Salvation and non-salvation of defectiveness under ellipsis

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1. Introduction

The concept of *salvation by deletion* has provided a fruitful way to discuss the nature of locality constraints on movement and their interaction with ellipsis operations since Ross’s (1969) seminal work on sluicing. In the following example, for instance, omission (i.e. non-pronunciation) of the portion including the island crossed by wh- movement makes the resulting sentence acceptable.

(1) John saw the man who kissed one of the girls, but I don’t know *which of them* (*John saw [NP the man who kissed *t]*).

There has been an intense debate on whether examples like this indeed instantiate salvation by deletion, or whether instead they signal the presence of a derivation that evades islandhood, or whether perhaps there may even be no hidden syntactic structure of the type indicated above at all (see Chomsky 1972; Baker and Brame 1972; Merchant 1999; Lasnik 2001; Barros, Elliott, and Thoms 2014; among many others).

In this squib we present what we contend are bona-fide cases of salvation and non-salvation by deletion, in the context of *defective* verbs, as a way to probe into lexical representations. It has been previously demonstrated that what would otherwise be ineffable gaps in a verbal paradigm seem to be able to appear inside ellipsis sites. Thus, the Russian stripping examples shown in (2) are good, despite the fact that the neither *buzit* ‘to make a fuss’ nor *šelestet* ‘to rustle’ have a proper form for first person singular non-past:

(2) On {buzit / šelestit}, a ja net.
    he makes.a.fuss / rustles but I not
‘He {makes a fuss/ rustles} but I don’t.’ (adapted from Abels 2018)

Similar observations have been made for lexical gaps in other domains; cf. Oku 1998; Kennedy and Merchant 2000; Kennedy and Lidz 2001; Merchant 2015. The intuition behind these works is that lexical gaps, such as the 1SG non-past for the verbs above, arise from the lack of a proper allomorph. Crucially, if ellipsis is an instruction to prevent morphophonological realization, the problem doesn’t arise inside the ellipsis site. This logic, we will show, is only partially correct, as some lexical gaps cannot be saved by ellipsis.

We thus distinguish two types of defective verbs: (i) defective verbs that can be saved by deletion, which we take to lack an eligible allomorph for certain environments within a language, and (ii) defective verbs that cannot be saved by deletion, which we take to signal the lack of a formative (i.e. possible item in the numerations that provide the input to syntax within a given language) necessary to build certain structures within a language.

2. Brazilian Portuguese and Russian: two cases of salvation by deletion

To illustrate the cases of salvation by deletion in Brazilian Portuguese we will use the defective verb *demol-i-r* (*DEMOLISH-TV-INF*)1 ‘to demolish’, which lacks first person singular present indicative and all forms of present subjunctive. These gaps arise precisely where non-defective verbs lose their thematic vowel in the verbal paradigm, as shown in the following table in which each verb form is split in three slots ROOT-TV-T/AGR:2

We will compare the behavior of non-defective verbs with defective verbs.

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1TV= theme vowel; INF = infinitive.
2*V indicates a gap. The *V in the tables and examples we present do not represent the judgement itself, but rather that speakers are uncomfortable with potential forms that could arise for the gap.
Table 1: Brazilian Portuguese: comparison between the non-defective verb vot-a-r (√VOTE-TV-INF) ‘to vote’ and the defective verb demol-i-r (√DEMOLISH-TV-INF)

<table>
<thead>
<tr>
<th></th>
<th>PRESENT INDICATIVE</th>
<th>PRESENT SUBJUNCTIVE</th>
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<tbody>
<tr>
<td>1sg</td>
<td>vot-Ø-o</td>
<td>*V</td>
</tr>
<tr>
<td>2sg, 3sg, 1pl</td>
<td>vot-a-Ø</td>
<td>demol-e-Ø</td>
</tr>
<tr>
<td>2pl, 3pl</td>
<td>vot-a-m</td>
<td>demol-e-m</td>
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<tr>
<td>infinitive</td>
<td>vot-a-r</td>
<td>demol-i-r</td>
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Table 1: Brazilian Portuguese: comparison between the non-defective verb vot-a-r (√VOTE-TV-INF) ‘to vote’ and the defective verb demol-i-r (√DEMOLISH-TV-INF)

