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‘Few’, ‘A Few’, and ‘Only’ Noun Phrases, Non-Monotonic Quantifiers, and Negative Polarity Items

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For Larry Horn and Frans Zwarts

Frans Zwarts (1996: 182) claims that ‘Few trees’ will satisfy only the first and fourth of the De Morgan conditionals in (1) and will in consequence be merely downwards monotonic.¹

- (1)
- a. Few trees will blossom or die ||- Few trees will blossom and few trees will die.
 - b. Few trees will blossom and few trees will die ||-/ Few trees will blossom or die.
 - c. Few trees will blossom and die ||-/ Few trees will blossom or few trees will die.
 - d. Few trees will blossom or few trees will die ||- Few trees will blossom and die.

As late as *Atlas* (1996: 282; 1997: 360-1; 2001) I agreed with Zwarts’s logical intuitions in (2). In *Atlas* (2001: 16) I argued that the essential De Morgan condition for a semantically downwards monotonic quantifier was only the fourth De Morgan conditional. Even then, I continued to accept the downwards monotonicity of ‘Few N’ in (1d).

In this essay I ask the question that I should have asked at the conclusion of *Atlas* (2001): Is the fourth DeMorgan conditional correct in (1d) for ‘few trees’? – repeated as the simpler (2) below.

¹ In *Atlas* (1997) I distinguished between the first and fourth De Morgan conditionals. The fourth I called linguistically “prototypically” downwards monotonic. In *Atlas* (2001) I also distinguished the first and fourth De Morgan conditionals. The fourth I called logically “modest” downwards monotonic. These distinctions were in the service of understanding the relation between logical properties of negative quantifiers and their linguistic properties. For theoretical reasons that I discuss extensively in *Atlas* (2001), I chose the fourth DeMorgan conditional as the characterization of a logically monotone decreasing quantifier.

(2) *Few trees blossom or few trees die* ||- *Few trees blossom and die*.²

Though it was obvious that for the upwards monotonic quantifier ‘some trees’ the fourth conditional was incorrect³, most semanticists thought that ‘few trees’ had to be logically negative, possibly paraphrased by something like ‘not many trees’, since ‘few trees’ seemed so obviously linguistically and conceptually to have a negative concept in it somewhere. But is it true that ‘not many trees’ is monotone decreasing?

If one tested ‘not many trees’ as in (3):

(3) *Not many trees blossom or not many trees die* ||- *Not many trees blossom and die*.

one must distinguish between the sentential and verb phrases negations interpretations (a) {(i) “It is not the case that many trees blossom”, (ii) “Many trees do not blossom”} and the more natural, lexically incorporated ‘not’ in a negative phrase (b) “Not-many trees blossom”.

[REMARK: In the first of the pair in (a), the number of trees that blossom might be merely several, or the number might be very large, even to include lots and lots of trees – especially if one thought that ‘Lots and lots of trees blossom’ entailed ‘Many trees blossom’ while negating ‘many’ merely conversationally implicated ‘not lots and lots’⁴ – or each of many trees do not blossom; in the second of the pair in (a) the options for literal meaning are the same – see Atlas (1974), Horn (1989:365), and Kuroda (1977) – but the ‘not’ in the verb phrase might make the last interpretation the preferred one, as in ‘Many trees don’t blossom’. In (b) the interpretation makes ‘many’ an upper bound on the number of trees, as ‘unlikely’ makes a bound of ‘likely’ or ‘unhappy’ makes a bound of ‘happy’. Notice that I am not claiming that ‘Not many trees blossom’ is synonymous with ‘It is not the case that many trees blossom’, as Ippolito (2006), Roberts (2006), and Horn (1969: 99) did for ‘Not only Muriel voted for Hubert’ and ‘It’s not true that only Muriel voted for Hubert’.⁵ I am claiming that the sentence-string is open to various literal construals, so that the semantically non-specific negative string can literally

