21 An Approach to Semantic Change

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When changes happen to the meanings of words, we speak of *semantic change*. Meanings of words can be extended creatively (a possibility afforded by the human cognitive system), or their meanings can change through reanalysis, chiefly but not exclusively during language acquisition. Any speaker without direct access to the intent of the speakers around him or her must figure out what words mean from the contexts in which he or she encounters them. As Nerlich (1990: 181) puts it, "Words do not convey meaning in themselves, they are *invested* with meaning according to the totality of the context. They only *have* meaning in so far as they are interpreted as *meaningful*, in so far *as the hearer attributes meaning to them in context*" (emphases in original). If an interpretation of a word different from the intended interpretation is possible, and if this new interpretation is the one seized upon by the listener or learner and entered into the lexicon ("new" from the point of view of other speakers, that is), semantic change has happened. Limiting the term "semantic change" to such reinterpretations, or reanalyses, naturally and correctly excludes the everyday creative synchronic extension of meanings mentioned above (the latter not usually considered as constituting "language change"; see further below).

Textbooks in linguistics commonly list various types or categories of semantic change.[1] Although below I will be arguing that they are not very helpful for our understanding, an introductory discussion such as this one would be incomplete without taking them into account and briefly reviewing the types most commonly referred to:

i *Metaphoric extension*. A metaphor expresses a relationship between two things based on a perceived similarity between them. When a word undergoes metaphoric extension, it gets a new referent which has some characteristic in common with the old referent. Words denoting body parts commonly undergo metaphoric extension: the *head* of an animal is its frontmost part, so one can also speak of the *head* of a line; the *head* of a person is his or her highest part, so one can speak of the *head* of a

community, the person having the highest standing. Similarly, we speak of the *foot* of a mountain, the *leg* and *back* of a chair, the *knees* of a bald cypress, being on the *heels* of victory, and the *heart* of a palm. Another cross-linguistically common metaphor is the use of verbs meaning 'grasp, take hold of' in the meaning 'understand,' as English *grasp*, *get*, German *fassen*, *begreifen*, Mandarin *lǐng*, *huì*.

ii *Metonymic extension*. Metonymic extension results in a word coming to have a new referent that is associated in some way with the original referent. The two referents here stand in a contiguity relationship with one another, rather than in a similarity relationship as with metaphoric change. When we say, "The *White House* issued a bulletin," we do not mean that the actual building at 1600 Pennsylvania Avenue engaged in this action; rather, we are referring to certain people associated with that building, that is, the executive branch of the US government. The phrase *White House* thus can refer to both the physical structure and the people associated with it; this latter meaning is a result of metonymic extension. (The same is true of its counterpart behind the former Iron Curtain, the *Kremlin*.) Another example is the adjective *blue-collar*; in the first instance it referred to workers who wear blue shirts, but then came to describe a worker who does a particular type of work with which blue shirts were associated. As has often been pointed out, in order to trace the rationale for particular metonymic changes, it can be necessary to have detailed knowledge of the culture in which the language is spoken.

iii *Broadening*. The word *dog* used to refer to a particular breed of dog, but came to be the general term for any member of the species *Canis familiaris*. This is an example of *broadening*, whereby a word that originally denoted one member of a particular set of things comes to denote more or all the members of that set. *Thing* used to refer to an assembly or council, but in time came to refer to *anything*. In modern English slang, the same development has been affecting the word *shit*, whose basic meaning 'feces' has broadened to become synonymous with 'thing' or 'stuff' in some contexts (*Don't touch my shit; I've got a lot of shit to take care of this weekend*). If a word's meaning becomes so vague that one is hard-pressed to ascribe any specific meaning to it anymore, it is said to have undergone *bleaching*.[2] *Thing* and *shit* above are both good examples. When a word's meaning is broadened so that it loses its status as a full-content lexeme and becomes either a function word or an affix, it is said to undergo *grammaticalization*. This will be discussed in much more detail below.

