

ED 358 745

FL 021 332

AUTHOR Murphy, M. Lynne
 TITLE The Semantics of Pragmatic Markedness.
 PUB DATE 3 Apr 93
 NOTE 20p.; Revised version of a paper presented at the Annual Conference on Pragmatics and Language Learning (7th, April 3, 1993).
 PUB TYPE Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)
 EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS *Classification; *English; *Language Patterns; Linguistic Theory; *Pragmatics; *Semantics
 IDENTIFIERS *Markedness

ABSTRACT

A discussion of markedness in English questions the value of markedness theory in constructing explanatory models of linguistic meaning. It challenges the claim that pairs of terms in sentences are in a single type of relation (marked/unmarked) that accounts for all differences between the two terms, including differences in use in measure phrases, nominalization, and implications for "how" questions. Aspects of this issue discussed include the evolution of the concept of markedness, criteria for determining markedness, predictability of distribution of gradable adjectives, and problems with theories relying on markedness. Examples of how knowledge of the world affects the distribution of gradable adjectives are offered. It is concluded that the distributional patterns labeled "marked" and "unmarked" are often asymmetrical, too diverse to form monolithic categories, and too interesting not to try to account for in a more explanatory way, despite their complexity and variability. (MSE)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

The Semantics of Pragmatic Markedness*

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Lynne
Murphy

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

M. Lynne Murphy
Department of Linguistics
University of Illinois at Urbana-Champaign
University of the Witwatersrand, Johannesburg, South Africa

ED358745

The aim of this paper is to question the value of markedness theory in constructing explanatory models of linguistic meaning. This goal grew out of my frustration in reading repeatedly in the literature on gradable adjectives that certain differences in the distributions of members of an antonym pair can be "explained" in terms of markedness, which is represented in these treatments as a lexical feature or a semantic primitive (e.g., in Rusiecki 1985, Lehrer 1985), while other authors give unconstrained or unmotivated explanations of markedness, many of them claiming that unmarked concepts are 'psychologically less complex' than marked ones (e.g., Bartsch & Vennemann 1972, Lakoff 1987). This paper questions the claim that the pairs of terms in sentences (1)-(3) are in a single type of relation ('marked'/'unmarked') that accounts for all of the differences between the (a) terms and the (b) terms, including differences in use in measure phrases, nominalization, and implications for how questions, as shown in these examples.

- (1) a. How tall are you?
(no implication that you are tall)
- b. *How shórt are you?
(not statable with sentential stress on short)

* A version of this paper was first presented at the Seventh Annual International Conference on Pragmatics and Language Learning, 3 April 1993. This work has benefited from discussion of markedness in phonology with Jennifer Cole and general comments by Georgia M. Green. I thank them both, but reserve the credit for any faults in this work for myself.

FL021332

- (2) a. How good is that paper?
(no implication that the paper is good)
- b. How bad is that paper?
(implication that the paper is bad to some degree)
- (3) a. How warm is the soup?
(implication that the soup is warm)
- b. How cool is the soup?
(implication that the soup is cool)

As indicated in the title, this paper argues that the phenomena that form the basis of the argument for a marked/unmarked distinction are predictable from the meanings of the words, extralinguistic knowledge, and pragmatic principles. Thus, the terms 'marked' and 'unmarked' are not useful to an explanatory theory of gradable adjective meaning.

Markedness theory concerns the proliferation of binary distinctions in natural language and is intended to account for the asymmetries in these binary distinctions. The terms 'marked' and 'unmarked' originated in the structuralist phonology of Nikolai Trubetzkoy (1939). Although the use of the terms today differs quite a bit from Trubetzkoy's original intention, we can see the legacy of the Prague Circle in modern phonology, where binary feature systems and underspecification theories depend upon asymmetrical distribution of features or phonemes.

The concept of markedness was later extended to semantics by Roman Jakobson (Battistella 1990:16). In the original estimation of markedness, marked/unmarked relations were context-dependent (as shown in (5)), language-specific, and potentially arbitrary. In more recent work, linguists have updated the concepts of marked and unmarked in order to jibe with generative theories of linguistics, whose background assumptions and goals differ in a number of ways from those of the structuralist theories. However, what was interesting in structuralist theories is not necessarily explanatory. It is the latter qualification that is required in modern linguistics.

