

Negated Antonyms: Creating and Filling the Gap

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1. Double Negatives

This squib proposes a theory of the semantics and pragmatics of certain antonym pairs and their negations, as in the following examples:

- (1) a. *happy, not happy, unhappy, not unhappy*
- b. *likely, not likely, unlikely, not unlikely*
- c. *intelligent, not intelligent, unintelligent, not unintelligent*
- d. *successful, not successful, unsuccessful, not unsuccessful*
- e. *polite, not polite, impolite, not impolite*
- f. *common, not common, uncommon, not uncommon*
- g. *frequent, not frequent, infrequent, not infrequent*
- h. *many, not many, few, not few*

The interpretation of the fourth members of such quadruplets, the so-called “double negatives”, have caught the attention of linguists and language critics alike, as detailed in several publications by Horn (1989: 296 ff., 1991, 1993, 2002). Jespersen (1924) describes what is perhaps the most tangible meaning effect in the following way:

The two negatives [...] do not exactly cancel one another, so that the result [*not uncommon, not infrequent*] is identical with the simple *common, frequent*; the longer expression is always weaker: “this is not unknown to me” or “I am not ignorant of this” means ‘I am to some extent aware of it, etc. (p. 332).

According to this, double negatives have the same interpretation as weak positives. There might be additional meaning components associated with this mitigating effect of double negatives. For example, Fowler (1927, p. 383) observed that this effect makes it suitable for intimating a certain attitude “congenial to the English temperament” such that “it is pleasant to believe that it owes its success with us to a stubborn national dislike of putting things too strongly”.

But there are other uses that have been identified. For Orwell (1946: p. 357) double negatives apparently had a purely connotational meaning, apparently arising from their added complexity: “Banal statements are given an appearance of profundity by means of the *not un-* formation” (p. 357). And it has been observed that sometimes double negatives even seem to express a meaning stronger than simple positives, as e.g. certain uses of *not bad* do.

Horn lists a great many convincing examples that show the mitigating use of double negatives quite clearly. A quick search of web sites, blogs and discussion forums reveals this semantic effect in the language of Internet users, as the following quite randomly selected examples show:

¹ Thanks to suggestions to an autonomous referee.

- (2) a. *For the first time in a long time I woke up feeling good this morning. I felt rested and content and was not unhappy to find that my kids were already awake.*
 b. *For the most part he is well informed and not unintelligent.*
 c. *It is not unlikely that these early therapsids may have had the beginnings of metabolic development towards the mammalian condition*
 d. *Homeowners Debt: "45% of Income not Uncommon"*

In all examples, expressions of the form *not un-A* could be replaced by *rather A*, or *quite A*, without significant change in meaning. Replacing them simply by *A* results in a more drastic meaning change:

- (3) a. *I was not unhappy to find that my kids were already awake.*
 b. \approx *I was quite happy to find that my kids were already awake.*
 c. \neq *I was happy to find that my kids were already awake.*

But one should be aware that a regular negation reading of double negative construction exists as well, especially in denials, as the following examples show:

- (4) a. *Now if I look unhappy, I apologize. But I'm not unhappy.*
 b. *JIM LEHRER: In other words, if the marines are not talking, it isn't necessarily because they're not happy... they're not unhappy.*
 c. *i am happy. i am not insanely happy, but i am not unhappy.*
 d. *Beauty: I am NOT unintelligent!!!*
Geek: Okay, you're not unintelligent, you're...academically un-inclined.

