snippets

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EDITORIAL STATEMENT

1. Purpose.

The aim of *Snippets* is to publish specific remarks that motivate research or that make theoretical points germane to current work. The ideal contribution is the ideal footnote: a side remark that taken on its own is not worth lengthy development but that needs to be said. One encounters many short comments of this kind in the literature of the seventies. We feel that there no longer is a forum for them. We want *Snippets* to help fill that gap.

2. Content.

We will publish notes that contribute to the study of syntax and semantics in generative grammar. The notes are to be brief, self-contained and explicit. They may do any of the following things:

- point out an empirical phenomenon that goes against accepted generalizations or that shows that some aspect of a theory is problematic;
- point out unnoticed minimal pairs that fall outside the scope of any existing theory;
- point out an empirical phenomenon that confirms the predictions of a theory in an area where the theory has not been tested;
- explicitly describe technical inconsistencies in a theory or in a set of frequently adopted assumptions;
- explicitly describe unnoticed assumptions that underlie a theory or assumptions that a theory needs to be supplemented with in order to make desired predictions;
- call attention to little-known or forgotten literature in which issues of immediate relevance are discussed.

We also encourage submissions that connect psycholinguistic data to theoretical issues. A proposal for a pilot experiment in language acquisition or language processing could make for an excellent snippet.

The earliest *Linguistic Inquiry* squibs exemplify the kind of note we would like to publish. Some of them posed unobserved puzzles. For instance, a squib by Postal and Ross in LI 1:1 ("A Problem of Adverb Preposing") noted that whether or not we can construe a sentence-initial temporal adverb with an embedded verb depends on the tense of the matrix verb. A squib by Perlmutter and Ross in LI 1:3 ("Relative Clauses with Split Antecedents"), challenging the prevailing analyses of coordination and extraposition, noted that conjoined clauses neither of which contain a plural noun phrase can appear next to an "extraposed" relative that can only describe groups. Other squibs drew attention to particular theoretical assumptions. For instance, a squib by Bresnan in LI 1:2 ("A Grammatical Fiction") outlined an alternative account of the derivation of sentences containing believe and force, and asked whether there were principled reasons for dismissing any of the underlying assumptions (among them that semantic interpretation is sensitive to details of a syntactic derivation). A squib by Zwicky in LI 1:2 ("Class Complements in Phonology") asked to what extent phonological rules refer to complements of classes. None of these squibs was more than a couple of paragraphs; all of them limited themselves to a precise question or observation.

3. Submission details.

Snippets is an electronic journal. We will publish issues roughly twice a year, and all issues will remain on the website.

Snippets is intended as a service to the linguistics community. Consequently, authors are advised that, when they submit to *Snippets*, we understand them as allowing their submission to be reproduced if published. At the same time, the rights for the notes themselves will remain with the authors. As a result, citation of *Snippets* material will have to indicate the author's name and the specific source of the material.

We will accept electronic submissions at the address snippetsjournal@gmail.com. Electronic submissions may take the form of (a) the text of an e-mail message, or (b) an attached file. The attached file should be a simple text file, a Word file (Mac or Windows), or a Rich Text Format (RTF) file. All submissions must state the name and affiliation of the author(s), and a (postal or electronic) return address.

Submissions are to be a maximum of 500 words (including examples), with an additional half page allowed for diagrams, tables and references. Given that we envision the submissions themselves as footnotes, the submissions may not contain footnotes of their own, nor may they contain acknowledgments – though we will allow informants and funding sources to be credited in a line following the references. The ideal submission is one paragraph; a submission of five lines is perfectly acceptable. We will not consider abstracts.

4. Editorial policy.

Submissions will be reviewed by our editorial board, and review will be name-blind both ways. We will provide a response within 3 months of the moment when we acknowledge receipt of a submission. At the same time, we do not guarantee more than a simple yes/no response to the submitter. We will not require revisions (barring exceptional cases). We allow resubmission (once) of the same piece.

This statement reproduces with minor modifications the Edtorial Statement in Issue 1 of Snippets *(January 2000), edited by Carlo Cecchetto, Caterina Donati and Orin Percus.*

1.

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Count lists cross-linguistically vs. bootstrapping the counting system

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Gelman and Gallistel (1978) formulate three principles that characterise counting:

1. The stable order principle: There must be a stably ordered list of counting symbols;
2. The 1-1 correspondence principle: In counting, the symbols must be applied in 1-1 correspondence to the individuals in the set being enumerated;
3. The cardinality principle: The cardinal value of the set is determined by the ordinal position of the last symbol reached in the count.

It has been noticed that in the course of acquisition of counting, there is a stage (6-18 months) when the first two principles are observed, but the last one isn't. Wynn (1990) identified children who could count at least to six, observing principles 1 and 2, but who failed when asked to give 'two' or 'three' objects.

Carey (2009) capitalizes on this finding and develops a 'Quinean bootstrapping' theory of number acquisition, which has a crucial linguistic component. Carey breaks the number acquisition into three steps:

A. Learning the ordered list ("one, two, three, four, five, six,…");
B. Learning the meaning of each symbol in the list ('five' means five);
C. Learning how the list represents number.

As the first step, the child learns the count list as a list of meaningless words, very much like "eeny, meeny, miny, mo". The meaning of the count list members boils down to their relative order in the list. As the next step, Quinean bootstrapping, this set of uninterpreted symbols gradually acquires meaning. Setting aside the details of this process, the count list is a linguistic prerequisite for number acquisition. During the course of number acquisition, the members of the count list, practically, get the meaning of cardinal numerals.

