

MOST

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Ever since Horn 1972, it has been a received view that the lexical meaning of scalar quantifiers specifies only a lower bound. *Most*, it is assumed, codes ‘more than half’, also covering ‘all’. To account for *most*’s common interpretation, ‘more than half but less than all’, linguists have assumed a ‘not all’ implicature. I argue that the implicature analysis cannot account for most of the discourse data, and that the upper bound on *most* is independent of a ‘not all’ implicature. Furthermore, based on questionnaire results, I propose a different semantics-pragmatics division of labor. *Most* denotes ‘a proper subset which is the largest subset given any partitioning of the complement subsets’. Thus, *most*’s lexical meaning does provide an upper bound, but pragmatic inferences may nonetheless sometimes render its use compatible with states of affairs in which ‘all’ is true.*

1. INTRODUCTION. *Most* is interesting not only for its own sake, that is, its lexical meaning and the variety of enriched pragmatic interpretations it gives rise to in natural discourse. *Most* can also serve as a test case for theories about pragmatic inferencing, semanticization, and most crucially, for the division of labor between the (lexical) semantics and the pragmatics of scalar quantifiers. Conveyed meanings necessarily combine semantic meanings with pragmatic meanings. But what should the division of labor between semantics and pragmatics be? In practice, pragmatics has often been delineated by Gazdar’s (1979) definition, namely, that it is responsible for those aspects of meaning not covered by semantics. I argue here that pragmatics cannot always provide ‘the rest’ of the meaning required to complement the meaning taken as semantic. I propose a ‘just that’ semantics for *most*, where its lexical meaning accounts for the upper-bounded interpretation commonly assigned to its pragmatics. The result is a new division of labor between *most*’s coded and inferred interpretations.

Consider the following, typical example of *most*.

- (1) **MOST** UCSB students have 0 . . . 1 . . . 2 . . . 3 or 4 drinks per week (4000 don’t drink at all). (An anti-drinking ad at UC Santa Barbara, February 2002)

Linguists of all stripes are in agreement that what the writers of 1 are committed to is ‘more than half but not all UCSB students’. They further agree on the lexicon-pragmatics division of labor for *most*. The lexical meaning of *most* contributes to this interpretation only a lower bound of ‘more than half’, which is compatible with ‘all’ (in addition to the neo-Griceans, see semanticists such as Chierchia & McConnell-Ginet 1990,

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Keenan 1996).¹ A pragmatic inference accompanying the use of *most* contributes the upper bound via a ‘not all’ implicature. I refer to this division of labor as the received view. The neo-Griceans have proposed a GENERALIZED CONVERSATIONAL IMPLICATURE status for the ‘not all’ interpretations of scalar quantifiers, but non-neo-Griceans must also assume that ‘not all’ is at least a frequent pragmatic inference (of whatever nature), even if they are not committed to a concept of generalized conversational implicature.²

Note, however, that not everybody formulates the pragmatic inference quite so strongly (as Gazdar (1979), Atlas and Levinson (1981), Horn (1984), and Levinson (1987, 1991, 2000) do). Soames (1982), Horn (1989), Gamut (1991), Davis (1998: 77), and Sevi (2003) avoid attributing a commitment to ‘not all’ to the speaker. They prefer to attribute to the speaker a lack of commitment to ‘all’ (i.e. the speaker is not in a position to claim ‘all’). Hirschberg (1991) suggests that the ‘not all’ implicature is a disjunction: ‘either not all, or the speaker does not know that all’, and Leech (1983:86), Matsumoto (1995), and Chierchia (2004) suggest that pragmatic factors determine which of the two is adopted. While these points are well-taken, when referring to ‘not all’ in this article I include all versions of ‘all’-excluding inferences.³

I argue that the default mechanism proposed is actually inapplicable in the typical *most* cases. ‘Not all’ implicatures, I claim, are not in fact normally generated by speakers. For the most part, the purported implicatures are incompatible with the speaker’s goal in uttering the *most* proposition. If so, the received view cannot account for why the speaker is nonetheless seen as committed to an upper-bounded reading in the majority of cases. I propose that the upper bound on *most* does not depend on an ‘all’-exclusion implicature, and this is why *most* is interpreted as upper-bounded even in the absence of an ‘all’-exclusion implicature. *Most* codes ‘a proper subset which is the largest subset given any partitioning of the complement subsets’. It thus carries a lower- as well as upper-bounded range as its lexical meaning, the extension of which is 50% plus something, up to 100% minus something. Questionnaire results for *more than half* and *most* confirm that whereas the former is indeed only lower-bounded, *most* must be analyzed as lexically upper-bounded. Speakers using a *most* proposition then only assert something of some majority. They are simply silent, however, about the minority complement set. Previous observations about the interpretation of *most* (as compatible with ‘all’) can be explained, once we distinguish between the meaning of X and the states of affairs it is compatible with (as proposed by Koenig 1991 for the number names). Parts (as *most* is) are often compatible with wholes (‘all’).

Quantitative findings for this article were originally based on the Santa Barbara Corpus of Spoken American English (SBC—Du Bois et al. 2000, 2003, over 100,000 words, 20 examples).⁴ They were later supported by all the occurrences of quantifier

¹ See, however, Horn 1972, 1989:§4.1.1 for historical views of *some* as bilateral.

² Non-neo-Griceans who share the intuition that Quantity scalar implicatures are commonly generated include Sperber and Wilson (1995:276), Koenig (1991), Foolen (1991), and Chierchia (2004).

³ However, there are semanticists (e.g. Landman (2000:ch. 5, p.c.)) who do not think that the scalar upper-bound implicatures are generated in the default case. Most of the criticism in §3 does not apply to them, but see §3.2 for a critique of Landman’s proposal.

⁴ SBC is available at Linguistic Data Consortium, University of Pennsylvania: (Part 1) <http://www ldc upenn edu/Catalog/CatalogEntry.jsp?catalogId=LDC2000S85>, (Part 2) <http://www ldc upenn edu/Catalog/CatalogEntry.jsp?catalogId=LDC2003S06>, or at TalkBank: <http://www talkbank org/media/conversation/SBCSAE/>.

most in the London-Lund Corpus of spoken British English (LLC—Svartvik & Quirk 1980, about 600,000 words, 96 examples), and from the first person narratives in Morris 1994:71–192 (11 examples). In addition, occasional examples were drawn from the Collins COBUILD Corpus, the British National Corpus (BNC), the Longman Spoken American Corpus (LSAC, 5 million words),⁵ and the World Wide Web (via WebCorp, a corpus-style engine),⁶ as well as from miscellaneous Hebrew and English examples I encountered.⁷

In what follows I first analyze the SBC data according to the (neo-)Gricean predictions, and then argue against the (neo-)Gricean analysis of *most*, based on SBC, LLC, and Morris. These considerations lead to the claim that not only can pragmatics not provide the upper bound, but further it is actually lexical semantics that must be responsible for the upper bound. My own analysis of *most* then follows, with an explicit treatment of how its various contextually dependent interpretations are to be accounted for, and some implications of the analysis for scalar predicates in general.

2. A (NEO-)GRICEAN ANALYSIS OF *most* IN DISCOURSE. Beginning with Grice's ground-breaking work (1975), pragmatists have distinguished between semantically coded and pragmatically inferred meanings. The former are linguistic, uncancelable, and context-insensitive; the latter inferred, cancelable, and context-dependent. A subset of the pragmatic meanings was dubbed by Grice CONVERSATIONAL IMPLICATURES, and within these, he has further delineated a set of GENERALIZED CONVERSATIONAL IMPLICATURES (GCIs). GCIs are conversational implicatures, but unlike PARTICULARIZED CONVERSATIONAL IMPLICATURES, they are default implicatures, routinely generated, unless specifically canceled in the specific context. The argument is that while GCIs are potentially cancelable, they tend not to be in fact.

Given this framework, linguists took it upon themselves to distinguish among a variety of interpretations associated with linguistic forms, so that they can each be assigned their proper status. According to the received view, introduced by Horn (1972), *most* is a scalar quantifier whose coded meaning is 'at least more than half', which is equivalent to 'at least more than half, possibly all'. This wide interpretation, while attested, is not its prevalent interpretation in natural discourse, however. The common conveyed meaning is said to be narrowed down to 'most, but not all'. This restriction is based on an 'all'-exclusion Quantity conversational implicature, which combines with the coded meaning. *Most* is said to participate in a HORN SCALE (see Horn 1972 and onwards), the strongest item on which is *all*, which is about the same semantic relations as *most*, is equally lexicalized and unmarked, and constitutes a tight contrast set with *most*, but is more informative (Levinson 2000). Thus, the addressee is supposed to normally reason that the speaker would have used *all*, rather than *most*, had she been in a position to commit herself to 'all'. By avoiding *all* the speaker generates a scalar implicature negating the stronger 'all'. Combining the semantic meaning of 'more than

⁵ The examples from LSAC are based on joint research with John Du Bois of the University of California, Santa Barbara.

⁶ For each of the Web examples, I verified to the best of my ability that the writer was a native speaker of English (by examining a much longer text than I actually quote).

⁷ In this I am following a common assumption that quantifiers behave the same in different languages (see Noveck 2001 about French and Papafragou & Musolino 2003 about Greek).

half' with the implicated 'not all' gives the conveyed meaning of 'more than half, but not all'.

According to Horn (1984, 1989) and Levinson (2000), this implicature is a GCI because it is a default interpretation, generated 'normally'. For example, according to Horn, *some* (and presumably the same applies to *most*) implicates 'not all' 'in a neutral context, one in which a stronger proposition, were I in a position to assert it, would have been relevant to the interests of the addressee' (1989:541). For such GCIs not to be generated, they must be specifically canceled in context (either explicitly or implicitly; see also Gazdar 1979). Turning to the corpus data, we find that, as predicted by this analysis, an upper-bounded interpretation is probably applicable in 16 of the 20 occurrences of the quantifier *most* in SBC. 'All' would have been relevant were the speaker in a position to assert it; there are neither linguistically explicit cancellations nor implicit contextual cancellations (due to background knowledge) in these examples and, crucially, the reality depicted is quite probably one that makes the 'not all' implicature true. Examples 2a and 2b are two of these cases from SBC, and 2c is from an Israeli newspaper. The 'not all' implicature seems to be generated here, in conformity with the neo-Gricean prediction.⁸

- (2) a. MARILYN: . . . I'd had a particularly stupendous time.
Because I had to . . . be a wife **most** of the time,
but part of the time I got to be a worker,
and do the really fun work, <SBC:003>⁹
- b. REBECCA: . . . (TSK) he's going to try and focus more on,
(H) . . . uh = ,
. . . discrepancies,
PART OMITTED
REBECCA: (H) But,
RICKIE: (SNIFF)
REBECCA: for the **most** part he'll be polite . . . and gentle.
<SBC:008>¹⁰

⁸ Unfortunately, it may not always be clear from the short excerpts quoted here what the speaker's intended meaning was, and one of my referees rightly asks how I determined the intended interpretation of the *most* utterances. Indeed, I had to use common sense, based on the local context, not here reproduced. Readers are invited to check my interpretations of the examples in the data (the sources for the 127 examples on which the statistical analysis in §3.1 is based are listed in §1 above).

⁹ Transcriptions of the SBC (Du Bois et al. 2000, 2003) are only slightly simplified. Each line represents an intonation unit. The following symbols are used: []: Overlap; (H): Inhale; (Hx): Exhale; =: lengthening; @: a pulse of laughter; and . . . indicates longer (. . .) or shorter (. . .) pauses. When quoting the London-Lund Corpus (Svartvik & Quirk 1980) I omitted prosodic markers because of their complexity.

¹⁰ Note that despite the fact that *for the most part* is an idiom, it behaves just like *most* regarding the upper bound, which is the focus of this article. Thus, in 2b it is upper-bounded, but in 5 it is probably compatible with 'all'. Example (i) shows the similarity in interactional function between *most* and *for the most part*.

- (i) You know, **most** classes that you go to in this area will be . . . you usually have to stay and take a sculpt class or come back on another day and do a sculpt class. But **for the most part, most** classes, uh, will have an abdominal set. (LSAC)

I also did not distinguish between the different constructions *most* participates in (e.g. *most x's* versus *most of the x's*). These do not seem to me to affect the question of the upper bound.

- c. Leibovich proposed that Israel should declare a five-year plan for an Israeli retreat from the overwhelming **majority** of the territories outside The Green Line. (originally Hebrew, *Haaretz*, 4.5.2002)¹¹

In 2a, *but part of the time* following *most of the time* makes it clear that this *most* is incompatible with ‘all’, because in the rest of her time Marilyn got to be a worker rather than (only) a wife. This is a case where the implicature is strengthened by explicit material. In 2b, Rebecca’s description of the cross-examining lawyer trying to find discrepancies in Rickie’s testimonies (a nongentle behavior) is incompatible with the possibility that the lawyer will be gentle all the time. Rebecca is in fact preparing Rickie for the possibility that the lawyer will not be gentle all the time. In this case, the context more implicitly supports, although it does not explicitly necessitate, the speaker’s generation of the GCI. Example 2c is interesting in that in this specific case, although the difference between ‘the overwhelming majority’ and ‘all’ is rather marginal in terms of how much territory is involved, when an Israeli leftist activist calls for a retreat from the occupied territories, ‘all’ is expected, rendering the ‘not all’ implicature quite salient.

Being conversational implicatures, however, GCIs are cancelable, and indeed, the ‘not all’ interpretation must be canceled in the following (it doesn’t seem reasonable that the speaker reverts to *all* just because he includes the seventies later—note that the reference to the seventies actually occurs as a separate question in a separate intonation unit).

- (3) MONTROYA: . . . would you say that **most** of you,
 without getting personal here,
 are products = ,
 . . uh = ,
 in terms of birth,
 . . . of the sixties?
 . . . **All** of you were born in the sixties?
 . . . Early seventies? (SBC:012)

No clear example of an explicit cancellation of the upper-bound understanding occurred in my primary data, but here is an example from BNC.¹²

¹¹ Note that here and in other cases where I quote Hebrew examples, English ‘majority’ sometimes translates the Hebrew nominal *most*, but Hebrew does not have two separate lexemes here. All translations of Hebrew to English are mine.

- (i) ha + **rov** ha + maxria.
 the most the crucial = ‘the overwhelming majority’

See the discussion around 34a for a difference between Hebrew *rov* and English *majority*. But on the whole, based on the many examples collected for Hebrew, I am confident that the Hebrew and English *mosts* should receive the same analysis.

¹² The following example from LLC was not included in the data, because *most* here was not intended as the quantifier *most* (but was an intensifier in *the most soul breaking amount of money*). Nonetheless, it seems that speaker b overlapped with speaker a’s *most* to correct it to *all*, taking a’s *most* as a quantifier (I refer to the LLC examples by indicating the reference to the first line of the example).

- (i) a: Valerie and I went up
 hired a .
 a place
 for about ten days
 and spent.
 the **most**
 b: **all** of ‘it .
 a: soul .
 breaking
 - laughs) amount of money. (LLC:5 9 57 6360 1 1 a 11)

- (4) Right I'm gonna ask the director, who I think is going to pick up **most if not all** of your points, (BNC: J43 182)

In the next example it is less clear whether a 'not all' GCI is generated, because it is quite possible that reality, as conceived by the interlocutors, is such that 'all' is also true (note that both speakers agree that 'there wasn't really nothing much to do').

- (5) LANCE: For the **most** part,
 . . . I mean I was able to k—
 I think I was able to keep up with that stuff,
 RANDY: With the ARTS.
 LANCE: . . . Yeah.
 I mean,
 @@ there wasn't really nothing much to do.
 [(H) um],
 RANDY: [No,
 there wasn't]. (SBC:022)

This is not a rare case. The reason we cannot be sure that the state of affairs described above is necessarily compatible with a 'not all' interpretation is that speakers sometimes refrain from using *all* (as well as other maximal terms) since it is the strongest item on the quantifier scale, and they are not always willing to commit themselves to such a strong statement, even when they actually think that the strongest claim is true. After all, it is so much easier to refute an 'all' statement than a 'most' statement. Here is a clearer example of an *all* avoidance with the similar *mostly*.

- (6) Client: Do you have other models in D?
 Salesman: The other shoes we carry **mostly** come in the standard B.
 (10.4.2000)

Initially, the client (I) interpreted the salesman as implicating that there are some other shoe models that come in D, but failed attempts to get the salesman to bring out any of those minority models made it clear that the salesman used *mostly* to avoid admitting having no D size shoes. It is possible that *most* in 5 is used to avoid *all*, in fact.¹³

The following example is a clearer case of the use of *most* instead of *all*.

- (7) I'm not being sexist here but nearly **most** cases I see are women . . .
 (pages.zoom.co.uk/santino/The_Whinger.htm, 12.28.2001)

The speaker in 7 seems to mean 'nearly all', because if *nearly most* here meant 'almost most' (i.e. 'about half'), then the whole point would be lost, namely, that more women than men use mobile phones (given that there is an equal number of women and men in the population). Note that universal claims, with or without *all*, are no different from *most* in this respect. Quantifiers are not necessarily used according to the quantities they objectively code. Just like we sometimes use *most* when 'all' is true, we sometimes use *all* when only 'most' is true, just because an 'all' statement is emotionally strong (see Labov 1985, Sacks 1992:701, and Ariel 2002b).¹⁴

¹³ Green (1995) argues that a scalar quantity implicature is not generated when speakers are not being maximally informative for fear of reputation loss should they be wrong after all. Matsumoto (1995) proposes that a scalar implicature is not to be generated if the choice of the weaker term (*most* in our case) over the stronger term (*all*) can be attributed to observance of other maxims, such as politeness. I believe that *all*-avoidance *mosts* can be motivated in this way.