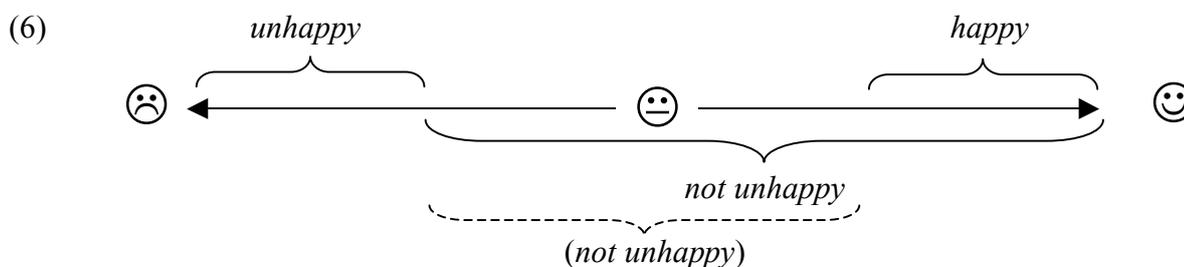
A quick survey makes it obvious that the mitigating reading of double negatives occurs with different verbs in different frequency, a phenomenon worth to be studied in greater detail. Also, the two readings appear to differ in the prosodic structure: Whereas for the 'quite A' reading the string *not un-A* is realized within one prosodic phrase, for the '¬ un-A' reading is typically realized within two separate prosodic phrases:

- (5) a. *(He is) (not UNhappy about it)*
 'He is quite happy about it.'
 b. *(He is NOT) (UNhappy about it)*
 'It is not the case that he is unhappy about it.'

I will leave these issues aside and rather develop an explanation how this interpretation obtains in the first place that has advantages over existing explanations.

2. Attempts to explain Double Negatives

Horn (1991, 1993) explains the downtoning effect of stating *not un-A* over simply stating *A* as follows: The speaker avoids *A* because there might not be sufficient evidence for stating *A* (violation of Quantity), or stating *A* would violate constraints posed by politeness considerations. This explanation presupposes that *A* and *un-A* are contraries, and not just contradictions; otherwise *A* and *not un-A* would in fact mean the same, which would result in virtual ungrammaticality (cf. Orwell's example **a not unblack dog*). This is illustrated in the following diagram.



The adjectives *happy* and *unhappy* each signal continuous regions in the emotional space, reduced here to a linear open-ended scale. The range of application leaves a gap in the middle range of

neutral emotions, the “zone of indifference” (Sapir 1944). This is characteristic for contraries in general. If *not unhappy* is the negation of *unhappy*, then these two expressions are contradictories of each other, and *not unhappy* can be applied to happy emotions, but also to emotions of the neutral range, as indicated. For expressing happy emotions, the two terms *happy* and *not unhappy* stand in competition with each other. Here *happy* wins on two counts: as the simpler expression of the two, and as the more specific one. Hence by Grice’s maxim of Quantity, as well as by his maxim of Manner, we should expect that *not unhappy* is pragmatically restricted to signal a neutral state of happiness, as indicated.

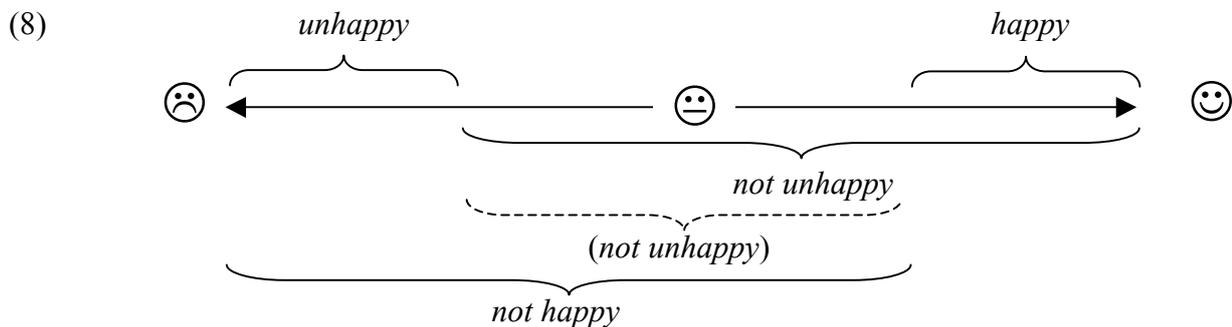
The problem with this analysis is that *not unhappy* is in fact not simply used to refer to the zone of indifference, the gap that *unhappy* and *happy* leave open. It does not mean what the psychologist Judith M. Bardwick called *plateaued* in her book *The Plateauing Trap* of 1986:

- (7) *When we are plateaued, we are not so much actively unhappy as we are just not happy. We could continue to live as we are, because it’s not awful. But it is also not joyous.*

Rather, *not unhappy* is used to refer to a – typically mild – state of happiness. Example (3.a) does not mean ‘I was indifferent as to whether the kids were awake.’ This is not predicted by the analysis above.

