Autohyponymy: Implicature in Lexical Semantics, Word Formation, and Grammar

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The word meanings given in dictionaries normally are "pragmatic meanings," that is, utterance meanings in prototypical situations. Those glosses are perfectly adequate for the needs of the normal dictionary user but they do not meet scientific standards. As H. P. Grice and L. Horn have shown in various publications, the apparent meanings of many words are in fact combinations of their lexical meanings proper and some superimposed conversational implicatures. Many contradictions can only be avoided by keeping these two parts separate. For example, the use of the adjective *rectangular* often (but not always) is interpreted as a significant non-use of the (stronger) alternative *square*. The adjective *rectangular* thus acquires a second, pragmatic reading 'rectangular but not square' that is hyponymous to its semantics; the word appears to be hyponymous to itself, in other words, to be an "autohyponym" (Horn 1984c:110). The purpose of this paper is to show that autohyponymy is pervasive in the lexicon, occurring with nouns, verbs, (scalar/degree) adjectives, conjunctions (e.g., the conditional *if*); it also occurs in word formation (the German feminine suffix *-in*), and grammar, for example, the absolute comparative (*ein älterer Mann*). The data are largely taken from German.[*]

1. Mysterious Meanings and Mysterious Ambiguities.[1]

The German comparative form *älter* in *Peter ist älter als Paul* has the same meaning as English *older* in *Peter is older than Paul*. However, in addition to this "relative comparative" there is an "absolute comparative" without an explicit basis of comparison: *Peter ist ein älterer Mann* 'Peter is an elderly (lit. "older") man'. When the construction is not elliptic and

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[1] This first section will only present the problems; bibliographical references to solutions are given with the analyses in section 3 below.

the basis of comparison is not provided by the context, the comparative form indicates a rather moderate degree of the predicate. This results in a paradox: When you see an old man and an "older" man, the second should be older than the first—but it is exactly the other way around. That usage is very rare in British English (yet: *better-class*), not so infrequent, however, in American English.[2] Absolute comparatives have puzzled German grammarians,[3] particularly because the German word for comparative is *Steigerungsform* 'augmentative form', which apparently indicates a weakening in meaning when used in the absolute form. Therefore, Engel (1988:563) distinguishes between "zwei Arten der Komparation" and states: "Beide unterscheiden sich grundlegend voneinander" (cf. also Varnhorn 1993:80). As a consolation for the unsatisfied reader he adds: "Mancher hätte es gerne einfacher; 'doch die Verhältnisse', sagt Bert Brecht, 'die sind nicht so'" (Engel 1988:564). Less familiar to readers but otherwise equivalent is the description in Drosdowski and Eisenberg 1995:295: "Bei diesem Gebrauch hat der Komparativ nicht steigernde, sondern abschwächende, mindernde, einschränkende Bedeutung," to which no consolation is added. Is it possible for a construction to have one meaning in most cases and exactly the opposite meaning otherwise?

There is another riddle about the comparative: Boiling water is warmer than hot water; hot water is warmer than warm water. In the following diagram point B is warmer than point A:
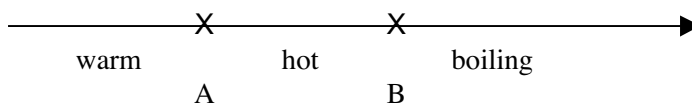

Figure 1. Is hot water warmer than warm water?

How is it possible that B is warmer than A although it is further away from 'warm'?

The equative comparison is not much better: *Peter is as old as Paul* apparently means that Peter's age is more or less the same as Paul's. If that were true, the negative sentence *Peter is not as old as Paul* should mean that Peter is either younger or older—yet it means that he is

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[2] Friederich (1994:163) blames German influence for that difference.

[3] See Weinrich 1987:118ff. for a review of unsuccessful attempts to deal with the problem.

younger. The reinforcement of the sentence, *Peter is definitely as old as Paul*, should more rigorously exclude the case that Peter is older, but it does not. The older Peter is, the easier it is to state this sentence. If he is indeed a hundred years old, another problem comes up: it is hard to tell if he is old or not. Both sentences 1 and 2 below are true although they appear to contradict each other:

(1) Peter is old.
(2) Peter is not old, he is a Methuselah!

There is another problem that seems to be totally unrelated to the riddles described above. Although logic is supposed to be particularly precise, many logical operators are ambiguous. When you say that you are going to travel to Italy or France, you will be understood to mean that you are not planning to travel to both countries. The disjunctive conjunction *or* appears to mean that one and only one of the two alternatives is true, compare the description of German *oder* in Duden GWb: "drückt aus, daß von zwei od[er] mehreren Möglichkeiten jeweils nur eine als Tatsache feststehen kann." The word does not always have that meaning, however. The German criminal code ("Strafgesetzbuch") uses the word with a different meaning (§146): "Mit Freiheitsstrafe nicht unter zwei Jahren wird bestraft, wer … Geld … nachmacht … oder [!] falsches Geld … als echt in Verkehr bringt." Whoever both forges money and distributes it cannot claim in court, Duden GWb in hand, that he has not done "A or B" but rather "A and B". The meaning of *oder* in the criminal code is 'A or B or both', that is, it includes the case 'A and B'. Logicians therefore distinguish an "inclusive" *or* (including 'both') and an "exclusive" reading, which is normal in natural languages: *or* is ambiguous.

The disjunction *or* is not the only ambiguous logical operator. When you say that your sister is possibly at home, you will be understood to mean that she is possibly out. Apparently, *possibly in* means the same as *possibly out*, viewed from a different angle (just as *the glass is half-full/half-empty*). On the other hand, if she is necessarily in, she must be possibly in (otherwise she would not be possibly in, that is, necessarily out—a contradiction). If 'possibly in' meant 'possibly out', there would be another contradiction: necessarily in → possibly in → possibly out → not necessarily in. This problem already puzzled Aristotle; his solution was to assume that 'possible' is ambiguous (*On Interpretation* 23a, 8).

One type of potentiality we cannot affirm of the necessary, the other we can (23a, 15–18). Modal logic needs the inclusive reading to be consistent; in everyday life we use the exclusive reading (excluding the case where *necessarily* applies), which logicians call "contingent."

A third operator with the same ambiguity is the existential quantifier *some*. When I say that some of my friends are teachers, everybody will understand that some are not. The opposition of 'applies to some' and 'does not apply to some' is only verbal (Aristotle, *Prior Analytics* 63b, 28–29). On the other hand, 'some' must be compatible with 'all': If all of my friends are teachers (presupposing that I have friends at all), some of my friends must be teachers (otherwise none of them would be—a contradiction). In this particular case *some of my friends are teachers* is true, and *some of my friends are not teachers* is false, therefore these sentences cannot have the same meaning. This marginal case is ignored in Duden GWb where you can find the following definition of *einige*: "eine unbestimmte kleinere [!] Anzahl, … nicht allzu viele." Duden's definition of *manche* is based on *einige*: "einige, in ihrer Gesamtzahl aber trotzdem [!] ins Gewicht fallende Personen oder Sachen unter anderen [!]." These definitions exclude the applicability of *einige/ manche* in those cases in which *alle* applies, too. The definitions are not erroneous, yet they only cover the normal cases and ignore the rare (if not pathological) borderline case of the application of *some* when *all* applies as well. Just like the other operators, *some* has an inclusive reading in logic and an exclusive reading in everyday life.

The word *rectangle*, too, has an inclusive reading in mathematics and an exclusive reading in everyday life, compare Webster's Third: "a parallelogram all of whose angles are right angles; *esp*.: one with adjacent sides of unequal length." Duden GWb only cites a (somewhat redundant) variant of the mathematical definition: "Viereck mit vier rechtwinkligen Ecken u. vier paarweise gleich langen u. parallelen Seiten," which tacitly includes the square. The *Diccionario Manual* of the Real Academia Española only cites the everyday meaning: "Paralelogramo que tiene los cuatro ángulos rectos y los lados contiguos desiguales." The most explicit definition is 200 years old, namely the one given by Adelung (1793–1801):

> in der Geometrie, eine vierseitige Figur, welche lauter rechte
> Winkel hat. In engerer und gewöhnlicherer Bedeutung, eine
> solche Figur dieser Art, wo zwar alle Winkel rechte Winkel, aber

nur die entgegen stehenden Seiten einander gleich sind, Rectangulum, Oblongum; im Gegensatze eines Quadrates, welches in der erstern weitern Bedeutung auch ein Rechteck seyn würde.