¹⁴ *All in all* (and Hebrew *be + sax-ha + kol* 'in sum') have in fact almost conventionalized the interpretation that 'a significant, nonmaximal amount', rather than 'all', is the case.

(i) There were certain moments there that were just priceless. **All in all**, it was just brutal. (LSAC)
 Note that English *in sum* cannot be used in this way (and cannot replace *all in all* in (i)).

The data examined so far seem to fulfill the (neo-)Gricean predictions about *most*. The addressee does not attribute to the speaker a commitment to 'all' in the majority of the cases (such as 1). Also, in some cases (3, 4), *most* is compatible with reality being 'all . . .'. These findings seem to conform to the (neo-)Gricean picture, whereby GCIs go through in the default case and are canceled in a minority of the cases.

3. PROBLEMS WITH THE (NEO-)GRICEAN ANALYSIS. I discuss the neo-Gricean analysis in §3, but the points made apply more generally. I present two problems for any analysis that assumes a default 'all'-exclusion inference. The first is a diachronic puzzle created by the assumptions adopted by (neo-)Griceans (§3.1). The second, even more fundamental, problem is my challenge of the very assumption that 'not all' is a default conversational implicature of *most* (§3.2). I argue that the upper-bounded reading of *most* cannot depend on any pragmatic inference.

3.1. A DIACHRONIC PUZZLE. According to the received view, 'not all' must be a recurrent pragmatic interpretation of *most*. After all, the majority cases are such that the addressee does not attribute a belief in 'all' to the speaker. Now, according to functional grammarians, recurrent pragmatic interpretations may semanticize (i.e. become coded, context-insensitive, uncancelable). Indeed, many semantic changes have been explained as semanticizations of GCIs (see Sweetser 1990, Traugott & König 1991, Hopper & Traugott 1993, Bybee et al. 1994, Heine 1997, and especially Traugott & Dasher 2002). The assumption is that over time, contextually derived meanings may become part of the lexical meaning of the expression in that the word/phrase can no longer be used without that meaning being retrieved automatically. Such semanticizations, although not obligatory, are restricted to inferred meanings that arise frequently for specific forms.

Since functional grammarians predict that frequent contextual meanings may get lexicalized by the forms implicating them across languages, and since GCIs are claimed to be very frequent contextual meanings, it follows that according to the functional grammarians, GCIs are predicted to lexicalize, at least sometimes. But it has been claimed that certain GCIs, most notably the 'not all' one associated with *most*, never undergo semanticization (see Horn 1989:252–67, Levinson 2000:69, but see §4.2 below). It seems therefore that some recurrent pragmatic meanings semanticize, while others consistently resist it. How can this be explained?

The neo-Griceans (Horn 1984, 1989, Atlas & Levinson 1981, Levinson 1987, 1991, 2000) have distinguished between different types of GCIs. I-inferences are guided by a minimization principle for the speaker ('say as little as possible') and an enrichment principle for the addressee (filling in additional information by inference).¹⁵ The I-PRINCIPLE explains why the graffiti writer in 8 would be understood as actually conveying a more informative proposition, 'He touched you *ALTHOUGH* you had said no'.

(8) He touched (you) **and** you had said no. (originally Hebrew, October 2002)

While numerous examples have been cited in the literature (see the references above) for the semanticization of I-inferences, according to Levinson (2000) semanticization consistently does not occur for Q-inferences, the inferences responsible for the speaker generating the 'not all' implicature of *most*.¹⁶

¹⁵ I am here assuming the terminology of Levinson 2000. See Levinson 2000:41 for other terms used for these concepts (his own in previous writings, as well as Horn's).

¹⁶ Q-inferences state that since a more informative expression (*all* in our case) was not selected, the speaker is not asserting that the stronger claim is the case.

Since the neo-Griceans too hold that GCIs may undergo semanticization, Levinson has provided an explanation for the lack of semanticization among Q-GCIs.¹⁷ He argues that there is a difference between I- and Q-inferences: I-inferences are culturally based, whereas Q-inferences are language-based, because they involve reference to a linguistic (Horn) scale of expressions. Another difference, of course, is that Q-inferences are negative, denying a stronger interpretation, whereas I-inferences are positive enrichments. But should these differences matter for their potential semanticizations?¹⁸ The neo-Griceans have motivated the blocking principle, which blocks the lexicalization of a Q-GCI in, for example, a potential word such as **nall*, meaning ‘not all’, by reference to an antiredundancy principle of lexicalization (Horn 1989:252–67, Levinson 2000:69). Thus, *some* and *most* trigger the meaning ‘not all’ freely and consistently anyway, so there is no need for a separate lexical item coding the GCI, nor presumably a word coding the combined semantic + GCI meaning (‘some/most, but not all’).

I see no reason why the differences above would distinguish between I- and Q-inferences regarding semanticizations in general, and the Q-implicature of *most* specifically. The same logic would predict that blocking should prevent the semanticization of I-inferences. If high-frequency sequences and, similarly, high-frequency form-function correlations tend to get entrenched in an unconscious process, the source for their frequent correlation (cultural versus linguistic) cannot be a factor. Levinson’s explanation for the absence of semanticization of Q-inferences imposes on the semanticization process an ability to distinguish language-based and culture-based inferences, and moreover, an absolute preference for semanticizing only the latter. It is more reasonable to assume that automaticity of connection between forms and functions (= lexicalization) results from frequent correlations, where it is doubtful that conscious ‘sensible’ factors, such as redundancy avoidance and even usability, can affect it.¹⁹

In any case, functionalist explanations for semanticizations have certainly not drawn a distinction between culture- and language-based inferences. How can we then resolve the contradiction between the principle that frequently occurring contextual meanings may semanticize (the functionalists’ claim) and the claim that some frequently occurring contextual meanings do not require lexicalization and therefore do not get lexicalized (Levinson’s position regarding Q-implicatures)? In §3.2 I argue that ‘not all’ is not actually a frequent conversational implicature in discourse. The diachronic puzzle for functional grammarians will then disappear.

3.2. THE DISCOURSAL STATUS OF THE ‘NOT ALL’ IMPLICATURE. Section 3.1 revealed a problem with the diachronic outlook presupposed by the (neo-)Griceans. Section 3.2 reveals a fundamental problem with the Gricean synchronic analysis of the semantics-pragmatics division of labor for *most*. Thus, while it is true that in the majority of the cases the speaker is not committed to ‘all’ (and these are not *all*-avoidance *most* cases), I argue that a ‘not all’ implicature is not actually intended by speakers in most cases.

¹⁷ Horn (1972 and onward), however, has analyzed some historical changes as semanticizations of Q-implicatures. Not of *some*, though, so he too needs to explain the puzzle here posed.

¹⁸ Geurts (1998) rightly argues that not every implicature can become lexicalized, for not every combination of lexical meaning + conversational implicature creates a natural concept. ‘Most but not all’ is, however, presumably, a natural concept. And in any case, even if not lexicalized, the original implicature may instead come to be entailed by the lexical item, which then poses the same puzzle as to why common implicatures do not become entrenched in this way at least.

¹⁹ Similarly, Traugott (2004) argues against the assumption of a synchronic or diachronic antisynonymy principle.

If so, the (neo-)Griceans cannot account for the upper-bounded interpretation of the majority cases of *most*.

WHEN 'ALL' IS IRRELEVANT: I am not the first to argue that scalar GCIs are not default interpretations. Relevance theorists have already argued against the neo-Gricean analysis of quantity implicatures (see Sperber & Wilson 1995, Carston 1990; see also Davis 1998). As Carston (1990) noted, based on a few contrived examples, such as 9, interpreted out of context, the neo-Griceans have concluded that routinely, when a scalar predicate is used, the scalar implicature is relevant.

(9) \sim **Some** of my best friends are linguists. (Levinson 2000:76, ex. 2a)²⁰

In the absence of any context, 9 does seem to arouse a question about the rest of the speaker's best friends. Out of context, nonmaximal quantities seem to evoke the relevance of the fact that a nonmaximal value was picked (see the experiments reported on in Politzer 1986, 1990, 2004, Newstead 1995, and Noveck 2001, where *some* was often interpreted as 'some but not all' and not as 'some and possibly all'). The 'not all' GCI is then generated here. Not so, however, when 9 is embedded in the following context.

(10) \sim A: I wonder whether I should take a linguistics course next semester.

B: **Some** of my best friends are linguists. Would you like to talk with them?

In 10, whether all the speaker's best friends are linguists does not matter. This is even clearer in the following example offered by Carston (1990, ex. 30).

(11) \sim A: If any of the students have failed I'll be in trouble.

B: I'm afraid **some** of them have.

Relevance theorists have criticized the neo-Gricean notion of default implicatures based on examples like 10 and 11, their point being that speakers are not always interested in whether 'all' is true. In 11, the fact that *some* is true is relevant enough (i.e. it carries sufficient contextual effects). Here is an attested example where 'all' seems irrelevant.

(12) As usual, I got only a fraction of what I needed to do done. But I did get **some** things done. (private e-mail message, 5.16.2002)

While the speaker does intend the 'not all' implicature triggered by 'a fraction of' in his first sentence, the final focus of his message is on the half full rather than the half empty glass. It seems that the relevant comparison in this case is to the lowest end of the scale ('none'), rather than to the maximal ('all') point. Here's such an example with *most* (in a democracy, a majority is enough, and whether or not all parties are opposed to some action is immaterial).

(13) **Most** of the parties at the Knesset are opposed to most of the economic proposals. (Voice of Israel news, 4.25.2002)²¹

Now, the neo-Griceans accept that there are cases like 10–13. Levinson (2000:52) is rather explicit about the nongeneration of implicatures even though they are true when they clash with the speaker's goals: 'Relevance implicatures, or inferences about speaker's goals, can limit the amount of further inference that is warranted. Thus, even where these further inferences are entirely consistent with all that is known, they do not go through'. Horn and Levinson might then concede that the implicature is not generated in 10–13. Still, despite the fact that 'not all' is not a relevant implicature here, it is most probably the case that the speaker is not seen as committed to 'all'. The upper bound for *most*, I maintain, is independent of an 'all'-exclusion implicature.

²⁰ Following Chafe (1994:xiii), I mark contrived sentences with \sim . Unfortunately, I have also sometimes had to contrive examples in this article.

²¹ Knesset is the Israeli parliament.

Note that this is a problem for anybody advocating only a lower-bound semantics for *most* (relevance theoreticians included). Still, my data indicate that these cases are not actually common. Let us now proceed to discuss other nonimplicating cases, ones that do occur frequently in the data.

WHEN 'ALL' WOULD HAVE THEORETICALLY BEEN RELEVANT BUT 'NOT ALL' IS NOT: While the relevance-theoretic critique, based on the irrelevance of 'all' in some cases, is certainly justified, this is not the only obstacle for a 'not all' GCI generation in the data. For the main part, I argue, 'all' would have theoretically been relevant when *most* is used because it is more informative, but not so 'not all'. The received view seems to assume that we invariably expect 'all' statements, and that if 'all' is relevant, so is 'not all' (see Krifka 1995, Chierchia & McConnell-Ginet 1990:193–94, in addition to the neo-Griceans). I claim this is not so. I claim that it is simply unrealistic to expect universal generalizations, and we are quite ready to accept conclusions based on partial generalizations. Since 'all' is not usually expected, 'not all' is not routinely relevant. For example, it is because of the well-known collocation 'one size fits all' that *all* is expected in 14, and a 'not all' implicature is then generated (see also 2c).

- (14) One size fits **most** (a T-shirt label, Longs Drugstore, Santa Barbara, Jan. 2003)

My point, however, is that when 'all' is not expected, 'not all' is irrelevant, and no 'all'-exclusion implicature is generated.

Consider the following:

- (15) a. MONTOYA: . . . **Most** Americans,
 . . . do not vote,
 . . . in great numbers (SBC:012)
- b. SHARON: This kid,
 you know,
 she . . . **most** of the time doesn't have money,
 I have to give it to her myself, (SBC:004)
- c. The waiters and **most** of the kitchen staff thought: Oh, girls! We're gonna have to do **most** of the work for 'em. I was constantly being grabbed. (Morris, p. 73)

In all of these examples, the interlocutors have no expectation for 'all' generalizations. They don't expect ALL Americans to not vote, they don't expect the girl to not have money ALL the time, and they don't expect ALL the kitchen workers to have such thoughts. This is why it makes no sense that Montoya (in 15a) wants to convey (also) that 'not all Americans do not vote' that is, that 'some Americans do vote', or that Sharon (also) wants to convey that not all the time does the girl referred to have no lunch money and she has to give her some, that is, that sometimes the girl does have lunch money. Nor that the speaker in 15c, who talks about her hardships in working in a male-dominated environment, wants to also convey that 'not all the kitchen workers thought . . .', and that the staff worried about having to do 'not all the work'.²² These GCIs, while most probably compatible with the speakers' beliefs, are not simply irrelevant to the conversation at hand because 'all' is not expected. Generating them would in fact defeat the speakers' purpose, which is to protest against the majority cases. The

²² Note that the question is whether the speaker wants to convey 'not all' rather than to 'say' 'not all'. This is why I am not proposing we test the viability of the GCI by considering the explicit uttering of *most*, *but not all* as a possible paraphrase. There always is a difference between 'saying' and implicating, even though in very clear cases of GCI generation (e.g. ex. 19), the paraphrase might be felt to be equivalent.

speakers in 15 have no interest in weakening the points they are making by rendering salient the minority cases, where some Americans do vote in great numbers, where the girl has lunch money, where some of the kitchen workers weren't antiwomen, and where the 'girls' were going to do some of the work. They want to focus on the majority cases, because these are the ones justifying their complaints. It is only the majority reference set that is relevant for the interaction.

Here are three more examples where 'all' is not expected, and again, not only is 'not all' not relevant, it would actually challenge the speakers' own points (as in 15).

- (16) a. The **majority** decided for peace. Me too. (bumper sticker, originally Hebrew, spotted 4.2002)
 b. **Most** egg production was infected with salmonella. (MP Edwina Currie, December 1988)
 c. **MOST** UCSB students have 0 ... 1 ... 2 ... 3 or 4 drinks per week (4000 don't drink at all) (An anti-drinking ad at UCSB, February 2002) [= ex. 1]

Note that the sticker carrier in 16a claims that it is convincing enough that most Israelis decided for peace. There is no expectation that all Israelis would agree on politics, of course. Similarly, Routh (1994) mentions that MP Currie was forced to resign from office (she had been a UK parliamentary under-secretary for health) following her statement above, even though it was 'only' about most eggs and not about all eggs. Finally, the ad in 16c targets the light drinkers as example setters and does not wish to call attention to the minority heavy drinkers. Such examples demonstrate that a comparison between *most* and *all*, finding the former less than optimally informative, is not always called for in natural discourse. For example, when Tom Segev, a journalist, in a piece about immigrants from Germany wrote that '**Most** of them refused to be integrated into the Hebrew culture' (originally Hebrew, *Haaretz* 11.22.02), the *most* did not prevent four letters to the editor from calling Segev's words defamation of German immigrants (in general), two of the letters explicitly stating that the use of *most* does not alter this charge (11.29.02).

While *most* is not as informative as *all*, interactionally, it is rather informative, and moreover, it has a very important advantage over *all*. *All* actually makes the speaker's proposition extremely vulnerable. *All* is easily refutable: it takes only one counterexample to refute an *all* statement. A *most* statement is much harder to refute, especially since very often one does not know what the whole set is, and hence what constitutes 51% of it. Indeed, according to Biber and colleagues (1999:277–78), academic writing contains significantly fewer *alls* than conversation (half the number), but many more *mosts* (three times as much). As they note, academic writing calls for guarded generalizations (expressible by *most*, *many*, etc.). Here is a relevant humorous example.

- (17) T.K.: Since **most** of the people from the Middle Ages are no longer with us today -
 M.T.: [interrupting] What do you mean most, all!
 T.K.: Well, you know, as a historian, I'm careful. (originally Hebrew, 3.13.03)

Indeed, it is a rare case that the difference between a strong but nonmaximal expression (such as *most*) and a maximal one (*all*) matters for the current purposes of the exchange. The reader is invited to substitute *all* for *most* in 15 and 16, to see that *all* statements would not have made the utterances all that much more rhetorically persuasive. The advantage of *all* over *most* in informativity is not that crucial, then. The risk of refutability it carries with it, however, is great. Indeed, when Acebes, still prime minister of

Spain, was accused of misrepresenting intelligence officials by changing their strong but nonmaximal *almost certain* to the maximal *sure* (that ETA was responsible for the train station bombings) he tried in vain to defend himself, arguing that:

(18) '**Almost certain** doesn't leave much doubt.' (*International Herald Tribune*, 3.19.2004)

While Acebes is right (and see the two letters to the editor mentioned above), the Spanish government quickly learned how using the maximally strong predicate makes the speaker extremely vulnerable. In other words, I maintain that a *most* utterance enables the speaker to offer quite a strong claim, yet without taking too much of a risk. This is why 'all' is not expected too often, and why 'not all' is irrelevant.