There is another attempt to explain the interpretation of the meaning of quadruplets like (1) that should be mentioned here, proposed by Blutner (2004). It makes use of the framework of Bidirectional Optimality Theory, but the explanation of double negatives like *not unhappy* is essentially the same as with Horn, and has the same problems. While Blutner’s diagrams suggest that he thinks of not being unhappy as a mild state of happiness, this does not follow from his theory in any obvious way.

Blutner looked, in addition, at expressions like *not happy*, whose literal meaning is indicated in the following diagram:



It is unclear how *not happy* should be pragmatically restricted, if it is restricted at all. Blutner suggests that it is restricted to the range of *unhappy*. This is problematic for the theoretical reason of avoidance of synonymy, as two expressions, *unhappy* and *not happy*, would end up with the same range of use. And it actually makes a wrong empirical claim, as *unhappy* can be used to refer to a more severe state of unhappiness than *not happy*. This can be seen in examples like the following:

- (9) *I’m not happy at all, in fact I’m quite unhappy.*
**I’m quite unhappy, in fact I’m not happy at all.*

The intensifier *at all* forces *not happy* to be understood in a strengthened sense, and not just as the negation of *happy*. Yet there is an obvious difference between *not happy at all* and *unhappy*. Examples like the following, found on the Internet, support this differential use of *unhappy* and a pragmatically strengthened *not happy*.

- (10) a. *I was very unhappy. I am not happy now. Everything is so sad.*
 [George Elliot, *Middlemarch*]
 b. *It’s an absolutely horrible feeling to be unhappy, and I don’t even think I was unhappy, just not happy, if you know what I mean.*

Alternatively, we might assume that *not happy* is restricted to the zone of indifference, just as *not unhappy*, by a similar reasoning as the one that we applied in the case of that expression. But notice that then, again, two expressions would end up pragmatically synonymous. As a matter of fact they aren't, as can be witnessed by the following example, a coherent interchange.

- (11) A: *John isn't happy.*
B: *Well, he's not unhappy.*

What we would like to have is a theory that predicts that both *not happy* and *not unhappy* are pragmatically restricted to the zone of indifference, but that *not happy* occupies the lower (left) region of it, whereas *not unhappy* settles to the higher (right) area. In the following I will show that this can be done by assuming completely standard steps of pragmatic reasoning if we assume a perhaps not-so-standard theory of the literal meaning of the basic antonyms, like *unhappy* and *happy*.

3. Pragmatic strengthening within an epistemic theory of vagueness

As mentioned above, antonym pairs like *happy* and *unhappy* are typically conceived as contraries that apply to the more extreme ends of a scale and leave a zone of indifference. This accounts for the fact that the two statements *I am happy* and *I am unhappy* can intuitively both be false, as when I say *I am neither happy nor unhappy*. I would like to suggest that *happy* and *unhappy*, against this impression, are in fact contradictories that exhaust the whole range of their scale. This means that literally, if *I am happy* is false then *I am unhappy* is true, and vice versa; these sentences cannot both be false. It is only after pragmatic strengthening of these expressions that I can say that I am neither happy nor unhappy.

This position finds support in the view of vagueness proposed by Williamson (1994). According to his epistemic theory of vagueness, a proposition containing a vague predicate, which is traditionally allowed to be neither true nor false in certain circumstances, in fact always is true or false (provided that its presuppositions are met). Consider the consequences of this view with the classical example of vagueness, the Sorites paradox. If one grain of sand after another is added to a collection of sand grains, there is a precise point at which the sentence *This is a heap of sand* changes its truth value from false to true. Or, if Louis loses one hair after another, then there is a precise point at which we may truthfully say *Louis is bald*. Also, the sentence *Rembrandt is old* is either true or false; according to our understanding of *old*, it must have changed its truth value at some time – in fact, some second – between the years 1606, the year of Rembrandt's birth, and 1669, the year of his death.