Given Carey's bootstrapping theory, it is unexpected that some languages have different words for numbers in the count list and for cardinal numerals. One example is Russian, where the count list and the list of cardinals differs in the first element: 'raz', 'dva', 'tri'… (count list) vs. 'odin', 'dva', 'tri'… (cardinal list). The special count form of 'one' in Russian cannot be used in cardinal constructions or in mathematical contexts:

(1) '*raz stol' vs. 'odin stol'
1.COUNT table 1.CARD table

(2) [How many tables do you have in your apartment?]
— Odin. / *Raz.

(3) Des'at' pl'us odin / *raz budet odinnadtsat'.
10 plus 1.CARD / 1.COUNT will.be 11.
'10 plus 1 makes 11'

Hurford (1998: 4-7) lists more languages that have the same property: the words used when reciting the counting sequence are different from cardinal numerals in Chinese, Maltese, Godoberi, Archi, German, Hungarian and Basque (the latter three are less clear cases). This phenomenon is not restricted to number 1.

The differences between count lists and cardinal numerals do not immediately undermine Carey's bootstrapping hypothesis, but the hypothesis seems to predict that there should be a stage in numeral acquisition when children use the members of the count list as cardinals. To the best of my knowledge, this prediction has never been tested.

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2.

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More hybrid agreement:simultaneous agreement with two competing triggers

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In some constructions, an agreement target can optionally agree with one or another possible trigger. This is illustrated by the French example in (1) below, which presents a case of agreement between a VP and a quantitative subject involving two DPs ('a large number$_{<DP1>}$ of my friends$_{<DP2>}$').

(1) a. Un grand nombre de mes copains est génial.
b. Un grand nombre de mes copains sont géniaux.

A large number$_{[sg,masc]}$ of my friends$_{[pl,masc]}$
(a) is awesome$_{[sg,masc]}$ / (b) are awesome$_{[pl,masc]}$.

The VP (copula and predicative adjective) can agree with either DP: it can – syntactically it seems – agree with the singular head DP_1 as in (a), or – semantically it seems – with the plural embedded DP_2 as in (b). The need for both syntactically-based and semantically-based agreements has been discussed in the literature (a.o. Morgan 1984, Pullum 1985, Corbett 1991, Wechsler and Zlatić 2003, Sauerland 2004): in particular, similar cases of mixed agreement patterns such as polite plurals or *pluralia tantum* have been related to an Agreement Hierarchy (a.o. Comrie 1975, Corbett 1983, 2006, Wechsler and Hahm 2011).

The new observation that we make is that the VP can *simultaneously* agree with *both* triggers. When the two DPs that are possible agreement triggers vary in two features, the VP can agree in one feature with one DP and in the other feature with the other DP. Such hybrid agreement is illustrated in (2) for the case where the two DPs vary in number *and* gender.

(2) a. (i) ? Un grand nombre de mes copines est folle.
(ii) * Un grand nombre de mes copines sont fous.

A large number$_{[sg,masc]}$ of my friends$_{[pl,fem]}$
(i) is crazy$_{[sg,fem]}$ / (ii) are crazy$_{[pl,masc]}$.

b. (i) ? Une majorité de mes copains est fou.
(ii) * Une majorité de mes copains sont folles.

A majority$_{[sg,fem]}$ of my friends$_{[pl,masc]}$
(i) is crazy$_{[sg,masc]}$ / (ii) are crazy$_{[pl,fem]}$.

(2a-i) shows that the VP *est folle* (fem. 'is crazy') can agree in number with the masculine singular DP_1 *un grand nombre* ('a large number'), but in gender with the feminine plural DP_2 *mes copines* (fem. 'my friends'). Although possibly degraded (as indicated by ?), this sentence is clearly much better than (2a-ii), which involves the 'reverse' agreement - in gender with DP_1 and in number with DP_2. In (2b), we reproduce similar facts by exchanging the gender features on the DPs.

Note that the acceptability of (2{a/b}i) is not due to an agreement mismatch between the copula and the predicative adjective: even though there is no phonological difference between the singular form (*fou*) and the plural form (*fous*) of the adjective, the sentence (2bi) cannot be analyzed as $est_{[sg,fem]}$ $fous_{[pl,masc]}$ where the copula would agree with the head DP *une majorité*$_{[sg,fem]}$ and the adjective with the embedded DP *mes copains*$_{[pl,masc]}$. This is demonstrated by example (3) below involving the adjective *génial* ('awesome'), which takes a different form in the (masculine) singular and plural: the (masculine) plural form *géniaux* is unacceptable in the configuration of (2bi).

(3) * Une majorité de mes copains est géniaux.
A majority$_{[sg,fem]}$ of my friends$_{[pl,masc]}$ is $_{[sg]}$ awesome$_{[pl,masc]}$.

Similarly, (4) exemplifies hybrid agreement for another pair of features, i.e. when the two DPs vary in number *and* person: (4i) where the VP agrees in person with DP_1 but in number with DP_2 is perfectly acceptable, as opposed to (4ii) with reverse agreement.

(4) (i) Une majorité d'entre nous sont loyaux.
(ii) *Une majorité d'entre nous suis loyal.

A major-part$_{[sg,3rd]}$ among us$_{[pl,1st]}$
(i) are loyal$_{[pl,3rd]}$ / (ii) am loyal$_{[sg,1st]}$

We thus add a new empirical fact to the realm of hybrid agreement patterns. It is not only the case - as previously observed - that some constructions allow agreement to have several possible triggers. But we also observe that subject-VP agreement can be hybrid in the sense that different *phi*-features on a VP can be triggered by different DPs contained in the subject. Furthermore, not all hybrid agreements are acceptable, but we have observed different degrees of acceptability depending on the agreement configuration. All these facts remain mysterious under existing proposals.