² If for sets X, Y, $X \in \llbracket Q \rrbracket$ or $Y \in \llbracket Q \rrbracket$, then the intersection of X and Y belongs to $\llbracket Q \rrbracket$, i.e. $X \cap Y \in \llbracket Q \rrbracket$. It suffices for the linguistic conclusion that $\llbracket VP_1 \text{ and } VP_2 \rrbracket \in \llbracket Q \rrbracket$, if $\llbracket VP_1 \rrbracket \cap \llbracket VP_2 \rrbracket \in \llbracket Q \rrbracket$, i.e. if we suppose that ‘and’ in these Verb Phrases expresses no more than the truth-functional conjunction. For reasons discussed in Atlas (1997) and Atlas (2001), I prefer (2) as a criterion for downwards monotonicity.

³ ‘Some trees blossom OR some trees die’ does not entail ‘Some trees blossom AND die’. There could be a situation in which trees that blossomed didn’t die or trees that died didn’t blossom, making the premise true and the conclusion false, there being no trees that both blossomed and died.

⁴ What is clear is that ‘all trees will blossom’ does not entail ‘many trees will blossom’, as the domain over which ‘all’ quantifies many not have a large cardinality; so all trees in a domain will blossom, though there are not many trees in the domain. The same goes for ‘most trees’. A semantically different situation arises for the partitive expressions ‘all of the N’, ‘many of the N’, and ‘most of the N’. For every non-empty domain D it seems plausible that the truth of ‘all of the trees blossom’ guarantees the truth of ‘many of the trees blossom’.

⁵ Horn (2009), agreeing with Beaver and Clark (2008:235) and Seuren (2001: 344-5), observes that non-canonical forms of negation like ‘not only’ have preferred interpretations that preserve “presupposed” content. So latterly for Horn (2009) *not only* ≠ *not ... only*.

“express” any of the various interpretations.⁶ Whichever interpretation one employs for the sentences in (3), to avoid a fallacy of equivocation one must keep the interpretation uniform. Thus, on interpretation (a)(i), is it the case that ‘Several trees blossom or several trees die’ entails ‘Several trees blossom and die’? For the same reason that this entailment fails for ‘some trees’, this relation is not an entailment. On interpretation (a)(ii), is it the case that ‘Lots of trees blossom or lots of trees die’ entails ‘Lots of trees blossom and die’? For the same reason again, this relation is not an entailment. For the interpretation (a)(iii), is it the case that ‘Each of many trees do not blossom or each of many trees do not die’ entails ‘Each of many trees do not (blossom and die)’ – i.e. entails ‘Each of many trees do not blossom or do not die’? In this interpretation, which is also the preferred one for the alternative paraphrase in (a), the entailment is correct. END OF REMARK]

In the natural interpretation (b), where we construe the neg-incorporated quantifier to be parsed by the awkward neologisms ‘fewer than many’ or ‘at most many’, is it the case that ‘{Fewer than, At most} many trees blossom or {fewer than, at most} many trees die’ entails ‘{Fewer than, At most} many trees blossom and die’? Perhaps for some readers there is semantic interference from our knowledge of botany in this example, so let us change the example: is it the case that ‘{Fewer than, At most} many trees blossom or {fewer than, at most} many trees are taller than 40 feet’ entails ‘{Fewer than, At most} many trees blossom and are taller than 40 feet’? Intuitively, this relation seems to be an entailment – it seems impossible for each of the clauses in the first ‘or’ sentence to be true while the second ‘and’ sentence is false. (This judgment is also the one that Zwarts (1996: 190) makes for ‘at most n ’, where n is a positive integer; Zwarts takes it to be merely monotone decreasing.)⁷ So for the preferred interpretations of the sentence-string, *Not many trees* seems to be a merely monotone decreasing NP.

So, if Zwarts, Atlas, Horn, and untold others construed *few trees* as *not many trees*, the judgment that *few trees* was monotone decreasing was a justifiable one for the preferred interpretations of the sentence-type containing ‘not many trees’. The question is whether ‘not many trees’ is the correct construal of ‘few trees’.