This analysis appears to go against the way how we use language, but Williamson reminds us that the alternatives are even more troubling. For example, if we allow for a zone of indifference in which a person is neither not old nor old, or in which a collection of sand corns neither form a heap nor doesn't, then we run into the problem of second-order vagueness. This is because we have reintroduce sharp borders again, like the one between (a) being neither old nor not old, and (b) being old. Using a continuum of truth values has been suggested as a solution, but even this turns out to be unsatisfying: There is a sense in which a person definitely can be called *old*, and the question then arises then when exactly this definite state was reached. Due to arguments of this sort, Williamson suggests a theory of vagueness according to which vague sentences literally are always either true or false, but typically language users do not know their precise truth conditions when it comes to the area in the zone of indifference in which theories that give up bivalence assume a third truth value. This is the epistemic theory of vagueness, which has been intensely debated ever since it was proposed.

I would like to subscribe to this view, adding that speakers might well know that in many cases there is no authority that could determine the precise borders (as is the case for *pamphlet* and *book*, which the Unesco Institute of Statistics defines as non-periodic publications of at least 5 but not more than 48 pages, and of at least 49 pages, respectively, exclusive of the cover pages). As speakers in the same community may set the border between *A* and *not A* differently, and as even

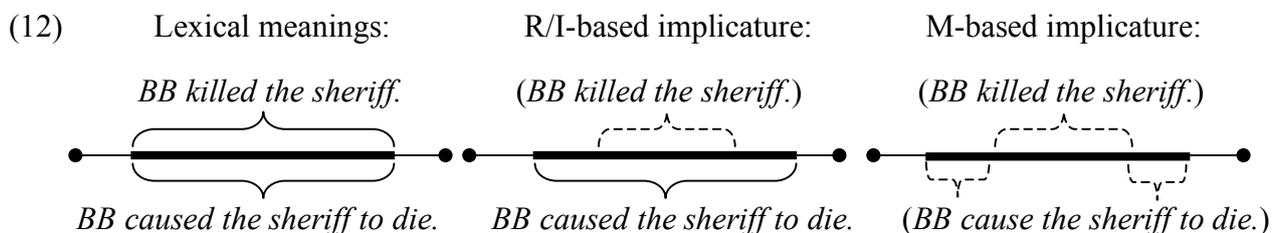
one and the same speaker may set the border differently at different occasions, communicating something as being *A*, or as being *not A*, becomes rather pointless if the phenomenon to be classified is close to a potential border between *A* and *not A*. Hence such classifications are avoided, as they do not safely communicate what they intend to communicate. If it is not guaranteed that speaker and hearer set the border between being bald and being not bald in the same way, then it is potentially misleading if a speaker calls Louis *bald*. As the addressee knows this, he will assume, on hearing that Louis is bald, that Louis is not a borderline case of baldness where opinions might differ, but a definite case of *apolecia*. This means that he can be called *bald* under any reasonable setting of the border. But this is a matter of use, not of the meaning proper, of such terms as *bald*, *old*, or *heap*.

The urge to use expressions that both interlocutors are likely to use in the same way for the classification of phenomena is somewhat reminiscent of the tendency towards stereotypical interpretations that underlies implicatures based on what has been called the R principle by Horn (1984, 1993) and the I principle by Atlas & Levinson (1981) and Levinson (2000). The R/I principle is generally seen as leading to an enrichment of the literal meaning of expressions such that they refer to stereotypical instances. To cite a famous example by McCawley (1978), *x kills y* means ‘x causes y to die’, but this meaning can be enriched so that *x kills y* is applied only if x causes y to die in a direct, intentional way. I would like to propose that there is a similar enrichment of the literal meaning of expressions to be applicable to cases in which speaker and addressee can assume that they both apply the expressions in the same way. This restricts the application of vague terms to instances that are sufficiently removed from potential borderline cases, even if the border itself is supposed to be sharp. Both types of restrictions, the one to stereotypical interpretations and the one to regions removed from potential borders, serve to make communication safer, as they make it less likely that speaker and addressee misunderstand each other.