The examples of ambiguity considered so far have a logical/ mathematical reading and an everyday life one. As we will see below, there are similar cases not related to mathematics at all. The German verb *laufen*, for example, does not have a mathematical reading, yet a standard and a colloquial one; of the 16 readings of the word Duden GWb lists the most important ones first:

1a) sich in aufrechter Haltung auf den Füßen in schnellerem Tempo so fortbewegen, daß sich jeweils schrittweise für einen kurzen Augenblick beide Sohlen vom Boden lösen;
1b) (ugs. [= umgangssprachlich]) 'gehen'.

The definition of Grimm DWb is similar:

im eigentlichsten sinne, von einer schnellen gleichmäszigen fortbewegung [...], während *gehen* die gemessenere, *springen* die satzweise ausdrückt, obschon die Grenzen nicht immer scharf gezogen werden, denn das intensivere *laufen* verwandelt sich oft in einen bloszen derberen ausdruck für *gehen* [...]: sogar *langsam laufen* für *langsam gehen*.

The criterion that distinguishes *gehen* and *laufen* is rendered precisely in both definitions: even the fastest *gehen* does not allow that both soles lose contact with the ground. The word *laufen* is applicable to slow walking, but this use is regarded as colloquial.[4]

All these examples (apart from the last) are cross linguistic phenomena and cannot be treated in the same way as the polysemy of *bank* ('financial institution'/'side of river'), which has to be stipulated in the lexicon. The solution to those problems is offered by the theory of Generalized Conversational Implicature, which can also account for the language specific ambiguity of *laufen* and many other phenomena in grammar, word formation and the semantics of all parts of speech. The

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[4] All this applies to the standard language; the dialects differ considerably.

analyses of the phenomena involve the notion of "conversational implicature," which is outlined in the following paragraph.

2. Conversational Implicature.

Conversational implicature is a type of inference that is based on certain implicit assumptions about the context of an utterance. The following two examples should clarify the notion.[5]

Imagine a local community that has become rich and wants to become richer. The community board considers investing money in a conference center. In order to examine whether or not they can afford it they consult an expert who makes the following statement: "The construction of the conference center will cost more than $20 million." The board decides in favor of the project, and ten years later the construction is finished, the community is broke, but the local construction companies have become very rich, including the expert's one. The construction costs ran up to $400 million. How do we now judge the expert's statement? It is true: 400 million is more than 20 million. Even when we find out that the expert was in fact an expert and had known the right figures from the beginning, the statement remains true. How was he able to deceive by making a true statement? The members of the board made the inference from "more than 20" to "not much more than 20," which is not logical. Neither is it stupid; Grice (1975) has shown that it can be rational reasoning to do so (maybe not in a situation that involves that much money). The members of the board did not make the inference from the proposition of the statement alone but (perhaps unwittingly) they relied on two more premises:

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[5] I am trying to be brief (if not in this footnote); Levinson 1983: ch. 3, Horn 1989, and Levinson 2000 are comprehensive treatments of the subject. For my present purpose I prefer a variant of Horn's and Levinson's framework to the rival Relevance Theory (Sperber and Wilson 1987, 1995) because it allows a more straightforward analysis. I am trying to "reduce processing effort with the reader" rather than to take a position against Relevance Theory. In fact, I believe that the two camps are much closer to each other than it appears, in particular, that RT is much more Gricean than its proponents might admit, and that the maxim of Relevance is by far the most important of all (Harnish 1976: 358, fn. 33). My account is not orthodox; ample discussion of the deviations would not serve the purpose of this paper though.

a.   the expert makes his statement as informative as possible, and

b.   the expert is a real expert and can accurately determine the construction costs.

They would not have been deceived if the expert had (truthfully) said that the costs would be higher than $10, premise a being obviously false, or if a garrulous barfly had said that, premise b being false. The fact that the expert made that statement and the two additional premises taken together logically entail that the building costs would not exceed $20 million by more than the margin of accuracy that would be granted to an expert.

   Let us look at another example. Consider the following dialogue:

A: "Do your daughters speak foreign languages?"
B: "Mary speaks Spanish."

One can conclude from B's answer that Mary speaks no foreign languages other than Spanish, and that her sisters do not speak any foreign language at all. Again, this inference is not logical, as the sentence is true (if not informative enough) even if each of B's five daughters speaks three languages. B could have tried to belittle the achievements of the girls; or he could just as well be a linguist who has just published a book on the plural (stressing the fact that there are apples in the salad even when there are exactly 1.0 apples in the salad) and who believes that he was only supposed to give the information necessary to determine the truth value of the question's proposition. The fellow could even be worse than that. He could have neglected the education of his daughters to the extent that they do not speak any foreign language at all and, in order to hush up this embarrassing fact, makes a true statement about his neighbor who happens to be called Mary. B's answer does not linguistically express that Mary is his daughter. This assumption is inferred from the (possibly false) premise that B's statement is a proper answer to the question. Nor is it expressed that Spanish is a foreign language to Mary; she could be a child he fathered and left in Mexico on his trip five years ago.

   When we interpret B's statement we infer that only Mary speaks a foreign language and that Mary only speaks Spanish as a foreign language, under the assumption that B delivered all of the relevant information; we infer that Mary is a daughter and that Spanish is a

foreign language to her, under the assumption that B's statement is an appropriate answer to the question, in other words, that B's statement is relevant (an answer being the only relevant statement in the context of that question, normally at least). A pragmatic analysis of these inferences (or conversational implicatures) might consist of making the additional premises explicit (see below).

H. P. Grice[6] showed in his revolutionary paper of 1975 that these premises can be largely reduced to the assumption that our communicative partners are cooperative, that is, that they obey certain "maxims of conversation" (Levinson 1983:101ff.; cf. also 2000:14):

The cooperative principle
Make your contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

The maxim of Quality
Try to make your contribution one that is true, specifically:
i. do not say what you believe to be false
ii. do not say that for which you lack adequate evidence.

The maxim of Quantity
i. Make your contribution as informative as is required for the current purpose of the exchange.
ii. Do not make your contribution more informative than is required.

The maxim of Relevance
Make your contributions relevant.

The maxim of Manner
Be perspicuous, and specifically:
i. avoid obscurity,
ii. avoid ambiguity,
iii. be brief,
iv. be orderly.

These maxims should not be misunderstood as moral guidelines that we follow when we talk. Our behavior (that appears to follow these

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[6] See Horn 1990 for predecessors.

guidelines) is the result of our attempts to optimize the ways to get our messages across when we acquire our communicative competence. This is a largely unconscious process, therefore it is rather difficult to cheat by implicatures. Since we are social animals, our behavior (linguistic or not) is optimal for our own purposes when it is cooperative. We do not expect our partners to behave in a moral way (that would be hard to explain), rather we expect our partners to behave in a normal way (which is a tautology). When we are looking at something (at a diagram with an optical illusion or any other picture) or when we listen to people, we just assume that things are normal, unless we have evidence to the contrary. Trivial as this observation may be, it was difficult to discover that this principle essentially governs our interpretation of utterances.

Implicatures can be distinguished from entailments by their "cancelability."[7] You can extend an utterance with the negation of one of its implicatures without being inconsistent, for example: "The construction will cost more than $20 million, even a lot more" or "Mary speaks Spanish. [Pause] And French; and Lucy speaks Russian." If you add the negation of an entailment, you run into a contradiction: "Mary speaks Spanish, but she does not speak a Romance language."

A pragmatic analysis of conversational implicatures might consist of making the additional contextual premises explicit, which reduces implicature to entailment and shows how implicature is in fact rational reasoning (see figure 2).[8]

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[7] Grice (1978) and Levinson (1983:118ff.) list a number of other tests; however, the others are either unreliable or can be reduced to cancelability. Entailment (and only entailment) allows *modus tollens*; presupposition (and only presupposition) survives negation.

[8] Grice's (1975:30ff.) calculus (cf. also Levinson 1983:113ff.) is unnecessarily complicated, involving the speaker's intention and mutual knowledge of speaker and hearer, which are pertinent to communication in general and not particularly to implicature. Moreover, this "pattern for working out an implicature" (Levinson; 1983:113ff.) would work equally well for presuppositions and entailments.