II. Sommers and Geach on ‘Few N’: an alternative to ‘Not many NP’

Fred Sommers made an interesting observation in *Appendix D* “ ‘Some’, ‘Every’, ‘Most’, ‘Just One’, etc.” from Sommers (1982: 369-71) *The Logic of Natural Language* about ‘Few N’, which I described (Atlas 2001: 20, n.7) as follows :

⁶ It is a conceptual point that I made use of in Atlas (1981, 1989, 1991). See the discussion of (21) below.

⁷ Atlas (2001: 16-18) introduces some complications into Zwarts’s (1998) picture by suggesting that linguistically negative NPs like ‘neither N’, ‘none of the n N’, ‘at most n of the k N’, where $n < k/2$, which are called ‘consistent’ because their predicate negations entail their sentence negations – so they are the NP analogue to modest Double Negation ‘ $\Phi \parallel \neg \neg \Phi$ ’ or to non-contradiction – should be removed from the negative hierarchy of quantifier expressions entirely, as they should be regarded as functors, and so proper-name-like, rather than as quantifiers. I also suggested the same for the “complete” NP ‘at most half of all N’, where a complete NP is one whose sentence negation entails its predicate negation. Zwarts takes this complete NP to be merely downwards monotonic.

Sommers (1982: 370) analyzes ‘Few S are M’ as ‘There are less S that are M than S that are not M’, or as ‘Some S are M and most S are not M’.⁸

The second of the paraphrases that Sommers offers is one that he acknowledged to have taken from Peter Geach’s *Reference and Generality: An Examination of Some Medieval and Modern Theories* (3rd edn.). Geach’s (1980: 108) suggestion for ‘few’, importantly unlike his suggestion for ‘only’, was:

(4) “Few As are so-and-so” = “Most As are not so-and-so but some are.”

Sommers’s first suggestion is that we may analyze *Few N are M* as *There are fewer N that are M than N that are not M*. A simple test of downwards monotonicity would be the correctness of the entailment claim: *Few N are F* ||- *Few N are F and G*. To take a concrete example, is ‘*Few women smoke* ||- *Few women smoke and drink*’ a correct entailment claim? For Sommers this would amount to checking the claim ‘*There are fewer women that smoke than don’t smoke* ||- *There are fewer women that smoke and drink than don’t (smoke and drink)*’. Let S be the set of smokers in a domain U, and the set of non-smokers be the complement set S’; similarly let D be the set of drinkers in the domain U, and the set of non-drinkers be the complement set D’. If there are fewer women that smoke than don’t smoke, the cardinality of S < the cardinality of S’. Does it follow that $\text{card } S \cap D < \text{card } S' \cup D'$?⁹ If $\text{card } S < \text{card } S'$, since $\text{card } S \cap D < \text{card } S$, and $\text{card } S' < \text{card } S' \cup D'$, we have that $\text{card } S \cap D < \text{card } S' \cup D'$. So in Sommers’s analysis ‘Few N’ is a downwards monotonic quantifier.

(5) For Sommers (1982: 370) *Few N* is a downwards monotonic quantifier.

What can we say about Peter Geach’s analysis of *Few N*? Is it a downwards monotonic quantifier? The condition that *Few women smoke or few women drink* ||- *Few women smoke and drink* would be written: *Most women do not smoke and some women smoke; or, most women do not drink and some women drink* ||- *Most women do not (smoke and drink) and some women smoke and drink*. Since *most women* and *some women* are upwards monotonic quantifiers, it is obvious that this entailment fails because of the second conjunct ‘some’ of the analysis. On Geach’s analysis, *Few N* is not a downwards monotonic quantifier. In fact, on Geach’s analysis, *Few N*, a conjunction of two upwards monotonic quantifiers *Most N* and *Some N*, is upwards monotonic!

(6) For Geach (1980: 108) *Few N* is an upwards monotonic quantifier.

So we are left in the usual philosophical pickle: one distinguished philosopher asserts “P”, and the other asserts “Not- P”.