Two important facts to keep in mind about markedness are: (a) that markedness relations are necessarily binary relations, and (b) that these relations are completely relative. For example, we cannot say simply that tall is an unmarked term; instead we must say that it is unmarked with respect to short, which is its marked counterpart. Thus, a linguistic item might be marked with respect to a certain other item, but unmarked with respect to yet another. Croft (1992) provides a nice example of this in the Chumash verbal agreement system, shown in (6), for which it is claimed that the plural is marked relative to the singular, but unmarked relative to the dual, as judged by morphological complexity.

(6) Chumash verbal agreement system (Croft 1992, from Koeber 1904:33):

	<i>singular</i>	<i>plural</i>	<i>dual</i>
<i>1st person</i>	k-	k-i-	k-i-s-
<i>2nd person</i>	p-	p-i-	p-i-s-
<i>3rd person</i>	s-	s-i-	s-i-s-

The criteria for determining which member of a pair is marked and which unmarked vary among authors and linguistic phenomena. For instance, when sorting gradable adjectives in terms of markedness, Hamilton & Deese (1971) use two criteria, listed in (7).

(7) Hamilton & Deese criteria for unmarked terms (context neutralization):

- a. basic root form of the unmarked member is also the name of the dimension
(e.g., wide/width vs. narrow/*narrowth)
- b. term can be used impartially in how questions (e.g., (1a) & (2a) above)

However, Battistella (1990) notes that markedness cannot be determined by such absolute criteria as those in Hamilton & Deese, or similar short lists used by other

linguists and psychologists. Instead, the spirit of relativity in the markedness theory would hold that whichever member of a pair displays the most unmarked characteristics is the unmarked member. Not every unmarked item, then, has the same sets of these properties. Thus, the items listed in (8) that fulfill some of the unmarkedness criteria with respect to their antonyms are just as much unmarked items as those which fulfill more than one criterion.

(8) Items that fulfill both (7a&b): true(false), good(bad), high(low), long(short), etc.

Items that fulfill only (7a): warm(cool)

Items that fulfill only (7b): big(little), hard(easy), old(young), etc.

Items that fulfill neither: first/last, solid/hollow, left/right, tiny/huge, etc.

Battistella's more complete, and necessarily more vague, list of criteria for all types of markedness relations is listed in (9). This list reflects his summary of markedness theory as developed by scholars from Trubetzkoy onward.

(9) **Criteria for Linguistic (Un)Markedness** (Battistella 1990)

I. Distributional Criteria

a. Neutralization

- marked term is excluded from the context (cf (1b,c) & (2b,c))

b. Optimality

- if a language has X (marked), then it necessarily has Y (unmarked)
(e.g., every language that has /ü/ has /i/, /i/ =unmarked wrt /ü/)

II. Amount of Structure Criteria

a. Indeterminateness

- unmarked term has less specific meaning, may stand for both poles of the opposition (e.g., tall can be used in referring to both tall and short things in contexts like (1b,c))

b. Simplicity

- unmarked elements are less elaborate in form (e.g., host vs. hostess)

c. Syncretization

- unmarked may be differentiated into more subcategories (e.g., present tense often has more conjugational forms than past)

III. Prototypicality

- unmarked form is "best example" of the category

Neutralization is often considered the most general criterion for markedness. Adrienne Lehrer (1985) lists the most common ways in which neutralization occurs in antonymous adjectives, and her list is presented here in (10). As in the simpler list given by Hamilton & Deese, the variety neutralization contexts represents a variety of different ways in which an unmarked member of a pair can fulfill the unmarkedness criteria. No single unmarked member of a pair must occur in all of these neutralized contexts, though some do.

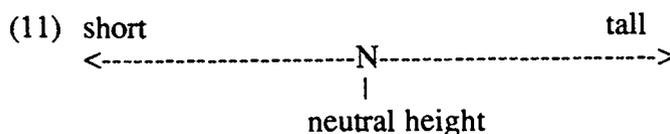
- (10) Markedness properties of antonym pairs (Lehrer 1985)
- I Neutralization of an opposition in questions by *unmarked* member
(How tall/*short are you?)
 - II Neutralization of an opposition in nominalizations by *unmarked* member
(warmth/*coolth)
 - III Only the *unmarked* member appears in measure phrases
(three feet tall/*short)
 - IV If one member consists of an affix added to the antonym, the affix form is *marked*
(happy/unhappy)
 - V Ratios can be used only with the unmarked member
(twice as old/*young)
 - VI The *unmarked* member is evaluatively positive, the *marked*, evaluatively negative
(good/bad)
 - VII The *unmarked* member denotes more of a quantity; the *marked* less
(big/little)
 - VIII If there are asymmetrical entailments, the unmarked member is less likely to be 'biased' or 'committed'
(X is better than Y: X may be good or bad. X is worse than Y: X must be bad (not good).)