How does this interactional state of affairs fare with a GCI analysis? When arguing for a generalized rather than particularized status for the conversational implicature associated with indefinite NPs (that the speaker is not closely connected with the entity coded by the NP), Grice was careful to motivate the assumption of permanent interest in whether the speaker is closely connected with the people and objects he or she mentions. In other words, he argued for the default relevance of such information to interlocutors. He argued that culturally, or rather, socially, humans find it important to know whether the people and objects with which speakers interact are closely connected with them. The concomitants and results, he reasoned, are remarkably different in these two cases. 'If the appropriate specification will be likely to enable the hearer to answer a variety of . . . questions for himself, then there is a presumption that the speaker should include it in his remark', but, continues Grice, 'IF NOT, THEN THERE IS NO SUCH PRESUMPTION' (1975:57, emphasis added). In other words, not every context makes the question of the relation between the speaker and the entities to which he or she refers relevant. When irrelevant, the GCI will not be generated, presumably. I claim that maximal quantities (such as 'all') in generalizations are different from information about people's relatedness to the speaker. While the consequences from the latter are often significant, this is not often the case for the former, as shown above. We do not have a similar permanent interest or expectation for 'all' generalizations. The neo-Griceans must assume otherwise in order to trigger the 'not all' implicature.

Recall that Grice's QUANTITY MAXIM, the maxim responsible for the 'not all' implicature, instructs speakers to make their contributions as informative as is required for the current purposes of the exchange. Green (1995) criticizes the neo-Griceans, as well as other linguists (e.g. Harnish (1976), Hirschberg (1991), Chierchia and McConnell-Ginet (1990:197)), for replacing Grice's first quantity maxim with a VOLUBILITY MAXIM (Carston (1998) adds Koenig (1991) and Matsumoto (1995) to the list). A volubility maxim instructs the speaker to be maximally informative, as much as is compatible with the current purposes of the exchange. I suggest that their need for a 'not all' implicature leads the neo-Griceans to a confusion between sufficiently informative information (the Gricean requirement) and maximally informative information (the volubility requirement). Only volubility can motivate the pervasive view that 'all' is always expected, and that therefore scalar quantity implicatures are normally generated. My data show otherwise. Interlocutors do not have such high expectations for maximal informativity.²³ If maximal informativity is not expected, then 'not all' is irrelevant and not implicated.

²³ Still, as Green himself notes, we do sometimes tend to be voluble. The following example seems to demonstrate the competing pressures to be only as informative as is required (mentioning just one car) and being maximally informative (mentioning three cars).

- (i) I finally found out what the best is. I have **a** Mercedes—**three** of them in fact. (Du Bois 1980, ex. 13)

In sum, the examples in this section attest that ‘not all’ is generated only where ‘all’ is contextually expected (e.g. 2c, 14, and 19 below). In other cases, the purported implicature would only weaken the speaker’s point, so it could not possibly be the speaker’s intent to generate it as an invited inference.²⁴ Levinson himself (1983:15–16) argues that ‘only those inferences that are openly intended to be conveyed can properly be said to have been communicated’ (see also Carston 2002:377). ‘Not all’, therefore, cannot be an implicature in such cases. Now, the received view can easily accommodate these nonimplicating cases by requiring ‘all’ to be contextually expected (rather than simply more informative) for the ‘not all’ implicature to be generated. It will then correctly predict no implicatures in 15 and 16. Still, we must somehow account for the fact that even in 15 and 16, *most* is upper-bounded. After all, the addressee does interpret *most* as nonmaximal. If such examples are rare, it is perhaps not so harmful for the received view. If, however, the nonimplicating cases constitute the majority of *most* uses, this reformulation will correctly block undesired implicatures, but at the same time, it will undercut the received-view account of the commonplace, upper-bounded conveyed meaning (recall that under the received view, the upper bound depends on a ‘not all’ implicature). We would have to conclude that the upper bound on *most* is independent of pragmatic inference in the majority cases, and that the received view therefore has no way of accounting for it. The discourse counts in the next section demonstrate just that.

DISCOURSE COUNTS: I argued in the preceding section that ‘not all’-implicature generation occurs only when ‘all’ is actually contextually expected, and not when ‘all’ would have theoretically been more informative. The discourse counts below show that contexts where ‘all’ is expected are not nearly as frequent as those where ‘all’ would have been relevant. We should accordingly expect a low frequency of ‘all’-exclusion implicature generation. This is what we find. SBC contained only 20 quantifier *most* examples, so I also examined all the quantifier occurrences of *most* in LLC and in the many narratives in 120 pages of Morris (a total of 127 examples). Table 1 summarizes the relevant data for all three sources on the relevance of generating the ‘all’-exclusion inference.

SOURCE	‘ALL’-EXCLUSION IMPLICATURE INTENDED		‘ALL’-EXCLUSION IMPLICATURE NOT INTENDED		TOTAL	
	N	%	N	%	N	%
SBC	3	15.0	17	85.0	20	15.8
Morris	2	18.2	9	81.8	11	8.6
LLC	17	17.7	79	82.3	96	75.6
Total	22	17.3	105	82.7	127	100

TABLE 1. Ratio of intended/not intended ‘not all’ implicatures from *most*.

As can be seen, the percentage of cases where *most* is used and the exclusion of the complement set is conversationally relevant is quite low (17.3%) for an interpretation that is supposed to be default. It is instructive that the three sources do not differ with respect to the frequency of the ‘all’-exclusion interpretation, even though LLC is British and SBC and Morris are American, and even though SBC and LLC are recordings of

²⁴ Note that I use the term INVITED INFERENCE somewhat differently from the original way Geis and Zwicky (1971) used it. As far as I can make out, their invited inferences are GCIs. By using the concept of ‘invited’ I wish to emphasize the speaker’s role as initiator of the interpretation. In this I follow Traugott and Dasher (2002:5).

natural conversations, whereas Morris is an edited version of first-person narratives. Table 2 shows the breakdown of the majority cases, where the GCI is not relevant. As can be seen, in a few cases the speaker is seen as possibly not excluding ‘all’, which renders the implicature incompatible, but in most cases, even though the speaker may not plausibly be taken to be committed to the truth of ‘all’, this fact is simply not relevant (see again 15 and 16 above).

SOURCE	‘POSSIBLY ALL’		UPPER BOUND INTENDED BUT ‘ALL’-EXCLUSION NOT INTENDED		TOTAL	
	N	%	N	%	N	%
SBC	2	11.8	15	88.2	17	16.2
LLC	7	8.9	72	91.1	79	75.2
Morris	2	22.2	7	77.8	9	8.6
Total	11	10.5	94	89.5	105	100

TABLE 2. Cases where upper-bound implicature is not triggered.

Distributional facts about the cooccurrence of *most* and *all* support the above findings. Thus, Stephen Levinson (p.c.) suggests that we can also test the plausibility of the (neo-)Gricean analysis of Q-GCIs based on the assumption that there is a salient paradigmatic opposition between the items on the Horn scale (e.g. *most*, *some*, *many*), especially with respect to the strongest item on the scale (*all*). He proposes that a discursual opposition should come about from the frequent cooccurrence of these expressions in opposition with *all* in natural discourse. These would indeed be cases where an expectation for ‘all’ is salient, and a GCI should be generated. Here are two relevant examples. In 19, from Israeli TV, the two moderators are promoting their upcoming show.

(19) Michaeli: We’ll talk about EVERYTHING.

Gaon: About **most** things. (Channel 2, 4.4.2002, originally Hebrew)²⁵

Example 19 is a clear case where the GCI is intended by Gaon, very much due to the highly salient opposition between the Hebrew counterparts of ‘everything’ (*ha + kol* ‘the all’) and ‘most things’ (*ha + rov* ‘the most’). Similarly, since Jo in 20 is contrasting *all* with *a majority*, the ‘not all’ implicature seems relevant (the example, however, is not part of the core data because it involves the English expression *majority*, rather than *most*).

(20) KURT: **all** the board [members]?

JO: [majority of] board member. (SBC:014)

If such paradigmatic contrasts turn out to be frequent, then ‘all’ must be contextually expected in many cases, in which case a GCI analysis may be justified. But a search in all three data sources showed only a handful of examples where *all* occurred in the same context with *most*: 6/127. The following is the only example where *all* and *most* could possibly be construed in contrast to each other in my main body of data, but note that the effect is not as strong.

(21) . . . when I was being taught how to be a surgeon, **most** of the general surgeons treated me as if I was a cute little piece of fluff. I don’t think **any** of them believed I’d have a career in surgery. (Morris, p. 112)²⁶

²⁵ Caps indicate stressed items.

²⁶ Note that *any of them* above could also be interpreted as anaphoric to *most of the general surgeons*, in which case no salient opposition is felt.

The other five examples in the data do not resemble 19–21. A search of LSAC showed 1,773 *mosts*. Based on other searches, I estimate that about 800 of these are quantifier *mosts*. Only twenty-two of these estimated 800 showed a relevant cooccurrence of *most* and *all* (when the two words appeared up to nine words apart). Nine of them are waverings between *all* and *most* (as in 42 below), where the two are not presented as opposed alternatives, and only thirteen (a marginal percentage out of about 800 occurrences) are cases where ‘not all’ is relevant. These findings show that for the most part, *most* and *all* do not form a salient opposition in natural discourse.

All in all, the received view can only account for a minority of *mosts* (33, 26%): where ‘all’-exclusion is a conversational implicature (22, 17.3%), and where ‘possibly all’ is compatible with the speaker’s intention (11, 8.7%). It cannot, however, account for the majority of *mosts* (94, 74%), where *most* is upper-bounded but no ‘all’-exclusion implicature is generated.

UNCOOPERATIVE INFERENCES: I argued above that ‘all’-exclusion cannot be an intended inference in the majority cases of *most* and cannot therefore constitute a (generalized) conversational implicature. As I have emphasized, however, *most* is nonetheless usually upper-bounded. How else can we account for the upper bound pragmatically? One might consider relinquishing the requirement that GCIs must be intended meanings. If we do that, an ‘all’-exclusion implicature will be generated by convention even in the absence of speaker intention, and the commonplace conveyed meaning will be accounted for.²⁷ I do not think, however, that we can allow unintended GCIs. According to Grice (1975), implicatures are part of the speaker’s intended meaning (see also Hirschberg’s (1991:19) emphasis of this point). In fact, once we allow that GCIs do not have to be intended by the speaker, we have no way of ever canceling GCIs except by contradiction. Thus, even when ‘all’ is irrelevant (as in 10–12), the GCI would be generated (contrary to Horn and Levinson themselves).

Perhaps this unintended interpretation can be assigned a different pragmatic status from conversational implicature. Indeed, I would like to suggest that we actually need a concept of unintended pragmatic inferences for analyzing natural discourse. I propose to term these UNCOOPERATIVE INFERENCES. Uncooperative inferences are like particularized conversational implicatures in that they are only plausible, and therefore cancelable, but a crucial difference between them and conversational implicatures is that they are not intended by the speaker, not even as weak implicatures (Sperber & Wilson 1995). Here is an unrelated example where I suggest that the addressee may draw an uncooperative inference (and not a particularized conversational implicature) to the effect that ‘Rebecca thinks that the addressees are poor (and might not even have enough money for the parking fee)’.

(22) REBECCA: .. do you guys have the cash to pay for it right now?
 (SBC:008)

Rebecca certainly does not intend to implicate that she thinks that her addressees are poor, even though it is quite plausible to infer that from her words (as an uncooperative inference). In fact, she chooses *cash* (rather than *money*), and she adds *right now* to avoid that particularized conversational implicature (cf. *do you guys have the money to pay for it?*). Linguists have assumed that if an inference is not a logical entailment

²⁷ See Davis 1998:133–44 for a proposal that conversational implicatures depend on conventions. Davis, however, does view GCIs as intended meanings.

(because it is only plausible, it is cancelable), it must be an implicature.²⁸ Horn (1984: 14), for example, seems to use ‘generate an implicature’ and ‘license an inference’ interchangeably. I suggest they are different. The former is an inference invited by the speaker; the latter is not. Given the received view about the lexical meaning of *most*, the ‘all’-exclusion interpretation is in most cases of *most* contextually plausible (as an attributed speaker belief) and potentially cancelable. It is, however, not a conversational implicature, since it is not intended by the speaker. As I have argued in Ariel 2002a, there can be a difference between facts about the reality that speakers depict and the message they actually intend to convey. While ‘not all’ may be true, it does not have to be a speaker-intended inference. Speakers select only certain aspects of the situation they wish to describe when they communicate. Note, incidentally, that this gap between the speakers’ commitments and their conveyed meanings is not unique to pragmatic inferences. It is equally relevant for semantic inferences. While speakers are necessarily committed to all the entailments of their true propositions, it is not the case that they intend to actually communicate each of them. Thus, a proposition such as *p and q* entails ‘*p or q*’, but under most circumstances it would not be taken to be a speaker-intended inference. If so, it would not be a very cooperative addressee who draws such uncooperative inferences.

Uncooperative inferences may, however, be inferred by an addressee, nonetheless. Indeed, an uncooperative addressee may derive a ‘not all’ interpretation when *most* is used as an uncooperative inference. Argumentative speakers, such as Patty in 23 and A in 24, do just that (for *some* and *most* respectively).

- (23) DAN: . . . cities that we are competing against,
 Seattle,
 . . . San Antonio,
 Minneapolis,
 . . they’ve got,
 . . . comprehensive plans,
 for the development of their cities.
 . . . And,
 [that]—
 PATTY: [some of] them do and some of them do not.
 DAN: The ones that I just mentioned do.
 . . Alright?
 PATTY: (Hx)
 DAN: And,
 . . my [point is,
 PATTY: [Some of them do,
 DAN: that],
 PATTY: and] some of them do not.
 DAN: . . . The ones that I just mentioned do. (SBC:026)

Note that Dan, who is interested in preparing comprehensive plans for city development, mentions cities that they are competing against as having them. He is probably not in a position to say ‘all cities’, but he focuses on the set of cities (apparently the ones he lists) which supports his proposal. Patty, who seems opposed to Dan’s input, insists

²⁸ Carston (1990) too has criticized Levinson for dubbing all pragmatic inferences implicatures. But her criticism pertains to inferences forming part of the explicature, namely inferences that contribute to the truth-conditional meaning of the proposition.

on drawing (twice) the ‘not all’ uncooperative inference from Dan’s words.²⁹ Example 24 is taken from a cartoon featuring a couple ‘fighting’ over *most* (caps indicate original boldface).

- (24) A: Why do you always think you’re right?
 B: Because I’m **RIGHT most** of the time
 A: **MOST** of the time? Then you admit you’re wrong **SOME** of the time.
 Wrong! Wrong! **WRONG!!**
 B: Things are so different at the office. (Beetle Bailey, *International Herald Tribune*, 10.17.2003)

B treats *most* as contributing a very strong statement, in line with the prevalent use (see also §§6.1, 6.2 below). Needless to say, B has no intention of implicating ‘not all’. A, on the other hand, being uncooperative, hastens to focus on the complement set in order to prove B wrong. The following example from the movie *When Harry met Sally*, quoted by Horn (2002), shows the same phenomenon for *attractive*, another scalar expression.

- (25) HARRY: . . . She could be attractive with a good personality or not
 attractive with a good personality.
 JESS: So which one is she?
 HARRY: **Attractive.**
 JESS: But **not beautiful**, right? (excerpted from Horn’s ex. 2)

Jess here is being difficult (throughout the conversation), drawing a definitely UNintended UNcooperative inference.

Nonetheless, despite the general usefulness of a concept of uncooperative inferences, an uncooperative-inference explanation is quite problematic for *most*, since it simply substitutes uncooperative inference for GCIs in drawing the ‘all’-exclusion inference. This means that uncooperative inferences, which are by definition optional, have to be stipulated as obligatory (or else the majority cases, where *most* is interpreted as upper-bounded, are left unaccounted for). It means that A (and Patty and Jess) are simply saying out loud what all addressees are thinking quietly when hearing *most*. I do not think we can accept that. Uncooperative behavior cannot be the norm. Such inferences are interactionally quite different from the absolutely cooperative interpretations of *most* as upper-bounded (compare 23, 24 with 15, 16). Imposing obligatoriness on what must be optional, addressee-initiated, and, moreover, not fully cooperative pragmatic inferential steps would then take away the very rationale behind uncooperative inferences. In addition, it is unreasonable to assume that a mostly irrelevant and nonsalient interpretation (the uncooperative inference) has such a deep impact on the lexicon (setting the ANTIREDUNDANCY PRINCIPLE in motion). Last, the semanticization puzzle would repeat itself for the uncooperative inference: If frequent, why don’t the ‘not all’ uncooperative inferences semanticize in any language? Hence, despite their

²⁹ An interesting set of cases for what I term uncooperative inference associated with quantifiers is provided by Moxey and Sanford (1993a). Their experiments establish that some quantifiers may be selected because they can indicate the expectation that a higher proportion than is predicated by the quantifier would have been expected (e.g. *not many/only a few came* indicates that more were expected to come). It seems that their subjects could draw inferences about the writer’s expectations about the proportions, as well as the writer’s assessment of their own expectations. Nonetheless, Moxey and Sanford emphasize that they are not proposing that addressees actually perform these inferences. They are not even sure that all people are capable of drawing these inferences. Such inferences are then good candidates for being uncooperative inferences that the speaker does not necessarily intend the addressee to draw, and that the addressee does not obligatorily draw.

usefulness elsewhere, replacing GCIs with uncooperative inferences cannot be the solution for *most*.