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┌─────────────────────────────────────────┐
│  ┌──────────────────────────────┐        │                      ┌──────────┐
│  │ 1.  S utters the sentence  X │───── no entailment ──────────│    Y     │
│  │                              │                               │          │
│  │                              │──── conversational ──────────│          │
│  │                              │        implicature            │          │
│  │                              │                               │          │
│  └──────────────────────────────┘───── entailment ────────────│          │
│                                                                 └──────────┘
│    2.   Additional premise:              │
│         S is (being) cooperative.        │
│                                          │
│                                          │
│    3.   Particular context condition:    │
│         If not Y, S is not cooperative.  │
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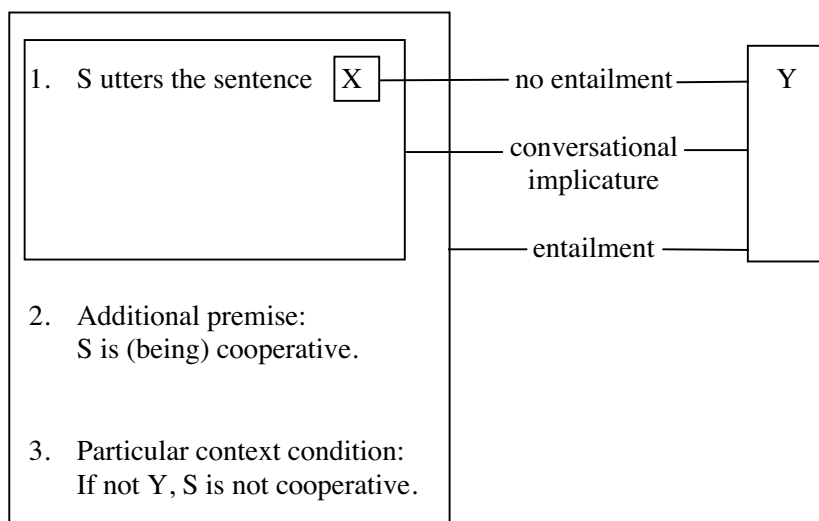
Figure 2. Implicature and entailment.

The uttered sentence does not entail Y, the utterance implicates but does not entail Y; only if taken together with premises 2 and 3 does entailment hold. The implicature is cancelable because those additional premises can be false. The pragmatic analysis of the implicature requires an elaboration of premise 3.[9]

The analyses of section 3 below only involve a certain subtype of conversational implicature, namely "scalar implicatures," which rely on the maxim of Quantity (i) above.[10] These inferences are made by the hearer on the basis of the assumption that the speaker has made his/her

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[9] This elaboration often involves commonsense judgments of the hearers based on their entire experience of life: different hearers, different implicatures. An explicit calculation of interpretation on the basis of discourse and world knowledge (as Blutner [1998] attempts) involves encoding common sense, a task that possibly not even the most ambitious AI theorists would dare to undertake.

[10] See Horn 1972, and in particular Hirschberg 1991. Similar effects can be observed from a wide range of implicatures based on the maxim of Relevance (cf. Horn 1984a:32), which are not discussed in this article.

contribution as informative or as strong as required, that is, that s/he has provided the hearer with all the relevant information. In particular, when a speaker has the choice between a certain word A (e.g., *rectangle*) and a stronger alternative, a hyponym B (e.g., *square*), it would be more informative to use the hyponym B. The choice of the weaker alternant A is therefore significant: it implicates that the stronger hyponym B is not applicable for some reason, for example, because it could not be applied truthfully. Therefore the weaker alternant A is normally applied only if the stronger B does not hold and it develops a "pragmatic meaning" or usage "A but not B" (e.g., "rectangle but not square, unequal rectangle"), which is hyponymous to its "semantic meaning"; therefore the word appears to be a hyponym of itself or an "autohyponym" (Horn 1984b:142, 1984c:110):[11]

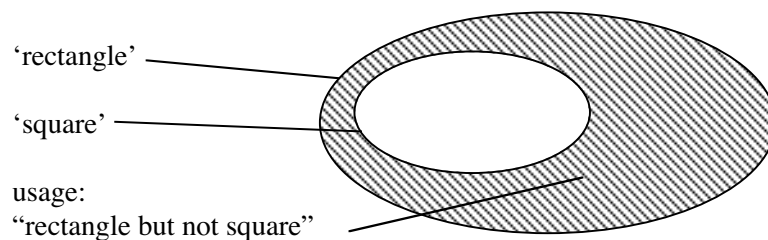'rectangle'

'square'

usage:
"rectangle but not square"

Figure 3. Autohyponymy of 'rectangle'.

To normal speakers (and lexicographers[12]) the more common narrow reading, hatched in the diagram above, appears to be the meaning of the word; usages of the wide reading can therefore have mysterious effects.

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[11] Single quotation marks indicate (semantic) meanings, double quotation marks (pragmatic) usages based on implicatures.

[12] See Paul (1895:147): "[In der Lexikographie] ist es notwendig, das Occasionelle in der Bedeutung, welches den Belegstellen anhaftet, loszulösen und das wirklich Usuelle festzustellen."

3. Analyses.

In the following section I show that autohyponymy is pervasive in lexicon and grammar. It can be found in all parts of speech and in word formation. During the descriptions of various cases the conditions under which autohyponymy can appear will be made more precise.

3.1. Hyponyms and Autohyponyms in Lexical Semantics.

Not every hyponym triggers autohyponymy. A statement like: "This is a mammal" does not normally trigger the implicature "not a dog." The major reason for this is the fact that *mammal* has several equally salient hyponyms *cow*, *cat,* etc.:[13]
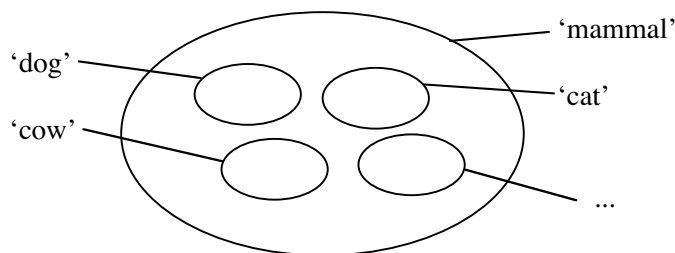

Figure 4. Equal-ranking hyponyms block autohyponymy.

Horn's example, the pair *rectangle/square,* is a particularly good one because *square* is the only hyponym of *rectangle*. In certain unusual situations the use of *mammal* can in fact trigger the implicature "not a dog," for instance in the following exam dialogue:

A: "Is this a dog?"
B: "It's a mammal."

These situations are too rare to let the word develop autohyponymy; only those implicatures that do not require particular situations ("generalized

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[13] This singularity condition has been observed by Kempson (1980:15). However, Kempson attempts a semantic account for those phenomena, which Horn (1984b:144ff.) and Rohdenburg (1985:132ff.) have shown to be pragmatic.

implicatures") are frequent enough to have that effect.[14] On the other hand, the condition that the words must belong to the basic vocabulary or to a basic level category in the sense of Rosch 1977 (see also Horn 1984a:34ff.) seems to be too strong. The implicature of German *Rechteck* 'rectangle' is fairly strong although the word is not particularly frequent (the most basic term for both is *Viereck* 'quadrangle'), whereas *Finger* does not trigger the implicature "not a thumb" in German (unlike the English equivalents, Horn 1984a:34). The sentence *Ich habe mir in den Finger geschnitten* is a very natural way of saying 'I cut my thumb', because normally it is rather irrelevant which finger has been cut. What the theory cannot explain, however, is why there is a difference between English and German in this case.[15]

Unlike the case of *mammal/dog*, the existence of other hyponyms does not prevent autohyponymy if the words are ordered on a scale (see Horn 1989: chapter 4), that is, if the ovals of the diagram are concentric:
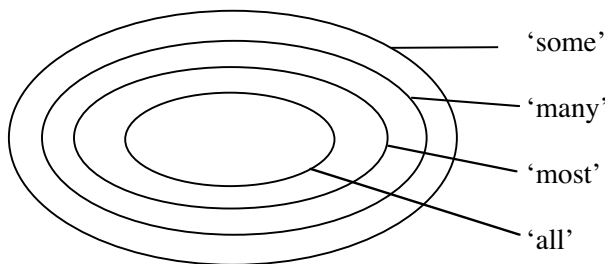

Figure 5. Scalar hyponyms trigger autohyponymy.

When I say that some of my friends are teachers, the choice of the weak quantifier *some* triggers the implicature "Not all of my friends are teachers," which is equivalent to 'some of my friends are not teachers' (Horn 1972:74). If in fact all of my friends were teachers, my statement would not have been as strong as required.