The problem with these efforts to categorize markedness criteria is not the interest in the asymmetry in pairs of linguistic items, but rather the trend toward treating the descriptive terms "marked" and "unmarked" as having explanatory value. Although we speak of words or phonemes or features as being marked or unmarked, and although the evidence for markedness is to be found in linguistic data, there is no reason to believe that the asymmetries noted in markedness theory represent linguistic phenomena, since our utterances and meanings are not only limited by the grammar, but also by its

communicative purpose. 'Marked' and 'unmarked' merely label the symptoms of semantic asymmetry—not the causes. While labeling symptoms may be a convenient means for abbreviating the causes behind the symptoms, if we don't know what those causes are (and so far, we don't), the terms 'marked' and 'unmarked' have no theoretical import. In the case of phonological or phonetic markedness, marked/unmarked patterns may be, to a certain degree, arbitrary, and Trubetzkoy has claimed that they are language-specific. (Although the move in generative phonology has been toward universal statements of markedness.) But any non-arbitrary markedness relations require explanation. In phonology, for instance, non-arbitrary markedness may have physical explanations, based on ease of pronunciation or differentiation. In the lexicon, it is difficult to argue that any of the marked/unmarked pairings are arbitrary.

Gradable adjective distribution provides a good test for the claim that so-called marked/unmarked pairs have predictable distribution, based on semantic and pragmatic facts about the adjectives and the way that they are used in context. This test is particularly fitting, since many linguists working on gradable adjective meaning have let markedness into their theory either as a lexical feature (+/- (UN)MARKED) or as a semantic primitive that distinguishes two members of a pair. Such treatments fail to identify any explanation for the dichotomous division and asymmetrical distribution of such terms. Instead, the most common reason for the use of markedness in such theories seems to be that the theorist has been unable or uninterested in finding asymmetries in the meanings or possible uses of antonymic adjectives that would account for differences in distribution. For example, Rusiecki (1985) gives a picture of the meanings of tall and short in a scalar model, for which tall and short are identical sides of a scale, as in (11), which satisfactorily accounts for the uses of tall and short in (12). However, this does not account for why tall, but not short can occur in measure phrases like 6 feet tall or impartial how questions. In order to account for the facts in (14), Rusiecki posits that tall

represents another scale (13) in just those cases where it occurs in a how question or measure statement, and that short is associated with no such unidirectional scale.



- (12) a. The University Inn is tall.
 b. Jiminy Cricket is short.
 c. Jiminy Cricket is short, but he's tall for an insect.
 d. The University Inn isn't really tall, but it's tall for Champaign.

(13) 0----->tall

- (14) a. Jiminy Cricket is two inches tall/*short.
 b. How tall/*short is the Urbana skyline?

How, then, does the language user know for which adjectives to posit the additional, asymmetrical scale of the type in (13)? According to Rusiecki's treatment, only unmarked terms have such scales, but markedness is treated as a given, a feature of the lexical item. However, this treatment is not sufficient, since it does not even hint at an explanation for the variety of distributions of adjectives.

Theories that rely on markedness as a theoretical primitive run into four problems. First of all, individual lexical items cannot be said to be 'marked' or 'unmarked'. Rather, they are marked or unmarked with reference to another item. If markedness is treated as a lexical feature, there is no principled limit to the number of markedness features an item would have, for it would have to have one for every other item it contrasts with. For cases like tall, this does not seem to be a problem, since we normally think of tall as contrasting only with short. Short, on the other hand, would need at least two lexical features concerning markedness: marked-with-respect-to-tall and marked-with-respect-to-long. Still other gradable adjectives have context-dependent opposites. So, for instance, it might be necessary for dry to have markedness features for its relations to wet,

sweet (as in dry/sweet wine), moist (as in dry/moist cake), and so forth. This problem also exists for nouns. Cow contrasts with a number of other items (bull, calf, horse) and has 'unmarked' distribution with respect to some of them. Even if a term is unmarked with respect to each and every term it contrasts with, it still must have as many lexical features for that unmarkedness as the number of terms it contrasts with. Because markedness is formulated as a relation among two lexical items, the theory fails to acknowledge or utilize any generalizations that can be made about, for instance, the fact that short is in marked distribution with respect to both tall and long.