⁸ The passage was a footnote in a paper devoted to Zwarts’s negation hierarchy. What was unsaid there is that, as I quoted in Atlas (2001: 17), Zwarts (1998: Table 4) took the view that *most N* was a consistent Noun Phrase, i.e. a sentence *Most N are not-M* would entail $\neg(\text{Most } N \text{ are } M)$. But they are not logically equivalent. Then, as noted above, one would need to observe that for *some but not most N* it is actually acceptable to paraphrase *Some but not most N are M* by *Some N are M but $\neg(\text{Most } N \text{ are } M)$* .

⁹ I shall abbreviate ‘the cardinality of the set S’ by ‘card S’.

III. Some Lexicographic Data

Well, as Wittgenstein said in such circumstances, “Back to the rough ground!” That is, back to ordinary linguistic usage. The table below presents some lexicographic testimony from several dictionaries, The Merriam-Webster Collegiate Dictionary, 11th edition (2003), The Random House Webster’s College Dictionary (2001), The Houghton-Mifflin American Heritage Dictionary (1992), Webster’s New Universal Dictionary of the English Language Unabridged (1976), and the canonical Fowler’s Modern English Usage, 2nd edition, edited by Sir Ernest Gowers, Oxford (1965).

	Pronoun [plural] Few	Adjective Few N	Adjective A few N
Fowler	<i>small number</i>	<i>some & not many N</i>	<i>some N</i>
American Heritage	<i>small number</i>	∅	<i>more than one but an indefinitely small number</i>
Random House	<i>small number</i>	<i>not many but more than one N</i>	∅
Merriam Webster	<i>not many</i>	<i>only a small number of Ns</i>	<i>at least some but an indeterminately small number of Ns</i>
Webster’s Universal	<i>not many</i>	<i>only a limited number</i>	<i>a small number</i>

Please note that in the parsings of Adjective *Few N*, like Geach’s analysis the paraphrases contain a conjunct expressing ‘some’ and one expressing something else, not Geach’s ‘most ... are not...’ but in the above entries ‘not many’, or, interestingly from the perspective of Atlas (1991, 1993, 1996, 1997, 2001, 2007), a paraphrase containing ‘only’. In either case the conclusion would be that ‘Few N’ is not downwards monotonic.

IV. Nouns and Adjectives: ‘Many’, ‘Many N’, ‘A Few’, ‘a Few N’, ‘Few’, and ‘Few N’

From a letter of Alexander Pope of 27 August 1714, commenting on party politics in (7) and a letter of Jeremy Bentham of 7 August 1840 commenting on the politics of James Mill, John Stuart Mill’s father, in (8), illustrating the uses of the noun phrases ‘many’, ‘a few’ and ‘the few’, we have:

- (7) *Party-spirit, which at best is but the madness of many for the gain of a few...*
- (8) *He rather hated the ruling few than loved the suffering many.*

In (9), (10), and (11) there are some nice reminders of the uses of the noun and adjective ‘few’, from The Gospel of Saint Matthew 22:14, W. Somerset Maugham’s “A Writer’s Notebook ‘1896’”, and Annie Dillard’s “An American Childhood,” Part 2:

- (9) *For many are called, but few are chosen.*
- (10) *Few misfortunes can befall a boy which bring worse consequences than to have a really affectionate mother.*
- (11) *Young children have no sense of wonder. They bewilder well but few things surprise them.*

From the Dillard quotation in (11) we observe the clear linguistic data in (12).

- (12) a. *Few things surprise them* ||- \neg (*Many things surprise them*).
 b. \neg (*Many things surprise them*) ||- \neg >> *Many things do not-surprise them.*¹⁰

Sentence (12a) is an entailment, and (12b) an implicature, viz. an Atlas and Levinson (1981) Informativeness Generalized Conversational Implicature (also known as a Horn (1984) R-implicature). In (13) we contrast ‘few’ in (12) with ‘a few’:

- (13) a. *A few things surprise them* ||-/ \neg (*Many things surprise them*).
 b. *A few things surprise them* ||-_S>> \neg (*Many things surprise them*).
 c. *Many things surprise them* ||- *A few things surprise them*.
 d. *A few things surprise them* ||- *At least one thing surprises them*.