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[14] Therefore Levinson (2000:16) is right to maintain the distinction of generalized and particularized conversational implicatures (the latter triggered only in unusual situations), even if the two types overlap.

[15] I doubt that the frequency of the individual words is responsible in this case. The constellation of the words is simply not a sufficient condition, but once the speakers begin to avoid one term in favor of the other, for whatever reason, the usage changes and stabilizes in a new way.

The analysis can be transferred to the "semantic offspring" of the quantifiers: *sometimes* means 'at some times' and *always* 'at all times'; therefore *sometimes* triggers the implicature "sometimes not = not always." The modal operator *possibly* means 'true in at least one possible world', *necessarily* means 'true in all possible worlds' (Horn 1972:117, 133); *A or B* means 'at least one of the connected clauses is true', *A and B* means 'all of the connected clauses are true'.

The set of evaluative adjectives has a similar structure:
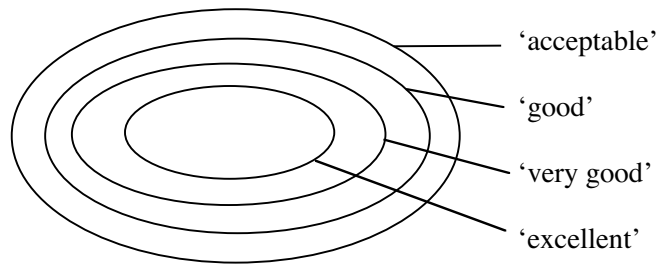
Figure 6. Scalar adjectives.

When you say "Peter's thesis is acceptable" it will be understood that it is not good (which entails 'not very good/not excellent'); however, any good thesis is acceptable—otherwise it would be "not acceptable." If you say "acceptable" and could as well have said "good," you would not have made your statement as strong as required, in most situations at least.

Except for the strongest alternative each of the words becomes autohyponymous (Horn 1984a:14):

'acceptable'   'good'

usage:
"acceptable but not good"

'good'   'very good'

usage:
"good but not very good"

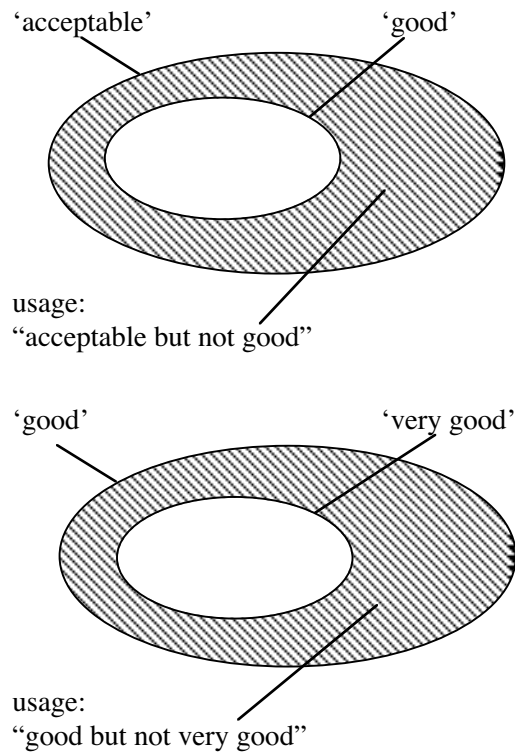Figure 7. Autohyponymy of scalar adjectives.

The similarity of the sets *some/all* and *acceptable/excellent* shows that the relation of logical duality between *some/all, possible/necessary, or/and* (stressed in Becker 1997) is rather unimportant. What counts, however, is that the words involved are closely related to each other. The words must form a contrast set of equally salient and therefore alternative wordings, a lexical paradigm.[16] Duality pairs satisfy that condition but other pairs of words do as well.

In order to form a lexical constellation that triggers autohyponymy, the words must be ordered by strength on a scale, they must be salient (equally and to a high degree), and they must be hyponymous; the

[16] That condition is hard to define (Gazdar 1979:58); see also footnote 19 below.

designations of military ranks, for example, do not trigger autohyponymy because they are heteronymous:[17]

'captain'   'major'   'colonel'

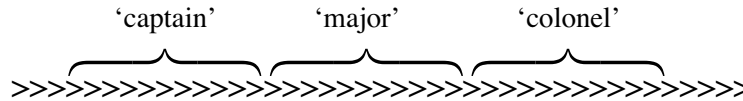>>

Figure 8. Non-hyponymous ranks (heteronyms).

The extensions of ranks are disjoint; when you are promoted to major, you are no longer a captain; whereas when you work on a good article and it turns into a very good one, it still remains good. Scalar hyponyms, however, appear to be disjoint like ranks when they develop autohyponymy and heteronymous usages:

meanings: 'good'

                                   'very good'

                                              'excellent'

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usages: "good"   "very good"   "excellent"
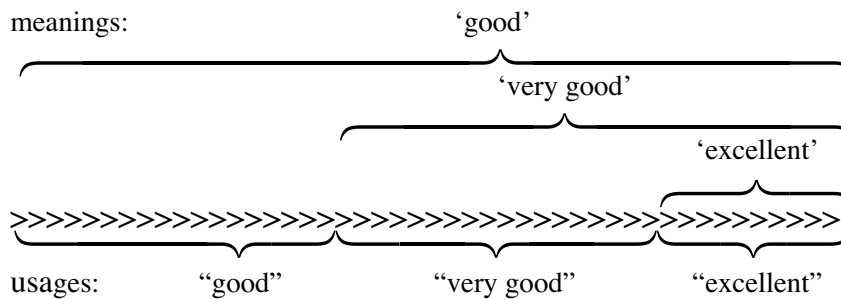
Figure 9. Hyponymous meanings, heteronymous usages.

The German grading system used in schools and universities is a lexical field of ranked terms (above the scale in figure 10) that developed from usages on the basis of everyday words with different meanings (below the scale):

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[17] Hirschberg (1991:98) does not exclude heteronyms; her notion of scalar implicature is wider and includes also particularized implicatures based on the maxim of Relevance as long as they involve any sort of scale.

'sehr gut'   'gut'   'befriedigend'   'ausreichend'   'mangelhaft'   'ungenügend'

'sehr gut'   'mangelhaft'   'ungenügend'

'gut'   'befriedigend'   'ausreichend'

Figure 10. German grade terms: lexicalized usages.
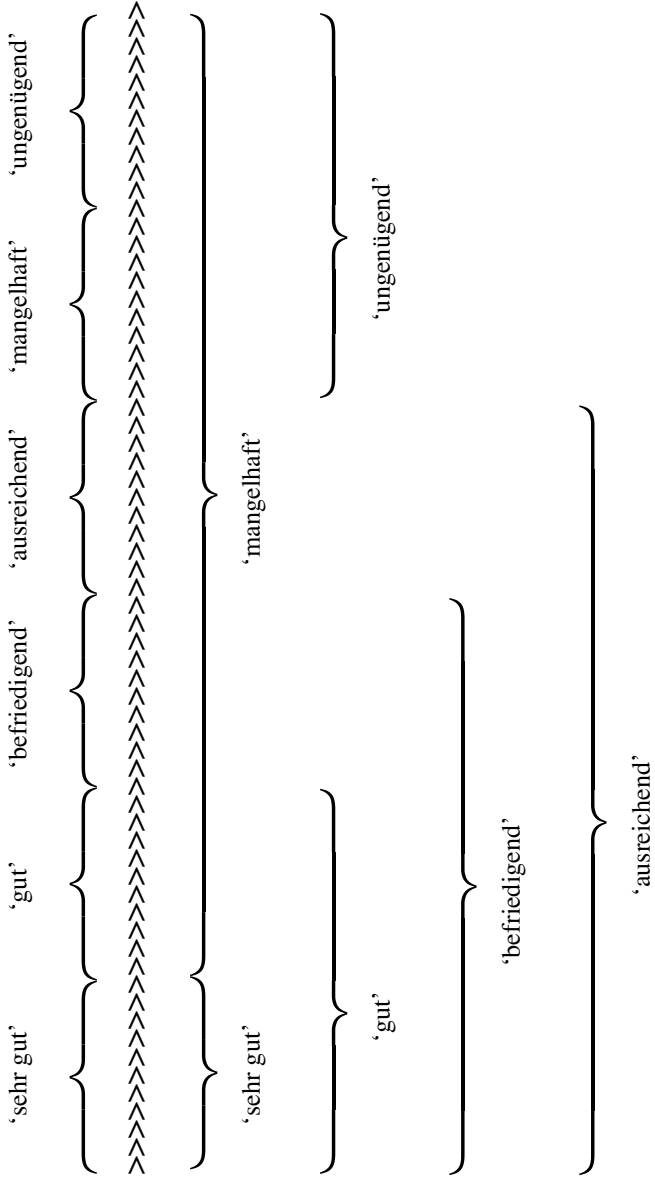
The best four grades are ordered as the scalar hyponyms discussed above: *sehr gut* 'very good', *gut* 'good', *befriedigend* 'satisfactory', *ausreichend* 'sufficient'; the grade *mangelhaft* 'having imperfections' is a euphemism, since even work graded *gut* has imperfections that do not allow the grade *sehr gut*. The literal meaning of the colloquial word would include grades *gut* to *ungenügend* (however, it does show a tendency to narrow down to 'having considerable imperfections'). The grade *ungenügend* 'insufficient' is a euphemism as well, since normally a grade *mangelhaft* is insufficient, too (you would fail an exam with a grade *mangelhaft*).