iv *Narrowing*. Narrowing is the opposite of broadening – the restriction of a word's semantic field, resulting in the word's applying only to a subset of the referents that it used to be applied to. *Hound* used to be the generic word for 'dog' (cf. German *Hund*) but nowadays refers only to a subset of possible dogs. *Meat* used to refer to 'food' in general, but now only to a particular kind of food. *Deer* used to be the all-purpose word for 'wild animal,' but now refers only to a specific kind of wild animal. The *skyline*

referred once to the horizon, but now specifically to the outline of the buildings of a large city against the sky, poking up from or in front of the horizon.[3]

v *Melioration and pejoration.* These are purely subjective terms referring to cases when a word's meaning becomes either more positive (melioration or amelioration) or more negative (pejoration). Two examples of melioration from English are *nice*, which meant originally 'simple, ignorant' but now 'friendly, approachable,' and *paradise*, which in Greek originally referred to an enclosed park or pleasure-garden, but came to be used for the Garden of Eden, whence the English meaning. Pejoration affected the word *silly*, earlier 'blessed' (cf. German *selig*), as well as *mean*, whose earlier meaning 'average' has been ratcheted down to 'below average, nasty' (cf. German *gemein*, now 'common, low, vulgar' from 'common, shared').

Such is a typical textbook typology of semantic change. Many other types have been put forward, but do not concern us here.

1 Reanalysis

Traditional typologies such as the one above are problematic, as has not gone unnoticed. Typical criticisms are that some changes are not covered by any of the types proposed in the literature,[4] and that a number of the types can be combined.[5] These remarks are quite correct. However, they are rather beside the point, because it is my contention that the typologies themselves are beside the point. The reason is that they refer to the *results* of change;[6] they leave entirely untouched the reanalyses (innovations) that are the true changes and that are of primary interest.

The source of these reanalyses, as briefly stated at the outset, is the discontinuous (and imperfect) transmission of grammars across generations, as was recognized a century or more ago by the Neogrammarians. All of us are exposed to a wide variety of speech from which we must abstract the knowledge necessary to construct a grammar of our native language, whatever it may be.[7] The process begins in very early childhood, where it follows biologically predetermined maturational paths whose milestones are reached without overt instruction from mature speakers, and continues during the formation of peer groups in pre-adolescent and adolescent years, and even later.[8] None of us has direct access to the underlying forms and rules constituting the grammars of other speakers (nor do they themselves!), only to the behavior (speech) that those grammars underlie – hence the discontinuity of grammar transmission.[9] Language is created afresh, and a little differently, with each new speaker, and with it, its sounds, word meanings, and everything else.[10] If one deduces a different underlying form or rule for producing something that a speaker or the speakers round about are producing, then one has made a reanalysis.

When we as historical linguists strive to understand the nature and the constraints on language change (for example, what constitutes a possible sound change in natural language), what we in fact are striving for is an understanding of what sorts of reanalyses can occur. Here I must interject some terminological clarification. The phrase "language change" refers to at least two quite distinct concepts in the literature, often leading to considerable confusion. Most commonly, probably, it refers to the manifestation of a linguistic innovation throughout a community and its robust appearance in written documents. As an object of study, that is too nebulous a concept (as nebulous as "the English language") because of the impossibility of defining "the language," "throughout a community," "robustly," and similarly vague or subjective criteria that are not, strictly speaking, linguistic. Reanalyses in individual grammars, by contrast, are very discrete entities, and in my opinion if one is to use the term "change" at all, it should refer to individual reanalyses. This is the way I will be using the term.[11]

Reanalysis is said to arise from ambiguous contexts.[12] To take a familiar example, consider the change undergone by the English word *bead*, originally 'prayer.' Prayers were, as now, often recited while being counted on rosary beads, and a phrase like *to count* (or *tell*) *one's beads* had at least two possible interpretations for someone who did not already know what was meant by *bead*: it could conceivably refer to the prayers that were being counted, or the beads (in the modern sense) that were being used for the counting. Some speakers apparently interpreted the meaning of *bead* as 'perforated ball on a string.' While it is not a major point, "ambiguous" is not the best characterization of contexts such as these, since something is ambiguous only if more than one interpretation is actually (not theoretically) available to the interpreter. Reanalysis rests crucially on meanings *not* being available; the word was without meaning to the learner until one was assigned.[13]