Sentence (13a) is a non-entailment, (13b) a Horn (1972) Scalar Quantity Implicature, reminiscent of the scalar implicature from ‘some’ to ‘not all’, and (13c) an entailment from ‘many’ to ‘a few’.

I find the observations of (13) linguistically evident, but I have also found some compelling support in the usage of the novelists Robert Graves and Alan Hodge, in their *The Reader over Your Shoulder: a Handbook for Writers of English Prose* (New York: Random House, 1947), 2nd edition, p. 86, where in the section on their Principle Seven *There should never be any doubt left as to how many*, they report a “scale of approximate counting”:

- (14) a. *< ..., a thousand or so, hundreds, a few hundred, a hundred or two, scores, a few score, a hundred or so, dozens, a few dozen, a score or two, a dozen or two,*

¹⁰ It is important to keep distinct the meaning of the English ‘not’ from those of a logical exclusion negation ‘ \neg ’ and a logical choice negation ‘ \sim ’. This issue will return in my discussion of (21).

a score or so, a dozen or so, several, a few, two or three, one or two>,

with the further caveat that:

- (14) b. if “the impression of number is still vaguer, one uses ‘many’, ‘a good many’, ‘a large number’ and so on.”

At the lower end I note Graves and Hodge’s judgment on the scale *<a score, a dozen, several, a few, two or three, one or two>* and the position of ‘a few’ in the following scale, my variant of the Graves-Hodge scale:

- (14) c. *<...most Ns, many Ns, ..., a few Ns, a N or two, a N or so>*.

Graves and Hodge’s judgment is that a few N can be more than two or three N, is certainly more than one or two N, and is semantically or pragmatically bounded by several N. ‘Several N’ in its mid 17th century use meant ‘an indefinite number more than two and fewer than many’.¹¹ The linguistic observations offered by Graves and Hodge support the observations in (13).

The observations in (13) allow us to characterize the logical relationship between ‘a few N’ and ‘few N’. Suppose that one were to consider the hypothesis (H) ‘*A few N are F* ||- *Few N are F*’. From (H) and observation (13c) that ‘many’ entails ‘a few’, it would follow that (J) *Many N are F* ||- *Few N are F*. But (J) is obviously absurd, and the absurdity can be seen as follows: since we accept (12a) that ‘few’ entails ‘¬ many’, if we also supposed (J) that ‘many’ entails ‘few’, it would follow that (K) *Many N are F* ||- ¬ (*Many N are F*), which is obviously absurd. So (J) cannot be correct, and in turn (H) cannot be correct. That is, we accept the non-entailments in (15a,b):

- (15) a. *A few N are F* ||-/ *Few N are F*.
b. *Many N are F* ||-/ *Few N are F*.

The obvious question to raise is whether the converse of (15a) is an entailment. Is it the case that *Few N are F* ||- *A few N are F*? My semantic intuition is to accept this entailment, at least until some theoretical reason arises to question it. (My argument is this: The denial of the entailment supposes the truth of ‘Few N are F and it’s not the case [¬] that a few N are F’, which does seem logically false, since ‘A few N are F’ is false either when there are no N that are F – see (13d) that ‘a few’ entails ‘some’ – or when there are fewer than a few N that are F. In either case ‘Few N are F’ cannot also be true.) So, in summary, we have the linguistic observations in (16).

¹¹ See Merriam-Webster Collegiate Dictionary, 11th edition, 2003, Springfield, Massachusetts, p. 1140. Barwise and Cooper (1981) take ‘a few’ to mean ‘at least several’, so they disagree with the Graves-Hodge scale on the relationship of ‘several’ to ‘a few’. Peters and Westerståhl (2006: 169, n.5) think that ‘a few’ means ‘some but only a few’ or ‘some but not many’, which I believe are incorrect accounts of ‘a few’, and they disagree with Barwise and Cooper (1981), who believe that ‘a few N’ is monotone-increasing. I side with Barwise and Cooper on the point of ‘a few N’ being monotone-increasing.