Taking the absence of the theme vowel to be a result of \( v \) obliteration,\(^3\) we assume that the root of demol-i-r ‘to demolish’ can only be realized in the presence of \( v \) (see Arregi and Nevins 2014; Nevins, Damulakis, and Freitas 2014, and references therein for further discussion):

\[(3) \quad \sqrt{\text{DEMOLISH}} \leftrightarrow /\text{demol}/ /\_\_ v \]  
(no elsewhere item)

To illustrate the cases of salvation by deletion in Russian, we will use two defective verbs: pret-i-t’ (√REPULSE-TV-INF) ‘to repulse’ and oščut-i-t’ (√SENSE-TV-INF) ‘to sense’.\(^4\) Typically, Russian defective verbs belong to the second conjugation (-i- theme vowel) in the non-past paradigm with a verb stem ending in a dental consonant. The gaps fall in the first person singular non-past cell of the paradigm, where other verbs of the same conjugation ending a dental consonant have alternations.\(^5\) This is shown in the following table by comparing their non-past paradigm with that of two non-defective verbs sokrat-i-t’ (√SHORTEN-TV-INF) ‘to shorten’ and met-i-t’ (√AIM-TV-INF) ‘to aim’, in which the verbal forms are divided into two slots, with the verb stem followed by the theme vowel plus inflectional morphology (šč = /ʃ/ and č = /tʃ/):

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\(^3\)For a phonological take on the missing theme vowel in the Spanish paradigm, see Camara Jr 1970 and Bermúdez-Otero 2012 for Spanish, among others.

\(^4\)The reason for choosing these two particular verbs is twofold. First, the competition analysis we will develop is easily stated with verbs whose stems end in -t. Second, these verbs assign different cases to their complements, which makes it possible to demonstrate that the gaps can be syntactically active in the ellipsis site. The facts we report here for these two verbs hold for all Russian defective verbs we tested.

\(^5\)See Halle 1973; Sims 2006; Baerman 2008; Pertsova 2016 and Gorman and Yang 2019 for discussion.
Table 2: Russian second conjugation - comparison between defective and non-defective verbs

In the 1.SG, sokrat-it’ ‘to shorten’ undergoes the t/t/ → šč/ʃʃ/ mutation (sokrašč-u), inherited from Old Church Slavonic; whereas met-it’ ‘to aim’ undergoes the t/t/ → č/tʃ/ mutation (meč-u), inherited from Old Russian. We take these alternation to be morphophonological and the defectiveness of verbs like pret-i-t’ ‘to repulse’ and oščut-i-t’ ‘to sense’ to arise through competition between the forms reflecting these two mutations (see Gorman and Yang, 2019, for a similar proposal), which we implement in terms of lethal competition between vocabulary entries (Nevins 2014), where essentially, the Subset Principle (Halle, 1997) for Vocabulary Insertion (or what Fodor 1972 calls ‘posttransformational lexical insertion’) cannot resolve a tie between equally specified entries.

(4) a. \( \sqrt{\text{REPULSE}} \leftrightarrow /\text{pret}/+1\text{SG.NPST} \) 
   b. \( \sqrt{\text{REPULSE}} \leftrightarrow /\text{pretʃ}/+1\text{SG.NPST} \) 
   c. \( \sqrt{\text{REPULSE}} \leftrightarrow /\text{pret}/ \)

(5) a. \( \sqrt{\text{SENSE}} \leftrightarrow /\text{ofutʃ}/+1\text{SG.NPST} \) 
   b. \( \sqrt{\text{SENSE}} \leftrightarrow /\text{ofut}/+1\text{SG.NPST} \) 
   c. \( \sqrt{\text{SENSE}} \leftrightarrow /\text{ofutʃ}/ \)

The presence of two competitors equally fit for 1.SG non-past leads to ineffability, since the system cannot decide between the two alternate forms in the context of first person singular non-past.

In both cases above, defectiveness is lack of a proper allomorph: in Brazilian Portuguese due to the lack of an elsewhere item, and in Russian due to lethal competition.
between two forms. With this background, let’s look at what happens in ellipsis sites.

