Syntactic Configurations
of Emphatic Reflexives*

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Peculiar Binding Configurations
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1   Overview

Many languages seem to allow reflexive pronouns to function either as arguments (1) or as adjuncts (2). The adjunct-type is called an Emphatic Reflexive (ER).

- (1)   a.   Kenneth injured <u>himself</u>.
          b.   They bought <u>themselves</u> some time.

- (2)   a.   No boy ate all the Cheezy Blasters <u>himself</u> ($\approx$ *without help*).
          b.   Liz <u>herself</u> ($\approx$ *and not someone else*) grew up in White Haven.

There are exactly two lexically differentiated ERs

- ^{vp}ER, loosely paraphrasable as 'without help' (2a)
- ^{dp}ER, loosely paraphrasable as '<u>X</u>, not Y' (2b)

Each has its own syntactic configuration, as well as its own felicity conditions that sensitive to:

- The type of the associate DP, or
- the argument structure of the predicate.

The ER reflexive pronoun is bound within a very local domain, even when the associate DP appears rather distant/disjoint

- ^{dp}ERs adjoin to the DP and may be stranded by A-movement, as was argued for Floated Quantifierss in Sportiche (1988)
- ^{vp}ERs are right-adjoined in the near-immediate c-command domain of the associate DP's merge position

Languages in which ERs do not involve reflexive pronouns (e.g. German) are only minimally different from languages which do (e.g. English)

- Reflexive pronouns represent a syntactically obligatory, semantically null argument (similar to cases like *perjure oneself*) of an ER^0
- a.   *German-type*: $[_{\mathrm{ERP}} \, [_{\mathrm{ER}^0} \text{ selbst }]]$
      b.   *English-type*: $[_{\mathrm{ERP}} \, [_{\mathrm{ER}^0} \, \emptyset \,] \, [_{\mathrm{DP}} \text{ himself }]]$

2 The ERs themselves

2.1 Basic evidence for two readings

Interpretations

Most basically, the distinction between the two types of ERs is that one is an adnominal adjunct and the other is an adverbial adjunct (Moravcsik 1972, Browning 1993, Eckardt 2001, Hole 2002, Bergeton 2004, Tavano 2006)

- The adnominal one (^{dp}**ER**) means something like '<u>X</u>, not Y'

    (3)   (*Jack is the last person who would sleep at work, but tonight...*)
          Jack ^{dp}himself will sleep at work.

     – These ^{dp}ERs can appear adjacent to the associate DP, as above, or it may also appear disjoint from it, as below:

    (4)   (*Jack is the last person who would sleep at work, but tonight...*)
          Jack (^{dp}himself) will (^{dp}himself) sleep at work (^{dp}himself).

- The adverbial one (^{vp}**ER**) means something like 'without help' (but not quite)[1]

    (5)   (Everyone had cheated...) No one had done their homework ^{vp}themselves.

     – Note that, unlike the ^{dp}ER, the ^{vp}ER can only appear after the predicate

    (6)   (Everyone had cheated...) No one (*^{vp}themselves) had (*^{vp}themselves) done their homework (^{vp}themselves).

Potential for ambiguity

The two types of ERs in English have identical forms but different interpretations and can overlap in the positions in which they can appear

    (7)   a.   Spike could have smoked the whole pack ^{dp}himself.
               ≈ His dad could have, his mom could have, and **<u>Spike</u>** could have too.
          b.   Spike could have smoked the whole pack ^{vp}himself.
               ≈ Spike wouldn't have needed anyone's help – he could have on his own.

Up to two ERs for the same associate DP

You can use both a ^{dp}ER and a ^{vp}ER with the same DP referent:

    (8)   a.   Liz's cast members ^{dp}themselves are running the show ^{vp}themselves.
          b.   Liz's cast members are ^{dp}themselves running the show ^{vp}themselves.
          c.   Liz's cast members are running the show ^{vp}themselves, ^{dp}themselves.

- (8c) might be slightly awkward for some people, but perhaps only for haplological reasons

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[1]It may also seem that ^{vp}ERs are similar to '*by Nself*'; but they are distinct – see Appendix.

Crosslinguistic realizations

Languages may have different forms for different $^{\text{dp}}$ER and $^{\text{vp}}$ER

- For example, Japanese *jishin* ($^{\text{dp}}$ER) versus *jibun-de* ($^{\text{vp}}$ER)

    (9)   [*Robotto jishin*] *-ga*   *jibun-de*   *jibun-o*   *tsukuri-naoshi-ta.*
             Robot $^{\text{dp}}$ER   NOM $^{\text{vp}}$ER-INSTR   REFL-ACC built-re-PAST
             'The robot itself rebuilt itself (by) itself.'

But It doesn't seem that there is ever more than 2 interpretationally distinct ERs[2]

The table below, summarizing ER/reflexive patterns in 72 languages, comes from Gast and Siemund (2006) and has been adapted to use my $^{\text{dp}}$ER/$^{\text{vp}}$ER terminology.

(10)

$^{\text{dp}}$ER	$^{\text{vp}}$ER	REFL	n in sample	example
A	A	A	30	English, Mandarin
A	A	B	25	German, Tzotzil
A	B	B	10	Japanese, Tarascan
A	B	C	4	Korean, Koyra Chiini
A	B	A	3	Malagasy, Amharic

2.2   Well-formedness for $^{\text{dp}}$ER and $^{\text{vp}}$ER

Each ER type has its own felicity conditions; these conditions only apply to either $^{\text{dp}}$ER or $^{\text{vp}}$ER, but not both

A $^{\text{dp}}$ERs's associate DP must conform to the following two constraints:

(11)   <u>Contrastiveness Condition</u> (adopted from Bergeton 2004)
       A DP is not compatible with a $^{\text{dp}}$ER unless its has a non-empty focus alternative set.