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3.

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The Apex Paradox

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In Phase Theory, the complement domain of a phase head spells out. Depending on the details of Transfer/Spell-Out or the exact formulation of the Phase Impenetrability Condition (PIC), this is done whenever the current phase is complete ('strong PIC') or as soon as the next higher phase head is merged to the derivation ('weak PIC'). Either way, Phase Theory has a dirty little secret that nobody talks about: what happens to the top part? If the Spell-Out domain equals a phase head's complement domain, no matter how the condition is formulated, there remains a problem at the root of any given derivation in its final stage: when, how, and under what condition do the top-most (phase) head and its edge spell out?

At least since Emonds (1970), modern syntactic theory has shown that root (main clause, independent) and embedded (subordinate, dependent) contexts are empirically different. The need to keep root and embedded contexts distinct has occasionally been recognized in the literature (e.g., Bayer 2004, Emonds 2004), but, for the most part, it has gone unnoticed -- root CP and embedded CP are treated as structurally alike. Cartographic approaches to syntax (Rizzi 1997 *et seq.*) prove to be exceptional: by sketching a more fine-grained picture of the C-domain, a structural distinction of root and embedded contexts has been made possible qua highest functional projections such as Force. These could serve as an explanatory device for the absence of root phenomena under the assumption that they are absent in (a subset of) embedded clauses. There is in fact research within the cartographic program that aims to implement Emonds' notion on root transformations by claiming that embedded clauses lack Force (e.g., Haegeman 2012). Even within cartography, though, an isomorphic conception of root and embedded contexts prevails.

An interesting connection of this root/embedded asymmetry with Phase Theory has remained virtually undetected: a root CP notionally non-distinct from embedded CPs poses a major problem. When syntactic chunks are sent off to the interfaces periodically, phase by phase, the complement XP of a phase head H1 is spelled out only upon External Merge of the next higher phase head, H2, such that H1 and its edge remain available to the derivation (e.g., ensuring successive-cyclic movement):

(1) …[$_{H2P}$ **H2** [$_{YP}$ Y [$_{H1P}$ **H1** [$_{XP}$ … X …]]]]

Spell-Out XP

Subsequent Spell-Out of the complement YP of H2, including H1 and its Edge, is triggered by the next higher phase head, H3, and so forth, according to the 'weak' version of the PIC (Chomsky 2001: 13).

While this mechanism might well capture cyclic Spell-Out of *embedded* phases, it begs the question of how a root CP can ever be spelled out in full. In order to spell out the complete root CP, some kind of 'Spell-Out by default' has occasionally been invoked: "[Spell-Out] must be able to spell out PH [i.e. the root CP] in full, or root clauses would never be spelled out" (Chomsky 2004: 108). This raises a fundamental question: how can C_{HL} know whether a given C is free or embedded? Put negatively, how can C_{HL} be prevented from treating an embedded CP as a root CP? We call this the *Apex Paradox*.

In our view, current theorizing has not provided a satisfactory solution to the Apex Paradox. One might see recent advances in Phase Theory as providing a direction. Specifically, Cecchetto and Donati (2015), who take the position that labels constitute the driving force behind a derivation (cf. Chomsky 2013), stipulate that a root C must be 'label-less' -- as opposed to an embedded C. The absence of a label might then serve as a stop signal for the computational engine, entailing Spell-Out of whichever syntactic object is available at the end of the derivation. We do not see this as a genuine solution, though. Rather, it seems merely to shift the burden of explanation to a different locus: while it is true that root C shouldn't need a label under this approach, it seems all too convenient that C of all lexical items does *not* come with a label at all. A similar idea, that root/matrix C is morphologically undetermined, seems to underlie Richards' (2016) suggestion that matrix C in English must be null -- possibly addressing the Apex Paradox by stipulating that the apex is simply different. Lastly, a 'general restriction on merge' could act as "an ineluctable forced end-point of the derivation", as suggested by Larson (2015: 63). As it stands, the Apex Paradox might have been recognized under one guise or another, but its treatment doesn't go beyond description.

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4.

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Stressed non-Boolean und *(*and*) in German*

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Background. A long-standing issue in semantics is whether English *and* and its correlates in other languages (here AND) have both a Boolean and a non-Boolean meaning and whether one of the two meanings should be reduced to the other (cf. Krifka 1990, Winter 2001, a.o.). We challenge one empirical argument for the claim that the Boolean meaning is the basic one, brought forth by Szabolcsi and Haddican (2004). They argue that in languages like English and German a focus accent on AND is incompatible with non-Boolean (i.e. collective or cumulative) interpretations and thus reveals the Boolean meaning. This claim is based on the observation that the English equivalent of (1) is unacceptable. (As is the German sentence in (1).)

(1) #Jan UND Kai haben sich getroffen.
Jan AND Kai have REFL met
'#Jan AND Kai met.'

Data. Closer inspection of data with stressed AND shows this empirical claim to be incorrect, at least for German. (2), which differs from (1) in that it involves three conjuncts and the predicate and the individual conjuncts are salient in the context, is acceptable.