As a second hypothesis, I would like to suggest that antonym pairs exhaust their semantic space. For example, *happy* and *unhappy* completely divide the scale of emotions along the dimension of happiness (at least if we do not account for the differentiation between *sad* and *unhappy*, which cannot be captured on a linear scale – see Muehleisen 1997). Similarly, *likely* and *unlikely*, *polite* and *impolite*, *frequent* and *infrequent* and other antonyms exhaust their semantic space. It is only because there is no agreed upon border between the semantic range of such terms that they are effectively used only in cases in which speakers and addressees can assume that they categorize phenomena in the same way.

My third hypothesis is similar to one assumed already by McCawley (1978), which was called M principle by Levinson (2000). It states that of two expressions with similar meanings, the simpler one tends to be restricted to a stereotypical, or in general, safer interpretation, whereas the more complex one is applied when a non-stereotypical interpretation should be communicated. In short, marked expressions tend to have marked meanings (see also Horn 1984, 1993 for discussion).

The M principle can be derived by assuming avoidance of synonymous interpretations, as the more complex expression is used for cases for which the simpler expression is avoided, due to R/I-based implicature. This can be illustrated with McCawley’s minimal pair, *Black Bart killed the sheriff* and *Black Bart caused the sheriff to die*, as follows:



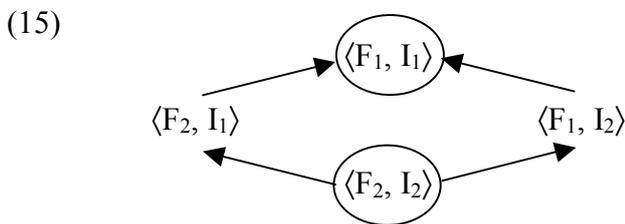
This principle can also be derived within Bidirectional Optimality Theory as a balancing of two tendencies: One that prefers the shorter expression over the more complex one, and one that prefers the stereotypical interpretation over the non-stereotypical one. To illustrate this with McCawley’s example, assume that we consider two form alternatives and two interpretation alternatives:

- (13) F_1 : *Black Bart killed the sheriff.* I_1 : ‘He killed him in a direct way.’
 F_2 : *Black Bart caused the sheriff to die.* I_2 : ‘He killed him in an indirect way.’

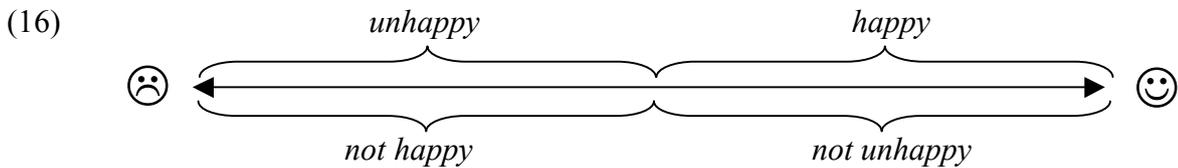
As preference orderings we have $F_1 > F_2$ and $I_1 > I_2$. The evaluation mechanism of Bidirectional Optimality Theory due to Blutner (2000) and Jäger (2002) (so-called “weak optimality”) works as follows:

- (14) A form-interpretation pair $\langle F, I \rangle$ is optimal iff
 a. there is no optimal pair $\langle F, I' \rangle$ such that $I' > I$,
 b. and there is no optimal pair $\langle F', I \rangle$ such that $F' > F$.