(12)   <u>Unique Identifiability Condition</u> (adopted from Siemund 2000)
       A DP must denote an individual of type $\langle \mathbf{e} \rangle$ to be compatible with an $^{\text{dp}}$ER.

A $^{\text{vp}}$ERs's associate DP must conform to the following constraint:

(13)   <u>Agentivity Condition</u>
       A $^{\text{vp}}$ER can only modify a predicate that licenses a volitional Agent.

$^{\text{dp}}$ERs depend on the interpretation of the associate DP

The Contrastiveness Condition requires available contrasts (and thus, possibly some real world knowledge), but not necessarily any surprise

- The $^{\text{dp}}$ER in (14) is licit because there is at least one clearly available contrast for Paula – Paula's brother

    (14)   A: What happened at Paula's party?
             B: Her brother sang a song, and Paula $^{\text{dp}}$herself got a present.

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[2]Some languages (like Japanese) may have multiple forms for the same type of ER. When such a case occurs, this is due to featural distinctions that do not affect the overall interpretation of the ER. For example, $^{\text{dp}}$ERs can be *jishin* or *jitai* in Japanese (Gast et al. 2007), and in Chinese can be *zìjǐ* or *běnshēn* (Hole 2008); in both cases, the former is used for animate DPs, and the latter for inanimates.

- But when we remove the first half of the sentence, the ^{dp}ER becomes illicit because there is no clearly available contrast for Paula

  (15) A: What happened at Paula's party?
           B: Paula (#^{dp}herself) got a present.

- Sometimes, real world knowledge may provide enough information to satisfy this constraint.

  (16) A: What did you do yesterday?
        a.   B: I spoke with Liz (#^{dp}herself) about Star Wars.
        b.   B: I spoke with George Lucas (^{dp}himself) about Star Wars.

  – The response in (17b) is felicitous (unlike (17a)), since we know that George Lucas is the creator of Star Wars; and as Edmondson and Plank (1978) point out, "remarkability implies contrast"

- But there need not be any salient contrasts for a ^{vp}ER's associate DP

  (17) A: What happened at Paula's party?
           B: Paula ate the entire cake ^{vp}herself. (...again!)

  – Furthermore, the predicate itself does not require any special context whereby it is surprising that Paula ate the cake

The Unique Identifiability Constraint requires that the associate DP has certain referential properties (i.e. the semantic type of the associate DP)

- The associate DP must be specific

  (18) **^{dp}ERs are only compatible with DPs of type $\langle e \rangle$**

type $\langle e \rangle$	not type $\langle e \rangle$
Specific Indefinites[3]	Non-specific Indefinites
e.g. (19a)	e.g. (20a)
Specific Definites	Non-specific Definites
e.g. (19b)	e.g. (20b)
Individual-denoting QPs	Set-referential QPs
e.g. (19c)	e.g. (20c)
Kinds	Wh-phrases
e.g. (19d)	e.g. (20d)

  (19) a.   All cretans lie; a cretan ^{dp}himself told me that.   (Edmondson&Plank 1978)
        b.   Ms. Palin ^{dp}herself was on the show.
        c.   Those five celebrities ^{dp}themselves ate here.
        d.   Boys' mothers are made of sugar and spice and everything nice, but boys ^{dp}themselves are made of snips and snails and puppy-dog tails.

  (20) a.   Some intern (#^{dp}himself) organized the party.
        b.   I want to go to the doctor (#^{dp}himself) but I don't know one.[4](E&P 1978)
        c.   Five husbands (#^{dp}themselves) do the dishes.
        d.   Which president (#^{dp}himself) composed the official Christmas card?

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[3]Fodor and Sag (1982) argue that specific indefinites are like names (which are type $\langle e \rangle$).
[4]Here 'the doctor' is not considered specific. Consider "I went to the doctor" – this sentence can be

- Notably, there is no restriction on the semantic type of an ^{vp}ER's associate DP

(21) a. Some intern organized the party ^{vp}himself.
b. Five husbands do the dishes ^{vp}themselves.
c. Which president composed the official Christmas card ^{vp}himself?

^{vp}ERs depend on an Agent theta role (argument structure)

When subject of a clause is not a volitional Agent, an ^{vp}ER is infelicitous

(22) a.	Which nurse cured you ^{vp}herself?	*Agent*
b.	#Which medicine cured you ^{vp}itself?	*Cause*
c.	#Which key opens this door ^{vp}itself?	*Instrument*
d.	#Which candidate is arriving ^{vp}herself?	*Patient/Theme*
e.	#Which student likes linguistics ^{vp}himself?	*Experiencer*

Furthermore, when the context is manipulated so that a subject is either a non-volitional or volitional, the acceptability of the ^{vp}ER changes

(23) a. (Phill is a strong guy, so without an axe,) he broke the door ^{vp}himself.
b. #(After Phill tripped and fell into the door,) he broke the door ^{vp}himself.

This is unlike ^{dp}ERs, which can appear freely with a DP of any theta role or volitionality

(24) a.	Emeril ^{dp}himself roasted these peppers.	*Agent*
b.	The grenade ^{dp}itself broke the window.	*Cause*
c.	You can see your phone's bill with the phone ^{dp}itself.	*Instrument*
d.	Rachel flavored the pasta ^{dp}itself with salt.	*Patient/Theme*
e.	I bought the director ^{dp}herself a beer.	*Benefactive*
f.	Ronan ^{dp}himself is living the dream.	*Experiencer*

So, it seems inappropriate to force a unified analysis of ^{dp}ERs and ^{vp}ERs

Though we still want to make sure our theory keeps the two rather similar to one another to explain the fact that so many languages use the same morpheme

To summarize...

	ER can go in many positions	ER means "$\underline{X}$ (not Y)"	DP needs salient contrast(s)	DP must be specific	ER must follow the predicate	ER means "without help"	DP is agentive	DP is volitional
^{dp}ER	✓	✓	✓	✓				
^{vp}ER					✓	✓	✓	✓

uttered even if there is no doctor in the common ground, unlike "The doctor arrived."