Many changes that cannot be classified according to the traditional classificatory scheme are readily understandable as reanalyses. I recently encountered the phrase *he harked* used after a quote and meaning 'he shouted, exclaimed.' It is impossible to subsume the change 'listen attentively' > 'exclaim' under any of the traditional rubrics, at least not without a great deal of special pleading. But anyone knowledgeable of what is probably the most familiar usage of *hark* (imperatival, as in the Christmas carol "Hark! the herald angels sing") will immediately have a sense of how this change came about. As an imperative, the word is isolated syntactically, its function is an attention getter, and several of its "standard" uses stem from its association with vocal actions that get one's attention (including, historically, *hark back*, originally said of hounds on the hunt responding to calls of incitement). One can speculate on the exact associations that led, in this speaker's mind, to the sense 'shout, exclaim,' and whether rhyme forms like *bark* played any role; the point is that, as I see it, no traditional category of change can account for this example.[14] It is simply a reanalysis. Another such example is the change of *realize* from 'bring to fruition' to 'understand' discussed by Trask (1996: 42), who comments, "It is not at all

obvious how this change could have occurred, since the new senses actually require a different construction (a *that*-complement clause) from the old sense." This is a pseudo-problem; a verb meaning 'understand' does not have to be followed by a *that*-complement, which means that a verb that is not followed by a *that*-complement (such as *realize* in the sense 'bring to fruition') could still be reanalyzed as 'understand' under the right conditions. There is no connection, metaphoric or metonymic or otherwise, between the concepts 'bring to fruition' and 'understand,' just as there is no connection between the concepts 'listen' and 'shout'; and speaking of "extensions" of meaning in such cases is therefore misleading.[15]

In fact, a fundamental flaw of most categorizations of semantic change is that they rest upon the assumption that an old meaning *becomes* the new meaning, that there is some real connection between the two. As these and other examples show, however, this assumption is false; a connection between the new and old meanings is illusory.[16] The set of meanings in a speaker's head is created afresh just like all the other components of the grammar. It may legitimately be asked how it is, then, that one can seem so often to find a connection between an old and a new meaning. In the case of metonymic change, the question makes little sense. Metonymic changes are so infinitely diverse precisely because, as was mentioned earlier, the connections are not linguistic; they are cultural. This has in some sense always been known, but when metonymic extension is defined in terms of an "association" of a word becoming the word's new meaning, we can easily forget that the "association" in question is not linguistic in nature.

If we turn to metaphoric change, the feeling that a metaphorically extended meaning is connected to the original meaning is very strong indeed. If, however, the original literal meaning of a word is opaque to a particular individual, and that individual ascribes to it only the metaphorical meaning, that is a reanalysis; as with other reanalyses, of course, here we have a discontinuity – the original meaning was not *extended* (at least not in any way that it had not been "extended" before). While the reanalysis is just as discontinuous as in metonymic change, unlike the latter there is a clear *semantic* connection between the literal and the metaphoric meanings.

2 Semantic Change and Lexical Change

Some works, such as Jeffers and Lehiste (1979), incorporate the traditional typology of semantic changes, and the attendant discussions, into their treatment of lexical change. In most other works, such as Hock and Joseph (1996), however, lexical change and semantic change are kept apart. Lexical change is generally used to refer to new words entering the lexicon (by borrowing, word creation, or other processes, as in Crowley 1997), although Hock and Joseph subsume under lexical change any change (phonological, morphological,

semantic, as well as borrowing, etc.) that has an effect on the lexicon. The terminology does not interest me so much as the assumptions underlying these different choices in treatment. We have discussed how grammar construction involves a discontinuity between the new grammar and the mature grammars of other speakers; each new grammar must be constructed from scratch. This of course includes the lexicon. Authors who restrict lexical change to processes such as borrowing or synchronic lexical innovation are essentially defining lexical change in terms of "the language" ("when a new word enters *the language*"). As noted previously, this ignores individual grammar construction, and treats "language," as well as the lexicon, non-scientifically, as entities that are "out there," shared among (or existing in the air around?) many speakers. Once the individual language learner is brought into the picture, one does not have to be terribly reductionist to see that borrowing is not meaningfully different from building a lexicon during language acquisition. In the case of the latter, words are being entered into the lexicon, their meanings are being deduced (sometimes with differences from other speakers, i.e., with "semantic change"), and the process repeats itself throughout life as one learns new words.