The second problem in using markedness as a theoretical tool is that semantic markedness relations seem quite universal, with only minor variations. For instance, we never find that a short is unmarked with respect to tall, even among short people. Were we to find a cave-dwelling culture where shortness was more valuable than tallness, we'd still be surprised if they measured items using their term for short rather than tall. However, since markedness is a relation between lexical items, generalizations cannot be made across languages, since different languages have different lexical items.

Third, treating 'marked' and 'unmarked' specifications as means for differentiating types of distributional patterns ignores the variety of different distributional patterns found within those items labeled marked/unmarked. It is not enough to claim that items are labeled in the lexicon as +/-MARKED, as this will not differentiate items in terms of the types of marked/unmarked symptoms that they display. For example, it is not sufficient to label both short and bad 'marked' and claim that this explains their distributional patterns *vis-à-vis* tall and good, for all of these terms have different distributional patterns, as shown in (15). If, however, we take the stance that the meanings of these items determine their possible distributions, then it is not surprising that they distribute differently, since their meanings fall into very different semantic realms.

- (15) a. How bad is it? (committed) vs. *How shórt is it? vs.
 How good is it? (impartial?) vs. How tall is it? (impartial)
- b. #You're 3 points good. vs. You're 5 feet tall. vs.
 #You're 3 points bad. vs. #You're 5 feet short.

Finally, the focus on the distinction between marked and unmarked ignores the fact that not all antonymic pairs have asymmetrical distribution. For example, while warm is unmarked with respect to cool because it can be nominalized as warmth, there is no such asymmetry among hot and cold, for which we have nominalizations heat and cold as well as symmetrical distribution in how questions, measure phrases, etc. Simply marking some items in the lexicon as 'marked' or 'unmarked' begs the question of *why* some pairs are asymmetrical in distribution.

As an alternative to markedness theory, a theory of gradable adjectives (or any other asymmetrically distributed category) should look for semantic and pragmatic reasons for specific distributional patterns. The questions we should ask are: What are the meanings of adjectives that can appear in syntactic/semantic context X (e.g., measure phrases, impartial how questions), and how do those meanings correlate with the adjectives' ability to occur in that context? What facts about the meanings of the adjectives that cannot occur in context X explain their failure to occur in such constructions? What facts about human interaction with the world (perceptual capabilities, social/cultural rules, beliefs) limit the distributions of adjectives?

Van Langendonck (1984) follows Lakoff & Johnson (1980) in asserting that markedness properties can be derived from properties that humans display. He proposes a hierarchy of these human properties, as given in (16).

- (16) Hierarchy of human properties affecting asymmetrical distribution
(van Langendonck 1984)
- a. biological (e.g., tall has unmarked properties because people get taller, not shorter)
 - b. perceptual (e.g., positive is unmarked with respect to negative because positive = existent, and existent things are more perceptually salient than non-existent things)
 - c. cultural

Van Langendonck's hierarchy is open to a lot of individual variance, since he focuses on any and all properties of the speaker. It is, however, possible to give a more constrained hierarchy. In such a treatment, the distributional characteristics of adjectives can be explained by appealing to what language users know about the world, that is, what they know about what they're talking about. Such knowledge is of two types, physical and cultural, and the relevance of this knowledge is hierarchically arranged, such that physical facts have much stronger effects on distributions of adjectives than do cultural facts.

- (17) Hierarchy of Language User's Knowledge of World,
(according to strength of effect on grammaticality judgments)
- a. physical facts (as filtered through human perceptual mechanisms)
 - b. cultural knowledge

The remainder of this paper gives some examples of how knowledge of the world affects the distribution of gradable adjectives in the sorts of contexts that we have looked at so far. But first, some basics about gradable adjective meanings are in order. Gradable adjectives are those that represent qualities that can obtain, for any particular referent, at a variety of degrees. Such adjectives can be modified by degree markers like very, hardly, and extremely, and can be used in equative, comparative, or superlative constructions. So, we have the contrast between the gradable adjectives in (18) and the non-gradables in (19).