2.3 ERs' identity (functions)

Starting with Moravcsik (1972), it has been noted that the ER has more or less the same meaning as the thing it modifies – but what does that mean?

Eckardt shows that $^{\mathrm{dp}}$ERs are identity functions

Intuitively, when a $^{\mathrm{dp}}$ER modifies a DP, the result is essentially identical to the input; thus, briefly:

(25) $[\![^{\mathrm{dp}}\mathrm{ER}]\!] = \mathrm{ID}(x) = x$
      $[\![\mathrm{John}\ ^{\mathrm{dp}}\mathrm{himself}]\!] = \mathrm{ID}([\![John]\!]) = [\![\mathrm{John}]\!]$

If that's the case, how does it contribute the meaning of '<u>X</u>, not Y'?

- The contrastive focus marking of the $^{\mathrm{dp}}$ER (rather, of the ID function) evokes a set of focus alternatives, à la Rooth (1985, 1992)
  - These focus alternatives to $\mathrm{ID}(x)$ will, like $\mathrm{ID}(x)$, be of the form $f(x)$ where f is some function.[5]

    (26) $[\![\mathrm{John}\ ^{\mathrm{dp}}\mathrm{himself}_{\mathrm{Foc}}]\!] = \mathrm{ID}([\![\mathrm{John}]\!])_{\mathrm{Foc}}$
         $\checkmark[\![\mathrm{John}]\!]$, with the following focus alternative set {MENTOR-TO($[\![\mathrm{John}]\!]$), MOTHER-OF($[\![\mathrm{John}]\!]$), ACQUAINTANCE-OF($[\![\mathrm{John}]\!]$), ...}

- In this way, Eckardt's proposal hinges on ERs always bearing contrastive focus[6] – Ahn (2008) provides evidence that this is in fact true for English

However, Eckardt treats the disjointed $^{\mathrm{dp}}$ERs as fundamentally different from the surface-adnominal $^{\mathrm{dp}}$ER

- She claims that there are no $^{\mathrm{dp}}$ER felicity conditions when they are disjoint
  - This does not seem to be true, given data like (27)

    (27)   a.   Jenna ($^{\mathrm{dp}}$herself) might ($^{\mathrm{dp}}$herself) go crazy ($^{\mathrm{dp}}$herself).
            b.   Which girl (#$^{\mathrm{dp}}$herself) might (#$^{\mathrm{dp}}$herself) go crazy (#$^{\mathrm{dp}}$herself)?

- As we will discuss shortly, this also makes predictions that are not borne out

Hole (2002) shows that $^{\mathrm{vp}}$ERs are identity functions

$^{\mathrm{vp}}$ERs are ID functions which take Kratzer (1996)'s Voice^0 as its argument

- Essentially, the Voice^0 is:
  - A syntactic head (the highest in the VP domain) which takes a DP specifier,
  - and a semantic function (call it AGENT) that maps that DP, x, to the Agent role in an event, e
- Thus, instead of the $^{\mathrm{vp}}$ER directly modifying the Agent, it modifies the functional head that licenses it

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[5]There is no theoretical limit on what kind of function f can be, though it seems focus alternatives find a way of restricting themselves. Take for example, "The book is RED." Any property should be a good focus alternative to *red*, but in reality, the number of optimal focus alternatives is quite limited – in this case, likely to colors.

[6]In the underlying representation; in certain cases (e.g. second occurrence focus), phonetic marking may become somewhat bleached.

Strong evidence for Hole's claim that [vp]ERs are linked to Voice^0 comes from the (un)availability of [vp]ERs in gerunds – of which there are three kinds in English

- Only *of*-gerunds do not assign accusative case, and according to Kratzer, this means the Agent-licensing Voice^0 must be absent in just this case
- Also in just this case, the [vp]ER is ungrammatical (example from Hole 2002):

(28) a. I remember him rebuilding the barn ([vp]himself).
      b. I remember his rebuilding the barn ([vp]himself).
      c. I remember his rebuilding of the barn (*[vp]himself).

Being that the [vp]ER ID function takes the AGENT function as its argument, the focus alternatives are other roles-assigning functions

- These can be as varied as the context dictates

(29) I built this house [vp]myself.

(30) Possible focus alternatives for AGENT(x,e) in (29):
      a. BENEFACTOR(x,e) – as in 'This house was built for me.'
      b. HOUSE-BUYER(x,e) – as in 'John built this house, and I bought it.'
      c. JOINED-AGENT(x,e) – as in 'I built this house with someone.'
      d. DELEGATOR(x,e) – as in 'I asked someone to built this house.'

The core difference between [dp]ER and [vp]ER is what kind of argument the ID function takes

[dp]ERs take DP arguments of type $\langle e \rangle$ (Siemund's Unique Identifiability Constraint) that have salient contrasts (Bergeton's Contrastiveness Condition)
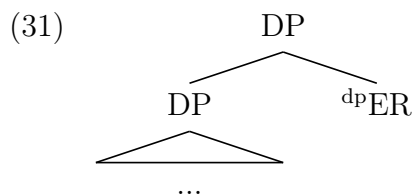
[vp]ERs take a Voice^0 argument (Hole), which in turn licenses the associated Agent DP

3 The Structures

Now that we know how they work, how do they work?

3.1 [dp]ER constituency and separability

A [dp]ER takes a type $\langle e \rangle$ DP as its argument, but is within the DP projection

(31)

```
              DP
           /      \
         DP        dpER
        /    \
      ...
```

[dp]ERs form a DP constituent with a DP

- A [DP [dp]ER] sequence is itself a DP, as it coordinates with DPs:

(32) Jack fired [DP Liz's mentor] and [DP Liz herself].