(2) Susi hatte befürchtet, dass sich ihre dummen Cousins Kai und Ron in ihrer Stammkneipe treffen würden. Außerdem hatte sie den ganzen Tag versucht, den schrecklichen Jan zu vermeiden, der mit ihr ins Kino gehen wollte. Und was ist passiert? **Kai, Ron UND Jan haben sich in der Kneipe getroffen** – und Susi musste mit allen reden.
'Susi had been worried that her stupid cousins Kai and Ron would meet in her local bar. And the whole day she tried to avoid terrible Jan, who wanted to go to the movies with her. Guess what happened: **Kai, Ron AND Jan met in the bar** – and Susi had to talk to all of them.'

Even with two conjuncts, focus on non-Boolean *und* is sometimes possible. (3) has a cumulative construal, as the acceptability of *gemeinsam* ('together, between them') shows. Szabolcsi and Haddican (2004) reject an English example similar to (3) (their (21a)), but do not provide a context.

(3) A: Ich habe gehört, der Jan oder der Kai hat gestern bei der Tombola 10 Preise gewonnen.
'I heard that Jan or Kai won 10 prizes at the tombola yesterday.'
B: Nein, Jan UND Kai haben (GEMEINSAM) 10 Preise gewonnen.
'No, Jan AND Kai won 10 prizes (BETWEEN THEM).'

Discussion. (2)-(3) show that stress on AND is compatible with a non-Boolean construal. But why is (1) not acceptable, while (2) is? It seems that standard focus theories, such as Rooth (1992), are in principle suited to explain the contrast even if AND is non-Boolean. We assume, following Sauerland (2004), that the individual conjuncts (and possibly the corresponding disjunction) count as focus alternatives of a non-Boolean conjunction. In addition, examples like (2) suggest that subpluralities formed from the denotations of the conjuncts also count as focus alternatives. If so, none of the alternatives for [[Jan und Kai]] in (1) – [[Jan]], [[Kai]], [[Jan oder Kai]] – can serve as an argument of collective *meet*, so no alternatives at sentence level can be obtained. If free focus requires at least one sentence-level alternative to be salient, (1) is predicted to be bad. [[Kai, Ron und Jan]] in (2), on the other hand, would have 'non-trivial' pluralities such as [[Kai und Jan]] among its alternatives, which are compatible with collective predicates.

This explanation raises two questions. First, assuming the alternative set from Sauerland (2004), it is unclear why the focus pattern in (2)-(3) seems to require *all* of the conjuncts to be salient. However, the same problem arises with focus on Boolean AND. Therefore, it is not tied to AND being non-Boolean. Second, if the non-Boolean meaning of AND is lexicalised, one might expect it to contrast with OR for the purposes of another alternative-sensitive semantic phenomenon, namely scalar implicatures (even though the contrast with OR is not needed to account for examples (1)–(3)). Examples like (4) show that this prediction is problematic.

(4) Die Susi oder die Anni hat gestern mindestens zwei Liter Wein getrunken. Ich weiß nicht mehr, wer.
'Yesterday, Susi or Anni drank at least two liters of wine. I don't remember who.'
a. → It is not the case that **Susi and Anni each drank at least two liters of wine**.
b. ↛ It is not the case that **Susi and Anni drank at least two liters of wine between them**.

The disjunction in (4) seems to implicate (4a), the negation of a sentence with Boolean AND, rather than (4b), the negation of a sentence with non-Boolean AND. It is unclear how the implicature (4a) could be derived under a non-Boolean theory of AND.

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5.

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Two types of subordinate subject contact relatives

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A variety of English dialects and contact languages, such as Gullah (Mufwene 1986), Tok Pisin (Woolford 1978), Belfast English (Henry 1995), and African American English (Sistrunk 2012) allow subject relatives that lack an overt relativization marker:

(1) There's one woman on our street [Ø went to Spain last year].

These constructions are typically called subject contact relatives (SCRs). Researchers have hinted that SCRs from different varieties may have different properties, and therefore different analyses (den Dikken 2005:700, Haegeman et al. 2015:62). However, these possible differences and their ramifications have not been explored.

Based on judgments in the literature regarding the acceptability of a resumptive pronoun (RP) inside the clause, I suggest that there are (at least) two types of SCR.

One type allows a RP in the SCR:

(2) There's one woman on our street [Ø{__/she} went to Spain last year].

This type of SCR is found in Belfast English (Henry 1995:126) and Tok Pisin (Woolford 1978:222).

A second type does not allow a RP in SCR:

(3) I want you to meet somebody [Ø{__/*he} bin on my mind all my life].
'I want you to meet somebody [that's] on my mind all my life.'

This type of SCR is found in Gullah (Mufwene 1986:10, 15, modified) and likely found in African American English (AAE), since RPs typically do not occur in ex-slave corpora (e.g., Tottie & Rey 1997, Tottie & Harvie 2000).

The above observation helps fill in a gap in our understanding of the status of SCRs. Haegeman et al. (2015) convincingly illustrate that Belfast English SCRs behave like subordinate clauses, rather than independent clauses with optional subjects as suggested by Henry (1995) and den Dikken (2005). However, Haegeman et al. do not specifically analyze AAE SCR, which have different properties than Belfast English SCRs. I suggest that the fact that RPs are not allowed in AAE SCRs indicates that these constructions are also subordinate clauses. If they were independent clauses with an optional overt subject, the personal pronoun should typically be licit; however, this is not the case.

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6.

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Do superiority-violating multiple singular which-*questions have pair-list readings?*

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Sentences like (1) with multiple singular *which*-phrases give rise to a *pair-list* (PL) and *single-pair* (SP) reading.

(1) Which boy likes which girl?

A complete answer to the PL reading of (1) determines for each boy which girl he likes. A complete answer to the SP reading is about a single boy-girl pair.

Kayne (1983) and Pesetsky (1987), among many others, point out that multiple *wh*-questions with *which*-phrases tolerate superiority violations, as in (2).

