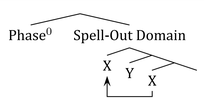
(3) **Depth of Embedding**:
A syntactic object, X, is more deeply embedded than some other syntactic object, Y, provided that no copy of X c-commands all copies of Y

- PS assignment, as with any PF operation, does not apply to entire sentence-structures at once
  - ↳ Instead, it operates on Spell-Out Domains (e.g. Legate 2003, Adger 2006)
- This gives the following definition for the PS assignment operation:

(4) **Syntactic Depth Nuclear Stress Rule**:
The most deeply embedded constituent in a Spell-Out Domain receives the phrasal stress.

- Given this definition, some movements feed/bleed NSR and some don't (Legate 2003)
  - ↳ When both copies of X are sent to Spell-Out with Y:

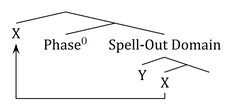
(5)



Y is deemed most embedded
  - ↳ (Even though there is a copy of X lower than a copy of Y; see (3))

When the higher copy of X is not sent to Spell-Out with Y:

(6)



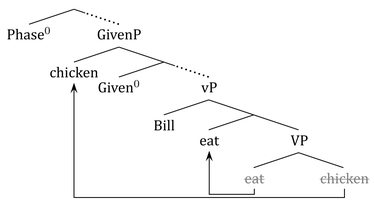
X is deemed most embedded
  - ↳ (Even though there is a copy of X that c-commands (every copy of) Y, this is not visible at Spell-Out)

3. Deriving Classes of "Exceptions"

3.1 Given Material

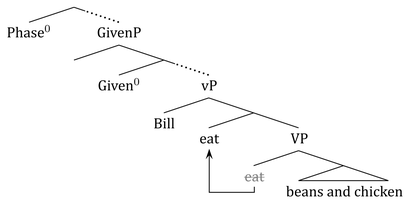
- It is standardly believed that given elements (in English) are impervious to PS
- Wagner 2006 shows that given material actually moves, as much as is grammatically possible
  - ↳ Thus ***chicken*** in (1a) moves, but it does not move in (2a) because movement is impossible
    - ↳ But if movement is what affects PS assignment (done at PF), it cannot be LF movement
  - ↳ Let's call the target of movement for given material "GivenP"
    - ↳ GivenP **must be located within** the lowest Spell-Out Domain
    - ↳ Since **given material (covertly) moves within the Spell-Out Domain**, and PS is calculated upon Spell-Out Domains, **given material will not be considered the most deeply embedded constituent for the NSR**
      - ↳ See (5)
    - ↳ The derivation of (1a) proceeds as below:

(7)



  - ↳ Following (4), ***chicken*** does not receive PS because it is not most embedded in (6)
- ↳ However, since movement of ***chicken*** is impossible in (7) (island effects), it stays the most embedded
  - ↳ And it receives PS, **despite being given**

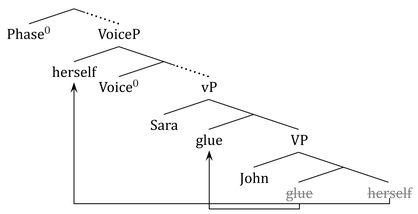
(8)



3.2 Reflexive Anaphors

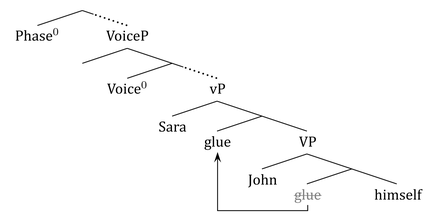
- In a very similar way, reflexive anaphors are shown to undergo movement to a position outside of vP and within the phase (Ahn 2012, 2013, In Progress)
  - ↳ However, this anaphor-movement only takes place when the anaphor is bound by the subject
    - ↳ Thus when bound by a non-subject, the movement doesn't take place and the anaphor bears PS
  - ↳ These two derivations are given below

(9)



  - ↳ In (9), ***herself*** is bound by the subject and thus moves, leaving ***John*** as the most embedded

(10)



  - ↳ In (10), ***himself*** is bound by the object ***John*** and doesn't move, staying as most-embedded

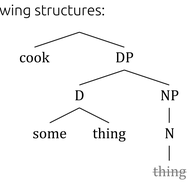
3.3 Indefintes and N→D

- English words like ***someone***, ***everything*** and ***anybody*** are formed by N→D movement
  - ↳ The result of N→D movement does not bear PS

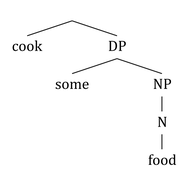
(11) What did Liz do?
a. She ***cóoked*** something.
b. She cooked some ***food***
c. #She cooked ***sómething***.