- They appear inside case marking in phrasal-marking languages, like Korean and Japanese

(33)   [$_{DP}$ *Liz caki*] *-ka*   *Cheezy Blasters -ul*   *meog-eoss-da*
        [$_{DP}$ Liz ^{dp}ER] -NOM Cheezy Blasters -ACC eat-past-decl
        'Liz herself ate the Cheezy Blasters.'

In languages like English, ^{dp}ERs can appear in multiple positions by a mechanism like Quantifier Float (à la Sportiche 1988).

^{dp}ERs can appear in multiple positions, but not in more than one of those at once[7]

(34)   a.   *Liz's cast members ^{dp}themselves are ^{dp}themselves running the show.
      b.   Liz's cast members ^{dp}themselves are running the show ^{vp}themselves.

- This complementary distribution seems to indicate that the two ^{dp}ERs are instances of the same element in different locations
- This is not straightforwardly predictable in an analysis in which disjoint ERs are adverbial and base-generated in each surface position

The available positions for ^{dp}ERs seems to be limited to positions through which A-movement has occurred[8]

- The data is strikingly similar to motivation for a stranding analysis of Q-Float (Sportiche 1988)

(35)   a.   [You both] will [~~you both~~] have [~~you both~~] done it.
      b.   [You] will [~~you~~ both] have [~~you both~~] done it.
      c.   [You] will [~~you~~] have [~~you~~ both] done it.

(36)   a.   [You yourselves] will [~~you yourselves~~] have [~~you yourselves~~] done it.
      b.   [You] will [~~you~~ yourselves] have [~~you yourselves~~] done it.
      c.   [You] will [~~you~~] have [~~you~~ yourselves] done it.

- Given the structure in (31) and a stranding-by-A-movement mechanism, these facts are straightforwardly captured
  - When a DP containing a ^{dp}ER undergoes A-movement, the DP that moves can either be the larger 'shell' containing the ^{dp}ER, or the smaller one that excludes it[9]

Thus, it is also clear why ^{dp}ERs can only be disjoint from their associate DP when A-movement has occurred[10]

DPs that do not move at all are incompatible with disjoint ^{dp}ERs

(37)   a.   Jack (*^{dp}itself) gave the ring (^{dp}itself) to Phoebe (*^{dp}itself).
      b.   Stephanie (*^{dp}itself) dressed as Cher (*^{dp}itself) on Halloween (^{dp}itself).

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[7]Recall from (8a), repeated as (34b), that there can be one ^{dp}ER and one ^{vp}ER for a given DP.
[8]The fact that ^{dp}ERs may appear after the predicate presents an additional problem, which will be discussed.
[9]There are good arguments against stranding as deriving floated quantifiers as in (35) (Fitzpatrick 2006). These arguments do not seem to apply to ERs (Ahn 2010).
[10]See Appendix for data showing that it must be A-movement, not A′-movement.

3.2 ^{vP}ER constituency and argument structure

A ^{vP}ER takes the Voice head as its argument, but attaches below it

(38)
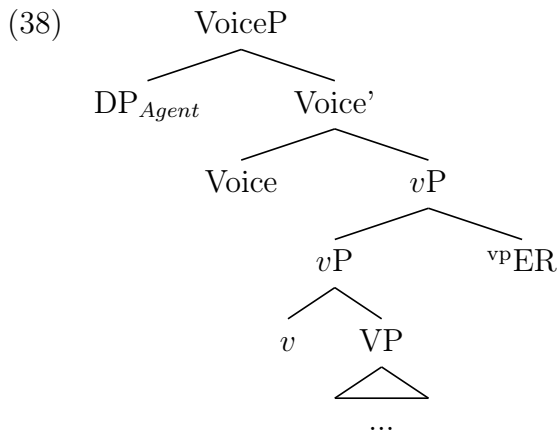
^{vP}ERs are in the site of VP Ellipsis

Moravcsik (1972) and Edmondson and Plank (1978) both note that the ^{vP}ER must appear within the domain of VP Ellipsis

- For (39a), it is implied that "Pete designs microwaves"

  (39)   a.   Jack designs microwaves ^{vP}himself, but Pete doesn't [~~design microwaves~~ ~~^{vP}himself~~].
         b. ?*Jack designs microwaves, but Pete doesn't [~~design microwaves~~] ^{vP}himself.

Merchant (2007) argues that the site of VP Ellipsis is the sister of the Voice head

- He shows voice-mismatch is possible in VP Ellipsis, but impossible in sluicing:

  (40)   This problem was to have been looked into $Voice_{passive}$ [~~look into this problem~~], but obviously nobody did $Voice_{active}$ [~~look into this problem~~].

  (41)   *This problem was looked into $Voice_{passive}$ [~~look into this problem~~], but we don't know who [~~$Voice_{active}$ look into this problem~~].

- He argues that this can only be explained by syntactic identity, the only difference between (40) and (41) being the ellipsis (or not) of the $Voice^0$

Since VP Ellipsis is sister of Voice, and ^{vP}ERs elide in VP Ellipsis, it must be the case that ^{vP}ERs are adjoined somewhere inside Voice', e.g. adjunct to vP as in (38)

^{vP}ERs are bad with Cause DPs

The same sentence can either allow or disallow ^{vP}ER-usage, depending on the context which determines the appropriate theta role; recall (23), repeated as (42)

(42)   a.   (Phill is a strong guy, so without an axe,) he broke the door ^{vP}himself.
       b. #(After Phill tripped and fell into the door,) he broke the door ^{vP}himself.

This can be explained if Cause DPs are not licensed by a $Voice^0$, but rather a lower projection (e.g. vP)

- Koopman (2008)'s analysis of Samoan ergatives provides evidence for just this

- Volitional agents co-occur with extra verbal morphology ('faʔa') in a way that non-volitional causers never do

(43)   a.   *na   faʔa-mama: e   Ioane le   ʔieʔafu*
           PAST CAUSATIVE-clean ERG John the sheet$_{abs}$
           'John cleaned the sheet.'
      b.   *na   (*faʔa-)mama: le   ʔieʔafu i   le   timu*
           PAST (CAUSATIVE-)clean the sheet$_{abs}$ OBL the rain
           'The rain cleaned the sheet.'

