Scalar and Non-Scalar Implicatures
of *Might* and *Some**

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1 Introduction

- I'm going to talk about implicatures associated with the existentials *might* and *some*

- first I'll give (very brief) background on standard scalar implicatures for existentials, and introduce the notion of lower bound strengthening implicatures

- then I'll disambiguate these two kinds of implicated content with respect to their interaction with metalinguistic negation

- finally I'll discuss the interaction between implicated content and focus

2 Two Kinds of Implicatures for Existentials

2.1 Standard Scalar Implicatures

- standard scalar implicatures for existentials impose an upper bound

  - *some* implicates ¬*all*; *might* implicates ¬*definitely*

- standard account (conceptually rooted in Horn 1972):

  - existentials come associated with a scale ordered by asymmetric entailment[1]

  - <some, all>
    <might, definitely>

  - if a scalar element is asserted, implicate the negation of its stronger scalemates[2]

semantic contribution of the existential
enriched with ¬all implicature
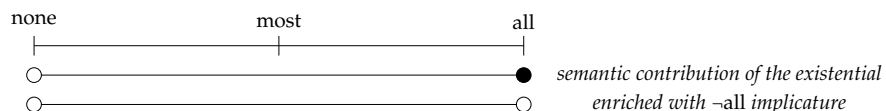
2.2 Lower Bound Strengthening Implicatures

- *might* and *some* are strictly existential

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[1]Or at the very least, a set of elements over which a partial order can be defined (Hirschberg 1985).
[2]See e.g. Sauerland (2004) for a recent(ish) formal implementation of the reasoning underlying this procedural stipulation.

- but lower bound strengthening inferences are common

  (1) a. **A:** Paul might come to the party.
         B: Oh, I didn't know that! We should get extra chips.
      b. **A:** Paul ate some cake.
         B: Well, there goes his diet!

- In (1a), **B** takes **A** to be communicating that there is a fairly substantial probability that Paul will come to the party; in (1b), **B** takes **A** to be communicating that Paul ate a fairly substantial amount of cake. These are clearly not entailments:

  (2) a. Paul might come to the party, but it's extremely unlikely, and not worth worrying about.
      b. Paul ate some cake, but it was an extremely small amount, just a sliver.

- Rudin (to appear) gives a formal account of these implicatures, which I will sketch here:

  - truly trivial possibilities, and truly trivial quantities, aren't likely to be relevant to the QUD

  - therefore, when a speaker makes a claim with *might/some*, listeners, assuming cooperativity, will infer that the speaker intended to convey a relevantly large amount of probability/a relevantly large quantity (with 'relevantly large' defined relative to the QUD)

semantic contribution of the existential
contribution of ¬all implicature
contribution of lower bound strengthening
full pragmatically enriched package
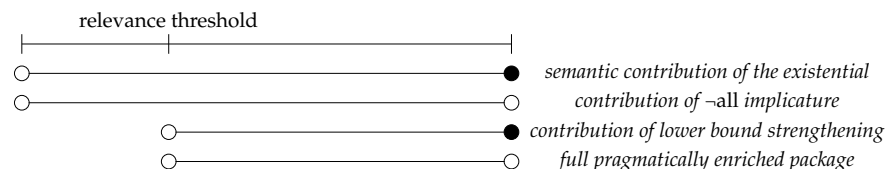
- pleasantly, Degen & Tanenhaus (2014) produced fine-grained quantitative data showing that *some gumballs* is rated more and more natural as the amount being described approaches half of the total gumballs, followed by a sharp dropoff (presumably due to the availability of lexically salient competitors like *most*)

- this lends some experimental validity to the notion that *ceteris paribus* there is a preference for stronger interpretations of existentials

3 Interaction with Metalinguistic Negation

- standard scalar implicatures can be the target of metalinguistic negation:

  (3) a. **A:** Paul might come to the party.
         B: You're wrong that he MIGHT come—he'll DEFINITELY come!
      b. **A:** Paul ate some cake.
         B: He didn't eat SOME cake—he ate it ALL!

- in each case the implicated content is rejected, but not the semantic contribution of the existential

- lower bound strengthening implicatures cannot be targeted by metalinguistic negation:

(4) a. **A:** Paul might come to the party.
      B: # You're wrong that he MIGHT come, because it's extremely unLIKEly.
   b. **A:** Paul ate some cake.
      B: # He didn't eat SOME cake, because he only ate half a FORKful.