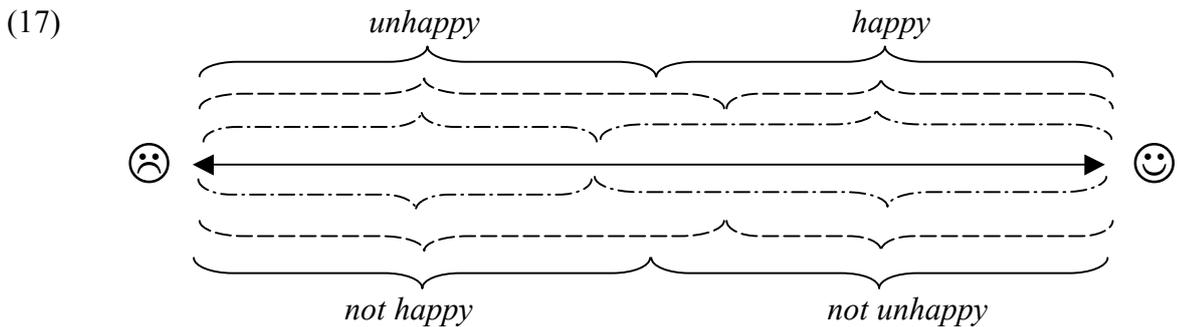
Among the four pairs $\langle F_1, I_1 \rangle$, $\langle F_1, I_2 \rangle$, $\langle F_2, I_1 \rangle$, $\langle F_2, I_2 \rangle$, the first and the last one are optimal. The first one, $\langle F_1, I_1 \rangle$, is clearly optimal as there is no pair at all that is preferred over it. The pairs $\langle F_2, I_1 \rangle$ and $\langle F_1, I_2 \rangle$ are not optimal, as the optimal pair $\langle F_1, I_1 \rangle$ is preferred for reasons of form or interpretation, respectively. Interestingly, the pair $\langle F_2, I_2 \rangle$ again is optimal: According to the definition, it is not to be compared with $\langle F_1, I_1 \rangle$, as this pair varies in both form AND interpretation. And it is also not to be compared with the pairs $\langle F_2, I_1 \rangle$ or $\langle F_1, I_2 \rangle$, as these pairs are not optimal, as we just have derived. The following diagram illustrates the preference orderings (indicated by arrows) and the optimal pairs (indicated by enclosures):



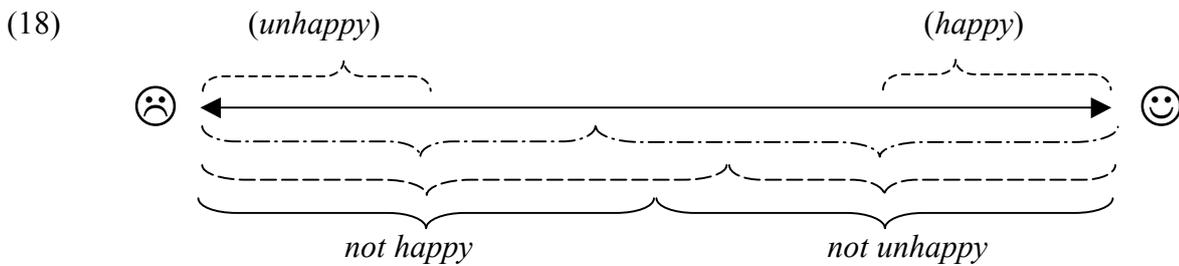
We now return to antonyms and their negations. If antonyms are contradictories, and if negation expresses a contradictory relation as well, the literal meanings of the expressions of a quadruplet relate to each other in the following way:



According to the epistemic theory of vagueness, the precise delineation between the two regions is not fixed; there is a whole range of options, as illustrated in the following diagram:

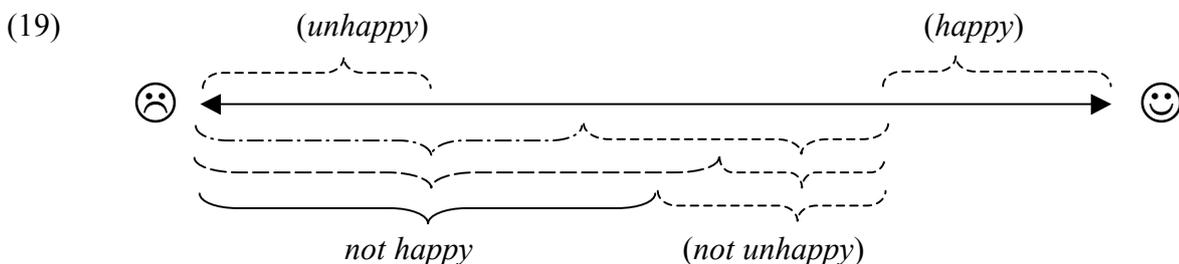


As a consequence of this uncertainty about the location of the border between happiness and unhappiness, the use of *unhappy* and *happy* is pragmatically restricted to those areas for which the interlocutors can assume to be in mutual agreement, to ensure safe communication. This is a special case of an R/I-based implicature:



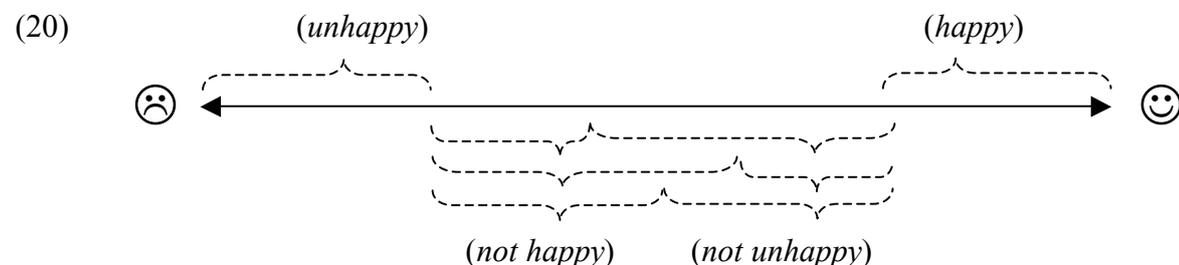
The diagram indicates a particular way in which *happy* and *unhappy* are restricted by R/I-implicature. But of course the borders of the restriction is vague in the sense that even after strengthening, speaker and addressee cannot be sure that they agree on the points at which happiness and unhappiness start. In a sense, the problem of second-order vagueness raises its head again. But notice that now this is not a semantic phenomenon, but a pragmatic one. The borders can, in a sense, be negotiated between speech participants; they are not part of the semantics of the language itself.

In the right-hand half of this diagram, we find two competing expressions, *happy* and *not unhappy*, where the second one is clearly more complex than the first. This is the configuration that triggers M-implicatures. In the following diagram, some of the ranges of possible interpretations of *not unhappy* after M-implicatures are indicated.



This is precisely the effect that we are trying to reconstruct. *Not unhappy* is used to express mild states of happiness, and not just the “plateau”, the middle ground between happiness and unhappiness.

What about *unhappy* and *not happy*? These two expressions compete with each other as well, but it is less clear in this case which of them is the simpler one. While *unhappy* is one complex word, *not happy* is a syntactically complex expression consisting of two simple words. Thus it is expected that the contrast of use between *unhappy* and *not happy* is less clear than the one between *happy* and *not unhappy*, and this is what we find. But still we can argue that *not happy* is more complex than *unhappy*: This clearly holds as far as phonology is concerned, and we may plausibly defend that syntactic complexity weighs more than morphological complexity, at least when we look at frequent derivational affixes. This would predict our somewhat tentative impression that *unhappy* indicates a stronger feeling of unhappiness than *not happy*. This situation is indicated in the following diagram:



Notice that there is no clear border between *not happy* and *not unhappy*, and the two expressions are not exhaustive. This is indeed what we find; a person can be said to be *not happy* but also *not unhappy* at the same time. But notice that our theory predicts in any case that *not unhappy* can be used to report higher stages of happiness than *not happy*, and this in also what we find.

We have observed above that one can describe one's emotional state by saying:

(21) *I am neither happy nor unhappy.*

According to our explanation of the way how these expressions are used, sentences of this type are contradictions. To get a non-contradictory reading, we must assume that *unhappy* and *happy* are strengthened locally. The sentence then means, roughly: 'I am in a state for which neither the statement *I am happy* nor the statement *I am unhappy* is appropriate'. While strengthening implicatures have been understood in a way that they only apply at the level of the whole sentence, a number of phenomena are known that have forced researchers to assume implicatures that are triggered more locally (cf. Krifka 1995, Chierchia 2004), and sentences like (21) appear to be one of them.