Thus, we have the structure for an Agent DP in (44) allowing an ^{vp}ER, whereas the structure for licensing a Cause external argument in (45) does not

(44)   A little girl scared me herself.   (45) *A small noise scared me itself.
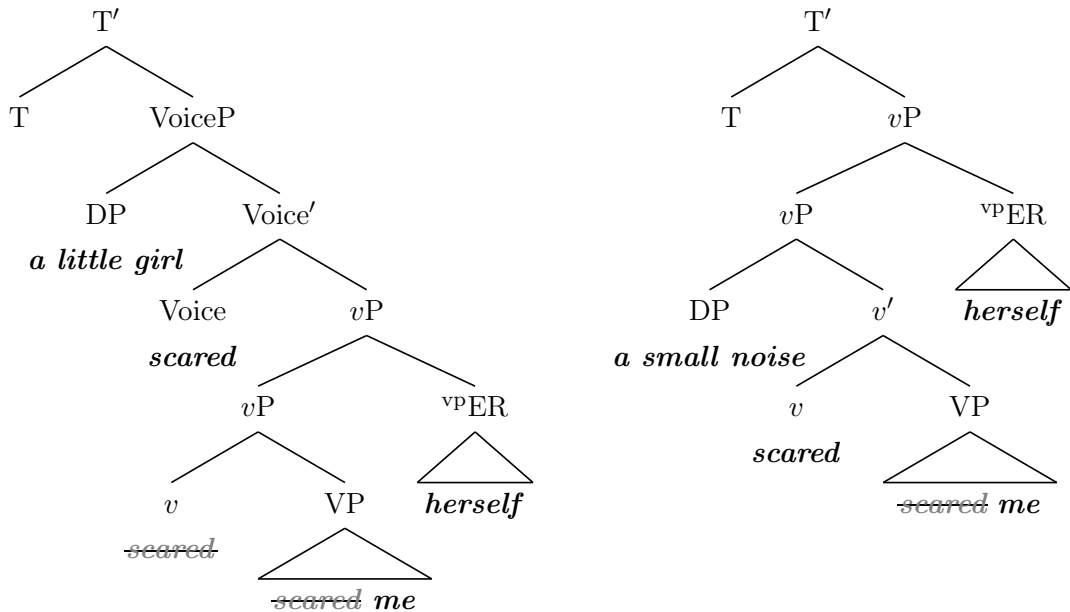
A ^{vp}ER in a clause with a Cause external argument – e.g. (45b) – would not have a Voice^0 to take as its argument, causing ungrammaticality and providing evidence for the structure in (38)

- This seems analogous to other cases of being unable to attach an adverb when there is not enough structure:

(46)   a.   ✓I consider Tina to usually be a genius.
      b.   *I consider Tina usually a genius.
      c.   *I consider usually Tina a genius.

3.3   English-type vs. German-type

Identical ID functions

In German (and other languages such as Finnish, Danish, and Dutch), the word or morpheme that represents that ER (47) looks rather like a functional head (48), instead of a phi-feature-bearing DP argument (49)[11]

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[11]Of course, *sich selbst* is also possible – Bergeton (2004) spends a good deal of time on these, showing that they are simply compositional as reflexive and ^{dp}ER.

(47) *Liz <u>selbst</u> verkauft eine Firma*
Liz [dp]ER sell   a   company
'Liz herself is selling a company.'

(48) *<u>Selbst</u> Liz verkauft eine Firma*
Even Liz sell   a   company
'Even Liz is selling a company.'

(49) *Liz hat {<u>sich</u>/*<u>selbst</u>} verletzt*
Liz has <u>self</u>/*SELBST injured
'Liz injured <u>herself</u>.'

- On the other hand, the English examples look rather like phi-feature-bearing DP arguments

  (50) Liz <u>herself</u> sold the company

  (51) <u>Even</u> Liz sold the company

  (52) Liz injured <u>herself</u>

How can we reconcile the two while maintaining the vast number of interpretational and distributional similarities between the ER *selbst* and the ER *Nself*?

- In German, *selbst* is always a functional head – sometimes the ID function and sometimes a scalar focus particle
- In English, *Nself* is always a DP – sometimes a semantically null syntactic argument
  - Inherent reflexive verbs are like those in (53) which necessarily take a reflexive syntactic argument. Arguably, the reflexive argument contributes no reflexive meaning; in fact, Büring (2005) calls these 'semantically intransitive.'

    (53) behave oneself; better oneself; busy oneself; collect oneself; compose oneself; conduct oneself; enjoy oneself; exert oneself; perjure oneself; pride oneself; resign oneself; sun oneself   (Levin 1993)

  - Also in the list should be 'Ø oneself' where the Ø is the PF representation of the ID function
- In this way, the ER head in German is intransitive and spelled-out as '*selbst*', and is an inherent reflexive verb in English spelled out as Ø