Horn (2005), however, proposes that speakers do sometimes generate implicatures against their best interest. He includes nonsalient and possibly irrelevant implicatures as speaker-intended. Horn argues that although unwelcome to the speakers' immediate goals, they must sometimes generate quantity implicatures, which defeat their purpose, just because they must obey the maxim of Quality. Thus, while 'not all' might defeat the speakers' goal in uttering 15, 16, and most of the examples in my data, they have to generate these if they are to abide by Quality, which instructs speakers not to say that for which they lack evidence (namely, 'possibly all'). I think that phrasing the received meaning of *most* in this way is misleading, focusing on just one particular value (100%) covered by the received meaning of *most*. One could then equally argue that speakers must not use *most* because of Quality, because *most* is compatible with 51%, 85%, or 99%, and speakers lack the evidence for committing to such values. Perhaps they do not know, or perhaps they know it is 53% or 56%, as in the following example (where we are later told that 53% of the Israelis and almost 56% of the Palestinians are involved).

- (26) Poll: **Most** Israelis, Palestinians support Geneva Accord. (*Haaretz*, English edition, 11.24.2003)

Note further that Horn's examples 41–43 for this argument are all cases where the speakers are expected to make a stronger statement than they actually do. For example, when the speaker invites somebody to bed saying 'I'm very fond of you, you're very special to me' (Horn's ex. 43), a natural implicature is that the speaker does not love the addressee. Under such circumstances the speaker necessarily generates unwelcome implicatures. I expect the same to happen with *most*. For instance, imagine the following variation on 19.

- (27) ~Michaeli: Now that we're married, we'll talk about EVERYTHING.
Gaon: About **most** things.

In this case, Gaon would be implicating 'not all', even though it certainly is not the optimal message from a newlywed to his wife. But the fact of the matter is that this is not the unmarked *most* case, and it feels quite different interactionally. I propose that Horn's new solution is to be avoided, first, because it obliterates important distinctions between default interpretations (the upper bound on most *mosts*), invited implicatures (as in 19), even if reluctantly so (as in 27), and uncooperative inferences (as in 22–25). The three types of inferences have quite distinct discursual statuses in interaction.

More generally, assuming a lexical-meaning status for an interpretation that is routinely not actually realized ('possibly all') is theoretically undesirable. It opens up the door for assuming all kinds of abstract meanings, which are then canceled. Recall that adopting such a stand is necessary only because of the decision not to include an upper bound in *most*'s lexical meaning, so that we can account for the few cases where *most* is compatible with 'all'. I claim that a 'just that' semantic analysis is to be preferred. Indeed, if we assume that the lack of commitment to 'all' (as distinct from 'all'-exclusion) can be incorporated into the lexical meaning of *most* (see §5.2), without losing the ability to account for those cases where *most* is indeed compatible with 'all' (see §5.4), we can avoid a theoretically unwelcome step and at the same time avoid a confusion between legitimate (default) interactional interpretations (the upper bound on *most*), (infrequent) 'not all' implicatures, and (rare) uncooperative inferences.

NONIMPLICATURE SOLUTIONS?: While the classical received view, as presented in §1, cannot be maintained in view of the findings above, its semantic aspect, namely, that *most* is only lower-bounded lexically, may be preserved according to both relevance theory and Landman (2000:ch. 5, p.c.). The relevance-theoretic position assumes a lower-bounded-only semantic meaning for *most*, which is then often enriched into an explicature ‘most but not all’ via pragmatic inferencing.³⁰ I believe that the same arguments against ‘not all’ being a conversational implicature apply to ‘not all’ being an explicatured pragmatic enrichment, for the same mechanism I argued against is relied upon. Thus, although the relevance-theoretic approach does not over-generate ‘not all’ implicatures, it too cannot account for the fact that the default *most* interpretation is nonetheless upper-bounded. In principle, however, relevance theory does not have to subscribe to the received view and can easily accommodate the semantics of *most* here espoused.

Landman attempts to account for the upper bound by noting that the probability of the addressee picking precisely 100% for *most* (as opposed to any value between 51 and 99%) is simply statistically slim. Findings from a questionnaire on Hebrew *most*, however, show that the ban on 100% is not in fact a matter of low statistics (see §5.3, Ariel 2003, 2005). Subjects consistently refused to confirm that a speaker could have referred to 100% when using *most*, even though they did accept the minimally lower 99%, for example (as well as 75%, 80%, 90%, etc.). Of course, each of these percentage values should be equally rare statistically. Moreover, the facts are that for *more than half*, where the same statistics are in operation, subjects were willing to select 100%. As the reader will see, since speakers categorically do not view *most* as denoting ‘all’, we cannot make do with a statistical tendency here. Thus, if, as I argued above, a GCI cannot provide the upper bound on *most*, then the semantic aspect of the received view cannot be maintained after all, for it fails to account for speakers’ interpretations of *most*.

3.3. TAKING STOCK. Let me recapitulate the arguments against a pragmatic account for the prevalent conveyed meaning of *most*. In §3.1 I raised a question about the possibility that ‘not all’ is a default implicature, yet one that apparently never semanticizes in any language. Section 3.2 focused on problems for a synchronic implicature analysis, first considering cases where ‘all’ is irrelevant. I concluded that the received view can correctly block the ‘all’-exclusion implicature in those cases, then moved on to cases where ‘all’ would have theoretically been relevant, but ‘not all’ is not. I argued that in such cases (neo-)Griceans wrongly predict a ‘not all’ implicature. If the relevance condition is amended in the spirit of my findings, such that ‘not all’ is implicated only when ‘all’ is contextually expected, then no implicature would be generated inappropriately. Once that is done, however, the received view has no way of accounting for cases where ‘not all’ is not implicated, but *most* is nonetheless taken as upper-bounded (both when ‘all’ is irrelevant and when ‘not all’ is irrelevant). The corpora counts show that the nonimplicating cases constitute the majority of the cases. I then considered the possibility that uncooperative inferences may account for the upper-bound interpretations in the absence of speaker intentions to convey them. The problems with this solution are that the diachronic problem repeats itself, and that an uncooperative interpretative step is relied on for consistently deriving *most*’s common interpretation, which is interactionally unmarked and flawless.

³⁰ Explicatures are full propositions created by adding on pragmatic inferences required for deriving full (truth-evaluable) propositions.

Finally, I argued against viewing the upper bound as a matter of statistics. The unavoidable conclusion is that the upper bound on *most* is independent of pragmatic inference to that effect: the majority cases are such that *most* is upper-bounded, but only in a minority of the cases is a ‘not all’ implicature generated.

In 28 I summarize the data on the interpretation of *most* regarding the upper-bound interpretation.

- (28) a. *Most* is upper-bounded; ‘all’ is expected, ‘not all’ is relevant and intended in context. It is therefore generated as a particularized conversational implicature (e.g. 2c, 14, 19). It may be explicitly strengthened (e.g. 44).
- b. *Most* is not upper-bounded. According to the received view, the potential implicature is canceled implicitly (e.g. 3, 45) or explicitly (4).
- c. ‘All’-exclusion cannot be attributed to the speaker as a particularized conversational implicature; ‘all’ is not expected, and therefore ‘not all’ is not relevant and not an intended inference in context. *Most* is, however, upper-bounded (e.g. 15, 16). Rarely, an uncooperative ‘not all’ inference may nonetheless be drawn (23).
- d. It is not clear (nor crucial to know) whether *most* is upper-bounded. ‘All’ is not expected (e.g. 5, 42).

The received view recognizes types a and b only. I have found that the majority of *mosts* actually falls under type c. Although Levinson (2000), for example, does recognize the existence of type c, he does not realize how prevalent it is.

The discourse findings presented in §3 have both semantic and pragmatic implications. I discuss the implications for the semantics of *most* in §5. Specifically, I propose that the lexical meaning of *most* constitutes the prevalent conveyed meaning (an upper-bounded *most*). In §4 I briefly explore some implications for the pragmatic analysis of scalar implicatures.

4. PRAGMATIC IMPLICATIONS. The analysis of naturally occurring *mosts* demonstrates that an overwhelming majority are interpreted as circumbounded (i.e. lower- and upper-bounded; 118, 92.9%). However, only a minority of these (22, 18.6%) can be accounted for by an ‘all’-exclusion GCI analysis. Contrary to the received view, the upper bound on *most* is independent of a ‘not all’ implicature. In this section I consider some implications of these findings for the concept of generalized conversational implicatures and for other scalar quantifiers on the Horn scale (§4.1). We then see how the findings can explain away the diachronic puzzle posed in §3.1 (§4.2).

4.1. THE STATUS OF GENERALIZED CONVERSATIONAL IMPLICATURES. My arguments against a ‘not all’ GCI for *most* seem quite compatible with the relevance-theoretic position on GCIs, as well as Hirschberg 1991. These researchers argue that the neo-Gricean concept of GCI reduces an utterance-level phenomenon to the level of the word. According to Carston (1990, 1998, 2002:ch. 2), we do not actually need a special GCI category of implicatures, for GCIs, just like particularized conversational implicatures, are context-dependent (see originally Sperber & Wilson 1987, 1995:276–78). Hirschberg (1991:132) even maintains that the partially ordered sets responsible for the scalar implicatures vary from one person to another, sometimes in the same exchange.³¹

³¹ But note that relevance theorists do recognize that standard (more automatic) pragmatic processes may exist (see Sperber & Wilson 1987:748), and while Hirschberg (1991:43) maintains that both GCIs and particularized conversational implicatures are context-dependent, she agrees that GCIs are more context-independent than particularized conversational implicatures. Instead of GCIs, Carston (1990) has proposed a continuum of particularized conversational implicatures, from one-offs to ones that are hardly ever canceled.

also relevant, the addressee infers a Quantity implicature, based on the speaker's avoidance of confirming the stronger statement previously mentioned.

Moreover, note the following, where despite the use of the Hebrew maximal expression *kol* 'all, every', a particularized conversational implicature negating a larger set than that represented by *kol yehudi* 'every Jew' is possibly generated.

(30) I love **every** Jew (originally Hebrew, a bumper sticker, July 2002)

Example 30 potentially carries a variety of implicatures. One (as confirmed by consulting several speakers) is that the sticker holder does not love non-Jews (the relevant non-Jewish group in Israel being Arabs). It seems that the set of all the citizens of the state of Israel is here highly salient, so much so that failing to include non-Jews/Arabs in the profiled reference set implicates nonlove (hatred?) for the complement set of non-Jews. If so, it seems that even the universal quantifier, which is the maximal value on the Horn scale, does not stop addressees from taking into account a relevant larger set than the one denoted ('every Jew'): *All/every* can be taken as representing a subset despite the fact that it represents a complete set. In other words, 'not all' implicatures and uncooperative inferences are not restricted to linguistically nonmaximal expressions. A maximal quantifier too may give rise to a 'not all' interpretation.

It is clear, then, that scalar implicatures may be generated in the absence of conventional Horn scales. Should we then simply eliminate GCIs altogether in favor of particularized conversational implicatures, as relevance theorists have proposed? This move may seem reasonable for *most* where the percentage in which 'all'-exclusion constitutes a conversational implicature is rather low (17.3%). What about other scalar quantifiers? Here are two examples where *some* and *many* behave just like *most*.

- (31) a. REBECCA: (H) my one concern about this case . . . i=s,
 (H) u = m,
 . . . that . . . **some people** may have [the a]ttitude of,
 RICKIE: [(SNIFF)]
 REBECCA: well,
 . . . he never touched you,
 RICKIE: Mhm.
 REBECCA: . . . he didn't . . . make any verbal threats to you,
 (H) it's no big deal Q). (SBC:008)
- b. We have continued to make **many** of our shoes in the United States . . .
 We believe **most** consumers think that 'Made in USA' means that real manufacturing jobs were provided to U.S.A. workers ('New Balance' shoe label, April 2000)

In 31a, Rebecca, a prosecutor, is concerned only about the set of jurors, as minor as it might be, who would not consider a sexual offense too severe if the defendant did not touch the victim. She is definitely not concerned about the complement set of people/jurors (who agree with her, presumably). After all, it is enough that one juror thinks so for the defendant to be acquitted. Although it is certainly consistent with her statement (and her belief, no doubt) that not all people have this attitude (it is truth-compatible), it would be wrong to attribute to her an intention to communicate it (it is not speaker-intended). The same is true for 31b, where it would defeat New Balance's purpose to intentionally communicate the fact that 'not all their shoes are made in the US', and that not all consumers think that making shoes in the US means that jobs are 'provided'. The first implicature would undermine their pride in producing American shoes, and the second would weaken the basis for their pride in providing jobs to US citizens.

But neither the examples above nor the persuasive arguments put forth by relevance theorists, which I support for *most* in general, entail that the same solution is necessarily applicable to other scalar quantifiers. While I believe that *some* and *many* may very well reveal patterns similar to that of *most*, the fact that speakers using *most* do not commonly generate a scalar GCI does not rule out the possibility that speakers of *some* or *many* do generate 'all'-excluding GCIs frequently enough to justify the accepted neo-Gricean analysis for those expressions.³³ The existence of particularized conversational implicature counterparts does not really argue against a GCI analysis for some cases, because the fact that we can infer the 'not all' interpretation as a particularized conversational implicature when one expression is involved does not mean that it is not a GCI for another after all. Some scales (for some expressions) may have a more conventional or entrenched status, and the fact that Horn-style scales can be constructed ad hoc does not mean that all of these scales are constructed in this way in real time (see also Papafragou & Musolino 2003).

In fact, even if we conclude that the assumption that GCIs go through unless specifically blocked is wrong in general, it may still be correct to assume a GCI status for some implicatures, just because a 15% (say) rate of implicature generation is significantly higher than the frequency of any given particularized conversational implicature. In other words, we may wish to recognize the difference between one-off conversational implicatures (if that is what particularized conversational implicatures regularly are) and conversational implicatures that are recurrent and therefore relatively salient/privileged to interlocutors, even if they are not routinely generated. It is possible that a 10–15% occurrence is not merely a case of a relatively frequent ad hoc particularized conversational implicature (the relevance position). Rather, it possibly points to the existence of a pre-existing strategy available to speakers.

Thus, while I agree with the relevance position that some purported GCIs are not default interpretations, I do not accept their assumption that since some scalar implicatures can be seen as generated ad hoc, all must be seen as generated in that manner. Only empirical studies can confirm if other scalar quantifiers are also used to generate particularized, rather than generalized, conversational implicatures of 'not all'.³⁴ In fact, a concept of GCI may prove useful for explaining potential semanticizations, even if it is drastically weakened to a privileged inference status, as I proposed above.

4.2. DISAPPEARANCE OF THE DIACHRONIC PUZZLE. Based on the findings for *most* presented in §3, the absence of semanticization of the 'all'-exclusion interpretation in *most* can now be explained. The assumption that 'all'-exclusion is a default/frequent interpretation seems unjustified for *most*. In other words, the assumed fact that there are no natural-language words for *most* that also code 'not all' is not necessarily due to an antiredundancy principle, because that interpretation is commonly generated as a conversational implicature 'for free'. In the case of *most*, at least, this interpretation seems to be intended in only a minority of the cases. If so, the reason for the lack of words encoding 'not all' in natural language could very well be the relatively low frequency with which this contextual meaning is relevant in actual discourse. The functionalist principle 'frequency drives semanticization' is then applicable to Q-implicatures from *most* after all: the low frequency of the 'all'-exclusion implicature explains the absence of semanticization. As I argue below, however, it is quite possible that

³³ Although the diachronic puzzle would remain.

³⁴ I myself have argued against a GCI analysis of discourse anaphora (Ariel 1994).

while ‘not all’ is not lexicalized, an upper bound is part of the lexical meaning of ‘most’ expressions in natural languages. I myself can only claim it for English and Hebrew.

5. AN ALTERNATIVE SEMANTIC SOLUTION: A ‘JUST THAT’ LEXICAL MEANING FOR *most*. Section 4 briefly discussed potential consequences of the findings in §3 for the pragmatic analysis of *most* and other scalar quantifiers. In this section I concentrate on semantic consequences: I offer a new lexical meaning for *most*. Recall that the statistical findings presented in §3.2 attest that the upper bound must be independent from the generation of an ‘all’-exclusion conversational implicature (or uncooperative inference) to that effect. I now propose that not only is it the case that pragmatics cannot account for the upper bound, but lexical semantics should in fact be responsible for the upper bound on *most*. For this analysis to work, we need to distinguish between ‘all’-exclusion and upper bound. Only the latter is encoded by *most*. Section 5 is for the most part a summary of the arguments for a ‘just that’ semantic analysis of *most* made in Ariel 2005.

5.1. PREVIOUS SEMANTIC-PRAGMATIC DIVISIONS OF LABOR FOR SCALAR QUANTIFIERS. Assuming that in the majority of cases *most* is interpreted as ‘more than half and less than all’, what statuses have been attributed to each of the components of this interpretation? First, there is the received unilateral thesis, assumed in the article so far, which stipulates that *most* is only lower-bounded. On this analysis, *most* means that the number of the members for which the predication holds true exceeds half of the total number of set members. The upper bound has to be pragmatically derived via an ‘all’-exclusion conversational implicature. ‘More than half but not all’ (of whatever strength) is the conveyed meaning, which simply combines the lexical meaning with the implicature. As we have seen, however, since ‘not all’ is not routinely generated as an implicature, the received view has no way of accounting for the commonplace upper-bounded interpretation of *most*.

Peterson (1979) is the only one to have proposed an ambiguity analysis for *most* (Hamilton (1860), as cited in Horn 1989:207, offered a similarly ambiguous account for *some*). According to Peterson, *most* has a lower-bounded meaning, as well as an ‘all’-exclusion meaning (which is its basic meaning).