Consider first gapping, which we take to involve ellipsis of some portion of structure that includes the verb.

**Brazilian Portuguese: gapping**

(6) a. Você votou *(n)o Pedro, e eu votei *(n)a Maria.

   you voted on-the Peter and I voted on-the Mary

   ‘You voted for Peter, and I for Mary.’

b. Você demole a casa, e eu *V demoli o prédio.

   you demolish the house and I demolish the building

   ‘You demolish the house, and I demolish the building.’

(6-a) shows the remnant portion corresponding to the complement of the verb in the gapped clause preserves the selectional properties of the verb inside the ellipsis site. This selectional connectivity implies that the root in the ellipsis has to be isomorphic with the one in the antecedent. The fact that the gapped verb has to be isomorphic with the one in the antecedent implies that in (6-b) the gap is syntactically active.

In Russian the evidence that the lexical gap is syntactic active is more direct, since the verbs under discussion assign different cases to their complements. We can thus see case-connectivity in the very examples where the lexical gaps are inside the ellipsis site. Consider now the following pair:

**Russian: gapping**

(7) a. Na veršine étoj gory ty oščutiš radost’, a ja *V strakh.

   on top this mountain you sense happiness.ACC but I sense fear.ACC

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6Defective verbs (as well as defective nouns) may be found in a range of languages beyond these two; see Baerman, Corbett, and Brown (2010) for a thorough overview. We predict that all morphophonologically-based cases of defectivity will show parallel patterns of salvation by deletion under the relevant ellipsis types.

‘At the top of this mountain, you will sense happiness, and I fear.’

b. Ty pretiš mne, ja tebe.  
you repulse me.DAT and I repulse you.DAT  
‘You repulse me, and I you.’

In both examples, the gapped verb corresponds to a gap in the paradigm. From the verbs we are using, oščut-it ‘to sense’ assigns accusative and pret-it ‘to repulse’ assigns dative. The case of the verb complement in the gapped clause is dependent on the verb inside the ellipsis site, again implying that the verb inside the ellipsis site is isomorphic with the one in the antecedent.

The very same pattern arises for other types of ellipsis: 8

**Brazilian Portuguese: stripping**

(8) A: Você vota *(n)a Maria então? B: Não, *(n)a Ana eu vote-t.  
you vote on-the Mary then no on-the Ana I vote  
‘Do you vote for Mary then?’ ‘No, I vote for Ana.’

(9) A: Você demole a casa então? B: Não, o prédio eu demole-i  
you demolish the house then no the building I demolish  
‘Do you demolish the house then?’ ‘No, the building.’

**Russian: stripping**

(10) A: Ty oščutiš radost’ na veršine étoj gory.  
you sense happiness.ACC on top this mountain  
‘You will feel happiness at the top of this mountain.’

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8 See Depiante 2000, Merchant 2004, Nakao 2009, among others on stripping and fragment answers, which we take to involve movement of the remnant to a focus projection followed by TP deletion; and Chomsky 1977, Kennedy 2002, Lechner 2018, among others on comparative deletion.
B: Net, strakh ja*V† na veršine étoj gory.
no fear.ACC I sense on top this mountain
‘No, fear.’

(11) A: Ty pretiˇs vsem svoim neprijatelam.
you repulse all self adversary-PL.DAT
‘You repulse all your adversaries.’

B: Net, tol’ko Ivanu ja*V†.
no only Ivan.DAT I repulse
‘No, only Ivan.’

**Brazilian Portuguese:comparative deletion**

(12) a. Você votou mais vezes *(n)a Maria do que eu votei *(n)a Ana.
you voted more times on-the Mary of-the that I voted on-the Ana
‘You voted for Mary more times than I voted for Ana.’

b. Você demole mais casas com um trator do que eu *V casas
you demolish more houses with a tractor of-the that I demolish houses
with a pickaxe.
‘You demolish more houses with a tractor than me with a pickaxe.’

**Russian:comparative deletion**

(13) a. Na veršin-e étoj gory ty oˇsˇcutiˇs radost’ bystree, čem ja *V
on top this mountain you sense happiness.ACC faster than I sense
fear.ACC
‘At the top of this mountain, you will sense happiness faster than I fear.’
b. Ty pret-i-š mne bolše, čem ja repulse tebe.
you repulse me more than I repulse you.
‘You repulse me more than I you.’