- So let us consider the syntax, as that is what we have seen to affect PS
  - ↳ It is standard to assume that ***cook something*** (involving N→D movement) and ***cook some food*** have the following structures:

(12)



(13)

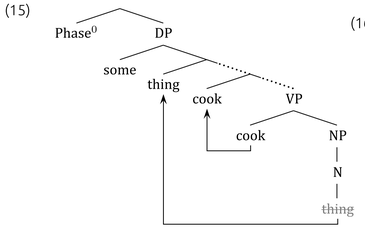


  - ↳ However this would not explain why ***cook*** bears the PS in the former, but ***food*** bears PS in the latter
  - ↳ Sportiche 2005 proposes an alternate structure of DPs, in which the deep structure of ***cook some food*** is as (14)

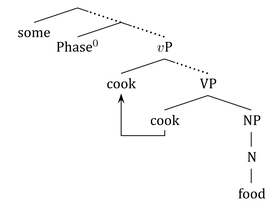
(14) [$_{DP}$ some [$_{vP}$ cook [$_{NP}$ food]]]

  - ↳ However, the two ***some***s in ***cook something*** and ***cook some food*** are not the same D
    - ↳ it is thus possible that the two Ds occur in different positions
    - ↳ Given the PS differences between the two, the N→D Ds must be within the Spell-Out Domain, and the non-N→D D must be outside of it:

(15)



(16)



3.4 Verb Particles

- The syntax of particle verbs is heavily debated
  - ↳ With proposals even varying on the basics of surface constituency
- Looking at the distribution of PS, we can decide between analyses

The following are the PS data for [V Obj Prt] order:

- Though the particle is rightmost, a non-given object bears PS:

(17) Q: What's that noise?
A1: John turned the ***rádio*** on.
A2: #John turned the radio ***ón***.

  - ↳ This means the object more embedded than the particle at Spell-Out

- But when the object is given, the particle (and not the verb) bears PS:

(18) Q: What happened to the radio?
A1: John turned the radio ***ón***.
A2: #John turned the ***rádio*** on.
A3: #John ***túrned*** the radio on.

  - ↳ This means that the particle is more embedded than the verb and given material at Spell-Out

And here are the PS facts for [V Prt Obj] order:

- A non-given object bears PS:

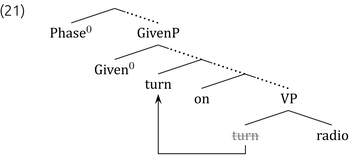
(19) Q: What's that noise?
A1: John turned on the ***rádio***.
A2: #John turned ***ón*** the radio.

- The particle bears PS, with a given object:

(20) Q: What happened to the radio?
A1: John turned ***ón*** the radio.
A2: #John turned on the ***rádio***.
A3: #John ***túrned*** on the radio.

- **Even though the word order changes**
  - ↳ the object always bears PS when not given, and the particle bears PS when the object is given.
  - ↳ **At Spell out, a non-given object is more embedded than the particle, which is more embedded than the verb and given material**

(21)



  - ↳ The difference in word order must be derived from movements do not affect this hierarchy at Spell Out

4. Conclusions

4.1 Syntax / Prosody Interface

- Each of (2a-d) has a different analysis, which explains why the exact conditions on when one is extrametrical varies across each word class.
- **Syntax is more complicated (as has already argued) but the interfaces are simpler**
  - ↳ The locus of phrasal stress is in fact a signal about the structure
- **Prosodically motivated movement (p-movement) is unnecessary** as a grammatical operation
  - ↳ This is good: p-movement is actually incompatible with Minimalist grammatical architecture
- Though the syntactic structures are more complex, **this simplifies the learning problem**
  - ↳ The interfaces are more transparent; detectable cues in the prosody can inform the learner about the syntactic structure

4.2 The Predicate Spell-Out Domain

- Many works (Chomsky 1995 ***et seqq.***) consider the lowest phase head to be v^0, with little functional structure within its c-command domain
  - ↳ **We now have the evidence that this structure is too simple**, and more functional structure is needed

Conclusions

The distribution of PS provides evidence for the following rank ordering within the Spell-Out Domain for what has been labelled "vP":

(22) Phase > { given material / subject-bound reflexives / N→D Ds } > Verb > Particles > Complements

- **Each of these aspects of the structure has been argued for before**
  - ↳ The distribution of PS adds weight to these proposals

References

Adger, David. 2006. Stress and phasal syntax. lingBuzz/000255.
Ahn, Byron. 2012. Default sentential stress and non-exceptional reflexives. Presented at the 2012 Annual LSA Meeting.
Ahn, Byron. 2013. Universality and subject-oriented reflexivity. Presented at ICL 19.
Ahn, Byron. In Progress. Giving reflexivity a voice: Twin reflexives in English. Doctoral Dissertation, UCLA.
Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
Chomsky, Noam, and Morris Halle. 1968. *The sound pattern of English*. New York, NY: Harper and Row.
Cinque, Guglielmo. 1993. A null theory of phrase and compound stress. *Linguistic Inquiry* 24:239–297.
Kahnemuyipour, Arsalan. 2009. *The syntax of sentential stress*. Oxford: Oxford University Press.
Kratzer, Angelika, and Elisabeth Selkirk. 2007. Phase theory and prosodic spellout: The case of verbs. *The Linguistic Review* 24:93–105.
Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34:506–515.
Sportiche, Dominique. 2005. Division of labor between merge and move: Strict locality of selection and apparent reconstruction paradoxes. lingBuzz/000163.
Wagner, Michael. 2006. Givenness and locality. In *Proceedings of SALT XVI*, ed. Masayuki Gibson and Jonathan Howell, 295–312. CLC Publications.
Zubizarreta, María Luisa. 1998. *Prosody, focus, and word order*. Cambridge, MA: The MIT Press.

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