A similar issue that is often confronted in the literature on semantic change is whether a particular semantic innovation constitutes "language change" or not. Most linguists recoil from the idea that the daily metaphorical and metonymic uses of words should be so characterized. Put in these terms, these questions are meaningless and unanswerable, again because "language change" is not a clearly defined or definable concept. But, as with the issue discussed in the preceding paragraph, if we frame the question in terms of reanalyses and with respect to individual speakers, we will find an answer quite readily – although it will vary from speaker to speaker, just as grammars are different from speaker to speaker. Take, for example, the idioms *surf the Web* and *channel-surfing*, recently innovated metaphorical uses of *surf*. Anyone who has learned the phrases and added them to his or her lexicon has changed his or her knowledge of English. But no reanalysis has occurred; *surf* continues to have, as one of its meanings, the old literal meaning that it always had. Only if one acquires *surf* in its new metaphorical meanings without (for whatever reason) acquiring the literal meaning has a reanalysis happened.

2.1 *The role of children in semantic change*

It was mentioned above (n. 10) that the role of children in instigating semantic change is a contentious issue. It was further noted that none of the views and conclusions about the nature of semantic change that are presented in this chapter depends crucially on the resolution of this issue. However, since it is important and much discussed, let me address it briefly before moving on to grammaticalization. The Neogrammarians and, more recently, Halle (1962) argued that children were the primary instigators of language change; this

view has been criticized for several decades by sociolinguists on the grounds that it is unrealistically reductive, does not adequately take into account the variation that is part and parcel of the linguistic data around us, and does not take into account the fact (as elucidated in sociolinguistic studies) that children are constantly modifying their grammars under the influence of a succession of prestige-holding peer groups throughout their pre-adolescent years. Weinreich et al. (1968: 188), a watershed study for sociolinguistic theories of language change,[17] famously decreed that no change was possible without variation and heterogeneity.[18] These criticisms, while certainly well taken in several respects, do not of course invalidate the essential insight of the Neogrammarians that language change is based on the discontinuity of grammar transmission.[19] Throughout life, all of us are exposed to linguistic output; *when* we are exposed to it and *whose* output it is may be significant for sociological and sociolinguistic studies, but are otherwise irrelevant both to my arguments and to an understanding of linguistic innovations.[20]

I rather suspect that one source of the controversy over whether young (pre-school) children play a role in semantic change is the conflicting uses and understanding of the terms "change" and "language change." If "language change" is taken to mean "diffusion of innovations through a community," as it is generally used in the sociolinguistic literature, then the validity of the claim that "children cause language change" is entirely dependent on the prestige of individual young children; and since "[b]abies do not form influential social groups," in the words of Aitchison (1981, here cited from 1991: 173), one can (under this understanding of "language change") only say, as she does, that "children have little importance to contribute to language change . . . [c]hanges begin within social groups, when group members unconsciously imitate those around them." If, however, "language change" is taken to mean "reanalysis" or "innovation" on the part of individuals, then saying that children cause language change is quite true; they are no more immune from reanalyzing other speakers' outputs than the rest of us.[21]

This concludes my review of general issues surrounding semantic change, both taken alone and considered within the broader picture of language change. Some oversimplification has been unfortunately unavoidable due to space limitations, but I believe the conclusions to be sound. In the remainder of this chapter we will concentrate on grammaticalization, and discuss remaining issues (such as the directionality of semantic change) in that context.[22]

3 Grammaticalization

Probably no other topic in semantic change (or syntactic change, since it is also discussed frequently in that context) has received as much attention in the past few decades as grammaticalization (or grammaticization). Although it is treated in detail by specialists elsewhere in this volume, I would like to

offer some comments on it, since my views are not orthodox in all respects. Again, because of space limitations, some oversimplification is unfortunately unavoidable.