The claims made here about gradable adjective meaning are summarized in (21), the most important aspect of which is item (c), that different types of constructions indicate different comparison relations. This predicts that if a certain type of comparison is impossible, for example, if a standard of comparison cannot be identified for the dimension, then whatever linguistic constructions reflect that type of comparison will not be found in the language. Thus, asymmetrical distributions of antonymous adjectives indicate that some asymmetrical knowledge about or mental representation of the antonyms.

- (21) **Claims about Gradable Adjective Meaning** (Murphy 1993)
- a. Gradable adjectives are inherently comparative
 - b. Lexical representations differentiate gradables by:
 - their dimensions
 - their scalar directions
 - (•what sub-range of the scale they indicate)
 - c. Different types of constructions indicate comparison with different standards.
Hence, if a type of comparison is impossible within a dimension, the associated linguistic constructions will not exist.

Some of these claims are exemplified in the treatment of tall and short. These two words represent different directions of measurement in the height dimension, but as shown above, they have very different distributions, as repeated in (22)-(23).

- (22)
- a. The Empire State Building is tall.
 - b. The Empire State Building is 102 stories tall.
 - c. How tall is the building? (no implication that the building is tall)
- (23)
- a. My house is short.
 - b. #My house is three stories short.
 - c. #How short is your house?

- (26) a. The cocoa is cool.
 b. #The cocoa is 50° cool.
 c. How cool is the cocoa? (implies the soup is cool)

The symmetry of warm/cool reflects the symmetry of the temperature scale, as illustrated in (27).

(27) TEMPERATURE SCALE (WRT HEATED DRINKABLE LIQUIDS)
 cool <-----C-----N-----S-----> warm
 C = cocoa N = neutral S = soup

Neither term can be used in a measure phrase because there is no starting point in the temperature scale. There may be zeroes in the Fahrenheit and Celsius systems, but these zeroes are not at the beginning of the scale, so they don't count as starting points for measurement. Although absolute zero is a possible candidate for a starting point, it is not salient, for none of us has ever felt absolute zero. Thus, our knowledge about measurement and the limits of our perception predict that we cannot use measure phrases with temperature terms. The how questions formed with these terms entail an expectation that the soup is warm or the cocoa is cool, in contrast to the how question for tall which is neutral with respect to evaluations of the height of the building. This follows from the fact that there is no starting point on the temperature scale. Since there is no starting point, the only other option for comparison is the neutral point. So, the question (25c) can be paraphrased as "How much warmer than the neutral temperature is the soup?" Since the soup is being compared to the neutral point using the term warm, which indicates the direction toward higher temperatures, the speaker has taken a side on the soup-temperature issue: It is assumed to be warm.

Note that while we can compare warm and cool things to the neutral point in how questions, we cannot do this for short things. It is not the case that the short how question entails shortness, it is just not a good sentence if it carries the usual sentential stress on the adjective. There seems to be some principle which prevents committed how questions on scales with starting points, whether or not the adjective in question can be used in comparisons involving the starting point. This fact has been noticed as well by Bierwisch (1989), and I have yet to find a language in which this generalization does not hold.

Dimensional adjectives such as tall, short, warm, and cool, seem to be easily accounted for with reference to knowledge that we as language users have about the qualities they denote. All of the sorts of distributional asymmetries cannot be addressed in the space of this paper, but tougher cases are to be found in terms such as good and bad and clean and dirty, in (28)-(29).

- (28) a. How good is it? (impartial)
 b. How bad is it? (implies badness)
- (29) a. How clean is it? (impartial)
 b. How dirty is it? (implies dirtiness)

The scales themselves do not necessarily show any asymmetries, since there is no salient absolute bad or absolute state of filth. This is good for the analysis, since if there were a starting point on the scale, the (b) sentences would be prevented, just as How short are you? is prevented. But, still there is an asymmetry to be accounted for here, and so I'll take a very preliminary stab at it. Good and clean represent qualities that are evaluatively positive to the extent that there are almost no actual contexts where goodness and cleanness are not desired states. Compare these, for instance, to other adjectives

whose desirability varies among contexts. For example, hard and soft do not show these asymmetries, as in (30), and neither is so clearly a positive quality. Whether you like pillows, butter, or wood to be hard or soft depends completely upon your individual tastes and the purposes to which you wish to put these objects. The how questions that result betray a presupposition about the referent's qualities.