  (54) a. *German-type*: [ERP [ER0 selbst]]
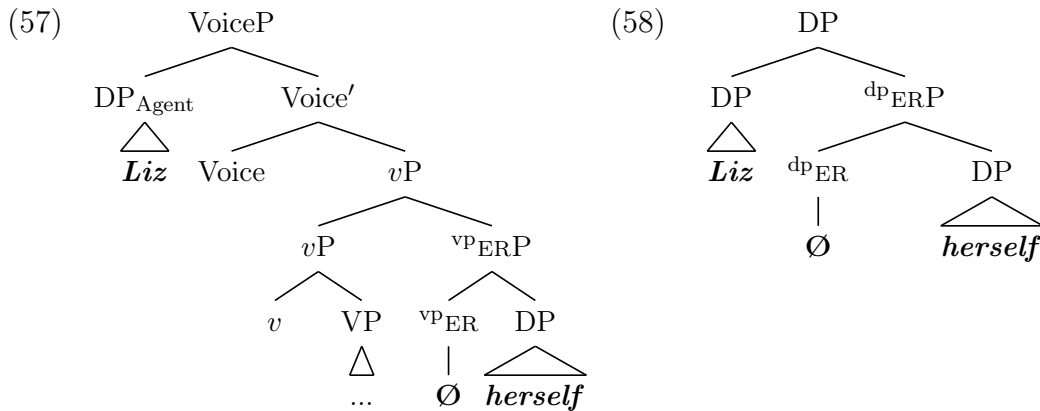   b. *English-type*: [ERP [ER0 Ø] [DP himself]]

ERs are always headed by ID functions, which are semantically identical across languages for a given interpretation

- Below is an example showing that [dp]ERs differ only in their syntactic valency for German and English:

(55)
```
                    DP
                  /    \
               DP       dpER
              /  \        |
            D     NP      ID
           das   Auto    selbst
```

(56)
```
                    DP
                  /    \
               DP       dpER
              /  \      /   \
            D     NP   ID    DP
           the   car   Ø    itself
```

3.4 Binding for the English-type?

ER reflexive pronouns are quite trivially bound, under a syntactic approach to binding[12]

(57)

```
            VoiceP
          /        \
   DP_Agent        Voice'
      |           /      \
     Liz      Voice       vP
                       /       \
                     vP        vpERP
                    /  \       /     \
                   v   VP   vpER     DP
                       |     |      /    \
                      ...    Ø    herself
```

(58)

```
            DP
          /    \
        DP     dpERP
        |     /      \
       Liz  dpER      DP
              |      /    \
              Ø    herself
```

In the cases of both the ^{vp}ER and the ^{dp}ER, the ER will always be asymmetrically c-commanded by the DP antecedent, and very locally so

- Specifically, these reflexive pronouns are bound within a single phase, thus jibing well with recent work (Chomsky 2008, Lee-Schoenfeld 2008, Tucker 2010, among others) which suggests that the binding domain is a phase

So what about when they appear disjoint?

- DPs that intervene between an anaphor and its antecedent generally result in ungrammaticality, as below.[13]

  (59) Eric made Denkins watch himself.
     a. ?*Eric said, "Denkins, watch me."
     b. ✓Eric said, "Denkins, watch yourself."

- However, intervenor effects are not found at all with ERs

  (60) A: Did Eric$_i$'s wife make Denkins$_j$ watch for trespassers?
        B: No, <u>Eric$_i$</u> made Denkins$_j$ watch <u>^{dp}himself$_{i;i}$</u>.
            $\approx$ Eric (not his wife) said, "Denkins, watch for trespassers!"

- This is because ^{dp}ERs are base-generated adjacent to and c-commanded by their DP associates

So, even if there's stranding, it occurs after the antecedent binds the ^{dp}ER reflexive, and their local relationship is undisrupted

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[12]Tavano (2006) has been proposed that the reflexive pronouns in ERs can be treated as logophoric anaphors, as defined in Reinhart and Reuland (1993). This would seem to be required, given that the coargument of the reflexive in (57) is not a coindexed DP (but rather the Voice head). However, it may be disadvantageous to do so; logophoric anaphors have distinct formal properties, and tend to be able to alternate with a non-reflexive pronoun – neither of which are demonstrated by ER reflexive pronouns.

[13]It should be mentioned that judgments on examples like (**??**-(59)) may be subject to dialectal differences; furthermore, if at all acceptable, they may be sensitive to linguistic factors such as de se versus de re. (Ahn, Orfitelli, and Sportiche, *in preparation*)

4 Evidence of predicate fronting?

^{dp}ERs that appear at the right-edge of the predicate seem to be a problem

If ^{dp}ERs appear disjoint from their associate DP by stranding, it is unexpected that we cn often find ^{dp}ERs at the right-edge of a predicate

(61)   I will love it myself.

Only certain elements may bear sentence level nuclear pitch accent (NPA)

In English, this is the right-most element in the intermediate phrase (iP) that contains the predicate (Chomsky and Halle 1968, Selkirk 1995)

(62)   [Mary bought a book about **BÁTS**]$_F$

Adverbs appearing on the right side of a predicate cannot bear a sentence-level accent unless they are sufficiently low

- Namely the adverb must be located at the 'volitional' position or below, on the Cinque hierarchy (Stowell, p.c.)
- This tells us that only certain adverbs are within the predicate's iP, when right-hanging

  (63)   *John did it **PRÓ**bably/per**HÁPS**/al**LÁG**edly.

  (64)   John did it in**TÉN**tionally/**QUÍCK**ly/**CLÉ**verly.

Since right-edge ^{dp}ERs below can bear the NPA like the lower adverbs above, we have an idea of how low they need to be

  (65)   a.   The pope eats meat on Friday ^{dp}him**SÉLF**.
         b.   The old ladies ran quickly ^{dp}them**SÉLVES**.

- Note that this must have to do with the position of external arguments, as internal argument subjects (66) do not allow right-edge ^{dp}ERs

  (66)   a.   *The beef cooked/was burned/disappeared quickly ^{dp}it**SÉLF**.
         b.   *The computer bothers/worries/scares me ^{dp}it**SÉLF**.

Thus, the VP-internal external argument position must become linearized to the predicate's right-edge

Perhaps, the (an) underlying position of the subject is linearized on the right of the predicate

- Kitagawa (1986) proposed that the underlying word order of the VP in English is VOS, before the subject moves to TP

  (67)   They [$_{VP}$ did it [~~they~~ ^{dp}themselves]].