Grammaticalization can be defined as the process whereby a full-content lexical word becomes a function word or even an affix.[23] The histories of prepositions, conjunctions, affixes, and all manner of sentential and elocutionary particles are often stories of grammaticalization. English prepositions and conjunctions like *behind, across*, and *because* were originally prepositional phrases containing the nouns *hind, cross, cause*. One can compare Swahili *ndani* 'inside, into' (< *da* 'guts'), Kpelle *-lá* 'inside' (< 'mouth'), and Mixtec *ini* 'inside' (< 'heart').[24] Negators in many languages can be descended from full-content words with no negative meaning at all originally, as French *pas* (from Latin *passus* 'a step') or English vulgar slang *shit, dick, fuck-all* 'nothing'; these were used with negatives originally to strengthen their force, and became reanalyzed as the negative elements all on their own.[25]

The literature on grammaticalization is large because of a widespread sense that there is something special about it. "The cross-componential change *par excellence*, involving as it does developments in the phonology, morphology, syntax and semantics" (McMahon 1994a: 161) is by no means an unusual characterization of the phenomenon. When it is so characterized, of course it appears to be an entirely different animal from, for example, metonymic change, or a sound change like assimilation. I have yet to find evidence that this characterization is accurate. The source of grammaticalization is the same as the source of phonological, morphological, semantic, and syntactic change – reanalysis of potentially ambiguous strings (see the next paragraph for discussion of an example).[26] The fact that the reanalyses leading to grammaticalization have (or can have) repercussions beyond the semantic component of the grammar is irrelevant (sound changes can have similar effects, e.g., apocope that results in reduction or loss of case systems); and I would urge researchers to reconsider whether the repercussions are even what they are claimed to be. Put another way, reanalysis of a word as a grammatical element does not in itself mean that any module of the grammar outside the lexicon has changed, in spite of appearances to the contrary. Old English *willan* and *cunnan* gradually lost their force as full lexical verbs and became grammaticalized as the modals *will* and *can*, but that is not (*contra* the usual analysis) a syntactic change; that is purely a *lexical* change – the rules for stringing words together into phrases and sentences (i.e., the syntax) remained the same at the moment these words were reanalyzed. (This is not meant to deny the existence of reanalyses that simultaneously cause a change in lexical representation as well as syntactic structure, but simply to point out that not all putative examples in the literature are indeed examples.)

Consider as a further example the reanalysis of verbs into prepositions, a rather common change: Thai *maa* 'to(ward)' is historically the verb 'come,' *càak* 'from' is from 'leave,' and Ewe *ná* 'for' is from 'give' (Blake 1994: 163–4). The verbs in question were often used to fill out the meaning of other verbs to

express directionality: a non-directional motion verb like *walk* could be combined serially with a directional verb like *come* to mean 'walk to,' or *leave* to mean 'walk away from.' A sequence beginning literally *walk come the house* can be structurally reinterpreted as a combination of verb plus preposition (equivalent to *walk to the house*) rather than as verb plus verb. In one sense, there has in fact been no change: the meaning of the phrase is still the same, only the lexical specification of one of the words has changed due to the structural reanalysis. (In these languages there is in fact often a split: the verb is still alive and well, and a second, homonymous word has come into existence with a prepositional function, used in different contexts from the verb.)

Grammaticalization has often been portrayed as a gradual process (as by Traugott and Heine, both this volume),[27] but the analysis of, say, Thai *maa* in certain contexts as a preposition and not a verb is, like other (re)analyses, instantaneous. One must not conflate the succession of diachronic events that precede a reanalysis with the reanalysis itself: regardless of how many prior events made the grammaticalization of *maa*, for instance, ultimately possible, during that whole period *maa* was a verb, not a preposition, and the change from verb to preposition was just the next event in the unending series of events that constitute the history of Thai.[28] (I do not wish to say that it is unimportant to study these prior events – quite the contrary.)