(2) Which girl does which boy like?

While the grammaticality of (2) is unquestionable, there is disagreement among scholars as to whether questions like (2) have PL readings. Specifically, Barss (2000) and Bošković (2001) claim that they only have SP readings, while Pesetsky (2000) and Kotek (2014) assume that they also allow PL readings, just like their superiority-obeying counterparts.

We conducted an online experiment to investigate which hypothesis is correct. The task of our experiment was to judge the felicity of question-answer pairs on a scale of 1 (very unnatural) to 5 (very natural). There were 12 critical items, 6 of which involved superiority-obeying questions like (1) and 6 of which involved superiority-violating questions like (2). All of them were paired with a PL answer. They were presented with 6 filler items and 24 items from a separate experiment. The order of presentation was randomized for each participant, except that the first two items were always filler items.

34 self-claimed native speakers of English were recruited on Amazon Mechanical Turk and paid $0.40 for their participation. The data from six of them were excluded from the analysis, as they did not provide correct answers to more than two filler items (where the correct answers are those that fall into the interquartile range calculated with all the subjects). For three of the fillers, the median rating was 5, and for two, it was 2 and for one, it was 1.

The results (available on https://github.com/patrl/superiorityExperiment) are summarized in Figure 1. The median rating (indicated by a thick horizontal bar) is 5 for both conditions, suggesting that PL readings are possible for both superiority-obeying and superiority-violating multiple singular *which*-questions. This runs counter to Barss's and Bošković's view.

However, we also observe a significant difference between the conditions such that superiority-violating questions are judged as less natural with PL answers than superiority-obeying ones (Wilcoxson signed-rank test: W=1033, Z=–4.463, $p < 0.001$). Furthermore, a by-subject breakdown of the data indicates that this difference is driven by a subset of the subjects, suggesting inter-speaker variation. Specifically, as shown in Figure 2, a number of subjects judged the superiority-violating questions with PL answers worse than the superiority-obeying questions, while others judged them more or less equally good. If such inter-speaker variation exists, a theory of PL readings needs to be able to explain the existence of speakers for whom superiority-violating questions do not have PL readings.

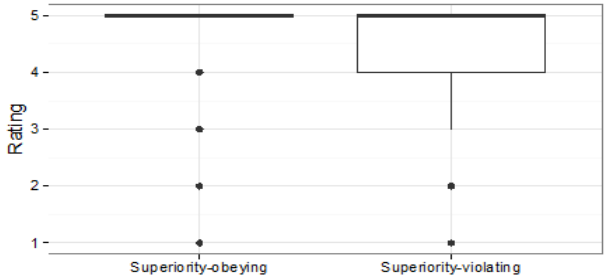

Figure 1: The ratings for the two conditions of the experiment.

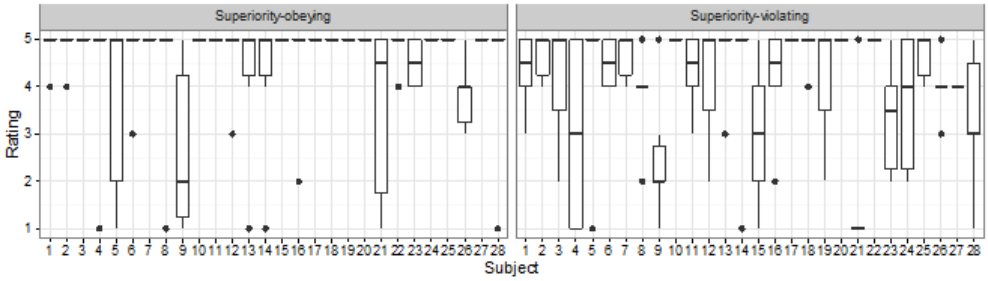

Figure 2: A by-subject breakdown of the data in the two conditions. Each subject is identified by a number on the x-axis.

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7.

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He himself *and* I

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John sees himself in a mirror, but fails to recognize that it's him. He thinks, 'that guy is an idiot', but not 'I am an idiot'. (1) has a reading on which it is true in this situation (the 'de re' reading), and a reading on which it is false ('de se').

(1) John thinks that he is an idiot.

This snippet concerns the use of *he himself* in sentences of this kind. The readings of *he himself* in (2) are notoriously more limited than those of *he* in (1), and pose a puzzle.

(2) John thinks that he himself is an idiot.

According to a received view, *he himself* is obligatorily de se. If true, this means that (2) can only describe a situation in which John thinks 'I am an idiot.' This view stems from a philosophical tradition beginning with (Geach 1957; Castañeda 1968), and has subsequently been endorsed by linguists (Chierchia 1990; Higginbotham 2003). Castañeda called *he himself* a 'quasi-indicator'. The hallmarks of quasi-indicators are (i) the inability to refer to an individual other than an attitude holder and (ii) unambiguous de se construal. *He himself* seems to have the property in (i), and differs in that respect from *he*, as (3) shows. In the years following Castañeda's influential paper, it was assumed that any anaphor displaying (i) is a quasi-indicator, and hence also displays (ii). This assumption underpins a wealth of work on the semantics of attitude reports including Heim 2001, 2002; Schlenker 2000; von Stechow 2002, 2003.

(3) a. Speaking of Bill_i, John thinks that he_i is an idiot.
b. *Speaking of Bill_i, John thinks that $[\text{he himself}]_i$ is an idiot.

But it turns out that *he himself* allows a de re reading as well under certain circumstances. Consider again the story above: John, unaware that he is looking in a mirror, thinks 'that guy is an idiot'. In response to the question in (4), it would make sense to answer (2), with focal stress on *himself*.