  - Though it would seem to encounter issues when considering small clauses
  - Also, this would seem to predict "They did it ^{dp}themselves, ^{vp}themselves", despite the fact that the intuition is "They [did it ^{vp}themselves], ^{dp}themselves"

- Alternatively, it could be that the lowest internal subject position is below the highest object position, as proposed by Hallman (2004)

(68)   They did it [[~~they~~ ^{dp}themselves] ~~did it~~].

– Like Kitagawa's approach, this seems to predict "^{dp}themselves, ^{vp}themselves"[14]

Perhaps instead, the subject position ends up linearized on the right through some kind of predicate fronting, perhaps to Spec, FP (perhaps this is a low focus position?), à la Baltin (2002)

(69)
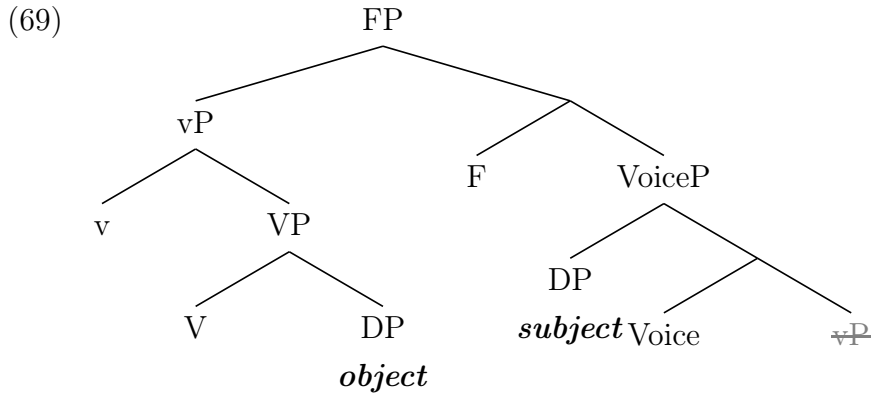
- This could explain why we get the intuition that the ^{vp}ER precedes the ^{dp}ER in cases like "They did it ^{vp}themselves, ^{dp}themselves"
- Such predicate fronting also seems to be supported by the fact that a low flat plateau, which is generally associated with a phrasal boundary, precedes the ^{dp}ER found on the right-edge, as in (70)

(70)
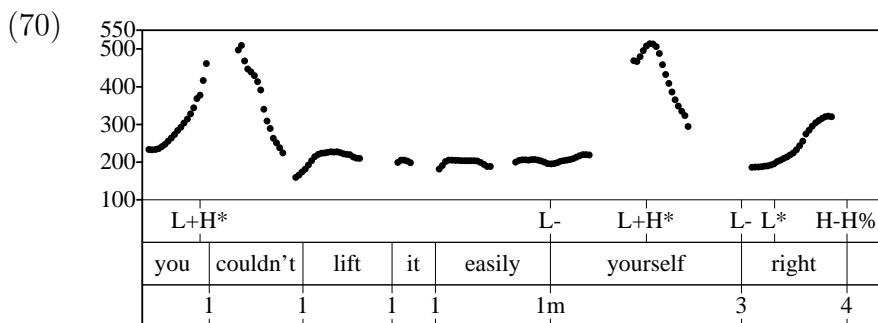
- There does seem to be a problem with this predicate fronting – it looks remarkably like the Collins (2005) smuggling analysis of the passive
- Shouldn't the internal argument be the minimal candidate for movement to Spec, TP?
    – Well, maybe not. All DPs within the fronted vP should have all their ϕ-features checked (making them invisible to the TP's EPP probe), unlike the case of passives where the object DP doesn't have its Case feature checked.

Thus, it seems that ^{dp}ERs might provide evidence for predicate fronting in English as being a seemingly routine process

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[14]This is somewhat unclear, however, since it is not entirely apparent where ^{vp}ERs would adjoin in Hallman's framework, which is incompatible with Kratzer's VoiceP.

5 Conclusions

- There are two types of ERs – ^{dp}ERs and ^{vp}ERs
  - These each have reliable crosslinguistic and intra-linguistic properties that distinguish them from one another
- ^{dp}ERs are adnominal in their base generation and rely on its associate DP having certain interpretational properties
  - ^{dp}ERs can be stranded, but only by A-movement
  - It seems they may be able to be used for testing underlying position(s) of a DP that A-moves, if the data in section 4 is on the right track
- ^{vp}ERs are adverbial and rely on the structural presence of the volitional agent licenser
  - Thus ^{vp}ERs can be used to argue for different argument structures when licensing different kinds of external arguments

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6 Appendix

6.1 By himself ≠ ^{vp}himself

^{vp}ERs seem to be quite similar in meaning to *by Nself*, but *by Nself* has distinct interpretational and syntactic properties

- First, "*by Nself*" is ambiguous between "alone" and "without outside help."

  (71) a. John went to the movies by himself (=alone).
       b. John made dinner by himself (=without outside help)

- Second, the "*by Nself*" construction has a wider syntactic distribution than ERs.

  (72) a. John is by himself (=alone).
       b. *John is ^{vp}himself/^{dp}himself.

- It seems that the "*by Nself*" in (72) means something like "there was no external causer," unlike ^{vp}ERs which instead deal with agentivity

  (73) a. The book fell down by itself (≈no one made it fall).
       b. *The book fell down ^{vp}itself (≈without outside help).

In sum, "by Nself" is not the same as a ^{vp}ER. Those interested in the properties of "*by Nself*" are referred to Levin and Rappaport Hovav (1995).

6.2 A′-movement and Unstrandability

When the movement of a DP is A′-movement, the ^{dp}ER cannot be stranded

(74) <u>Subject Contrastive Topic</u>
      a. The boys all/themselves like beans.
      b. *?The boys$_i$, t_i all/themselves like beans.[15]

(75) <u>Object Contrastive Topic</u>
      a. Courtney likes all the boys/the boys themselves.
      b. *The boys$_i$, Courtney likes t_i all/themselves.