_Brazilian Portuguese: fragment answers_

(14) A: Em quem você votou?
in who you voted
‘Who did you vote for?’
B: *(N)o João eu votei.
on-the John I voted
‘I voted for John.’

(15) A: Quem demole a casa?
who demolishes the house
‘Who demolishes the house?’
B: Eu a casa.
demolish the house
‘I demolish the house.’

_Russian: fragment answers_

(16) A: Ty znaeš, čto ty oščutiš na veršine étoj gory?
you know what you sense on top this mountain
‘Do you know what you will feel at the top of that mountain?’
B: Strakh ja.
fear.I sense
‘Fear.’

(17) A: Sredi tvoikh neprijatelej, komu ty pretiš bolše vsego?
among your adversary who you repulse most of all
‘Among your adversaries, who do you repulse the most?’
B: Ivanu bolše vsego.
Ivan.I repulse most of all
‘Ivan.’
The patterns found in the examples above all suggest the lexical gaps we are dealing with can be syntactically active. That suggests that in these cases syntax can build the relevant structure that correspond to lexical gaps. If the source of defectiveness here is lack of a proper allomorph, and ellipsis bleeds lexical insertion (say, by the instruction of non-pronunciation of a constituent by an E-feature on the head introducing the constituent to be elided; Merchant 1999, Aelbrecht 2009, Kornfeld and Saab 2004, Sailor 2019), the prediction is that defective verbs like these can appear inside ellipsis sites.  

3. English: two cases of non-salvation by deletion

We will now consider two cases of non-salvation by deletion in English in the realm of defective verbs. First, certain English modals can also be said to be defective as they lack non finite forms (*must can, *will can, *is can(ing), *have can(ed), *does can, ...):

(19) a. *John must can swim. (intended: according to the evidence, John is able to swim)
   b. *John will can swim. (intended: John will be able to swim.)
   c. *John doesn’t can swim. (intended: John isn’t able to swim)

In principle, one possibility is to say that we are again facing morphophonogical defectiveness just like what we saw for Brazilian Portuguese and Russian, and that English can only be realized in the presence of a [+finite] T:

(20) can ↔ /kæn/ _ T[+fin]  (no elsewhere item)

This analysis however seems to make the wrong prediction, since ellipsis doesn’t make the

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9 A similar pattern of salvation by deletion may be found with defective nouns in Russian, as pointed out by a reviewer for the defective noun meˇct´a ‘dream’. Post-stressing nouns like this lack a genitive plural form, but are saved by ellipsis:

(18) U nego byli meˇct-´y, a u menja ne bylo N.
   at him.GEN were dreams-GEN.NOM and at me.GEN not were dream.PL.GEN
   ‘He had dreams, but I hadn’t.’
examples any better.\textsuperscript{10}

(21) a. *Mary can swim, and John must can swim too.

b. *Mary can swim, and John will can swim too.

c. *Mary can swim, but John doesn’t can swim.

Consider now the following examples with both must and have to receiving a deontic interpretation:

(22) a. I must leave.

b. I have to leave.

Even though (22-a) and (22-b) can be synonymous, must, like can, lacks non-finite forms, but have to doesn’t:

(23) a. *I don’t must leave.

b. I don’t have to leave.

And such pattern is carried over to ellipsis sites:

(24) a. *John must leave, but I don’t must leave.

b. John has to leave, but I don’t have to leave.

This comparison raises skepticism on the possibility of deriving the defectiveness of modals like can and must from a semantic property.