(4) I don't understand the story. Who does John think is an idiot?

So *he himself* has two alternative uses in sentences like (2), as a de se pronoun and as a focused de re pronoun. The puzzle this poses is: why precisely these two uses? Or, to put it another way, how does focus come to permit de re construal?

The test in (4) builds on an insight from Schlenker (2000: 59), who noted that the facts about the interpretation of *he himself* are unclear, and suggested that '*himself* might be used as a device of focalization'. A congruent answer to the question in (4) assigns focus to the subject of *think*'s complement; on this view, the reflexive can serve as a device for marking this. Maybe one can maintain that, without this motivation for use of the emphatic reflexive, what is emphasized is that the reported belief is de se.

These facts show that *he himself* is not in fact a quasi-indicator. Until recently, the other prime candidates as exemplars of quasi-indicators were logophoric pronouns: the distribution of these elements is limited to the scope of attitude verbs, and they unambiguously pick out the attitude holder. But they too allow de re readings, at least in the Niger-Congo language Ewe (Pearson 2013, 2015). Perhaps there are no quasi-indicators?

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8.

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A note on grammaticality and analyticity

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There are logically contradictory sentences like "John is smoking and is not smoking" that are grammatical. But much recent work (Barwise & Cooper 1981, von Fintel 1993, Gajewski 2008, Chierchia 2013) assumes that in some cases analytic sentences (i.e. contradictions and tautologies) are ungrammatical *qua* their analyticity. To predict whether an analytic sentence is ungrammatical, Gajewski 2002 defines the concept of L-analyticity that later work by Gajewski (2008) and Chierchia (2013) makes use of.

Consider how Gajewski's (2002) proposal captures the difference between the ungrammatical contradiction (1a) and the grammatical (1b) and (1c).

(1) a. *Some boy except John slept.
b. John is smoking and is not smoking.
c. Every woman is a woman.

Gajewski adopts for the exceptive (1a) an analysis that amounts to (2) (see also Gajewski 2008). (2) is a logical contradiction which following von Fintel he uses to explain its ungrammaticality. Gajewski notes though that (1b) and (1c) are also classical logical contradictions, they are nevertheless grammatical.

(2) $[\exists x \in \{y : \mathbf{boy}(y) \wedge y \neq \mathbf{John}\}\ \mathbf{sleep}(x)] \wedge \neg[\exists x \in \{y : \mathbf{boy}(y)\}\ \mathbf{sleep}(x)]$

Gajewski proposes to capture the difference between (1a) and (1b/c) by appeal to the *Logical Skeleton* of the sentences. To define this notion, he assumes a distinction between logical and non-logical lexical items. Then the logical skeleton of a logical form representation is defined by replacing all maximal constituents that dominate only non-logical lexical items with variables of the corresponding type and binding these variables by a lambda-operator with maximal scope over the sentence. The logical skeleton of (2) is given in (3):

(3) $\lambda\mathbf{N},\mathbf{V} \in D_{et}\ \lambda\mathbf{A} \in D_e\ [\ [\exists x \in \{y : \mathbf{N}(y) \wedge y \neq \mathbf{A}\}\ \mathbf{V}(x)] \wedge \neg[\exists x \in \{y : \mathbf{N}(y)\}\ \mathbf{V}(x)]\ ]$

Gajewski proposes that logical forms and the corresponding sentences are ungrammatical if their logical skeleton is a constant function in the argument positions introduced by replacing non-lexical material. It is easy to verify that (3) is false for any three arguments. But for the grammatical (1b) and (1c), the logical skeletons shown in (4a) and (4b) respectively aren't constant.

(4) a. $\lambda\mathbf{V},\mathbf{V'} \in D_{et}\ \lambda\mathbf{A} \in D_e\ [\mathbf{V}(\mathbf{A}) \wedge \neg\mathbf{V'}(\mathbf{A})]$
b. $\lambda\mathbf{N},\mathbf{N'} \in D_{et}\ \mathbf{every}(\mathbf{N})(\mathbf{N'})$

Though influential and interesting, Gajewski's proposal remains to be worked out in detail. We point out one issue that ought to be considered. Namely, the sentences in (5a) and (5b) are like (1b) and (1c) grammatical. But current semantic analyses predict both to be L-analytic.

(5) a. John is and isn't smoking.
b. Every woman is one.

Specifically, both sentences in (5) involve a variable binding dependency such that a tautology or contradiction arises as shown in (6).

(6) a. $\lambda \mathbf{V} \in D_{et}\ \lambda \mathbf{A} \in D_{e}\ [\mathbf{V}(\mathbf{A}) \wedge \neg \mathbf{V}(\mathbf{A})]$
b. $\lambda \mathbf{N} \in D_{et}\ [\lambda \mathbf{N'}\ \mathbf{every}(\mathbf{N'})(\mathbf{N'})](\mathbf{N})$

L-analyticity also results if the sentences in (5) are analyzed as cases of ellipsis. In fact, once the licensing of destressing is taken into account, even (1b) and (1c) are L-analytic. Consider (1c). Assuming that destressing of the second occurrence of *woman* is licensed by an entailment relation from the preceding occurrence (Rooth 1992 and others), it is natural to imagine (1c) as involving a logical skeleton like (7), which is tautological for two arguments.