The fact that hot water can get warmer although it apparently moves away from "warm" on the scale is only mysterious when the pragmatic usages are regarded (Horn 1984a:14):

meanings: 'warm'

                                                        'hot'

                                                                    'boiling'

>>>>>>>>>>>>>>>>>**A**>>>>>>>>>>>>>>**B**>>>>>>>>>>>>>>>>

usages: "warm"   "hot"   "boiling"

Figure 11. Hot is warmer than warm.

Point B is further away from the usage "warm (but not hot)", but it is higher on the scale of the meaning 'warm' (see 3.3 below).[18]

Normally the existence of several hyponyms to a superordinate term blocks autohyponymy. Under certain conditions this is not the case, however. The German verb *laufen* 'to move on foot' has developed the usage "to run" triggered by the hyponym *gehen* 'to walk slowly':

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[18] An anonymous reader observed that "for some children (but as far as I know no adults) *warmer* can be used for 'closer to (exactly) warm' rather than 'higher up on the <hot, warm> scale'"; my daughter Luisa confirmed that when she was two. That suggests that pragmatic usages are primary in language acquisition and, possibly, in language history.
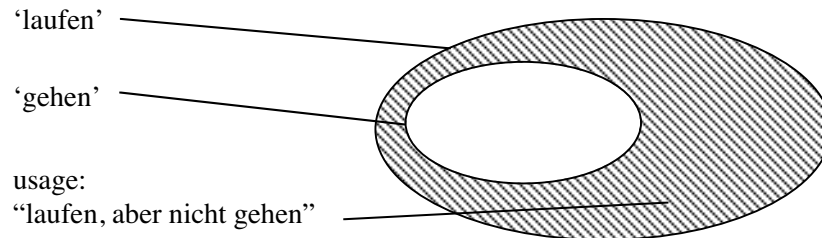
'laufen'

'gehen'

usage:
"laufen, aber nicht gehen"

Figure 12. Autohyponymy of German *laufen*.

There are several other hyponyms of *laufen* (*schreiten*, *stolzieren*, etc.) but only *gehen* is very common (even more common than *laufen*) and therefore a salient alternative wording.[19] The use of *laufen* for 'to walk slowly' is possible, but inaccurate and therefore "umgangssprachlich" or 'colloquial'.

We have seen that nouns, adjectives, and verbs can develop autohyponymy. Examples for conjunctions are harder to find, yet the relation of *if* and *since* or *because* (German *wenn/weil*) seems to be a relevant case (*if*-clauses with indicative mood). The sentence *If he is ill, he is not in his office* states a conditional relation between the two parts. The sentence *Because he is ill, he is not in his office* states the same conditional relation and moreover the factivity of the two parts: He is ill, he is not in his office, and these facts are in a conditional relation. If this analysis is true[20], the two connectives are hyponymous and should trigger autohyponymy:

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[19] The condition "each item must be lexicalized to the same degree" (Atlas and Levinson 1981:44) is too weak; *schreiten* is a simplex verb as *gehen* is but it is considerably less salient. On the other hand, Matsumoto's (1995:25) Conversational Condition implies that scalar implicatures are the weakest of all and that any "other factor" that might explain the choice of the weaker word would cancel the implicature—which seems to be too strong.

[20] See Frege 1892:63; also Drosdowski and Eisenberg 1995:771. The relation between *if* and *because* is anything but trivial, see Sæbø 1991:626. In Frege's analysis both the conditional relation and the related propositions are asserted; according to Dancygier and Sweetser (2000:121) the propositions are presupposed; and in the analysis of König (1991:196, also König and Siemund 2000:352) the relation is presupposed. These differences are not pertinent to the present argument though.

'if'
(conditional relation)

'because'
(conditional relation and factivity)

usage:
"conditional relation and non-factivity"
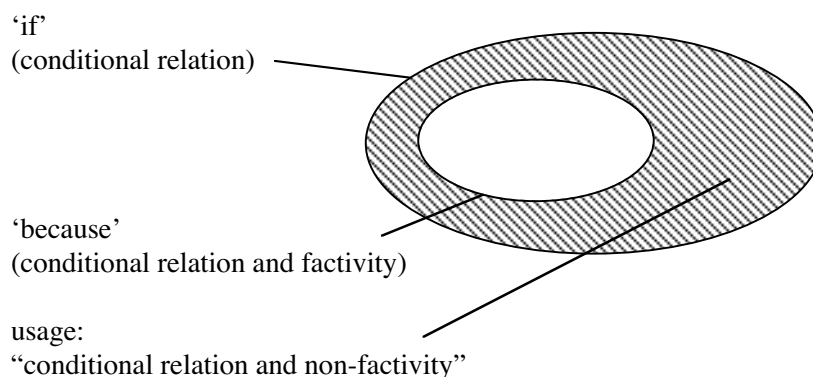
Figure 13. Autohyponymy of *if*.

The ambiguity between a hypothetic (non-factive) and a non-hypothetic reading of German *wenn* obviously puzzled Hartung (1964:352):

> Hypothetische *wenn*-Sätze können in entsprechende *weil*-Sätze umgeformt werden. Dabei geht der hypothetische Charakter der Aussage verloren. [...] Die *wenn*-Sätze beschränken sich jedoch nicht auf hypothetische Sätze.

A similar account is given in Dancygier and Sweetser 2000:122, 125:

> The *if*-clause cannot express an assertion because the conjunction sets up a hypothetical mental space, different [!] from the base space where assertions could be made.

> The non-positive stance of *if* need not commit the speaker to a negative or skeptical stance, but does indicate [!] that she thereby distances herself from full commitment to the contents of the *if*-clause.

That indication can only be an implicature "$(p \rightarrow q) \Rightarrow_{CI} \neg p$" because it is cancelable: "such conditionals need not necessarily bring up another alternative space" (Dancygier and Sweetser 2000:126). Gohl (2001) shows that non-hypothetical *wenn*-constructions (whose antecedent is given in the context of utterance) still indicate non-factuality (2001:29ff.):

> So wird zum Beispiel *wenn* dann in Begründungen eingesetzt, wenn der Sprecher/die Sprecherin auf hörerbasiertes Wissen zurückgreift und/oder sich von schon Gesagtem distanziert und/oder eigene Einschätzungen zum Ausdruck bringt. *Weil* wird hingegen in der Regel dann verwendet, wenn SprecherInnen in ihren Begründungen auf eigenes und/oder neu thematisiertes Wissen zurückgreifen.

Gohl rejects the assumption of polysemy ("nicht besonders plausibel," 2001:28) and stresses that context is relevant for its variability ("die Konstruktionen und die weitere kontextuelle Umgebung, in denen es verwendet wird"). She obviously has the syntagmatic dimension in mind and seems to neglect the paradigmatic dimension, although she explicitly contrasts *wenn* with *weil* in the quote above.

Freundlich (1974:123) observed that the conditional relation is "more hypothetical" when it is expressed by the conjunction *wenn* (due to its syntactic parallelism it is the only alternative to interact with *weil*):

> So sind «wenn—dann», «wenn—so», «aus … folgt», «… schließt ein» hypothetisch (wobei das hypothetische Moment bei «wenn—dann» und «wenn—so» noch etwas nachdrücklicher hervortreten mag als bei den übrigen Wortpaaren)

The "hypothetical momentum" of English *if* might be even stronger since there is a temporal conjunction *when*; German *wenn* more or less covers the range of both. *Weil* is not precisely hyponymous to *wenn*, but the overlap is sufficient to trigger the implicature.