The unacceptability of examples in (21) and (24-a) can be predicted if the defectiveness that has been traditionally associated with English modals like can is not the lack of a proper allomorph, but actually the lack of an appropriate formative that provides the input to syntax in the English grammar. In the lexicon, English modals like can always come

\textsuperscript{10}As a reviewer points out, the examples in (21) do not logically exclude the lexical insertion rule in (20). Example (21), however, does exclude (20) as the sole source of defectiveness of can, given our discussion of salvation by deletion in BP and Russian.
with [+fin] feature that must be checked against a finite T, which limits its distribution morphosyntactically, without making reference to exponence.\textsuperscript{11} Defectiveness in this case is a deeper property of English grammar. Specifically, its lexicon of formatives does not include a version of modals like *can without this [+fin] specification. As such, the ellipsis pattern above is straightforwardly understood, as the syntax is not able to build the relevant structure to begin with.\textsuperscript{12}

The second case of non-salvation by deletion in English occurs with the verb *beware (Lakoff 1970, p.28, Fodor 1972), which appears only in imperative sentences, embedded under modals and command verbs (e.g. *tell, ask, ...) as seen in the examples below:\textsuperscript{13}

(27) a. Beware of barking dogs!
   b. You should/must beware of barking dogs.
   c. I told them to beware of barking dogs.

(28) a. *John bewares of barking dogs. (intended: John watches out for barking dogs)
   b. *John bewared of barking dogs. (intended: John watched out for barking dogs)

\textsuperscript{11}It is orthogonal to this analysis whether modals like *can and *must project a ModP/VP and move to T or project a TP directly.

\textsuperscript{12}Notice that replacing *can with *be able to in these examples also leads to unacceptability (e.g. *Mary is able to swim, and John must be able to swim too.), a phenomenon known as Warner’s effect, reported for both auxiliary *be and have (Warner 1986). We assume that Warner’s effect arises due to a combination of lexical resources and the identity condition on ellipsis (Lasnik 1995), thus constituting an independent phenomenon. Specifically, the exponents of *be, *is, *have, ..., realize heads that come from the lexicon already specified with inflectional features, and the identity condition on ellipsis cannot handle the lack of featural isomorphism between the auxiliary in the elided VP, realized as *be in the example above, and the one introduced by the antecedent VP, realized as *is in the example above. It should also be pointed out that more elaborate examples can be constructed in which paraphrases for the modal lead to reasonably good examples, i.e. (26-b) is fairly better than (25-b) (Lasnik 2019, building on an earlier version of the present work):

(25) a. *Mary may access the records and Bill should may access the records by tomorrow
   b. *Mary may access the records and Bill should have permission to access the records by tomorrow

(26) a. Mary has permission to access the records and Bill should have permission to access the records by tomorrow.
   b. Mary has permission to access the records and Bill should have permission to access the records by tomorrow.

\textsuperscript{13}We thank Howard Lasnik for the observation that restrictions on *beware are not rescued by ellipsis.
c. *John didn’t beware of barking dogs. (intended: John didn’t watch out for barking dogs)

d. *I won’t beware of barking dogs. (intended: I will not watch out for barking dogs)

We must rule out first the possibility of beware being parsed as be aware (pace Fodor 1972), which could in principle account for some of its restrictions. The restriction on tensed beware (*bewares, *bewared) would follow because aware is an adjective and thus cannot host tense morphology. Similarly, the restriction on John didn’t beware of barking dogs would reflect the restriction on John didn’t be aware of barking dogs, which doesn’t seem to be related to defectiveness.

This analysis, however, faces setbacks. It is not clear that beware is diachronically derived from be aware; the Oxford English Dictionary reports some ancient uses of beware (≈1300) where be is a verb prefix/particle by rather than a copula, and also some inflected uses (bewares, bewared, ...) after the 17th century, which were eventually discarded. Second, the fact that, for some speakers, beware can take a DP complement directly is difficult to reconcile with a be aware parsing - as adjectives can’t case-mark their complements:14

(30) a.%You should beware barking dogs!

b.%Beware barking dogs!

Indeed, beware and be aware have different meanings. Collapsing the two would overgenerate the following type of example (Max Guimarães, pers. comm.):

(31)*They should beware of barking dogs, but they aren’t.

14Consider the following example of beware with a direct DP complement:

(29) ‘Beware the Jabberwock, my son!
The jaws that bite, the claws that catch!
Beware the Jubjub bird, and shun
The frumious Bandersnatch!’

(Lewis Carroll, Jabberwocky [1871])
Notice now, that *beware* can in principle appear inside ellipsis sites:

(32) a. They told me to *beware* of the dog, but I refused to *beware* of the dog.  
b. They didn’t tell me to *beware* of barking dogs, but I should *beware* of barking dogs.