(32) (Most S are P) if and only if (Few S are not-P).

(Most S are not-P) if and only if (Few S are P). (Peterson 1979:155)

There are a few problems with this proposal. First, Chierchia and McConnell-Ginet (1990:194–95) argue that it would seem strange that all known languages should manifest the very same ambiguity and, moreover, that this ‘ambiguity’ is so easily accounted for pragmatically (e.g. invariably the weaker and not the strongest item on the scale is ‘ambiguous’—this is why Kempson (1986) resists the lexical-ambiguity analysis). Grice’s (1978) MODIFIED OCCAM’S RAZOR (‘Do not multiply senses beyond necessity’) is also normally used against such an analysis. Recent research, however, has argued that deriving every interpretation potentially inferable as an ad hoc inference may not be what speakers do in reality (see Ariel 2002c, and references cited therein). As I mentioned in §4, addressees may well retrieve from memory (rather than infer locally) certain assumptions, despite the fact that they are inferable in principle. This is because recurrent inferences may get entrenched (to various degrees). Thus, one could perhaps argue that although the ‘most but not all’ interpretation can be created ad hoc with the aid of an inference, it is actually entrenched as a separate semantic meaning and therefore not inferred in practice. This would also address Chierchia and McConnell-Ginet’s counterarguments. It is not surprising to find (universally) pragmatic traces in a seman-

tics that developed out of pragmatic use. Note, however, that in view of the findings presented in §3, the entrenchment here would have to be based on uncooperative inferences, which do not constitute intended meanings. Does it make sense that entrenchment should occur for inferences that are ‘objectively’ justified but not very often actually intended as conversational implicatures? There seems to be no evidence for such a historical development.³⁵ Also, note that this analysis forces addressees to decide between the ‘possibly all’ and ‘not all’ interpretations, a decision that I am claiming is not clear-cut in conversation (see 3, 5, and 6). Finally, even in the majority cases, where an upper-bounded reading is intended (e.g. 15, 16), Peterson’s analysis would predict that should ‘all’ be true, the proposition must be false. This is unjustified, and this is why such an account was rejected by linguists in the first place.

5.2. THE LEXICAL MEANING PROPOSED FOR *most*. So far, we have seen that the ambiguity proposal for *most* is not convincing: Peterson’s (1979) semantic bilateral analysis fails when ‘all’ is true. The unilateral lexical proposal makes the right prediction for the minority of cases when ‘all’ is true, but cannot account for the majority cases, where no ‘all’-exclusion implicatures or uncooperative inferences are inferred, but *most* is taken as upper-bounded nonetheless. What lexical meaning can we assume then?

In Ariel 2004, I argue that the set of entities that *most* picks for predicating on, as specified by its coded meaning, includes any value larger than half, but smaller than ‘all’ (51–99% for short). The following example from a broadcast about Saddam Hussein’s election attests to the significance of the difference between 99.99% and 100% for Hebrew *most* (recall that in Hebrew the same word, *rov*, serves for both ‘most’ and ‘majority’).

- (33) le + axar she+ nivxar be+ **rov** shel . . . **rov!** hu
 After (that) he was elected with (a) majority of . . . A majority! He
 nivxar be + mea axuz!
 was elected with (a) hundred percent! (Voice of Israel radio, 10.18.02)

Note that the speaker of 33 stopped himself after *shel* ‘of’, avoiding 34a presumably. He then repeats the word *rov* ‘majority’ in a scornful tone, thereby indicating that he is not willing to call 100% *rov*. Compare the rejected 34a with the acceptable 34b.

- (34) a. ~??hu nivxar be + **rov** shel 100%.
 He was elected at (a) majority of 100%.
 b. ~ hu nivxar be + **rov** shel 99.99%.
 He was elected at (a) majority of 99.99%.

Indeed, there is a difference between the minimally different 34a and 34b, where anything less than 100% makes the utterance acceptable. It seems that the English technical term *majority* is not restricted in this way, rendering the English counterpart of 34a acceptable. But English *most* is not as tolerant.

- (35) ~??He was elected with **most** of the electorate’s votes (a hundred percent).

While I am proposing a circumbounded range analysis for *most*, unlike Peterson’s (1979) bilateral analysis, my analysis assumes an upper bound, not an ‘all’-exclusion entailment (hence the decision to avoid the term BILATERAL). Since the minority complement of *most* is not denoted on my account, it may or may not share the property predicated on the majority set (as allowed for by the unilateral approach—see §5.4

³⁵ Davis’s (1998) proposal that ‘not all’ is regularly implicated just because it is a habit of speakers to generate that implicature suffers from the same problem.

below). Extensionally, *most* stands for a set of entities that constitutes 50% + something, but less than 100%, of another, larger set. Thus, when the speaker says *Most Israelis support the Geneva Accord*, *Most Israelis* represents a set of Israelis constituting 51–99% of another, larger set of all Israelis, and it is about this proper subset that ‘support the Geneva Accord’ is predicated on. The complement minority subset of Israelis not included under *most* is not denoted at all, and at the lexical-semantic level, the speaker undertakes no commitment about the application of the predicate to these Israelis: if they are not referred to by the speaker, he or she is (lexically) committed neither to the predicate not applying to ‘all’ nor to the predicate possibly applying to ‘all’. Consider Figure 1.

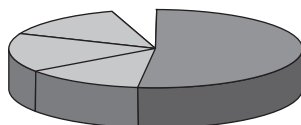


FIGURE 1. Lexical meaning of *most*.

First, more than half of the circle is highlighted (darkened). This represents the profiled meaning of *most*, that is, those aspects not only invoked, but actually made prominent by the use of the word—see Langacker 1987. The most minimal majority (lower bound) is colored dark gray, and the rest of the potential *most* range is colored light gray. Second, note that the circle is missing part of its contour. This is because the complement of *most* is not profiled. The speaker asserts nothing about it, because it is not being denoted. While conceptually, one necessarily relies on the notion of a ‘whole’ to define a majority (the whole provides a conceptual base with respect to which *most* can be defined), at the lexical level, the status of the complement set is similar to that of any irrelevant referent (e.g. Algerians). That is why it blends with the rest of the context in Fig. 1. As Langacker (1995) emphasizes, conceptual bases do not constitute profiled meaning aspects for lexical items (see his analysis of *elbow* vis-à-vis ‘arm’).

Most, then, denotes a proper subset that is larger than half. I propose to define the lexical meaning of *most* as ‘a proper subset that is the largest subset, given any partitioning of the complement set’ (into one or more subsets). First, since it is a PROPER subset, *most* cannot denote ‘all’, which means it is upper-bounded. Second, as long as the *most* set is larger than 50%, the complement set will range between 1% and 49%, and there is no partitioning of the complement set that can be greater than the *most* set. But consider the case of a plurality (say, 45%) which is the largest of three subsets (the others being, say, 30% and 25%). Now, it is always possible to combine the various complement subsets into a single complement subset under some rubric (55% in our case; see §6.5). The definition above is aimed to preclude the application of *most* to the currently largest subset (45%) in this case. This is achieved by requiring that *most* denote not only the largest subset under the current partitioning, but also under any partitioning of the complement. The effect of this requirement is that *most* is also lower-bounded (by 51%). This definition has a few advantages. First, *most* denotes a coherent, circumbounded concept (‘a largest proper subset’). Second, diachronically, it shows the current meaning to be a narrowing down of the historical meaning (something like ‘the greatest part’; cf. French *la plupart*—see §6.1), and it also connects with superlative *most* (‘to the greatest extent’). The newer meaning involves only the addition of the specification regarding ANY possible partitioning. The third advantage is that *most*’s

(infrequent) use with a plurality interpretation (where it does denote the largest subset even though it is smaller than 51%) is naturally accounted for (see §6.5 below).³⁶

My proposal that when *most* is used only the majority set is being profiled is quite compatible with recent psycholinguistic experiments. These have demonstrated that speakers draw addressees' attention to the reference set of positive quantifiers, rather than (also) to the minority complement set not included under the quantifier (for *most*, potentially referred to by 'not all/some not'). Just and Carpenter (1971) found that response times for verifying sentences by comparing a positive quantifier (e.g. *a minority*) with a picture were shorter than when a negative quantifier (e.g. *few*) was used, just because the relevant set for the negative quantifier is the complement ('few not') rather than the reference set ('few/a minority'). In other words, reference to the complement ('some not' in the case of *most*) takes longer than reference to the reference set ('the majority' in the case of *most*).

Moxey and Sanford (1993b) propose that all positive quantifiers (such as *most*) focus on the reference set, whereas all negative quantifiers (such as *few*, *not many*) (also) raise the question of the complement set. In a number of experiments, subjects were asked to continue a piece of discourse that introduced a reference set either by positive quantifiers (e.g. *Almost all/Many of the football fans went to the game*) or by negative quantifiers (e.g. *Not quite all/Few of the football fans went to the game*). The subjects' continuation had to begin with *They . . .*, which ensured that they would have to refer to a highly accessible set of referents (pronouns are restricted to highly accessible referents—see, for example, Sanford & Garrod 1981, Ariel 1990, Chafe 1994). Indeed, subjects invariably chose to continue the discourse about the profiled reference set ('the fans who went to the game') when the quantifier was positive, but they did so in less than half of the cases when the quantifier was negative, where they preferred continuations about the complement set ('the fans who did not go to the game'; see Moxey & Sanford 1987, Sanford et al. 1996). Quantifiers 'exert an influence on the patterns of inference . . . , they are controllers of what is attended to' (Moxey & Sanford 1993b: 107). Sanford and colleagues (1996:144–45) then conclude that 'although all of these sets [reference set, complement set, reference plus complement set—MA] have to be taken into account in logical reasoning, they are not equally accessible'. Such findings testify that for a positive quantifier such as *most*, it is the reference set, and not the minority complement set ('some not'), that the speaker is making accessible and relevant for interlocutors. They support my proposal that when *most* is used, the speaker is profiling only the reference set, and not the complement set.³⁷

Note that relevance theoreticians, as well as Récanati (1989), rightly question the application of the Gricean program to just any interpretation that we can technically

³⁶ For an alternative formalization, see Uriel Cohen at <http://www.tau.ac.il/~cihenfr/>.

³⁷ Laurence Horn (p.c.) counters that the findings are also compatible with the received view in that implicatures do not share the central status that 'said' material enjoys. Still, my intuitions are that (i) is less natural than (ii).

- (i) ~A: What are we doing today?
?B: We're interviewing **most** of the candidates. Maya Shani and Iddo Raviv can't come.
- (ii) ~A: Are we interviewing **ALL** the candidates today?
B: We're interviewing **most** of them. Maya Shani and Iddo Raviv can't come.

Since proper names are lower accessibility markers than pronouns, they can sometimes felicitously refer to the nonmentioned candidates. This happens, however, only when a 'not all' implicature is generated (due to the contrast with *all*), because the implicature grants some (low) degree of accessibility to the mental representations of the non-comers. Not so when a 'not all' implicature is not generated, since the representations for Maya Shani and Iddo Raviv are then harder to access. Horn does not share my judgments, however.

relegate to pragmatics. Instead, they argue, we should reserve this status to interpretations that intuitively feel like implicatures, that is, ones perceived by speakers as external to ‘what is said’, as indirectly implied. Specifically, Récanati argues that the upper bound on the cardinal numbers is not taken as external to their semantic lower-bounded meaning, and therefore should not count as an implicature. I believe this criticism equally applies to the upper bound on *most* (see §3.2 and the psycholinguistic experiments just mentioned confirming the reality of the majority reference set). Chierchia and McConnell-Ginet (1990:194) share this intuition about the directness of the upper bound on scalar quantifiers. Horn (1992), however, concedes that Récanati is right about the numbers, but cites De Morgan (1847:56), Mill (1867:501), and others as intuitively assigning quantity inferences from other scalar expressions (specifically *some* used out of context) a different status from semantic meaning. He thus claims that the scalar quantifiers do meet Récanati’s condition for implicature status. I agree with Horn and the others that ‘not all’ is certainly implicated in examples such as 19, but I have argued at length that they are not generated in the default case. In other words, the intuitive feeling of an ‘external’ implicature that Horn and others rely on for their analysis is attached only to the ‘not all’ implicatures we draw in a minority of the cases (where it is denied that the predicate applies to ‘all’). These are not to be confused with the majority of the cases, where we interpret *most* as upper-bounded (i.e. where the denotation is oblivious to ‘all’). This upper bound is not external to ‘what is said’, and not indirect or implied.

5.3. *Most* IS LEXICALLY UPPER-BOUNDED: QUESTIONNAIRE RESULTS. Figures 2 and 3 summarize the results from Ariel 2003 regarding subjects’ acceptance rates of various values for *most* in comparison with *more than half* (see also Ariel 2003, 2005). A comparison of *most* with *more than half* is quite illuminating, because under the received view, there is supposed to be no semantic difference between the two expressions. In Ariel 2003 I argue otherwise. Table 3 presents the actual findings on which Figs. 2 and 3 are based (the acceptance rates for 60% and 75%, and 80% and 85% are averaged in Figs. 2 and 3). Starting with 49% and 50%, Fig. 2 demonstrates a similarity between *most* and *more than half*. Both values are basically rejected as extensions of the two expressions. Acceptance rates for above 50% are many times higher, indicating that 51% (the lower bound) represents a hard-edged linguistic category for both *most* and *more than half*.³⁸ The next two sets of bars show higher acceptance rates for *more than*

VALUE	<i>most</i>	<i>more than half</i>
49%	3/32 = 9.4%	1/19 = 5.3%
50%	7/64 = 10.9%	3/38 = 7.9%
51%	47/64 = 73.4%	35/38 = 92.1%
60%	21/32 = 65.6%	19/19 = 100%
75%	30/40 = 75.0%	25/26 = 96.15%
80%	29/32 = 90.6%	18/19 = 94.7%
85%	23/24 = 95.8%	12/12 = 100%
90%	27/32 = 84.4%	10/19 = 52.6%
99%	80/96 = 83.3%	22/38 = 57.9%
100%	6/96 = 6.25%	21/56 = 37.5%

TABLE 3. Acceptance rates of 49–100% values for *most* and *more than half*.

³⁸ The reason why the gap between 50% and 51% is much larger for *more than half* than for *most* is that for the former it distinguishes between a lexically illegitimate interpretation and a pragmatically preferred interpretation, whereas for the latter it distinguishes between a lexically illegitimate interpretation and a pragmatically dispreferred interpretation.

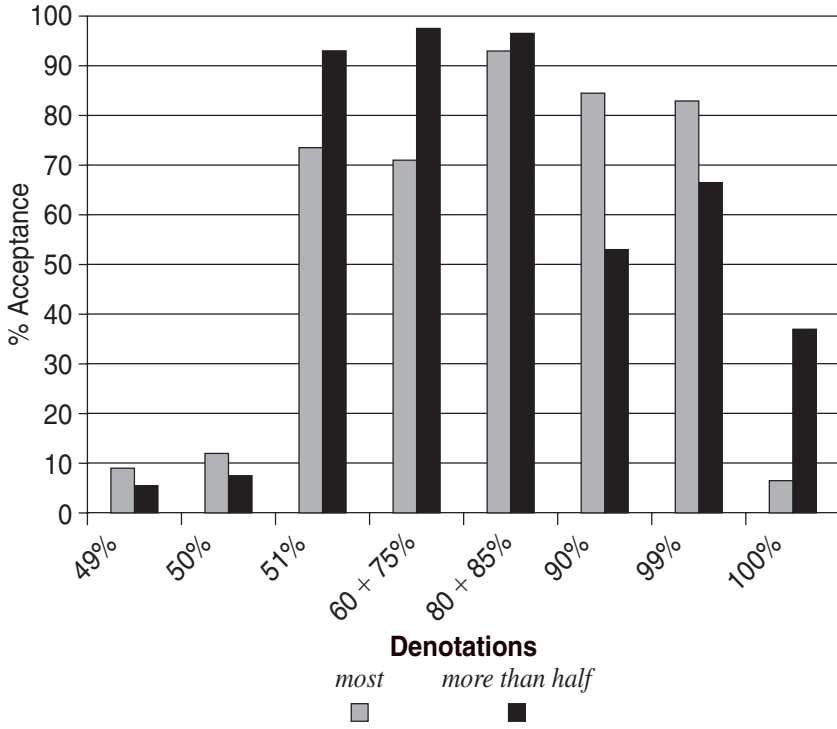


FIGURE 2. *Most vs. more than half.*

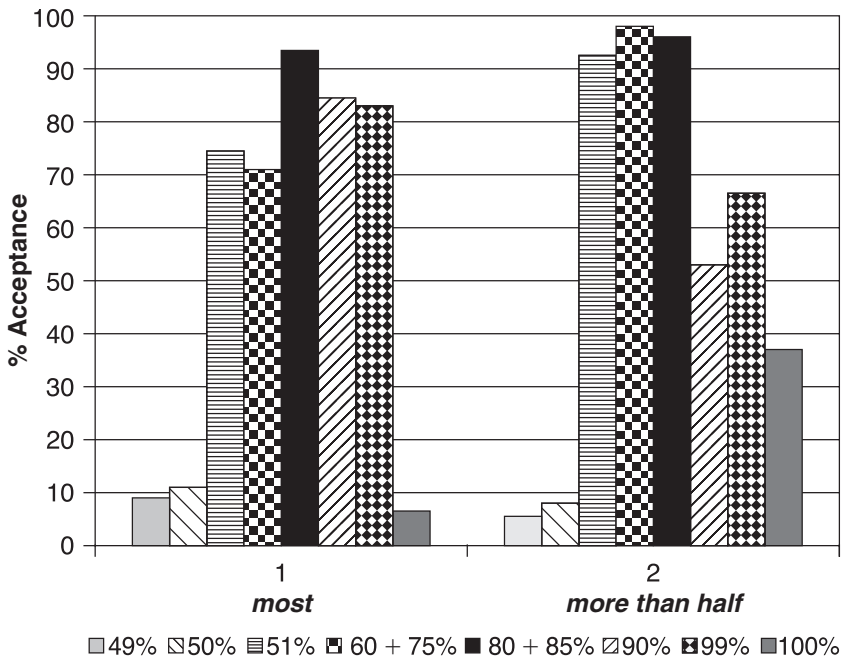


FIGURE 3. Interpretation profiles: *most vs. more than half.*

half for relatively low majorities (51%, 60%, 75%). *Most* and *more than half* then receive equally very high acceptance rates for larger majorities (80%, 85%) but, then, lower ones for the very high majorities (90%, 99%). Note that *most* gets higher acceptance rates here than *more than half*. I later suggest that these differences stem from *most*'s pragmatic association with a noteworthy amount (see §6.1). Now, there is a significant drop in the acceptance rates for 100% for both expressions. Crucially, however, *more than half* has a sizable acceptance rate for 100% (37.5%), but 100% is virtually unacceptable for *most*, only 6.25% of the responses confirming that the speaker could have intended 100% when producing a *most* utterance. The rate of acceptance for 100% for *most* is in fact smaller than the rate of acceptance for the semantically impossible 50%, and even for 49%. Note, incidentally, that it is not the case that there was a small subset of subjects who consistently confirmed 100% for *most*: only one subject (out of 32) consistently confirmed 100% for *most* in the three questions pertaining to its meaning. But this same subject also verified 20%, 49%, and 50% and did not always confirm the truth-compatibility of *most* with 'all' (in a different type of question). We cannot, then, even claim that some (minority) of subjects do have a lower-bounded-only lexical meaning for *most*.