Autohyponymy can be found in various parts of speech: nouns, adjectives, verbs and particles as conjunctions. To complete the list one could add the category article: the use of the indefinite article implicates the non-applicability of the definite article: "I got this book from a library" → "not from the library (e.g., the department library)", see Levinson (2000:91ff.) The sentence *X is at the station* entails *X is near the station*; the use of the weaker "X is near the station" implicates the negation of the stronger: "X is not at the station" (Levinson 2000:96).[21]

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[21] See Levinson 2000: chapter 4 for pronouns and anaphora; the case of numerals (at least n/exactly n) has not been settled (Levinson 2000:87ff.)

3.2. Autohyponymy in Word Formation.

The phenomenon of "blocking" is widely regarded as a morphological phenomenon: the formation *stealer* is blocked due to the existence of the word *thief* (cf. Aronoff 1976:43). That the reason for this may be pragmatic can be gathered from the fact that such formations are not blocked entirely (*stealer* does occur, not only in baseball, cf. OED) and that the older simplex forms or unproductive formations tend to be more specific and the more recent formations tend to take on the more general readings (*inhuman/unhuman/non-human*, see Horn 1989:552, fn. 5).

Nor is blocking restricted to morphology. The phrase *next Friday* is lexically blocked when it is supposed to refer to 'tomorrow', that is, when it is used on Thursday (Levinson 1983:75). Things are even more complicated in German, for two reasons: First, there is the word *übermorgen* 'the day after tomorrow', which noticeably blocks *nächsten Freitag* 'next Friday' on Wednesday. The prefix *über-* is recursive, so there is some effect even on Tuesday. Secondly, there is the phrase *diesen Freitag* 'Friday of this week'; nevertheless, *nächsten Freitag* can be used until Wednesday, and sometimes it is even used on Thursday. To make things worse, the Germans invented the phrase *am kommenden Freitag* ("on the coming Friday"), which is perfectly clear (on any day but Thursday, and although there are always lots of Fridays yet to come, the English phrase *this* (≠ *that/others*) *coming Friday* is more precise). However, the fact that *nächsten Freitag* is only the third-best choice to refer to the Friday of the same week has an effect on its usage: it is frequently used with the meaning "the next Friday but one" but it still can refer to tomorrow; according to its meaning 'nearest' it should be able to refer to yesterday but it is never used that way. Therefore it takes some time to make an appointment in German; a solution to the problem is not in sight.

A prototypical example of autohyponymy in word formation is the German feminine suffix *-in* that forms designations for female persons from masculine personal nouns (e.g., *Amerikanerin* from *Amerikaner*).[22] Unlike its English "equivalents" it is very productive; when it refers to a single person it is nearly obligatory: ??*Sie ist Amerikaner*. When the

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[22] See Doleschal 1992 for details. Horn's (1984a:33) analysis of *bitch/dog* and *lion/lioness* has escaped the attention of those engaged in the debates over the suffix *-in*.

masculine noun is used in the plural to refer to a group of people (*5 Amerikaner*), it can refer to a group of both sexes, however, it strongly suggests that the group is purely male. Particularly with designations of professions in which women are underrepresented *(5 Professoren)*, the problem is an important political issue in Germany.

The fact that *5 Amerikaner* suggests that the group is purely male has led to the widely held and strongly propagated opinion that the masculine noun means 'male American', which does not correspond to language use, since even women frequently refer to their own profession with the masculine noun (Martin 1997:586ff.). The apparent ambiguity of the masculine noun is autohyponymy triggered by the female derivation:

Amerikaner
'American'

Amerikanerin
'female American'

usage:
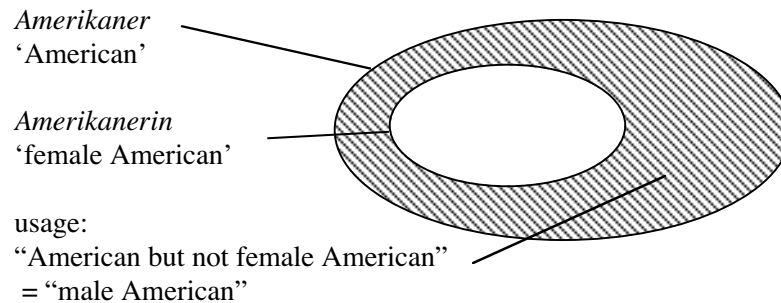"American but not female American"
 = "male American"

Figure 14. Autohyponymy of underived personal nouns in German.

The noun shows all the properties predicted by the theory of Generalized Conversational Implicature: the implicated part "male" can easily be canceled: *Es waren fünf Amerikaner im Flugzeug, darunter zwei Frauen* 'There were five Americans on the plane, among them two women'. The German sentence is no less natural than its English gloss. It is definitely not contradictory, unlike the sentence "There were five men on the plane, among them two women." Secondly, the use of the suffix is all the more necessary the more relevant the sex of the persons referred to is. When the noun refers to a single person, the suffix is nearly obligatory. A sentence such as: *Heute Abend gehe ich mit einem Kollegen zum Essen* 'Tonight I am having dinner with a colleague' is a blatant lie when said to a wife and when the colleague is a woman.

3.3. Autohyponymy in Grammar: Comparative Constructions.
The theory of Generalized Conversational Implicature permits a uniform description of both relative and absolute comparative. The absolute comparative *ein älterer Mann* is elliptic; just as in many other elliptic constructions a prototypical value is substituted if the value cannot be inferred from the context.[23] The value to be inserted in this case is the average; this value is still context dependent: *ein älterer Mann* in a college seminar is younger than one in a park;[24] *eine größere Maus* 'a larger mouse' is smaller than a "smaller elephant." The positive forms *alt* 'old' and *groß* 'large' are pragmatically determined, too. A large elephant can be rather small when only a certain set of dwarves is considered. The following two dialogues cannot be interpreted such that one person makes a true statement and the other a false one:[25]

A: "Oh, you have a big ice cream!"
B: "No, it's rather small."

A: "*Titanic* is a cool movie."
B: "Oh, no!"

Both interlocutors express their different standards and both are right. We would only regard one of the statements as false if we find the respective standard absurd. B contradicts A, but in many cases like those there is no authoritative norm that could tell us who utters the true sentence and who the false one.

The applicability of gradable adjectives is entirely governed by relevance. An expression like *der alte Mann* must refer to a man who is old enough that his age can help in identifying the referent. In predicative use, *dieser Mann ist alt* 'this man is old' will appear to be false when the man referred to is not old enough to be distinguished by his age, that is,

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[23] The sentence *Peter is reading* will normally be interpreted as "reading a book or newspaper", but not the label of a beer bottle; the sentence *Peter has eaten* will be regarded false if he has just eaten a piece of chocolate.

[24] Therefore it cannot be "eine durch Normen verfestigte Erwartung" (Weinrich 1987:121), the context parameter does not permit any sort of "solidification." There is not a norm for any given context but there can be a commonsense judgment of the speaker as to what might be the average.

[25] This is true for "Bewertungsadjektive" (Bierwisch 1987:108), that is, evaluative adjectives, and for evaluative readings of gradable adjectives.

when mentioning that his age is not relevant.[26] One could go as far as relating the relative positive form *one week old* to the absolute positive form: any one that has age is old;[27] to say *she is old* of a one-week-old baby would be misleading instead of being false (less misleading in a situation where the requirement holds that healthy, one-week-old newborn babies must leave the hospital). In any case, 'old' means considerably older than the average (in our one-week-maximum-stay situation an "older" baby would be above 3 or 4 days). The extensions of *alt* and *älter* (in normal and farfetched situations) are such as in the following diagram:
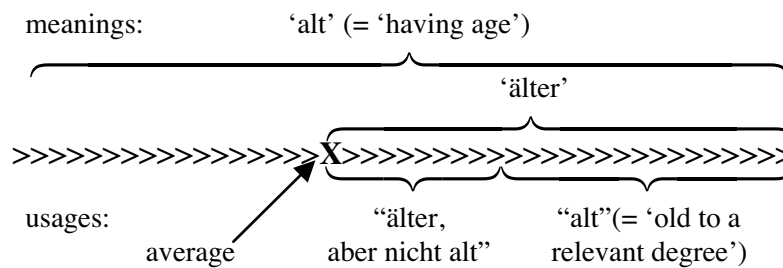
meanings:　　　　　'alt' (= 'having age')

'älter'

>>>>>>>>>>>>>>>>>>X>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

usages:　　　　　　　"älter,　　　　"alt"(= 'old to a
　　　　　average　　aber nicht alt"　relevant degree')

Figure 15. An old man is older than an "older" man.