4 Directionality in Grammaticalization and Semantic Change

Numerous scholars have set up explicit and detailed clines to map out an apparent unidirectionality that characterizes grammaticalization. As this topic is covered in detail in Traugott (this volume) and in the literature cited there, I will not embark on a full discussion, save to outline some hypotheses for further consideration. Traugott, in a number of articles (e.g., 1982, 1985, 1989, and this volume), has argued that there are three overarching tendencies to be found characterizing semantic change: words that start out with a purely "external" meaning acquire one that is more "internal," that is, tied to perception or evaluation (such as *boor* 'farmer' > 'oaf,' *feel* 'touch' > 'have an opinion, think'); "external" meanings turn into textual meanings that structure discourse (e.g., *while* 'period of time' > 'period of time (during which something happens)'); and meanings become increasingly subjective (e.g., *apparently* 'openly' > 'to all appearances'). Ideally, these tendencies would reflect overarching principles of semantic change, which, needless to say, would be an enormously valuable advance.

My assessment of this literature is that it is at the least premature to ascribe such weight to these tendencies (and others that have been put forward), and in fact I rather doubt that they represent any overarching principles governing semantic change; rather, they are epiphenomenal. Let us consider as an example

first the Hittite quotative particle *-wa(r)*, which can represent the standard shift from referential or concrete to more abstract meaning: in the usually accepted etymology, it is derived from a form of PIE **u̯er-* 'say,' probably an aorist **u̯ert* 'said (3rd sg.),' which in Common Anatolian became grammaticalized as a quotative particle.[29] The types of reanalyses responsible for the grammaticalization have been well documented by Traugott and others. The question that arises is, is there anything that could cause a change in the other direction, from quotative particle to (say) verb of speaking? For this to happen by a reanalysis, this unstressed particle, with no inflectional endings, would somehow have to be reinterpreted as an inflected content word. Perhaps this is not impossible, but the conditions allowing such an analysis are surely very rare.[30]

To take a second example, English *since* had a purely temporal meaning in the first instance ('after'), and out of this developed a secondary, subjective, causal meaning ('because'); this is a classic example of the supposed principle that grammaticalization and semantic change in general proceed toward more subjective meanings. Could the reverse happen – could a subjective expression of causality get reanalyzed as an objective expression of temporal succession? In the case of a word like *since*, which can be used as either a causal or a temporal conjunction, this might well be possible by narrowing. In the case of a word like *because*, which has only causal meaning, it is much harder to envision how it could ever come to mean, say, 'after.' Causality can imply temporal succession, since an event that causes another event must precede that event in time or be already present. For a conjunction like *because* to become a temporal adverb only, it must be stripped of its causal meaning as the result of a reanalysis whereby the presence of the causal meaning was not perceived. Such a reanalysis would only make sense if *because* were limited to contexts where a temporal interpretation ('after') was possible. This could only happen if the word were restricted to use with verbs expressing actions that precede the actions of matrix clause verbs. Such a restriction is not likely, however, since something can happen because something else *is* (contemporaneously) or *will be* the case. I do not know any examples of causal conjunctions with the type of restriction in usage outlined above; and the rarity of such examples presumably accounts for the rarity of the shift from subjective to objective meaning (at least in this case).[31] What we see from all this is, again, that the probable reason that Traugott's and others' directional tendencies seem true is not because such tendencies exist as reifiable entities influencing semantic change, but rather because the contexts in which the opposite direction could be taken are rare to non-existent; and the reason they are rare to non-existent flows from more elementary principles.

Another tendency that has been forwarded (one belonging a bit more in the realm of morphological than semantic change, but germane to our topic as well) is the shift from function word to affix, supposedly strongly preferred over shifts in the other direction. This also follows from more basic principles. The change of function word (say, postposition) to affix is made rather easy by the usual phonological factors involved: function words are unstressed and

frequently cliticize, and a reanalysis of a clitic that is attached to one part of speech as an affix is a relatively trivial change. Typically, the affix would live on as an unstressed entity, subject to further phonological weakening perhaps. For the opposite to happen, the conditions would have to be right for a phonologically dependent clitic or affix to be reanalyzed as a separate word. Such changes can occur, but affixes generally do not behave phonologically as independent words.[32] I therefore see the directionality (function word > affix) as epiphenomenal, and not an independent property of semantic change itself.[33]