The same results are somewhat differently represented in Fig. 3. The mountain on the left represents *most*, and the one on the right represents *more than half*. Examining the left sides of the two mountains we see that acceptance rates fall off a cliff once we go below 51% for both *most* and *more than half*. But whereas for the upper bound for *more than half* there is a nondrastic (I would argue pragmatic) sloping down from 99% to 100% (1.76 times more confirmations for 99% than for 100%), the counterpart upper bound for *most* demonstrates an abrupt (I am claiming semantic) plunge in the acceptance rates between 99% and 100% (13.3 times more confirmations for 99% than for 100%). It is interesting to examine the results for a specific question (asking about 'an overwhelming majority'/'a lot more than half'). In this question (see Ariel 2003, Table 6 for details), 90.6% of the subjects confirmed 99% for *most*, but only 3.1% confirmed it for 100% (a 29.2 times gap). For *more than half*, however, 83.3% confirmed 99% and 33.3% confirmed 100% (a 2.5 times gap). Note that it is actually this question about 'an overwhelming majority'/'a lot more than half' that accounts for the relatively high confirmations for 99% for both expressions (for *more than half* it even makes it look as if 99% gets more confirmations than 90%). If we calculate the gap between 99% and 100% ignoring this question, confirmations for *more than half* are only 1.47 times higher for 99% than for 100% (58% versus 39.5%). This same ratio also distinguishes between the acceptance rates for 49% and 50% for *more than half*. The gap in favor of 99% is 9.6 times for *most* (75% versus 7.8%). I maintain that if a small difference in denotation (1%) creates such a huge gap in acceptance rates, and moreover, the difference is between negligible (3.1%, 7.8%) and striking rates of acceptance (90.6%, 75%), this signals a hard-edged category boundary. We do not see such a difference between 49% and 50% for either expression, nor do we do see it for 99% versus 100% for *more than half*. We see such a gap only for 50% versus 51% for both expressions, and for 99% versus 100% for *most*, but not for *more than half*.³⁹

³⁹ Horn (2005) argues that because of the paradigmatic opposition between *most* and *more than half*, the latter but not the former can more easily denote 100%, but see Ariel 2005 for counterarguments. Briefly, the difference in confirming 99% and 100% is also fairly large for *more than half*, and the same opposition seems not to block either expression from being accepted at very high rates for 80% and 85% values (see Fig. 2 again).

Finally, on a second questionnaire administered to a different set of students at Tel Aviv University, subjects were asked to choose between 51% and 100% on the one hand and on the other pragmatically narrowed-down interpretations as ‘what the speaker intended’ in uttering *most* or *more than half*. While a majority of the subjects (14/22, 63.4%) chose ‘51–100%’ for *more than half*, only a negligible minority (2/23, 8.7%) made the same choice for *most*. This finding too corroborates my claim that, unlike *more than half*, *most* is lexically upper-bounded. I propose that the three large gaps in acceptance rates (between 50% and 51% for both expressions and between 99% and 100% for *most*) equally attest to semantic boundaries.

5.4. COUNTERING THE ADVANTAGES OF AN ONLY LOWER-BOUNDED MEANING FOR *most*. Consider 5 once again. I trust that most people would not say that Lance’s *most* proposition is false if he was actually ‘able to keep up with that stuff’ all the time, rather than only most of the time, even if he knew that that was the case. This intuition formed the basis for the received assumption that *most* is only lower-bounded. The assumption is that lexical meanings must guarantee the applicability of all states of affairs compatible with the use of the word. Since it seems that, just like other values higher than 50%, ‘all’ too may be true when *most* is used, there seems to be no reason to distinguish between ‘all’ and other such values. Hence, the lexical denotation of *most* includes 100% under the received view. Since I accept this intuition about 3, 5, and 6, I need to explain how an upper-bounded analysis for *most* can ensure that states of affairs in which ‘all’ is the case are compatible with the use of *most*. Following Koenig 1991, I have argued that truth-compatibility is distinguishable from lexical meaning: In the case of *most*, the compatibility with ‘all’ is a pragmatic rather than lexical matter (see Ariel 2005 for a more detailed argument).

Koenig (1991) reminds us that lexical meaning is not automatically read off truth-compatibility.⁴⁰ Indeed, propositions may be true under circumstances that have nothing to do with the truth conditions specified by their linguistic components. Consider 36.

- (36) Israel has liquidated **Sheikh Yassin** at 5 a.m. this morning. (originally Hebrew, News headlines, Voice of Israel, 3.22.2004)

Nobody would claim that this announcement was false just because with the sheikh, Israel also killed a few of his aides, as well as passers-by. It is quite clear that ‘killing Sheikh Yassin’ is compatible with ‘killing Sheikh Yassin, his aides, and passers-by’. Now, argues Koenig (discussing different examples), nobody would draw any conclusion about the lexical meaning of *Sheikh Yassin* from its truth-compatibility with ‘his aides and passers-by’. In other words, we do not offer lower-bounded meanings for lexical items (e.g. ‘at least Sheikh Yassin, possibly others’) just because they are compatible with states of affairs in which the predicate (‘being killed by Israel’) is true for additional entities. There is, of course, a difference between the sheikh and his paraphernalia (and passers-by) from an Israeli perspective, while there is not between the reference set and the complement set for *most* usually, if the predicate is true for all. This difference stems from the fact that the whole constitutes a relevant conceptual base for *most*, whereas Yassin’s aides (and passers-by) do not constitute such a conceptual base for interpreting *Sheikh Yassin*. But as Langacker (1995) emphasizes, conceptual bases must not be confused with profiled meanings. Thus, there are many more contexts where it is relevant to discuss only a subset of the entities for which some

⁴⁰ Du Bois (1998), and following him Ariel (2002a), has called a semantic theory that conflates these two a ‘video translation theory of linguistic meaning’.

predicate holds true in cases where the ‘complement’ does not constitute a conceptual base (as in Yassin’s case) than when it does (in most *most* utterances). But this only translates into a rarity of examples where *most* is asserted when ‘all’ is known to be true. Lexically, I maintain, they constitute the same case. Nonprofiled aspects, of whatever cognitive status, do not constitute part of lexical meanings.

If I am correct, then even in cases such as 5 and 6, which are truth-compatible with ‘all’, all the speaker is committed to lexically is ‘less than all’. It is then a pragmatic decision, dependent on inferences based on general knowledge, whether a proposition made about a nonmaximal set is true when reality is that ‘all’ is true. Indeed, differently phrased questions on the first questionnaire (see §5.3) attest to that. I found that, contrary to common assumptions, subjects are far from unanimous in deciding that *most* is compatible with ‘all’. Note that I am distinguishing between decisions on the meaning of *most* (reported on in §5.3) and decisions on the truth-compatibility of *most* (see Ariel 2003, 2005 for details). For the latter issue, I composed a different set of questions and indeed elicited different responses. Thus, many of my subjects determined that *most* is compatible with ‘all’ for declaring that someone gets a prize. The person who guessed that most of the guests would prefer square plates when, in fact, all of the guests preferred square plates was granted the prize by a third of the subjects. While a third is a sizable minority, it is still a minority. Two thirds of the subjects thought that the person does not deserve to get the prize, because *most* is not compatible with ‘all’.⁴¹ Similarly, a majority of Noveck’s (2001) subjects (59%) judged that sentences such as *some giraffes have long necks* are false (i.e. incompatible with ‘all’ being true), while the others (41%) judged that they were true (i.e. compatible with ‘all’ being the case).

Interestingly, when asked, over 90% of Noveck and Posada’s (2003) subjects chose to change *some* to *all* in such sentences (but not others). In other words, even the subjects who judged such *some* sentences as true preferred an *all* phrasing. It seems that different questions elicit different responses (see also Newstead 1995). Papafragou and Schwarz (2005) too got different results on *most* than Papafragou and Musolino (2003) got for *some* for the upper bound. This should not be the case according to the received view, since both expressions are supposed to equally trigger a ‘not all’ implicature. I would like to suggest that the difference lies in the phrasing of the questions to the subjects. Papafragou and Schwarz asked whether the character ‘*ΔΙΔ* OK’ when they performed ‘all’ instead of ‘most’. Papafragou and Musolino asked whether the character ‘ANSWERED WELL’ when the character answered ‘some’ instead of ‘all’. I suspect that the former question about action is more about truth-compatibility, and that this is why as many as 56.7% of the responses confirmed that the character did OK. The latter question about wording is closer to asking about the meaning of the quantifier, and that is why 92.5% of the subjects rejected the nonmaximal quantifier (*some*) when ‘all’ was true.

If so, the problem with the received view is that its proponents have drawn conclusions about the coded meaning of scalar expressions based on questions that addressed a different issue, namely the compatibility of the scalar expression with a higher value being true in the world. Once we recognize that subjects are responding to different questions, it is not so surprising that they consistently refuse to confirm that a nonmaximal quantifier (*some* or *most*) DENOTES ‘all’, but they are not at all consistent about

⁴¹ Incidentally, the subjects made exactly the same decision about 80%. See Ariel 2005 for a comparison between *most* and the numbers.

whether a nonmaximal quantifier (*some* or *most*) is COMPATIBLE with ‘all’. The former is a question about the lexical meaning of the nonmaximal quantifier. Hence, there is agreement between subjects (that it is upper-bounded). The latter is a question about the applicability of world-knowledge inferences (whether or not a nonmaximal quantity is compatible with a maximal quantity). Hence, we should expect subject variability. See Ariel 2005 for arguments for the pragmatic nature of the decision concerning truth-compatibility.

In order to demonstrate the difference between these two tasks, I had subjects in a separate questionnaire decide about either the intended meaning or the truth-compatibility with ‘all’ of one and the same (Hebrew) sentence, *The teacher already knows most of the students*. When asked about the MEANING of the sentence, only 2/23 (8.7%) thought that the speaker intended the lower-bounded-only ‘51–100%’. Instead, most subjects (19/23, 82.6%) chose upper-bounded interpretations (either ‘80–95%’—the majority, or ‘51–75%’—a minority). This is in line with the results from my previous questionnaire (reported on in §5.3). However, when asked about *most*’s COMPATIBILITY with ‘all’, results were reversed for this same sentence, 11/15 (73.3%) saying that the speaker’s claim was true in case the teacher already knew all of the students. In other words, subjects clearly distinguish between intended meaning and truth-compatibility. So should the analyst, therefore.

I conclude that *most* is both lower- and upper-bounded lexically, even though under certain circumstances (but by no means automatically) a *most* proposition may be considered true even if reality is such that the predicate holds of ‘all’. Truth-compatibility is distinct from asserted lexical meaning.

6. *Most* IN CONTEXT. Thus far, I have focused on *most*’s lexical (§5) and default conveyed meaning (§3), but like other linguistic expressions, *most* also acquires ad hoc context-dependent interpretations. I take up the main ones in §§6.1–6.5. I briefly discuss their cognitive statuses in §6.6.

6.1. *Most* IMPLICATURES OF ‘NOTEWORTHY AMOUNT’. Note that if all we could consider was the lexical meaning of *most*, we would not be able to explain the following, quoted in McCawley 1981.

(37) **Most** of the ladies and **more than half** of the gentlemen wore evening clothes.
(Sinclair Lewis, *It can’t happen here*, McCawley 1981, ex. 14.1.5)

As McCawley explains, this quote ‘strongly suggests that a greater proportion of ladies than of gentlemen were dressed in evening clothes’ (1981:427).⁴² Indeed, 24/51 (47.1%) of the second questionnaire subjects asked about the Hebrew version of this sentence said that the speaker meant that proportionately more women than men wore evening clothes, as compared with only one subject (2%) who said so about the men. Similarly, in the question alluded to in §5.3, 60.9% of the subjects said that the speaker meant 80–95% when using *most*, but none of them chose that value for the counterpart *more than half*. I suggest that the pragmatic inference of ‘noteworthiness’ is often a conversational implicature and not merely an uncooperative inference. Thus, should the majority

⁴² Even though *more than half* can go as high as 100%, whereas I am suggesting that *most* cannot, *more than half* is oriented towards ‘half’, whereas *most* is not. Indeed, 6/14 (42.9%) occurrences of *more than half* in SBC, LLC, and LSAC show a contrast with another *half* expression (*half*, *less than half*, etc.). However, only 6 out of an estimated 927 quantifier *mosts* in these data showed a cooccurrence of *most* and *half*. The different orientations account for the difference in interpretation above. Similarly, *close to all* is interpreted as a higher majority than *most* just because it is more explicitly oriented towards ‘all’.

for 16c turn out to be nominal (e.g. if only 51% of UCSB students drink 0–4 drinks), the addressee would feel misled, or at least surprised. But what counts as a noteworthy majority? This is very much context- (and even individual-) dependent. A noteworthy majority can be as low as 50.6%, as shown below (for *majority*).

- (38) The **majority** of babies born in California are now Hispanic . . . the study found that 50.6 percent of all babies . . . were Hispanic. (*Tinta latina* 2:4, 4.2003)

Such a low majority might seem extremely significant not just to the racist. The reason is that the other minorities are by far smaller: 30.4% white, 11.7% Asian/Pacific Islander, and 6.1% African-American babies (*ibid.*).

Note that, while a candidate in an election needs only 50% + one vote, which then counts as the majority of the votes, a social scientist observing a 51% versus 49% distributional pattern for some behaviors/linguistic forms would not usually count this as a majority-minority distinction. Instead, patterns demonstrating such ratios would be described as having equal distribution, even if the body of data was exhaustive. The reason is that we expect that ‘most’ should not only be nominally true, but that it should also carry significant effects. While a nominal majority entails significant results in elections, where arbitrariness is accepted, it is not significant when random variation is a factor that is not accepted. Indeed, here is a typical example, where 51% is not treated as a majority.

- (39) . . . the right-wing camp has increased, and it includes **about half (51%)** of the people questioned (*Haaretz Rosh Hashanah Supplement*, 9.26.2003)

The next example shows somebody (40b) contesting the assumption (in 40a) that 52% even constitutes a majority (presumably, he means a noteworthy majority) (http://www.talkleft.com/new_archives/004742.html).

- (40) a. An ABC News poll shows that **most** people support a life over death sentence for John Lee Malvo, who was a juvenile at the time of the sniper attacks. Given a choice, 52 percent say they’d prefer a sentence of life in prison . . . , while 37 percent prefer the death penalty. (12.20, 2003)
 b. Fifty two percent is **not ‘most.’** (12.21, 2003)

Presumably, the poster of 40b would find *more than half* a more appropriate description for 52%. The original use, I assume, views 52% as noteworthy, because the opposed view is only endorsed by 37%, rather than by 48% of the people surveyed. Of course, individuals vary in their assessments of ‘noteworthy amount’.

If I am right and *most* tends to implicate a ‘noteworthy majority’, then even in elections, mere percentages cannot determine our descriptions. Thus, in the same radio program (6.4.2003, ‘Reshet Bet’, in Hebrew) reporting on the victories of election candidates, one candidate (Lopoliensky in Jerusalem) was reported to have received ‘more than half of the votes’, but another (Yahav in Haifa) was said to have ‘won by a large majority’. It turns out that each got 52% of the votes, and the next contender in both cities received about 43% of the votes. So, why was 52% seen as ‘more than half’ in Jerusalem, but as ‘a large majority’ in Haifa? Because the Jerusalem winner was the one predicted to win by the polls. In Haifa, though, the winner was the one who was expected to lose the election. Hence, the same 52% is more striking in Haifa than in Jerusalem.