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[26] The average is not the proper basis of comparison for the positive (as claimed by Bierwisch [1987:101], Klein [1991:670] and many others) but for the absolute comparative: a man who is slightly older than the average is "ein älterer Mann" but not "ein alter Mann". Therefore Bierwisch's analysis of the absolute comparative remains inconclusive (1987:179ff.). Moreover, it is not very convincing that an important grammatical distinction as positive/comparative should not make a semantic difference.

[27] Sadock (1981:260ff.) makes such a "radical pragmatic" claim, among other daring claims. His claim is supported by the interpretation of "this man has a certain age" (the argument being bound explicitly by an existential quantifier) as "noticeably above the average" with the upper bound caused by autohyponymy "but not old". Note that the reference to the norm (comparative: average; positive: considerable degree) is only there when the argument of the degree is not filled. A problem of this approach is the negative statement *this man is not old*; the negation would deny its pragmatic usage but not its semantics (which, on the other hand, would be pointless in almost all situations).

The absolute comparative develops the usage "older but not old," which is a relatively low degree:[28]
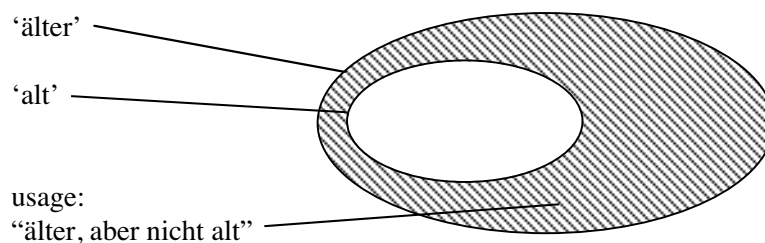
'älter'

'alt'

usage:
"älter, aber nicht alt"

Figure 16. Autohyponymy of the absolute comparative form.

The riddle of the equative comparison has found a similar solution. The construction *so alt wie* 'as old as' has the meaning 'at least as old as' which is compatible with 'older' (Horn 1989:386ff.); the negation, *nicht so alt wie* 'not as old as' means 'younger':

'as old as'

'not as old as'   'older'

>>
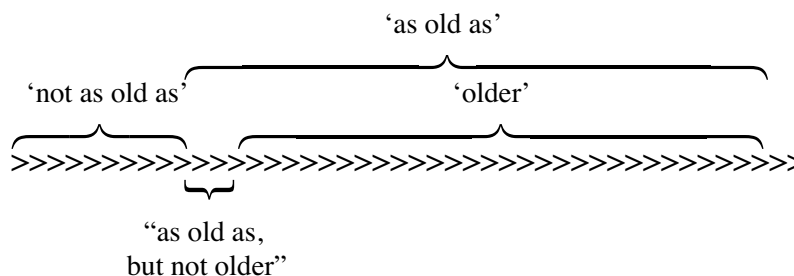
"as old as,
but not older"

Figure 17. Autohyponymy of the equative comparison.

The expression *as old as* develops the usage "as old as but not older". The reinforced statement *definitely as old as* is only mysterious when it is related to that pragmatic usage; when it is related to the proper meaning 'at least as old as' it becomes plausible that it can more easily be applied to a value when it is farther away from the negation 'not as old as'.

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[28] This analysis does not depend on the rather shaky analysis of "old" = 'old to a relevant degree'.

4. Summary: Conditions for Autohyponymy.

Under certain circumstances, which are outlined below, a word A with a hyponym B can acquire a second, pragmatic meaning or usage "A that is not B" (for example, "rectangle that is not a square").

'A'
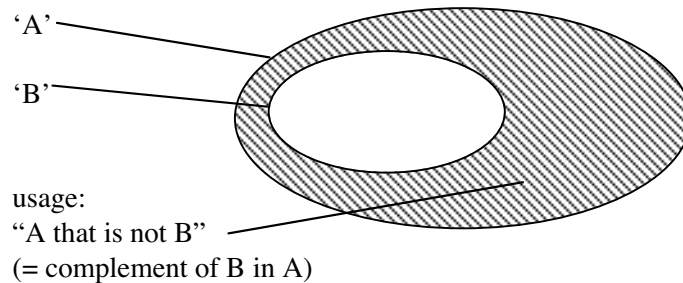
'B'

usage:
"A that is not B"
(= complement of B in A)

Figure 18. Autohyponymy.

This second meaning is the complement of B in A, the hatched part in the diagram above. This second meaning is based on a conversational implicature: If the more informative term B had been applicable, the cooperative speaker would have used it; assuming that the speaker is cooperative, the hearer infers that B is not applicable and restricts the extension of A to "A minus B". The second meaning is again a hyponym of A; therefore A becomes hyponymous to itself or "autohyponymous." Since the second meaning is based on an implicature and therefore pragmatic it should be called "usage" rather than "meaning." The restricted usage is normal and the use of A where B could apply is less normal; therefore the "A minus B" reading appears to be the meaning to speakers and lexicographers. The use of A for B is not normal, but it can occur in certain constructions or in certain less frequent cases; then it might have some strange effect. The linguistic description of these words can achieve more clarity and avoid the assumption of unnecessary ambiguities if this interaction of semantics and pragmatics is regarded. Grice (1978:47ff.) warned that "senses are not to be multiplied beyond necessity" (which he dubbed "Modified Occam's Razor") and proposed a description where such words have "a less restrictive rather than a more

restrictive meaning" whenever the more restrictive interpretations can be achieved by a "superimposed implicature."[29]

What the Gricean theory does not achieve (which is not infrequent with context-dependent matters) is the power to predict exactly when autohyponymy is triggered by a hyponym.[30] The most important condition is that A and B must form a paradigmatic contrast set of alternative wordings; B must be at least as salient as A, and B must either be the only salient hyponym of A or all other hyponyms must be stronger than B such that their exclusion is entailed by the exclusion "A that is not B". When these conditions are met, the implicature involved is inferred normally, that is, the implicature is a "generalized conversational implicature."

REFERENCES

Adelung, Johann Christoph. 1793–1801. Grammatisch-kritisches Wörterbuch der Hochdeutschen Mundart mit beständiger Vergleichung der übrigen Mundarten, besonders aber der Oberdeutschen. 4 vols. 2nd rev. edn. Leipzig: Breitkopf und Härtel. (Rpt. 1990 with an introduction and bibliography by Helmut Henne. Hildesheim: Olms.)

Aronoff, Mark. 1976. Word formation in generative grammar. Cambridge, MA: MIT Press.

Atlas, Jay David, and Stephen Levinson. 1981. *It*-clefts, informativeness, and logical form. In Cole (ed.), 1–61.

Becker, Thomas. 1997. Was wir von Aristoteles über die Bedeutung deutscher Wörter lernen können: über konversationelle Implikaturen und Wortsemantik. Pragmatik: Implikaturen und Sprechakte, ed. by Eckard Rolf, 51–71. (Linguistische Berichte, Sonderheft 8.) Opladen: Westdeutscher Verlag.

Bierwisch, Manfred. 1987. Semantik der Graduierung. Grammatische und konzeptuelle Aspekte von Dimensionsadjektiven, ed. by Manfred Bierwisch and Ewald Lang, 91–286. Berlin: Akademie Verlag.

Blutner, Reinhard. 1998. Lexical pragmatics. Journal of Semantics 15.115–162.

Cole, Peter (ed.). 1981. Radical pragmatics. New York: Academic Press.

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[29] Posner (1979:361, 369ff.) calls this position "Bedeutungsminimalismus" 'semantic minimalism'.

[30] The predictability is even poorer when implicatures based on the maxim of Relevance are involved (R-implicatures in the sense of Horn 1989:194ff.).

Couper-Kuhlen, Elizabeth, and Bernd Kortmann (eds.). 2000.
  Cause—condition—concession—contrast: Cognitive and discourse
  perspectives. Berlin: Mouton de Gruyter.

Dancygier, Barbara, and Eve Sweetser. 2000. Constructions with *if*, *since*, and
  because: Causality, epistemic stance, and clause order. In Couper-Kuhlen and
  Kortmann (eds.), 111–142.

Diccionario manual e ilustrado de la lengua española. 1950. 2nd edn. Madrid:
  Real Academia Española.