(7) $\lambda \mathbf{N} \in D_{et}\ \lambda \mathbf{N'} \in \{\mathrm{M} \in D_{et} : \forall \mathrm{x}\ \mathbf{N}(\mathrm{x}) \rightarrow \mathrm{M}(\mathrm{x})\}\ \mathbf{every}(\mathbf{N})(\mathbf{N'})$

We leave it for future work to determine whether Gajewski's proposal can accommodate cases such as (5). An alternative avenue of explanation may built on recent empirical work that finds sentences similar to (1b) to be rather acceptable (Alxatib & Pelletier 2011, Sauerland 2011, Alxatib *et al.* 2013, and others).

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[*Author's note following publication*. It recently came to my attention that the point made here was independently discussed by J. Gajewski in a 2009 handout entitled "L-triviality and grammar." In this handout, Gajewski attributes the observation to D. Fox.]

9.

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Root infinitives on Twitter

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Root Infinitives are said to occur in limited cases in German (the same is claimed for English, see for example Huddleston and Pullum 2002): in exclamative 'Mad Magazine'-readings (1a), in subjectless root wh-clauses (1b) or (usually also subjectless) non-wh infinitives (1c) which are interpreted as imperatives (Repp 2009).

(1) a. Ich – (und) die Fenster putzen? Niemals!
me - (and) the window clean? never!
'Me, clean the window? Never'
b. Wohin fahren?
where go?
'Where to go?'
c. Den Eierkuchen wenden{./!}
the pancake flip
'Flip the pancake{./!}'
(examples from Repp (2009, ex. 4))

However, on the social media platform Twitter, we find root infinitives that do not fall under these categories. Rather, they report a personal experience in a pseudo-generic statement:

(2) a. Erstmal barfuß in Hundescheiße laufen. Guten Morgen!
first barefoot in dog_poo walk. good morning!
'Stepping in dog poo first thing (in the morning). Good morning!'
b. Dem Tag ein entschiedenes "Nein!" entgegenrufen wollen, aber nur ein müdes
the day a decisive "no!" shout_at want, but only a tired
"Nccchhhh..." rausbringen und sich in einem Büro wiederfinden.
"Nccchhh…" get_out and self in an office find.
'Wanted to greet the day with a decisive "No!", but could only get out a tired
"Nccchhh..." and found myself in an office.'
c. Durch eine Scheibe Toast einen Schlag bekommen.
by a slice toast a shock get
'Get /got zapped by a piece of toast.'

Existing analyses of another genre, diary ellipsis, have it that subjects and auxiliaries can be elided, but that there can be no root infinitives. While sentences like (2c) could potentially lend themselves to such an analysis, sentences like (2a,b) do not,

since they contain unambiguous infinitives (‘laufen’, ‘wollen’, ‘rausbringen’, ‘wiederfinden’). Note that the punctuation indicates that the authors think of these utterances as full clauses.

Bare (non-wh) root infinitives like (1c) can, according to Reis (2003), receive one of two interpretations: (i) directive as in (1c) or (ii) what she calls optative/expressive, as in (4):

(4) a. Ah, dem Jauch alles beantworten, was er fragt.
'Oh, to answer (Jauch) all that he asks.'
b. Noch einmal 20 sein.
'To be 20 again!'
(exs. from Reis 2003, my translations)

Reis proposes a modal analysis of the meaning of German wh-infinitives like (1b), based on an analysis for English wh-infinitives by Bhatt (2000). She claims (p. 180) that non-wh root infinitives in German also always have a modal interpretation (except for the 'Mad Magazine'-cases as in (1a)). In contrast, the examples in (2a,b) cannot have a modal interpretation. In (2a), stepping in dog poo is neither deontically or optatively modalized. And although (2b) arguably could include a covert possibility modal in the second clause (= 'be able to speak'), the third clause is clearly unmodalized. Instead, a diary-like interpretation is reasonable, since the authors presumably report their own recent experiences. If one were to rephrase the meaning of these statements, the infinitive clauses would receive the status of nominalizations, references to facts/events that are (implicitly) evaluated:

(5) a. This is a bad start to the day (for me): Stepping in dog poo first thing in the morning. (~ 2a)
b. Do you know what this feels like: Wanting to greet the day decisively but only managing a tired "Nccchhh" and finding yourself in an office. (~ 2b)

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10.

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Another problem for alternative-based theories of plurality inferences: the case of reduplicated plural nouns in Japanese

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Bare plurals like *books* trigger plurality inferences in U(pward)E(ntailing) contexts, (1a), but not in D(ownward)E(ntailing) contexts, (1b). Furthermore, in non-monotonic contexts, the plurality inferences are observed in the UE part of the meaning but not in the DE part of the meaning, (1c) (Spector 2007).

(1) a. John read books.
b. John didn't read books.
c. Only John read books.

Sauerland (2003), Spector (2007), Zweig (2009) and Ivlieva (2014) develop alternative-based theories of the phantasmagoric behaviour of plurality inferences. Putting the details aside, all of them crucially exploit singular counterparts of plural bare nouns, e.g. *book*.

Magri (2011) and Ivlieva & Sudo (2015) discuss potential problems for these theories posed by so-called 'object mass nouns' (e.g. *change*) and 'mass plurals' (e.g. *clothes*), respectively. The gist of their observations is that these nouns give rise to plurality inferences, despite the fact that they seem to lack singular counterparts. For example, in UE contexts, (2a), *change* implies that there is more than one coin, which disappears in DE contexts, (2b). And in non-monotonic contexts, (2c), the plurality inference is only observed in the UE part of the meaning.

(2) a. John has change.
b. John does not have change.
c. Only John has change.

Here I observe that reduplicated plural nouns in Japanese create the same problem. Generally, nouns in Japanese are number neutral, (3).