A recent ‘battle of *most*’ between Israelis and Palestinians regarding the identity of the people killed by Israel in Gaza can testify to the noteworthiness attached to *most*. The Israeli (a) and the Palestinian (b) versions are presented in 41.

- (41) a. **Most** of the people killed were armed Hamas people. (originally Hebrew, Israeli TV 10.7.02)
 b. **The great majority** of the people killed were innocent. (originally Hebrew, Israeli radio, 10.8.02)

Note that neither side found it necessary to use an ‘all’ statement, even though both majority versions are factually inaccurate—see §6.5 below. Both felt they were vindicated by a quantification of ‘most’, because it is considered a noteworthy amount. Results from the first questionnaire confirm this suggestion. Subjects confirmed higher values for *most* (e.g. 90%) at a higher rate than they confirmed lower values (e.g. 51%, by 15%), and these confirmations were reversed for *more than half*, where subjects preferred the 51% value at a higher rate than the 90% value (75.1% more; see Table 3, Figs. 2 and 3, and experiment 1 in Papafragou & Schwarz 2005 for similar results).

As I argued above, discursively, there may not, in fact, be such a great difference between ‘all’ and ‘most’ statements (see §3.2 again, and §6.2 below). This is why I proposed that the meaning of *most* is ‘THE LARGEST proper subset of a whole’. Indeed, we have seen Montoya wavering between *most* and *all* in 3. In fact, many of the cases where *most* and *all* do cooccur in LSAC (9/22) show speakers wavering between *most* and *all*. Consider 42.

- (42) They **all** live, **alot** of them live there. **Most** of them **all** live there. (LSAC)

A parallel search for *some* and *most* (14 cases) revealed only two to three such clear cases (none of them parallels 42). Interestingly, whereas 4/14 (28.6%) of the *most* + *some* cases were explicitly marked as corrections, only 1/22 (4.5%) of the *most* + *all* cases was. I suggest that these findings attest to the fact that *most* is interpreted as relatively close to ‘all’, but not to ‘some’. Hence the need to mainly mark the shift from *some* as a correction.

The etymology of both English *most* (and *majority*) and Hebrew *rov* shows their connection to ‘great/largest quantity’.⁴³ As Gesenius (1907/1974) testifies, Biblical Hebrew *rov* was only used as ‘multitude, abundance, greatness’. Since newer meanings often carry vestiges of older meanings (see Hopper 1991), it is not surprising that despite the fact that *most* and *rov* can denote ‘minimally more than half’, they often implicate a noteworthy amount (a nonasserted remnant of the original lexical meaning). In sum, *most* conveys a noteworthy majority, but what counts as such is very much context-dependent.

At the same time, a very large majority is also normally excluded for *most*: we tend not to use *most* for sets containing over 95% of the relevant entities (see the questionnaire results in Fig. 2, where acceptance rates for 99% are lower than for 85%). These are better coded by *almost all* or *virtually all* (see Moxey 1986). Substituting *his major novels* with *most of his novels* in 43 can testify that *most* contrasts with *virtually all* and denotes a smaller majority.

- (43) a: yes have you read **virtually all** of Lawrence now
 A: @:m I’ve read his **major** novels. (LLC:3 1c 2012260 1 2 a 20 3)

⁴³ *The Shorter Oxford English dictionary* (1977) lists ‘greatest’ and ‘the greatest number of’ even as current meanings of *most*, and Even-Shoshan (1982) and Chueka (1997) list ‘a large quantity, abundance’ as a current meaning for Hebrew *rov*. Interestingly, none of them distinguish between ‘more than half’ and ‘plurality’ as currently distinct meanings.

I therefore suggest that we often narrow down the range entailed by the lexical meaning of *most* as in Fig. 1 to a more context-appropriate interpretation as, for example, in Figure 4.

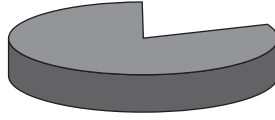


FIGURE 4. Common conveyed meaning of *most*.

Figure 4 has a large portion of the circle highlighted. Of course, the proportions chosen for the figure (85%) do not stand for anything specific really (I picked 85% because it was the value most favored for *most*—accepted by 96% of my subjects). What rough size of majority is inferred depends on the specific context (see Moxey & Sanford 1993b). The variability of the size of *most* is derived from the rather vague concept of ‘LARGEST proper subset’. What is a noteworthy ‘largest subset’ in one context is not in another. However, this contextual adaptation must not be taken too literally. Psycholinguistic experimentation shows that no precise assessments accompany the interpretation of quantifiers—see Bass et al. 1974, Moxey & Sanford 1993a, Routh 1994. I agree with Moxey and Sanford (1997) who emphasize that the meaning of the quantifiers cannot be reduced to numerical values. For *most*, what is implicated is that a large subset is involved, creating the conveyed meaning of a ‘noteworthy majority’.

6.2. *MOST* PROPOSITIONS AS JUSTIFICATIONS. The fact that we tend to interpret *most* as a relevantly noteworthy majority motivates the prevalent discursual function of *most* utterances. Speakers tend to use the *most* generalization as a reliable premise. For example, Montoya in 3 first establishes that most of his students’ parents were born in the 1960s, and then goes on to ask whether their parents were (therefore) very much influenced by the Vietnam War. We often intend the addressee to infer particularized conversational implicatures based on our *most* generalizations with the understanding that this contextual effect is strongly supported. Indeed, in most of the examples mentioned in §3, the speaker appears to feel that the fact that ‘most’ holds true is sufficient evidence or support for some relevant inference. In 15a–c, the fact that some negative situation holds in the majority of the cases serves as grounds for complaining. In 16a–c, the *most* proposition motivates relevant actions. MP Currie had to resign, even though she only said that most of the eggs had salmonella (16a). If most people decided for peace (16b), the inference is that all should adopt the same position, and if most students drink up to four drinks a week (16c), so should all students, because ‘most people can’t be wrong’.⁴⁴ Thus, very often, the *most* utterance is used to generate as a particularized conversational implicature some contextually relevant conclusion that the speaker endorses or wishes to explain (e.g. 41a,b). In many other cases, it supports an explicitly stated conclusion (e.g. 15a,c).

6.3. *MOST* IMPLICATING ‘NOT ALL’. Recall that my claim is that at the lexical semantic level, no reference is made to the complement of *most* (neither to include nor to exclude it). Such entities are as irrelevant as any other at this level. This is not necessarily the case pragmatically, however. An additional (infrequent) pragmatic enrichment of the

⁴⁴ George Lakoff (p.c.) suggested to me that *most* represents the norm. Indeed, advertisements often use phrases such as *most Americans prefer . . . , three out of four doctors recommend . . .* Here is a new Hebrew ad in this spirit.

(i) 82% of mothers in Israel prefer Avent (street advertisement, October 2002)

meaning of *most* occurs when the whole is quite relevant to the interlocutors. It is so salient (as Hirschberg (1991) puts it), or contextually expected, as I would put it, that the fact that it is not semantically profiled is noteworthy (recall 2c, 14, and 19 above). It is only in such cases that Papafragou and Tantalou (2004) find that children manage to infer ‘not all’ (and other scalar) implicatures. In these cases, the complement is relevant, and the addressee is therefore encouraged to infer a ‘not all’ implicature, just as the received view predicts. Figure 5 is an attempt to represent such cases.

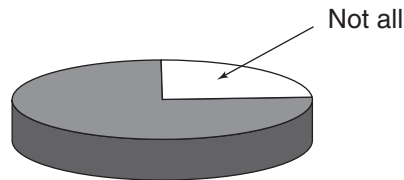


FIGURE 5. Conveyed meaning: ‘most but not all’.

The difference between this conveyed ‘not all’ meaning and the default conveyed meaning based on the upper-bounded lexical meaning I am proposing is that in the default case the speaker is seen as not coding and, hence, as not committed to the predicate applying to ‘all’. Here, however, the speaker is, in addition, indirectly communicating that the predicate does not apply to ‘all’. The complement of *most* is here profiled (in order to be excluded from the predication), whereas in the default case it is simply out of the picture, nothing being asserted on it.

Note that the effect of the ‘not all’ implicature is different on my account from the effect it has under the received view. On the received view, it is the adding on of the ‘not all’ interpretation that provides the upper bound on *most*. On my account, deriving the ‘not all’ implicature only brings to the foreground an interpretation that is congruent with the lexical meaning of *most* anyway, but one that is not normally profiled. Basically, the difference is that the lexical upper bound I am proposing entails no profiling of ‘all’, whereas the ‘not all’ implicature conveys that the predicate is not true of ‘all’, which is then profiled (as in Fig. 5). Given this characterization of the ‘not all’ implicature, 2a, as well as many other examples counted as implicating ‘not all’ in the counts reported on in §3 just because context made it clear that they were incompatible with ‘all’ being true, can now be reanalyzed as not implicating ‘not all’.⁴⁵ In fact, I estimate that most of the examples counted as implicating ‘not all’ according to the Gricean criterion are not implicature cases under my analysis. At least for *most*, I cannot agree with Papafragou (2002) and Papafragou and Tantalou (2004) that naturalistic conversations tend to be such that ‘not all’ is regularly generated. While they must assume this to justify the common, upper-bounded interpretation of *most*, I suggest that *most*’s upper bound is lexically accounted for.

Note that *most but not all* receives the same analysis, except that in this case, the representation constitutes the compositional (uncancelable) coded meaning, rather than a pragmatically enriched interpretation (and so does the rare *exactly most*).⁴⁶ Conversa-

⁴⁵ Note, however, that even if I am right about the lexical meaning of the scalar quantifiers, the projection problem for implicatures (see Chierchia 2004) does not disappear. The factors noted by Chierchia play a role in determining the ad hoc reading of scalar predicates, as well as the generation of conversational implicatures.

⁴⁶ My analysis of *most but not all* and *at least most* (see below) follows Kadmon’s analysis (2001) of *exactly n* and *at least n*.

tionally, however, it is wrong to view the explicit and implicit cancellations and strengthenings of the ‘not all’ interpretation as a single category. In 23 above, Patty, who is opposed to Dan’s proposal, insists on making explicit (twice) the ‘not all’ uncooperative inference from Dan’s words. Note that she refuses to rely only on the ‘not all’ implicature from her own first clause (*some of them do*). Here is a strengthened ‘not all’ *most* example.

(44) Yeah not all charge by the quarter. **Most** do but not all do. ⟨LSAC⟩

Note that the speaker starts with *not all*, which probably implicates ‘most’. But crucially, even though *most* is then interpreted with this *not all* in mind, another *not all* follows.⁴⁷ Thus, ‘not all’ can be compatible with a *most* utterance as a world-knowledge inference infrequently drawn (the default case), it can be an uncooperative inference (drawn despite the speaker’s intention), or it can be implicated (when ‘all’ is expected).

6.4. *Most* IMPLICATING ‘POSSIBLY ALL’. Next, the whole is also relevant for the case where *most* is (rarely) understood as ‘most, possibly all’ (recall 3, 5, and 6 above).⁴⁸ This happens only when attention is drawn to the fact that ‘all’ is (possibly) the case. The complement is then profiled and therefore highlighted in Figure 6.

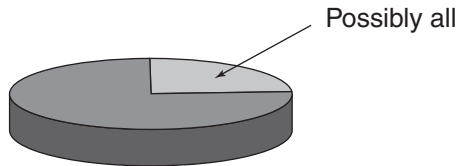


FIGURE 6. Enriched meaning: ‘most, possibly all’.

The truth-conditional meaning represented by Fig. 6 corresponds to *all*-avoidance *mosts* (see again 3, 5, and 6), to *mosts* understood as ‘at least most’, such as the following:

(45) The target date for the meeting is Jan. 17 in Los Angeles, provided **most** of the Hall of Famers can make it. (*International Herald Tribune*, 12.24–5, 2002, p. 16)

and to *most if not all* (as in 4) and *at least most (if not all)*, as in 46, except that in the latter two cases, the interpretation results from the compositional coded meaning, rather than from pragmatic enrichment.

- (46) a. Austin is one of a tiny handful of major U.S. cities that doesn’t elect **at least most, if not all**, council members from districts . . . (*Austin Chronicle* 10.12.2001)
 b. But, I believe that most authors are counting on **at least most** of the audience having some common points of reference (www.sondheim.com/commentary/collective.html, 1.18.2002)

⁴⁷ Similarly, while many universities (e.g. University of Michigan, University of Maryland, MIT) ask referees recommending candidates to graduate school to rank them on a scale such as: upper 1% or 2%, upper 10%, upper 25%, the University of Massachusetts explicitly states what would otherwise be a scalar implicature, as in ‘upper 10% BUT NOT UPPER 1% OR 2%’ (December 2002), including it as part of the semantic content.

⁴⁸ I view *in fact*, as in *most, in fact all*, as a correction marker, and hence, under my analysis, even when ‘all’ is true, the commitment to ‘all’ comes only from the explicit *all*.

Note that I am proposing ‘at least most’ as a potential contextual enrichment of *most*, even though the lexical meaning proposed for *most* is itself compatible with states of affairs in which ‘all’ is true. As I have suggested above, there is a difference between ‘most, possibly all’ being a conveyed meaning of *most* (as in 45) and ‘most, possibly all’ being a state of affairs compatible with *most* (in the default cases). Only in the former can an intention to convey ‘possibly all’ be attributed to the speaker. In fact, 3–6, which were initially analyzed as ‘most, possibly all’ in accordance with the (neo-) Gricean analysis, actually only demonstrate compatibility with ‘all’. They do not necessarily implicate ‘possibly all’.

To see the three-way difference between truth-compatibility with ‘all’, ‘all avoidance’, and a ‘possibly all’ implicature, consider, first, the results reported on in Ariel 2005 re *most*’s compatibility with ‘all’. As mentioned above, in the relevant question, a third of the subjects granted a prize to a person who guessed *most* when ‘all’ was the case. I doubt that a similar low ratio of responses would have occurred for 45, where ‘possibly all’ is implicated. In this case I expect an overwhelming majority to accept the ‘possibly all’ reading. Finally, the ‘all avoidance, and therefore possibly all’ cases are ones where the addressee cannot be quite sure what the speaker conveys with the *most* utterance (see again 5, for example). Since these three cases are interactionally distinct, they should be analyzed differently.

6.5. CREATING THE PLURALITY INTERPRETATION. Consider the following examples, where *rov*, the Hebrew ‘most’, is used for a largest subset smaller than 51% (see Ariel 2005 for an example in English).

- (47) a. Yosifov was elected by a **majority of 41.6%** . . . and does not need a second round. (originally Hebrew, *Haaretz* 6.5.2003)
- b. Knesset Member Shimon Peres was elected yesterday as temporary chair of the Labor party . . . by a **majority of less than 50%** (49.2%; 631 votes). (originally Hebrew, *Haaretz* 6.20.2003)
- c. There is a **majority of 41%** who are opposed to the unilateral withdrawal plan as against 34% who support it. (originally Hebrew, Voice of Israel radio, 3.31.2004)

It is straightforward to pragmatically form the plurality interpretation (upper- but not lower-bounded) out of the majority lexical meaning, even though it involves a nontrivial step of canceling part of the coded meaning (the lower bound). All one has to do to get from majority to plurality is ‘loosen up’ the ‘specification that the most subset is the largest subset in ALL possible contexts (i.e. under any partitioning)’ to ‘plausibly the largest subset in the context at hand’ (I am relying on Carston’s 2002 concept of loosening). Thus, whereas less than 51% is not enough to guarantee the status of ‘largest subset’ absolutely, in some relevant contexts there is no likely possibility for another subset to be larger, even if the largest subset denotes less than 51%. Indeed, fourteen out of fifteen of my students accepted that a 45.4% versus two 27.3% subsets constituted a majority finding for the distribution of some linguistic form (in Hebrew), justifying the use of ‘most’. Interestingly enough, however, the same students absolutely refused to accept that a country with 45.4% Jews, 27.3% Christians, and 27.3% Buddhists had a Jewish majority (*rov*). How can 45.4% versus the same two minority percentages constitute ‘most’ in one case but not in another? It all depends on how we collapse partitions into one binary partition. In 47a, for example, addressees assume that by a coalition, the candidate with the most votes will be gaining an absolute majority (rather than all the other opponents joining forces against him—partly because none of them got over the minimal requirement of 40% of the votes). In 47b no amalgamation of

votes is possible. In 47c once we eliminate abstaining votes, we create a binary division, where 41% becomes an absolute majority of 54.7%. In the two cases I presented to my students, it seems that speakers tended not to collapse the largest subset (45.4%) with any of the minority subsets. Rather, in the first, linguistic expression case, no binary partitioning is impossible, so the most frequent use of the form is declared its majority use. In the second example, it is the two smaller minorities (Christians and Buddhists) that are lumped together, thus forming a majority (54.6%). The 45.4% set is then not seen as *rov*.

What we see in the above three cases is that the way we treat majority and minority is not automatically derived from the raw percentages involved. Rather, since we view the *most* faction as noteworthy/having the power to determine policies and so on, in order for some set to count as the largest, justifying the use of *most*, it has to be ‘the plausible winner’. Fifty-one percent absolutely guarantees that status. Anything less is not automatically guaranteed. Here there is a lot of room for pragmatic considerations. Since Jews tend to divide up the world into us (Jews) versus them (non-Jews), the Israeli students I asked could not but lump together the two non-Jewish groups into one absolute majority. I expect different results in other cultures, of course.