Doleschal, Ursula. 1992. Movierung im Deutschen: eine Darstellung der
  Bildung und Verwendung weiblicher Personenbezeichnungen.
  Unterschleißheim: LINCOM EUROPA.

Drosdowski, Günther, and Peter Eisenberg. 1995. Duden Grammatik der
  deutschen Gegenwartssprache. (Duden, 4.) 5th edn. Mannheim: Dudenverlag.

Duden GWb: Duden. Das große Wörterbuch der deutschen Sprache. 1993–1995.
  8 vols. 2nd edn. by Dudenredaktion under the supervision of Günther
  Drosdowski. Mannheim: Dudenverlag.

Engel, Ulrich. 1988. Deutsche Grammatik. Heidelberg: Julius Groos.

Frege, Gottlob. 1892. Über Sinn und Bedeutung. Zeitschrift für Philosophie und
  philosophische Kritik, n.F. 100.25–50. (Rpt. 1975 in Funktion, Begriff,
  Bedeutung: fünf logische Studien, ed. by Günther Patzig, 40–65. 4th edn.
  Göttingen: Vandenhoek & Ruprecht.)

Freundlich, Rudolf. 1974. Über die logische und semantische Struktur
  implikativer Begriffe der natürlichen Sprache. Logik und Sprache, ed. by
  Albert Menne and Gerhard Frey, 119–127. Bern: A. Francke.

Friederich, Wolf. 1994. Ein größeres Zimmer—a larger room? Lebende
  Sprachen 39.162–163.

Gazdar, Gerald. 1979. Pragmatics: Implicature, presupposition, and logical
  form. New York: Academic Press.

Gohl, Christine. 2001. Zwischen Kausalität und Konditionalität: begründende
  wenn-Konstruktionen. InLiSt—Interaction and Linguistic Structures, No. 24,
  March 2001. URL:<http://inlist.uni-konstanz.de/issues/24/index.htm>.

Grice, Herbert Paul. 1975. Logic and conversation. Speech acts, ed. by Peter
  Cole and J. Morgan, 41–58. (Syntax and semantics, 3.) New York: Academic
  Press. (Rpt. in Grice 1989, 22–40.)

————. 1978. Further notes on logic and conversation. Pragmatics, ed. by
  Peter Cole, 113–127. (Syntax and semantics, 9.) New York: Academic Press.
  (Rpt. in Grice 1989, 41–57.)

————. 1989. Studies in the way of words. Cambridge, MA: Harvard
  University Press.

Grimm DWb: Deutsches Wörterbuch. 1854–1960. 16 vols. ed. by Jacob and
  Wilhelm Grimm. Leipzig: Hirzel. (Quellenverzeichnis 1971; rpt. 1984.
  Munich: Deutscher Taschenbuch Verlag.)

Harnish, Robert M. 1976. Logical form and implicature. An integrated theory of linguistic ability, ed. by Thomas G. Bever, Jerrold J. Katz, D. Terence Langendoen, 464–479. New York: Crowell. (Rpt. 1991 in Pragmatics: A reader, ed. by Steven Davis, 316–364. Oxford: Oxford University Press.)

Hartung, Wolfdietrich. 1964. Die bedingenden Konjunktionen der deutschen Gegenwartssprache. Beiträge zur Geschichte der deutschen Sprache und Literatur (Halle) 86.350–387.

Hirschberg, Julia. 1991. A theory of scalar implicature. New York: Garland.

Horn, Laurence R. 1972. On the semantic properties of logical operators in English. Doctoral dissertation, University of California, Los Angeles. Ann Arbor, MI: University Microfilms International.

————. 1984a. Toward a new taxonomy for pragmatic inference: Q-based and R-based implicature. Meaning, form, and use in context: Linguistic applications, ed. by Deborah Schiffrin, 11–42. Washington, DC: Georgetown University Press.

————. 1984b. In defense of privative ambiguity. Proceedings of the 10th annual meeting of the Berkeley Linguistics Society, 141–156. Berkeley: Berkeley Linguistics Society.

————. 1984c. Ambiguity, negation, and the London school of parsimony. Proceedings of the 14th annual meeting of the North East Linguistic Society, ed. by Caroline Jones and Peter Sells, 108–131. Amherst, MA: Graduate Linguistic Student Association, University of Massachusetts, Amherst.

————. 1989. A natural history of negation. Chicago: University of Chicago Press.

————. 1990. Hamburgers and truth: Why Gricean explanation is Gricean. Proceedings of the 16th annual meeting of the Berkeley Linguistics Society. Parasession on the legacy of Grice, ed. by Kira Hall, Jean-Pierre Koenig, Michael Meacham, Sondra Reinmann, and Laurel A. Sutton, 454–471. Berkeley: Berkeley Linguistics Society.

Kempson, Ruth M. 1980. Ambiguity and word meaning. Studies in English linguistics: For Randolph Quirk, ed. by Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik, 7–16. London: Longman.

Klein, Ewan. 1991. Comparatives. Semantics: An international handbook of contemporary research, ed. by Arnim von Stechow and Dieter Wunderlich, 673–691. Berlin: de Gruyter.

König, Ekkehard. 1991. Concessive relations as the dual of causal relations. Semantic universals and universal semantics, ed. by Dietmar Zaefferer, 190–209. (Groningen-Amsterdam studies in semantics, 12.) Dordrecht: Foris.

————, and Peter Siemund. 2000. Causal and concessive clauses: Formal and semantic relations. In Couper-Kuhlen and Kortmann (eds.), 341–360.

Levinson, Stephen C. 1983. Pragmatics. Cambridge: Cambridge University Press.

————. 2000. Presumptive meanings: The theory of Generalized Conversational Implicature. Cambridge, MA: MIT Press.

Martin, Victoria. 1997. "Der Lehrer schimpfte mit ihren Schülern": Perspectives on the changing use of the *-in* suffix. German Life and Letters 50.574–588.

Matsumoto, Yoshiko. 1995. The conversational condition on Horn scales. Linguistics and Philosophy 18.21–60.

OED: Oxford English Dictionary. 20 vols. ed. by John A. Simpson. 2nd edn. Oxford: Clarendon Press.

Paul, Hermann. 1895. Ueber die Aufgaben der wissenschaftlichen Lexikographie mit besonderer Rücksicht auf das deutsche Wörterbuch. Sitzungsberichte der philosophisch-philologischen und der historischen Classe der Königlich Bayerischen Akademie der Wissenschaften zu München, Jahrgang 1894, 53–91. Munich: Verlag der K. Akademie. (Rpt. 1998 in Sprachtheorie, Sprachgeschichte, Philologie: Reden, Abhandlungen und Biographie, ed. by Helmut Henne and Jörg Kilian, 131–169. Tübingen: Max Niemeyer.)

Posner, Roland. 1979. Bedeutung und Gebrauch der Satzverknüpfer in den natürlichen Sprachen. Sprechakttheorie und Semantik, ed. by Günther Grewendorf, 345–385. Frankfurt am Main: Suhrkamp.

Rohdenburg, Günther. 1985. Dogs, bitches, and other creatures. Journal of Semantics 4.117–135.

Rosch, Eleanor. 1977. Human categorization. Advances in cross-cultural psychology, vol. 1, ed. by Ned Warren, 1–49. London: Academic Press.

Sadock, Jerrold M. 1981. *Almost*. In Cole (ed.), 257–271.

Sæbø, Kjell. 1991. Causal and purposive clauses. Semantik: ein internationales Handbuch der zeitgenössischen Forschung, ed. by Arnim von Stechow and Dieter Wunderlich, 623–631. Berlin: Mouton de Gruyter.

Sperber, Dan, and Deirdre Wilson. 1987. Precis of *Relevance*. Behavioral and Brain Sciences 10.697–754.

————, and ————. 1995. Relevance: Communication and cognition. 2nd edn. Cambridge, MA: Basil Blackwell.

Varnhorn, Beate. 1993. Adjektive und Komparation: Studien zur Syntax, Semantik und Pragmatik adjektivischer Vergleichskonstrukte. Tübingen: Gunter Narr.

Webster's Third: Webster's third new international dictionary of the English language (unabridged). 1993. Springfield, MA: Merriam-Webster, Inc.

Weinrich, Harald. 1987. Ein kürzerer Beitrag zu den Norm-Komparativen der deutschen Sprache. Wörter, Schätze, Fugen und Fächer des Wissens: Festgabe für Theodor Lewandowski zum 60. Geburtstag, ed. by Gerhard Aust, 115–124. Tübingen: Gunter Narr.

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