The preceding discussion is of course far from a complete consideration of the careful and thoughtful work that Traugott and others have given these matters over the past few decades, and I hope to address these issues in more detail elsewhere. The tendencies that they have identified are in themselves perfectly valid, and can be put to great use in diachronic analysis of the histories of particular languages. I merely wish to point out that we should be careful how we interpret these tendencies, and the proposed unidirectionality of grammaticalization that they imply.[34]

Outside of the realm of grammaticalization, a large number of recurrent semantic changes are seen, as those examples given at the outset of this chapter. These reflect certain basic metaphorical extensions that all humans can construct, and so it is not surprising that they are found again and again in the histories of languages. Those that have so far been investigated are not unidirectional, but at least one study is suggestive that unidirectional changes may in fact exist. Jurafsky (1996) has claimed that the manifold uses to which diminutives are put cross-linguistically all stem from the notion of 'child' or 'small' (often, in fact, from an actual word for 'child' that got grammaticalized), and that developments in the other direction (e.g., a pejorative formation becoming an ordinary diminutive) are not found. His observations and analysis still await further refinement and empirical testing, but should they be proved correct, we may have finally discovered not only whether there exist true unidirectional changes, but also whether their unidirectionality is not simply epiphenomenal.

5 Grammaticalization and Frequency

The frequency of a linguistic form has often been viewed as a factor influencing language change; how it influences change – whether it catalyzes it, or keeps it in check – depends on what kind of change is being talked about and which scholars are talking about it.[35] Paul (1880: 86) opined that semantic change affects uncommon words more often than common ones, the reason being that a misconception about the meaning of a word has a greater chance of getting corrected from frequent exposure to the word in its correct usage. This intuitively makes some sense, but is not borne out by the facts. Grammaticalizations in particular provide many examples of quite common words that

have undergone semantic reanalysis. Since, therefore, both frequent and infrequent words undergo semantic change, frequency does not appear to be a relevant factor.[36]

In contrast to Paul's statement, frequency is considered a precondition for grammaticalization by several scholars (see Bybee, this volume, for much more detailed discussion of the whole issue). This is a difficult claim to evaluate because of the different uses to which the term "grammaticalization" is put; it sometimes refers to the whole "process" that I discussed above, and sometimes just to the reanalysis that causes a word to become a grammatical element. To take the latter usage first, it may in fact be true that all examples involve frequently occurring words, but this would certainly be epiphenomenal: as we have just discussed, frequency itself does not cause reanalysis, and grammaticalization (in this narrower sense) is reanalysis. In the broader sense, where grammaticalization is conceived of as a process, there are clear counterexamples for subparts of that process. Consider the phrases *pitch-black* and *pitch-dark*. Joseph (1992), in a different context, calls attention to the interesting fact that some speakers have reanalyzed these phrases as meaning 'very black/dark' rather than literally as 'black/dark as pitch'; *pitch-* was thus analyzed by them as a color intensifier, and they are able to generate phrases like *pitch-red* 'very red.' For them, *pitch-* has been at the very least delexicalized (and might at some future date become grammaticalized as a general intensive); and this quite in spite of the fact that neither *pitch* 'tar' nor *pitch-black* is terribly common.[37]

All that is really necessary for this reanalysis to happen is for the historical connection between the first compound member *pitch-* and the noun *pitch* to be opaque. While the factors causing opacity are far from clear, frequency is not one of them. Opacity, being the failure to analyze a form according to its historical morphosemantic composition, is itself a kind of reanalysis – a negative kind, a lack of an analysis that had been made by other speakers. Perhaps order of acquisition is at the root of this particular example: if *pitch-black* were encountered before the noun *pitch* (not an unreasonable supposition, and in line with the data in n. 28), a child or other learner would be unable to interpret it with reference to a noun he or she had not even learned yet.[38]

We have seen, then, that both frequent and infrequent forms can be reanalyzed; both frequent and infrequent forms can be grammaticalized. If all these things happen, then frequency loses much or all of its force as an explanatory tool or condition of semantic change and grammaticalization. The reasons are not surprising, and underscore the sources of semantic change again. Frequent exposure to an irregular morpheme, for example (such as English *is, are*), can insure the acquisition of that morpheme because it is a discrete physical entity whose form is not in doubt to a child. By contrast, no matter how frequent a word is, its semantic representation always has to be inferred. Classical Chinese *shì* was a demonstrative pronoun that was subsequently reanalyzed as a copula; exposure to *shì* must have been very frequent to language learners, but so must have been the chances for reanalysis.