- GENERALIZATION: standard scalar implicatures are lexical, i.e. derived from alternatives to the lexical item—therefore they can be targeted by metalinguistic negation in order to reject only the implicated content

- however, lower bound strengthening implicatures are only calculated when the sentence is evaluated relative to the QUD—so it doesn't make sense to target the specific lexical item with metalinguistic negation

4 Interaction with Focus

- it is well known that focus on an existential foregrounds/strengthens the standard scalar implicature

- however, focus seems to background/weaken the lower bound strengthening implicature instead

(5) a. **A:** Paul MIGHT come to the party.
      B: ? Oh, I didn't know that! We should get extra chips.
   b. **A:** Paul ate SOME cake.
   **B:** ? Well, there goes his diet!

- focus generates a set of alternatives (Rooth 1992); since our account of scalar implicatures crucially relies on reasoning about alternatives, it's not surprising that introducing alternative-generating operators might make those alternatives more salient and therefore foreground implicatures generated by considering them

- but the lower bound strengthening implicature is not incompatible with the standard scalar implicature, so it's not clear *prima facie* why making the standard scalar inference more palpable should make the lower bound recede

- PROPOSAL: differential effects of focus on standard scalar and lower bound strengthening implicatures stem from the fact that focus *widens the domain of alternatives*

  – Hirschberg (1985): if alternatives beyond those on the basic scale are salient in a given context, a much larger variety of implicatures can be generated

  – Degen & Tanenhaus (2014): explicit invocation of alternatives can strengthen their intrusion into pragmatic reasoning about what is conveyed by the use of a scalar term

  – Rooth (1992): *Constraint on scales:* If C is the underlying set of a scale used in computing the implicatures of a sentence a, then $C \subseteq [\![a]\!]^{\mathrm{f}}$

- ASSUMPTION: scales associated with existentials are constructed from conventionally salient alternatives to the scalar term

- HYPOTHESIS: when you generate the set of focus alternatives, you bring a lot more stuff to salience; potential scalemates brought to salience by the generation of the set of focus alternatives are added to the scale

- standard implicature generation over the new scale

(6) (HYPOTHETICAL) ALTERNATIVE-ENRICHED SCALES
    <some, a few, most, nearly all, all>
    <might, somewhat likely, likely, nearly certain, definitely>

- standard implicature generation over enriched scales doesn't just strengthen the implicature that there is an upper bound: it *lowers* the upper bound

  – if the upper bound implicated by the scalar implicature over alternative-enriched scales falls underneath the QUD's relevance threshold, then the lower bound strengthening implicature can't go through without contradiction
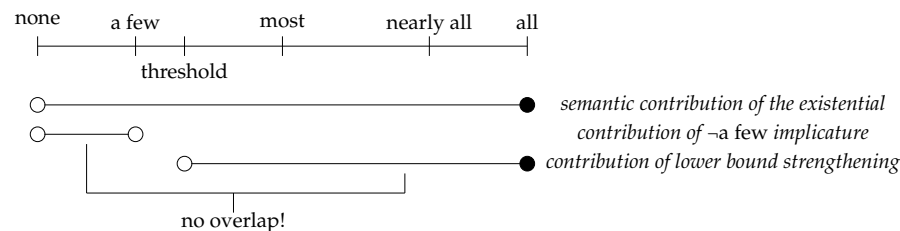
- this account makes clear quantitative predictions, *à la* Degen & Tanenhaus: focused *SOME gumballs* should have lower naturalness ratings than unfocused *some gumballs* for numbers of gumballs outside of the subitizing range

5 Conclusion

- I've presented here a brief empirical characterization of a (to my knowledge) unremarked on variety of implicature accompanying existential operators: the lower bound strengthening implicature

- lower bound strengthening implicatures, unlike standard scalar implicatures, are not targetable by metalinguistic negation, and are weakened, not strengthened, when the existential is focused

- the former fact can be explained by virtue of the nature of the implicature generation mechanism; the latter can be explained as an effect of focus bringing to salience a wider variety of alternatives than are conventionally triggered by the presence of the existential

References

Degen, Judith & Michael K. Tanenhaus. 2014. Processing scalar implicature: A constraint-based approach. *Cognitive Science*. **Hirschberg, Julia Bell. 1985.** *A theory of scalar implicature*. University of Pennsylvania dissertation. **Horn, Laurence R. 1971.** *On the semantic properties of logical operators in English*. UCLA dissertation. **Rooth, Mats. 1992.** A theory of focus interpretation. *Natural language semantics* 1: 75-116. **Rudin, Deniz. to appear.** Deriving a variable-strength *might*. *Proceedings of Sinn und Bedeutung 20*, god willing. **Sauerland, Uli. 2004.** Scalar implicatures in complex sentences. *Linguistics and philosophy* 27: 367-391.