Summing up, the lexical meaning proposed for *most* is a circumbounded range (‘more than half and less than all’): ‘a proper subset which is the largest subset under any partitioning of the complement’. In context, however, *most* can also be interpreted (infrequently) as: ‘most, but not all’ or ‘most and possibly all’ (when the appropriate particularized conversational implicatures are generated). In addition, since I propose to maintain the lower boundary on *most*, I must assume that some loosening of the lexical meaning can occur so that sometimes *most* can refer to largest subsets smaller than 51%. People rarely narrow down the lexical wide range of *most* to a specific percentage (except perhaps as an uncooperative inference), but I have argued that we tend to interpret *most* as constituting a noteworthy quantity (via a particularized conversational implicature). This assumption explains why we tend to view the *most* utterance as persuasive grounds for adopting, or at least explaining, other (explicit or implicit) propositions (a particularized conversational implicature). These implicatures must be distinguished from the potential inference based on world knowledge that *most* may be compatible with ‘all’ being the case.

6.6. THE STATUS OF THE CONTEXTUAL MEANINGS OF *most*. In §6, I treated the contextual inferences accompanying *most* as particularized conversational implicatures for the most part. I had, however, suggested that some pragmatic inferences are actually uncooperative inferences (§3.2), some may be GCIs (differently defined), and relevance theoreticians have urged that many pragmatic inferences actually constitute part of explicatures, rather than implicatures. I do not here attempt any conclusive analysis of each pragmatic inference mentioned above. In fact, I believe that the same pragmatic interpretation (e.g. ‘not all’) may have different statuses on different occasions (a lexical upper bound, a particularized conversational implicature, an explicature, an uncooperative inference, an inference about truth-compatibility—see Ariel 2002b). The following are merely exploratory thoughts on the topic.

One way to distinguish between explicatures and implicatures is effect on truth conditions. False explicated aspects result in a false proposition, whereas false implicatures do not. Example 41a, for example, is actually false, since only 5/14 (35.7%) were armed Hamas members (*most*’s semantic content is here false); 41b, on the other hand, is only misleading (but not false): The 9/14 (64.3%) who were unarmed do not seem to

constitute *a great majority*, but what exactly a great majority is is a matter of pragmatic judgment. We thus see a difference in our truth-value judgments for explicated versus implicated interpretations. According to relevance theoreticians (see Carston 1990, 1998), some (but certainly not all) cases of ‘not all’ interpretations may form part of the ‘said’/explicature, rather than the implicature, even though *not all* is not explicitly stated (basically, if the interpretation falls under the scope of a logical operator). For Horn (2002) these are products of retroactive accommodation. Here is a relevant ‘most’ example.

- (48) Many of them know it [the Koran—*MA*], **most or all** of it, by heart . . .
(originally Hebrew, The Islamic Museum, Jerusalem, December 2003)

Now, what status does the pragmatic inference in 37 and 43 (with *most*) have? Is the interpretation of *most* as ‘more than more than half’ (for 37) and as ‘less than (virtually) all’ (for 19 and 43) part of ‘what is said’/the explicature? or the privileged interactional interpretation (see Ariel 2002b)? What if we find out that 70% of the ladies and 85% of the gentlemen wore evening clothes? It turns out that only one subject (4.5%) on my second questionnaire thought that 37 would not be true then. The majority (15/22, 68.2%) thought that it would be true (6, 27.3% chose ‘impossible to know’). In other words, while almost half of the subjects thought that the speaker intended *most* to denote a higher proportion than *more than half* in 37, a negligible less than a tenth of that number thought that this interpretation affected the truth conditions of the sentence.⁴⁹ It therefore seems that the ‘noteworthy’ interpretation associated with *most* does not affect the truth conditions of the proposition expressed (still, recall example 40, where the writer denied that 52% constitutes ‘most’, presumably because such a small majority is not ‘noteworthy’).

The lack of affect on truth conditions is not necessarily true for ‘not all’ implicatures, however. Consider the question I posed to my subjects based on 49.

- (49) Iddo: Dana solved **all** the problems.
Maya: **Most** of them.

Is Maya’s claim true/did Maya tell the truth in case Dana solved all the problems? Thirty of thirty-eight subjects (79%) who responded to either version of the question determined that Maya’s contribution was not true. It seems that the ‘not all’ implicature in this case did affect the truth conditions of the proposition expressed (only 4, 10.5% said Maya’s claim was true, and another four chose ‘impossible to know’).⁵⁰ However, when I asked the same question with *more than half* instead of *most*, results were quite different. Two thirds (14/21) said that ‘Maya’s claim was true’ and almost half (7/15) even chose the same answer for the question, ‘Did Maya tell the truth?’. On average for the two versions, only 27.8% (10/36) said that it wasn’t true for *more than half* (13.9% chose ‘impossible to know’). All in all, subjects chose ‘not true’ for *most* 2.8 times more than for *more than half*, and they chose ‘true’ for *more than half* 5.5 times more than for *most*. Now, the two cases (for *most* and for *more than half*) are pragmatically identical, equally triggering an ‘all’-exclusion interpretation: in both cases Maya is seen as offering a counterproposal, replacing Iddo’s universal claim with a partial generalization. Note that in this case Horn cannot claim that unlike *most*, *more than half* simply does not participate in a Horn scale, and hence does not trigger a ‘not all’

⁴⁹ Note that any one subject answered only one question about 37.

⁵⁰ It remains to be seen whether subjects might see the difference between *most* and *more than half* as affecting truth conditions if used in the framework of 49.

implicature, because the context makes it clear that the speaker is generating the scalar implicature from *more than half* here. The different effect of the ‘not all’ implicature must therefore be due to the different lexical meanings of *most* and *more than half*. I suggest that whereas in the case of *more than half* there is some incongruity between the lexical meaning (not upper-bounded) and the pragmatically appropriate interpretation (‘all’-excluding), for *most*, there is no conflict. The lexical upper bound is simply strengthened into an ‘all’-exclusion commitment. In other words, I am proposing that the differential responses derive from the congruity between *most*’s lexical meaning and the ‘not all’ implicature on the one hand, and the incongruity between *more than half*’s lexical meaning and the ‘not all’ implicature on the other hand. These findings attest once again that the upper bound is different for the two expressions. Since the lexical meaning is different, so is the strength and effect of the very same implicature.

In sum, I have argued that the upper bound on *most* must be semantic, whereas the pragmatic inferences discussed in §6 (including those of ‘not all’) may be either implicatures or explicatures, depending on the specific circumstances. I maintain that the fact that ‘not all’, for example, is part of the explicature in one case does not necessarily mean that it is invariably an explicature. In the default case, it is merely truth-compatible with *most*. In rare cases it is implicated, and it can even be an uncooperative inference (as in 24). In addition, we may want to distinguish between types of conversational implicatures along the particularized/generalized distinction, except that the distinction pertains only to the frequency of the generation of the implicature, perhaps with a 10% rate of occurrence or so counting as GCI. Finally, the variability in subjects’ responses regarding the relevance of various implicatures to truth conditions supports my conclusion in Ariel 2002b that interactionally, we should recognize the ‘privileged interactional interpretation(s)’ of utterances, which are more often than not their explicatures, but not invariably so. These privileged interpretations not only vary from one context to another, but they may even vary among participants within the same exchange. Indeed, when 73% view an implicature as affecting the truth of the proposition (in 49), it must constitute a privileged interactional implicature for them. Not so for the rest of the subjects. Similarly, those subjects (40%) who judged the *more than half* version of 49 as false chose to assign the ‘not all’ implicature from *more than half* a privileged interactional interpretation status, but the rest of the subjects did not do so. Inferred interpretations, even ones with the very same content (‘not all’, ‘possibly all’), do not necessarily play the same role in all interactions.

7. CONCLUSIONS. Even though this article focuses on *most*, I have (tentatively) made more general proposals about meaning. I have tried to underscore the fact that meanings come in a variety of statuses. First, I have urged linguists to distinguish between profiled and nonprofiled aspects of meaning. While the latter may contribute to evaluating the truth-compatibility of the proposition, only the former constitute lexical meanings. I also pointed to a potentially important distinction between conversational implicatures (both generalized and particularized) on the one hand, and uncooperative inferences on the other. Whereas the former are part of the speaker’s intended meaning, the latter are by definition not intended by the speaker as part of the take-home message. This distinction is important for understanding human interaction in general, even though I ultimately rejected it as a solution for the frequent interpretation of *most*. In addition, I raised the possibility (in §§4.1 and 6.6) that even if no implicatures are ever generated as a default, GCI may still be a viable concept, provided it is redefined as a recurrent conversational implicature, by which I mean only that it has significantly higher fre-

quency and salience than particularized conversational implicatures. Finally, extending the relevance-theoretic analysis, I have proposed that inferred interpretations do not necessarily have one and the same interactional status. Some of them are what I have elsewhere termed PRIVILEGED INTERACTIONAL INTERPRETATIONS. As such, they may affect the truth conditions of the proposition expressed. Clearly, further research is needed before we can establish the concepts of uncooperative inference, the redefined GCI, and privileged interactional interpretations.

My second and main goal was to demonstrate that a circumbounded-range lexical analysis for *most* can explain all of the interpretations associated with *most*, some of which cannot be accounted for by the received view. Researchers adhering to the received view would have to address the problems raised in this article (as well as in Ariel 2003, 2005). Specifically, they would first have to motivate a pragmatic rather than a semantic solution for the upper bound on *most*. One line of argument could be to show that contrary to my analysis in §3, 'not all' is a relevant conversational implicature, intended by the speakers of 15 and 16, for example. Alternatively, some other pragmatic status could be attributed to this interpretation. Conventional implicature is out of the question, however, because it is not cancelable, and I have argued against viewing most 'not all' understandings as uncooperative inferences. Moreover, since 15 and 16 represent the majority of *most* utterances, the pragmatic argument will have to apply to all the relevant discourse data. Recall that under the circumbounded-meaning proposal the upper bound is lexically specified for *most*, rather than pragmatically derived.

Next, if such a pragmatic account were to be provided, the diachronic puzzle would have to be addressed. Why is no language reported to have semanticized a pragmatic inference that is so frequent? If the cultural-versus-linguistic source is to account for this, an argument must be made for hypothesizing a diachronic process that is sensitive to the inference source. Under the circumbounded-meaning proposal the circumbounded meaning is the original historical meaning of *most*, and a semanticization of the rare 'all'-exclusion implicature is not expected.

If these issues have been resolved, the received view would need to account for the wiseguy interpretations discussed in Ariel 2005, which show that the circumbounded meaning has a privileged status, which the lower-bounded-only meaning does not enjoy. Received-view proponents would have to account for the puzzling fact that an interpretation they presume pragmatic (and therefore context-sensitive)—the circumbounded interpretation—can go through despite an inappropriate context, whereas the interpretation they deem lexical (and therefore context-insensitive)—the lower-bounded-only interpretation—cannot be imposed when contextually inappropriate. Under the circumbounded-meaning proposal, it is the lexical (circumbounded) meaning that can survive an unfavorable context, and it is the pragmatically derived (lower-bounded-only) meaning that cannot be used under unfavorable circumstances.

Finally, received-view advocates would have to explain subjects' consistent resistance to interpreting *most* as denoting 100%, even though, when forced, they were quite willing to confirm 99% as an extension of *most*. Crucially, the different findings for *more than half* (over a third of the subjects here accepting 100% as a possible extension) would have to be accounted for. In Ariel 2003 I argued that pragmatics cannot account for this difference, because it would predict exactly the opposite results. Since *most* is pragmatically associated with larger majorities than *more than half*, *most* should have been interpreted as 100% at higher proportions than *more than half*. The comparison between *more than half* and *most* shows that indeed, when the ban on 100% is pragmatic (as it is for *more than half*), it can be suppressed, but when it is

semantic (as it is for *most*), it cannot be suppressed. The unavoidable conclusion, I proposed, is that it is semantics that is responsible for the difference between *most* and *more than half*. *More than half* is not, but *most* is lexically upper-bounded. Similarly, received-view proponents would need to explain the variable interpretative pattern pertaining to *most*'s truth-compatibility with 'all'. Variability is naturally accounted for pragmatically, of course. According to the circumbounded proposal, subjects' categorical judgments (regarding *most*'s upper bound) are semantic, whereas their variable judgments (pertaining to *most*'s truth-compatibility with 'all') are pragmatic.

If the received-view proponents somehow manage to account for all of the above, the circumbounded-meaning proposal and the received view will be descriptively equivalent. Two differences will remain, however. First, my proposal assumes what I believe to be a more commonsensical concept (a circumbounded quantity) as coded by a monomorphemic lexeme. The received view assumes that natural languages code a rather unintuitive lower-bounded-only concept as a monomorphemic word ('at least more than half' for *most*). Second, my analysis is a 'just that' semantic analysis, namely, where the prevalent conveyed meaning is directly accessed from the lexicon. Infrequent interpretations, though, result from the addition of conversational implicatures. Under the received view, it is the prevalent upper-bounded interpretation that is indirectly derived (via implicature), while the rare 'possibly all' interpretation is directly accessed.

The third point of this article pertains to the lexical semantics-pragmatics division of labor in general. The lexical meanings we attribute to linguistic expressions must of course show them to be compatible with all of the states of affairs in which they can be used truthfully and appropriately. But once we are willing to view some of the connections between lexical meaning and truth-compatibility as less direct, as possibly mediated by world knowledge, the way is paved for assigning an expression such as *most* a more intuitive lexical meaning ('what you see is what you get'). World knowledge (specifically, about part-whole relationships, with all of their complexity) can mediate between a lexical meaning ('proper subset which is the largest under any partitioning of the complement' = a circumbounded range, the extension of which is 51–99%) and states of affairs that the expression does not code but may nonetheless be compatible with (where 'all' is possibly true; see especially Ariel 2005). All in all, I am proposing that some of the burden normally placed on implicatures (the upper bound) be transferred to lexical semantics. And conversely, some of the burden imposed on semantics (compatibility with 'all') should be transferred to world-knowledge inference.

The lexical meaning I argue for (circumbounded) is not as minimal as the one posited by the received view (only lower-bounded), even though it does not actually violate modified Occam's razor since no ambiguity is assumed for *most*. It is not invariably the case that a minimal lexical meaning, strengthened by pragmatic inferences, is preferable to a richer lexical meaning. Speakers do not necessarily maximize inferences at the expense of lexical meanings. In the case of *most*, at least, the circumbounded-range meaning makes for a more psychologically natural concept, so that relegating one aspect of its interpretation (the upper bound) to optional inferencing seems unjustified (see again the discussion of Récanati (1989) and relevance proponents in §5.2).

Recall that in the 1970s, a popular definition for pragmatics was 'Meaning minus semantics' (see Gazdar 1979). Pragmaticists accepted current semantic (and syntactic) analyses and saw their role as limited to providing 'the rest of the account'. Indeed, the overall interpretation of linguistic expressions necessarily combines semantic with pragmatic aspects. But just like pragmaticists must take into account what can be

provided by the semantics of an expression, so semanticists ought to make sure that interpretations they are leaving out of their lexical analyses can and should in fact be pragmatically derived. Such assumptions must be tested in real discourse, rather than by constructing isolated sentences (where ‘not all’ implicatures seem quite reasonable). Based on such a discursive examination, I have argued that in the case of *most*, the pragmatic analysis cannot consistently provide the upper bound needed for the majority cases. Hence, semanticists cannot make do with lower-bounded-only lexical analyses. However, I am not simply dumping into the ‘semantic wastebasket’ an interpretation that cannot be pragmatically accounted for. The arguments in §5 (and see Ariel 2005) support the conclusion that indeed it is the lexical meaning of *most* that should be responsible for the upper bound in the majority of the cases.

Fourth, as I mentioned in §4, the examples and arguments in this article pertain to *most* only, and different scalar quantifiers are not necessarily predicted to behave uniformly. Nonetheless, it is possible that other scalar quantifiers (e.g. *some*, *many*) might be similarly analyzed. The same applies to scalar predicates other than quantifiers, where the negation of a stronger predicate seems an even less likely default implicature. A superficial look at the uses of *good* and *bright* in SBC and LLC showed no cases that I could imagine as triggering a scalar implicature denying the stronger predicate (‘brilliant’ for *bright*), although the speaker is, of course, not seen as committed to the stronger ‘brilliant’. I offer the following example, which seems to me to be typical, as food for thought.

- (50) ALINA: and he was real **bright**,
and he knew that this guy was a jerk. <SBC:006>

Narrowing down *bright* to ‘bright but not brilliant’ does not seem to be a reasonable speaker goal in the corpus examples I briefly examined. A comparison to *brilliant* seems irrelevant (although it is not inconceivable that some addressee might draw it as an uncooperative inference anyway—see again 25). If so, instead of assuming an ‘at least bright’ lexical meaning for *bright* and an ‘at least bright but not brilliant’ conveyed interpretation by implicature (this is Geurts’s 1998 analysis), I propose we consider the possibility that *bright* codes ‘bright’. ‘Not brilliant’ may either not be profiled at all (the default conveyed meaning), or it may be an uncooperative inference, or else a particularized conversational implicature (depending on the context in which it occurs), inferred (probably rarely) on the basis of an ad hoc contextual expectation for the use of *brilliant* when *bright* was chosen. As emphasized in §4, however, only an empirical examination can confirm whether the conclusion about *most* being lexically upper-bounded applies to other scalar expressions as well. Finally, and more generally, I hope that others will adopt the approach here applied to the analysis of *most*, grounding the study of meaning in actual language use.

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