- (16) a1. *Few N are F* ||- \neg (*Many N are F*),
Few N are F ||- \neg (*Most N are F*),

or equivalently:

- a2. *Many N are F* ||- \neg (*Few N are F*),
Most N are F ||- \neg (*Few N are F*).¹²

b1. *Few N are F* ||- *A few N are F*.

b2. *A few N are F* ||-/ *Few N are F*.

- c1. “*A few N are F*” ||-_s>> \neg (*Many N are F*),¹³
“*A few N are F*” ||-_s>> \neg (*Most N are F*).

- c2. “ \neg (*Many N are F*)” ||-_i>> *Many N are not-F*,¹⁴
“ \neg (*Most N are F*)” ||-_i>> *Most N are not-F*.

- d. *Few N are F* > *Many N are not-F*,¹⁵
Few N are F > *Most N are not-F*.

It is my view that any good theory of ‘A few N’ and ‘Few N’ should explain the linguistic data in (16). I happen to have a modest proposal.

V. A Proposal for the Semantic Relationship between ‘Few N’ and ‘A Few N’: the analysis of ‘Few N’

For semantic purposes I propose the logical equivalences in (17) to explain the logical data so far introduced. I hope that it will also be clear that the equivalences may be strengthened to an analysis of meaning when we consider the linguistic data of conversational implicata already introduced as well as linguistic data yet to be considered. My analysis of ‘Few N are F’ is given in (17)(P1). If one adopts the theory of ‘only’ sentences from Atlas (1996), one derives (17)(P2) and equivalently (17)(P2’) from (17)(P1).

(17) **P1. Few N are F -||- Only a few N are F.**

P2. Only a few N are F -||- A few N are F & {At most, No more than} a few N are F.¹⁶

¹² I include ‘Most N’ here as a nod to Peter Geach’s intuitions, discussed earlier.

¹³ The symbol ‘||-_s>>’ indicates a Scalar Quantity Implicature

¹⁴ The symbol ‘||-_i>>’ indicates an Informativeness Implicature.

¹⁵ The symbol ‘>’ represents a generic inference, the exact nature of which is left undetermined.

¹⁶ In various uses ‘a few N’, if it denotes a particular cardinal number at all, will have a denotation that depends on the context. Let’s suppose that the cardinal is n_0 . Then ‘At most a few N are F’ may be written in first-order logic in the usual way: $\exists x_1 \exists x_2 \dots \exists x_{n_0} \forall y [(x_1 \neq x_2 \wedge x_1 \neq x_3 \dots \wedge x_1 \neq x_{n_0} \wedge x_2 \neq x_3 \dots \wedge x_{n_0-1} \neq x_{n_0} \wedge \mathbf{N}x_1 \wedge \mathbf{N}x_2 \wedge \dots \wedge \mathbf{N}x_{n_0} \wedge \mathbf{F}x_1 \wedge \dots \wedge \mathbf{F}x_{n_0}) \wedge (\mathbf{N}y \wedge \mathbf{F}y \rightarrow (y=x_1 \vee y=x_2 \dots \vee y=x_{n_0}))]$.

P2'. Only a few N are F -||- A few, and {at most, no more than} a few, N are F.

My proposal has several virtues. Unlike other proposals in the literature, the proposal in **P1** respects the intuition that the relationship between the adjective ‘few’ and the noun phrase ‘a few’ in English cannot be a lexical accident. Secondly, the proposal will predict and explain the crucial linguistic data. Thirdly, it suggests for the first time that ‘Few N’ is an “excluding” quantifier and thus belongs in the same semantic class as ‘Only *Proper Name*’.