(3) a. ichi-rin-no hana
one-CL-GEN flower
'one flower'
b. takusan-no hana
many-ACC flower
'many flowers'

However, there are some exceptional plural nouns, which are formed by reduplicating a simple noun, (4). The relevant morphological process is unproductive, and (4) covers most of the existing reduplicated nouns.

(4) a. hito-bito person-person
b. yama-yama mountain-mountain
c. kuni-guni country-country
d. mura-mura village-village
e. hoshi-boshi star-star
f. kami-gami god-god
g. hi-bi day-day
h. hana-bana flower-flower

These nouns are plural and incompatible with singular reference, e.g. *hana-bana* can be substituted in (3b), but not in (3a). They are also not 'associative plurals', unlike plural nouns of the form *N-tachi* (see Nakanishi & Tomioka 2004), and can only refer to homogeneous groups, each member of which is describable by the noun.

Crucially, the plurality inferences of the reduplicated plural nouns behave exactly like those of English plural nouns. Specifically, (5a) has a plurality inference that more than one seasonal flower is involved, while (5b) does not. Moreover, (5c) has a plurality inference only in the UE part of the meaning.

(5) a. Taro-wa kisetsu-no hana-bana-o mottekita.
Taro-TOP season-GEN flower-PL-ACC brought
'Taro brought seasonal flowers."
b. Taro-wa kisetsu-no hana-bana-o motteko-nakatta.
Taro-TOP season-GEN flower-PL-ACC brought-NEG
'Taro didn't bring seasonal flowers."
c. Taro-dake-ga kisetsu-no hana-bana-o mottekita.
Taro-only-NOM season-GEN flower-PL-ACC brought
'Only Taro brought seasonal flowers."

This observation poses a challenge to the theories of plurality inferences that rely on singular nouns, as Japanese simply lacks singular nouns. One could assume that the crucial alternative includes numeral *one,* e.g. (3a), but such a move is theoretically costly, as what counts as an alternative needs to be structurally constrained (Fox & Katzir 2011, Katzir 2007).

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11.

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De re *readings of nested* which-*phrases in embedded questions*

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It is well known that *which*-phrases give rise to *de re/de dicto* ambiguity (Groenendijk & Stokhof 1982, 1984, Rullmann & Beck 1998, Sharvit 2002, among others). For example, the *de re* reading of (1) doesn't entail that the speaker's son knows that the relevant books are Russian novels.

(1) My son knows which Russian novels I haven't opened.

Suppose I reserve a part of my bookshelf for Russian novels, and my son doesn't know what kind of books they are or who wrote them, but knows which ones I haven't opened (e.g., because they are clean). In this situation (1) is true under the *de re* reading. The observations here and below hold for other question-embedding predicates like *ask, wonder, tell,* etc., but I will focus on *know* for reasons of space.

Adding a prepositional phrase to the *which*-phrase does not matter, as in (2).

(2) My son knows which novels by Russian authors I haven't opened.

The complex *which*-phrase here has a number of readings, but crucially, there is a reading where everything in the *which*-phrase is *de re* (which I call a 'completely *de re* reading'). Only under this reading is (2) true in the above situation.

I observe that the completely *de re* reading disappears when the PP is also a *which*-phrase (a construction Heim 1994 calls 'nested *which*-phrases'; see also Elliott 2015). Thus, (3) is not true in the situation given above.

(3) My son knows which Russian novels by which authors I haven't opened.

Standard views of *de re/de dicto* ambiguity of *which*-phrases do not offer a straightforward account of this (see von Stechow 1996:73 for related discussion). In fact, assuming that all novels have authors, they cannot even distinguish the completely *de re* readings of (1) and (3). Specifically, Karttunen's (1977) theory and its descendants would analyze the completely *de re* readings of the embedded questions in (1) and (3) as follows:

(4) a. $\{\ \lambda w'.\neg open_{w'}(spkr,x)\ :\ Russian\text{-}novel_{@}(x)\ \}$
b. $\{\ \lambda w'.\neg open_{w'}(spkr,x)\ :\ Russian\text{-}novel_{@}(x) \wedge \exists y\ [author_{@}(y) \wedge by_{@}(x,y)\ ]\ \}$

Since all novels have authors, these two sets are equivalent. Consequently, (3) is predicted to be true in the above context where (1) is, contrary to fact. An analogous problem arises under other theories such as Groenendijk & Stokhof's (1982, 1984)

partition semantics, according to which the embedded questions in (1) and (3) are translated into:

(5) a. $\lambda w.\ \{ w' : \{x : \text{Russian-novel}_w(x) \wedge \neg \text{open}_w(\text{spkr},x)\} = \{x : \text{Russian-novel}_w(x) \wedge \neg \text{open}_{w'}(\text{spkr},x)\} \}$

b. $\lambda w.\ \{ w' : \{\langle x,y\rangle : \text{Russian-novel}_w(x) \wedge \text{author}_w(y) \wedge \text{by}_w(x,y) \wedge \neg \text{open}_w(\text{spkr},x)\} = \{\langle x,y\rangle : \text{Russian-novel}_w(x) \wedge \text{author}_w(y) \wedge \text{by}_w(x,y) \wedge \neg \text{open}_{w'}(\text{spkr},x)\} \}$

This observation suggests that *de re* readings of *which*-phrases in embedded questions are constrained somehow. In particular, it seems that each *wh*-phrase must bind a variable in the body of the question, so to speak, so that it is not merely functioning as an indefinite. This would rule out (4b)/(5b). However, it is unclear where in the grammar this constraint should be enforced.

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