- (30) a. How soft is the mattress? (committed)
 b. How hard is the mattress? (committed)

A proposal with possible merit is that our conceptions of good and clean as positive qualities and bad and dirty as negative ones are strong enough that politeness dictates that the positive item be used pseudo-impartially so that we are not forced to commit to one side or the other of the merit or cleanliness scales when inquiring about these scales. So, we ask "How good is it?" even if we recognize the possibility that it is bad because asking "How bad is it?" would, in most situations, be impolite. This would be a case in which social knowledge, knowledge of how to interact with others, affects the distribution of adjectives. Note that the effects of this type of knowledge on distribution are less rigid than the effects of knowledge of the physical world. While How tall is it? is necessarily impartial, How good is it? is more ambiguous as to whether it is committed or impartial.¹

In conclusion, the distributional patterns frequently labeled 'marked' and 'unmarked' are too diverse to form monolithic categories and too interesting not to try to account for in some more explanatory way. This is not to say that the intentions of markedness

¹ The 'Pollyanna effect' (as termed by Charles Osgood), that languages tend to prefer terms for evaluatively positive states over terms for negative ones, is reflected in the world's languages. Greenberg (1966:90) notes that a "considerable number" of languages from at least three continents express 'bad' as 'not good', having no separate term for 'bad'. This asymmetry in 'good'/'bad' distribution cross linguistically is reflected intra-linguistically by the slightly wider distribution of good—in impartial as well as committed questions.

theory are not good. Semioticians especially have looked for explanation for the marked/unmarked distinctions they posit. Andrews (1990:137) states that “the purpose of markedness theory is to explain the properties of meaning that are invariant, not to justify a system based on statistical frequency.” But in the shift from structuralist to generativist interest in language, requirements for explanatory adequacy have shifted, and the artifacts of markedness theory have been misappropriated. Battistella (1990:6) notes that markedness has lacked serious, modern linguistic treatment because of the proliferation of reinterpretations of the terms ‘marked’ and ‘unmarked’, many of them at odds with each other and with the structuralists’ original intent. Perhaps, then, we will not be able to produce a coherent discussion of asymmetrical distribution patterns until these misunderstood categories are abandoned. While the task of explaining these distributions is not a simple one, owing to the complexity and variety of distributions, it should not be an impossible one, for these distributions are far too regular within and across languages not to be predictable at some level.

References

- Andrews, Edna. 1990. *Markedness Theory: The Union of Asymmetry and Semiosis in Language*. Durham, NC: Duke University Press.
- Bartsch, Renate & Theo Vennemann. 1972. *Semantic Structures*. Frankfurt/Main: Athenäum Verlag.
- Battistella, Edwin L. 1990. *Markedness: The Evaluative Superstructure of Language*. Albany: SUNY Press.
- Bierwisch, Manfred. 1989. The Semantics of Gradation. In M. Bierwisch & E. Lang (eds.), *Dimensional Adjectives*. Berlin: Springer-Verlag.
- Croft, William. 1992. Markedness and linguistic theory. Paper presented at the 9th Eastern States Conference on Linguistics, 13-15 November, Buffalo, NY.
- Greenberg, Joseph H. 1966. *Language Universals*. The Hague: Mouton.
- Hamilton, Helen, & James Deese. 1971. Does Linguistic Marking Have a Psychological Correlate? *Journal of Verbal Learning and Verbal Behavior* 10:707-714.
- Lakoff, George. 1987. *Women, Fire, and Dangerous Things: What Categories Reveal About the Mind*. Chicago: University of Chicago Press.
- Lakoff George, & Mark Johnson. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- Lehrer, Adrienne. 1985. Markedness and antonymy. *Journal of Linguistics* 21:397-429.
- Murphy, M. Lynne. 1993. Gradable Adjectives as Directions: Toward a Unified Treatment. In *Proceedings of the Ninth Eastern States Conference on Linguistics*, pp. 196-205. Ithaca, NY: Cornell University Working Papers in Linguistics.
- Rusiecki, Jan. 1985. *Adjectives and Comparison in English: A Semantic Study*. London: Longman.
- Trubetzkoy, Nikolai. 1939. Reprinted in 1969 as: *Principles of Phonology*. Trans. by Christiane A. M. Baltaxe. Berkeley: University of California Press.

Van Langendonck, W. 1984. *Markedness, Prototypes, and Language Acquisition*.

Voorlopige Publikatie 91. Dept. Linguïstiek, Katholieke Universiteit, Leuven.