VI. The Explanation of the Linguistic Data by The Proposal and Its Compatibility With Horn’s Pragmatic Theory of NPI Licensing

On the hypothesis of **P1**, the relationships in (16a1, a2) obviously follow analytically. The data in (16b1, b2) obviously follow. The scalar implicature in (16c1) arises from the Graves and Hodge’s lexical scale of quantity terms. The Informativeness implicature (Horn R-implicature) in (16c2) is explained by the theory defended in Atlas and Levinson (1981), Horn (1984), Atlas (1989), Horn (1989), Levinson (2000), Atlas (2005), Huang (2007), etc. The generic inference in (16d) could, perhaps, have the following two-stage analysis in (18i):

(18) (i)

- (a1) *Few N are F* ||- \neg (*Many N are F*),
- (c2) “ \neg (*Many N are F*)” ||-_I>> *Many N are not-F*.¹⁷

The analysis in (18i) is NOT similar to the one for comparative adjectives and adverbials of degree offered in Atlas (1984, 2005). In the latter analysis the relationship between ‘almost F’ and ‘not F’ also proceeded in two stages, but the first stage was an implicature from ‘almost F’ to ‘not quite F’, and then from the implicature ‘not quite F’, depending on the character of the predicate ‘F’, to an entailed ‘not F’. The implicature must come first; the entailment second. In the analysis here, the order is reversed, so the phenomenon is a quite different one. Generally, it would make no sense to try to implicate a proposition from an unstated entailment of a sentence that is stated, as implicatures by definition arise from inferences made from overt assertions. (For more discussion, see Atlas (1984, 2005).) The data here for ‘Many N’ and ‘Most N’ call for a different conceptualization of the inference. Another possibility of the same kind might be the following:

(18) (ii)

- (b1) *Few N are F* ||- *A few N are F*.
- (c1) “*A few N are F*” ||-_S>> \neg (*Most N are F*).
- (c2) “ \neg (*Most N are F*)” ||-_I>> *Most N are not-F*.

¹⁷ The arguments above are the same for ‘Most N’.

The same theoretical difficulties arise for this possibility as for (18)(i). Yet a third possibility makes use of the Atlas-Kempson view of the semantical non-specificity of ‘not’.¹⁸ We reformulate (a1) in its non-specific form, with English ‘not’ rather than a logical connective and with an intensional version of the logical consequence relation suitable for semantically non-specific relata, call it ‘ $\|\approx$ ’:

(18) (iii)

(a*1) *Few N are F* $\|\approx$ *It’s not the case that many N are F.*

(c*2) *It’s not the case that many N are F* \angle *Many N are not-F,*

where the symbol ‘ \angle ’ means ‘expresses’; the sentence on the left-hand side expresses the right-hand side. In the case of a semantically non-specific sentence, the right-hand side is one of several possible semantic “specializations” or “instantiations” of the sentence on the left-hand side. In my view the non-specificity account in (18)(iii) is the most theoretically coherent, but it is also the most obscure, for obvious reasons. For purposes of this essay, I shall let the matter rest here.

There are also predictions about the behavior of ‘Few N’ sentences that my proposal in (17) offers. It is clear from **P2** and **P2’** that ‘Few N’ is a conjunction (or an embedded conjunction) of an upwards monotonic and a downwards monotonic quantifier. Thus, on my proposal ‘Few N’ is non-monotonic! It is not “negative,” i.e. not downwards entailing, in the same way that ‘Only John’ turned out not to be negative, yet it will license “weak” Negative Polarity Items.

‘Few N’ has been standardly taken to be downwards monotonic, and hence to license Negative Polarity Items, on the grounds, I suggested, that it was tacitly understood to mean ‘ \neg Many N’. The proposal that I am offering needs to explain why it would be natural to interpret intuitively ‘Few N’ as meaning ‘ \neg Many N’. On the view in (17), ‘Few N are F’ is logically equivalent to, and may also be synonymous with, ‘A few N are F & at most a few N are F’. The second conjunct analytically entails ‘ \neg (Many N are F)’. The first conjunct, were it to be asserted independently of the conjunction, would have ‘ \neg (Many N are F)’ scalar-implicated by the speaker as a generalized conversational implicatum. So nothing in the meaning or the illocutionary potential of the first conjunct will conflict with the second conjunct’s entailment.¹⁹

¹⁸ See Atlas (1974, 1975, 1977, 1978, 1979, 1989), Kempson (1975), and Kempson (1988).