Crucially, the constraints on the distribution of *beware* inside ellipsis sites instantiate a case of *non-salvation* by deletion:

(33) *Beware* is **not** saved under ellipsis

a. *John should *beware* of barking dogs, but he doesn’t *beware* of barking dogs.  
b. *I told them to *beware* of barking dogs, but they don’t *beware* of barking dogs.

It looks like we are indeed facing another case where ellipsis can’t save a defective verb, similar to what we witnessed above with English modals.

We take *beware* to have in the lexicon a [+irrealis] feature that can be licensed by a C_{[+imperative]}, some modal verbs and verbs of command. The defectiveness of *beware* again comes from the lack of a formative that provides the input to syntax that would be compatible with a [-irrealis] environment. Non-salvation by deletion again implies that the English formative list cannot provide the relevant pieces for syntax to build the structure inside the ellipsis site, and that ellipsis, as an instance of non-pronunciation, can only save those morphemes that are syntactically licensed but morphophonologically problematic.

Related to the featural marking of verbs like *beware*, a reviewer has pointed out the relevance of a phenomenon from Russian that follows the same pattern. In particular, Russian *pluralia tantum* nominals lack a form for the paucal genitive of quantity used with numerals from *one and a half* (‘poltora’) to four (‘četyre’) and this restriction is carried over to ellipsis sites.\(^{15}\)

\(^{15}\)In order to circumvent such restrictions, speakers use a collective numeral that combines with a genitive plural form of the noun.
(36)*U nas byli odni poxoron-y, a ne tri
by we.GEN were one.PL funeral-PL.NOM and not three
‘We had one funeral, not three (funerals).’

(37)*U nas byli ne odni poxoron-y, a tri
by we.GEN were not one.PL funeral-PL.NOM and three
‘We didn’t have one funeral, but three (funerals).’

Notice also that paucal genitive of quantity in general can be elided with a nominative antecedent:

(38) U nas byla odna vstreča a ne tri (vstreči).
by we.GEN were one.PL meeting-PL.NOM and not three meeting-PL.GEN
‘We had one meeting, not three (meetings).’

This shows that the identity condition on ellipsis can cope with such mismatches, and thus the problem with (36) and (37) must be assigned to the defectiveness of the pluralia tantum nouns, rather than to genitive of quantity environments per se.

Though we will not offer a complete analysis here, it is clear that such defectiveness lies outside of the domain of morphophonology. We suggest that pluralia tantum nominals in Russian come from the lexicon specified as [−singular, +augmented, −additive] (Harbour, 2014) and this featural specification clashes with that of paucal numerals. Defectiveness in this case comes from the fact that the Russian lexicon lacks a proper formative that would fit the structure in (36) and (37), similar to the cases with beware above, which cannot be

(34) U nas byli odni poxoron-y, a ne troe poxoron-y
by we.GEN were one.PL funeral-PL.NOM and not three.COL funeral-PL.GEN
‘We had one funeral, not three (funerals).’

(35) U nas byli ne odni poxoron-y, a troe poxoron-y
by we.GEN were not one.PL funeral-PL.NOM and three.COL funeral-PL.GEN
‘We didn’t have one funeral, but three (funerals).’
inserted in finite realis environments. To conclude, we have offered cases of two types of defectiveness: syntactic failures, whereby the lexicon lacks an appropriate formative to insert in a given morphosyntactic environment, and morphophonological failures, whereby the set of vocabulary entries in a language lacks an appropriate allomorph. Ellipsis operations, modeled as an instruction to forego Vocabulary Insertion, can track this distinction, thereby constituting a reliable probe into lexical representations.

References


There is in fact a third possibility: that the impossibility of paucal numerals with these pluralia tantum nouns arises from LF defectiveness – more specifically, the lack of an Encyclopedic entry for the relevant allophone, along the lines Harley (2014) proposed for explaining the oddity of #a cahoot. Under such an analysis, which we must leave open for future research, the ill-formedness of (36) and (37) would be more akin to the following:

(39) a. I don’t care for these high jinks, #not even one.
    b. I don’t care for John’s high jinks, #especially the last.

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