There is one independent argument for the assumption that antonym pairs like *happy* and *unhappy* are literally contradictories that receive their interpretations as contraries only via pragmatic strengthening. In contexts in which it is irrelevant where the line between them is precisely drawn, antonyms are indeed exhaustive. This is the case with so-called unconditionals (Zaefferer 1991):

(22) *Regardless whether you are a happy person or an unhappy person, you should read this book.*

This clearly means that everyone should read the book; it does not exclude people that one would prefer to describe as indifferent, or as only mildly happy or unhappy..

I would like to point out that the theory of vague predicates presented here differs in an interesting way from one standard theory of dealing with vagueness, namely supervaluations, cf. Fine (1975). Whereas supervaluation theory assumes that the semantic interpretation of predicates leaves a gap between the positive and the negative extension that can be closed by ever-stricter valuations, the theory proposed here assumes, on the contrary, strict semantic interpretation that can be pragmatically weakened. It appears crucial for the application of pragmatic reasoning like the R/I principle and the M principle to assume a theory of vagueness that works with pragmatic weakening. It is perhaps not necessary to assume the epistemic theory of vagueness, but there seems to be no other plausible pragmatic reason why we should have a restriction of semantically exhaustive predicates to ones that leave gaps in the space of entities to which they are applicable.

4. Conclusion

We have seen that changing a crucial assumption about the lexical meaning of antonyms – that they form contradictories, not contraries – leads to a better understanding of the pragmatics of double negatives, like *not unhappy*, but also of simple negatives, like *not happy*. The assumption that antonyms are contradictory itself can be defended as well if we distinguish between their literal meaning and the way in which they are pragmatically restricted to guarantee safe communication.

Does this cover all uses of double negatives? Horn (1991, 1993, 2002) has listed seven uses altogether. Some of them clearly cannot be explained by the conspiracy of literal meaning and pragmatic reasoning suggested above. There might not be a corresponding *A* form, as is the case in *not unfounded*. The speaker might take up with the *not un-A* construction an *un-A* form that has been uttered before, perhaps because it is to be denied. A speaker might just want to sound pompous. In this case the use of double negatives may be selected for simply because they are more complex, which could be explained by the handicap principle (Zahawi & Zahawi 1997). Or double negatives might be used because they suggest a more careful exploitation of semantic and pragmatic distinctions of language in general. Or they might be used to imitate others that use them for one of these reasons. All these uses are rather tangential to our concerns here.

Horn also mentions irony, as in *Honey, you're not uncute*. It is obvious how this works: It playfully suggests that the addressee cannot really be called *cute*, but that the speaker does his very best to report a high state of cuteness while staying honest. Another reason Horn mentions is politeness, which can be explained by the fact that the mitigated interpretation that double negatives

afford may help to save face. This includes the face of the speaker, for whom the weaker statement of a double negative provides the possibility of a loophole if what he says is not quite true; cf. Seright (1966). Jespersen (1924) presumably had something similar in mind when he says that double negatives imply an hesitation on the side of the speaker.

Centuries earlier, Erasmus had claimed that double negatives do not only serve to impute modesty, but also insisted that they may be used to “amplify”, that is, to make a statement stronger. Examples of this use of double negatives are *It was no small joy to receive your letter*, or *Not bad!* as a comment to an artist performing a salto on a tightrope. At first sight this seems to run contrary to what we have assumed about the nature of double negatives. But there is a natural way by which this use to strengthen a proposition may come about when we assume that basically, double negatives make a weaker statement: If the context actually indicates that *A* holds, a speaker might suggest by saying *not un-A* that his standards for saying *A* are so high that they cannot be attained under normally conceivable circumstances. Getting a comment of this type from a critical mind who does ostensibly not succumb to the inflationary tendencies of language should be valued more than cheap praise from someone who is known to exaggerate.

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