¹⁹ I do not believe that one conjunct is actually asserted in the course of asserting a conjunction, *pace* Stalnaker (1974: 211). Stalnaker’s view is that it is “an uncontroversial assumption about the semantic properties of the word *and* ... that when one asserts a conjunction, he asserts both conjuncts.” On this view in asserting ‘A & \neg A’ one would never (or never only) assert a NECESSARY falsehood but instead (or in addition) individually assert the two CONTINGENT, component conjuncts (assuming that ‘A’ is not itself a necessary truth or a necessary falsehood). That, I take it, is absurd (on either interpretation of Stalnaker’s assumption) and is a *reductio* of Stalnaker’s and others’ view; in any case one ought to have been suspicious of a claim that the semantics of ‘and’ had such implications for the speech-act of making an assertion. There are those in the history of logic and philosophy who have taken the view that one cannot ASSERT sentences of the form ‘A & \neg A’. That animadversion will not save Stalnaker’s assumption. Let ‘B’ be a sentence non-identical with but logically equivalent to ‘A’. My *reductio* argument applies equally well to ‘A & \neg B’. See L. Goldstein (1988) and JD Atlas (1988, 2005).

In the case of ‘Only John’ being interpreted *à la Horn* in an assertion of the sentence as ‘No one other than John’, the interpreter is diminishing the semantic importance of the content of the “positive” or “prejacent” clause ‘John Fs’. On Horn’s (1969, 1992, 1996, 2002, 2009) views since 1969, the positive clause in the ‘Only John’ sentence, namely ‘John Fs’, was not asserted but presupposed, or implicated, or otherwise back-grounded. By parity of reasoning, Horn should say the same of my proposed analysis of ‘Few N are F’. The positive clause ‘A few N are F’ would not be asserted but be presupposed, implicated, or otherwise back-grounded. Therefore it is understandable that an assertion of ‘Few N are F’, if Horn took my suggestion for the analysis, should be interpreted by Horn as ‘ \neg (Many N are F)’ or, as on my analysis, ‘At most a few N are F’. On his current view of the pragmatic licensing of Negative Polarity Items by what is asserted in, rather than entailed by, the sentence, the asserted clause ‘At most a few N are F’, which is downwards monotonic, happily licenses Negative Polarity Items. I have expressed in *Atlas* (2007) my qualms about the current formulation of Horn’s pragmatic theory of the licensing of Negative Polarity Items, but if it can be made adequate, it will give Horn an elegant pragmatic explanation of the licensing of NPIs by ‘Few N are F’, even if I am correct that the sentence-type is semantically non-monotonic. Thus my new analysis of ‘Few N’ in (17) can meet the needs of Horn’s (2002, 2009) recent pragmatic theory of the licensing of Negative Polarity Items.

Conclusion

My search, since 1997, for another non-monotonic, NPI licensing, quantified Noun Phrase, is completed. Contrary to almost all semanticists’ expectations, despite the ultimately misleading hints from Sommers (1982) and Geach (1980), it turns out that the non-monotonic quantifier is ‘Few N’. My analysis in (17) explains the relationship between ‘Few N’ and ‘A few N’, predicts the relevant entailments and conversational implicata of ‘Few N’ statements, and though ‘Few N’ is a non-monotonic quantifier, my analysis makes it compatible with Horn’s (2002, 2009) current pragmatic theory of the licensing of Negative Polarity Items. It also puts ‘Few N’ into the same semantic class as the “excluding” quantifier ‘Only *Proper Name*’. At first glance this will surprise most semanticists, but on reflection I believe that they will see the merit of that classification.

The striking result of the analysis is that ‘Few N’ is a non-monotonic rather than merely downwards monotonic quantifier, notably contrary to the received views. And, as always, I am careful not to be too enthusiastic about received views. The Marquis de Vauvenargues once remarked that “Few maxims are true in every respect.” Johann von Goethe said, not of words but people, “Few of us love others for what they really are. Most of us love what they imagine in others; they love their own idea in someone else.” Linguists love words, and they are susceptible to similar weaknesses.

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