(76) <u>Subject Relative</u>
      a. I think the boys all/themselves cooked the beans.
      b. *It was the boys$_i$ that I think t_i all/themselves cooked the beans.
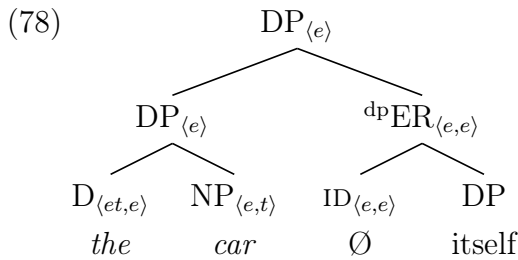
(77) <u>Object Relative</u>
      a. I think that Courtney ate all the beans/the beans themselves.
      b. *It was the beans$_i$ that I think Courtney ate t_i all/themselves.

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[15]The hallmarks of contrastive topics in English are: a high pitch on topic's stress, a rising L-H% pitch contour, and a prosodic break. I represent these prosodic cues with a comma.
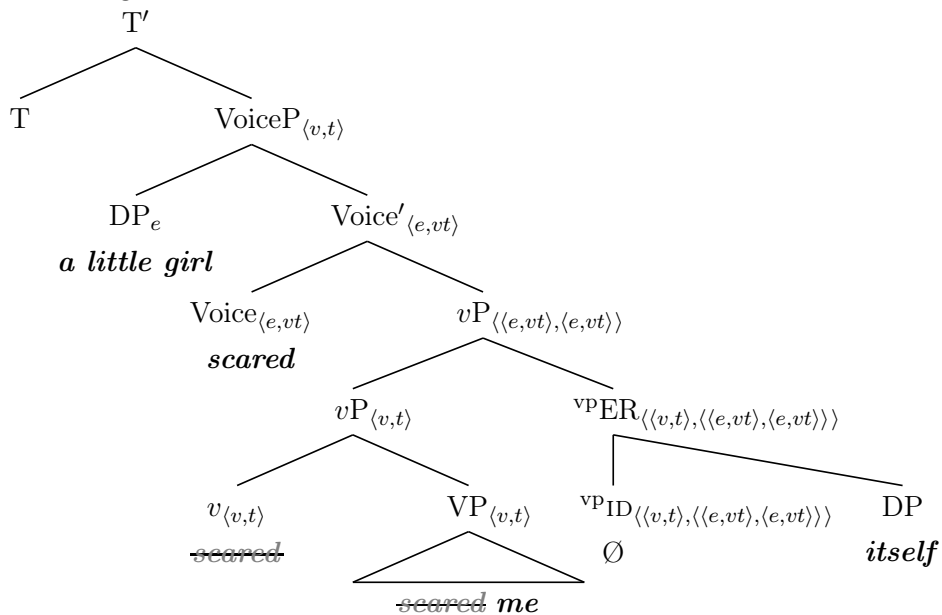
6.3 Semantic Trees

Semantic trees are given below, in (78)–(79). For more details, see Ahn (2010).

- The reflexive DP below doesn't have a semantic type, as it is semantically null

(78)

$$DP_{\langle e\rangle}$$

$$DP_{\langle e\rangle} \qquad {}^{dp}ER_{\langle e,e\rangle}$$

$$D_{\langle et,e\rangle} \quad NP_{\langle e,t\rangle} \qquad ID_{\langle e,e\rangle} \quad DP$$
$$\textit{the} \qquad \textit{car} \qquad \varnothing \qquad \text{itself}$$

- Below, $\langle v\rangle$ is the type for the event, and again the reflexive is semantically null

(79) A little girl scared me herself.

$$T'$$

$$T \qquad VoiceP_{\langle v,t\rangle}$$

$$DP_e \qquad Voice'_{\langle e,vt\rangle}$$
$$\textbf{\textit{a little girl}}$$

$$Voice_{\langle e,vt\rangle} \qquad vP_{\langle\langle e,vt\rangle,\langle e,vt\rangle\rangle}$$
$$\textbf{\textit{scared}}$$

$$vP_{\langle v,t\rangle} \qquad {}^{vp}ER_{\langle\langle v,t\rangle,\langle\langle e,vt\rangle,\langle e,vt\rangle\rangle\rangle}$$

$$v_{\langle v,t\rangle} \qquad VP_{\langle v,t\rangle} \qquad {}^{vp}ID_{\langle\langle v,t\rangle,\langle\langle e,vt\rangle,\langle e,vt\rangle\rangle\rangle} \qquad DP$$
$$\text{\sout{scared}} \qquad\qquad \varnothing \qquad\qquad \textbf{\textit{itself}}$$

$$\text{\sout{scared} } \textbf{\textit{me}}$$

- Finally, below is a semantic tree showing that an ${}^{vp}ER$ won't compose when there is no VoiceP in the derivation.

(80) *A small noise scared me itself.

$$T'$$

$$T \qquad vP_{\langle\langle e,vt\rangle,\langle e,vt\rangle\rangle}$$

$$vP_{\langle v,t\rangle} \qquad {}^{vp}ER_{\langle\langle v,t\rangle,\langle\langle e,vt\rangle,\langle e,vt\rangle\rangle\rangle}$$

$$DP_e \qquad v'_{\langle e,vt\rangle} \qquad {}^{vp}ID_{\langle\langle v,t\rangle,\langle\langle e,vt\rangle,\langle e,vt\rangle\rangle\rangle} \qquad DP$$
$$\textbf{\textit{a small noise}} \qquad\qquad \varnothing \qquad\qquad \textbf{\textit{itself}}$$

$$v_{\langle e,vt\rangle} \qquad VP_{\langle v,t\rangle}$$
$$\textbf{\textit{scared}}$$

$$\text{\sout{scared} } \textbf{\textit{me}}$$