6 Conclusion

The limitless variety of semantic change has often been a source of consternation. Hock and Joseph's textbook on historical linguistics is one of the more recent places this consternation can be found expressed (1996: 252):

> in the majority of cases semantic change is as fuzzy, self-contradictory, and difficult to predict as lexical semantics itself. This is the reason that after initial claims that they will at long last successfully deal with semantics, just about all linguistic theories quickly return to business as usual and concentrate on the structural aspects of language, which are more systematic and therefore easier to deal with.

Certainly the *results* of semantic change are often wildly idiosyncratic. Given the limitless variety of human cultures and creativity, this is fully expected. The fact is, there *are* no constraints on semantic change if one just views the relationship between the referents involved. One simply cannot rule out a given hypothetical semantic shift, in the way that one can rule out a given hypothetical sound change (e.g., a one-step sound change like $i > k^w$); it is only when extralinguistic cultural facts are taken into consideration (e.g., the fact that beads were associated with praying) that certain patterns emerge (the traditional categories of metaphor, metonymy, etc.).

In this chapter, I have taken issue with a number of relatively standard practices, assumptions, and terms in the study of semantic change, while trying to present them in a balanced manner suitable for an introduction to this fascinating area of historical linguistics. I have argued that much previous research has tended to obscure the nature and our understanding of semantic change as a non-gradual event. I have also stressed the importance of clearly defining our objects of study, and limiting our questions and investigations to concepts that are discrete, such as individual reanalyses and individual grammars. When this is done, many questions that had hitherto been cruxes turn out to be red herrings, such as when a semantic change constitutes language change. In this vein, I have tried to emphasize the importance of distinguishing between reanalyses and the spread or diffusion of change, which is a separate sociolinguistic issue.

Since in my view the results of change are not as important for an understanding of its mechanisms as the reanalyses and the contexts which enable them to happen, I argue for a different view of grammaticalization as a type of change really no different from any other semantic change. As with other types of change, I argue that the purported unidirectionality and "tendencies" of grammaticalization are not primes of semantic change, but epiphenomena derivable from more basic principles. The efforts of Traugott and others to isolate the discourse conditions that can lead to grammaticalization can be profitably extended to isolating the conditions that can lead to reanalysis more generally, and while I have my doubts that the proposed tendencies

of directionality in semantic change mean what they are sometimes claimed to mean, the research program out of which they have sprung is a very promising one indeed.

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For invaluable assistance with the bibliography and for numerous helpful suggestions and criticisms on earlier drafts I am indebted to both Brian Joseph and Richard Janda. I should note, though, that our views do not coincide on all points, and responsibility for any errors, of course, rests solely with me.

NOTES

1 See, for example, Arlotto (1972); Jeffers and Lehiste (1979); Hock (1991); McMahon (1994a); Crowley (1997); Hock and Joseph (1996); Trask (1996); as well as more specialized works like Goyvaerts (1981).

2 This, the standard take on bleaching, has some detractors who would argue that bleaching actually involves the addition of content; see Rubba (1994: 95).

3 I leave aside the question of whether broadening and narrowing might be leftovers of the semantic over- and underextension found in certain stages of child language acquisition; to my mind it seems possible that some instances of them could be, though in the absence of unambiguous examples I would not insist on it. (Barrett 1995: 378 implies that all overextensions go by the board.)

4 Cf. Hoenigswald (1960: 46), who remarks that a closed inventory is "an illusion."

5 Broadening, for example, is traditionally kept distinct from metaphor and metonymy, but is reducible to the former: if *dog* used to refer to a particular breed of dog, its subsequent use to refer to other breeds must have rested on a similarity perceived between that breed and other breeds. Melioration and pejoration are subsumable under metonymic change. Narrowing is no different from loss of meaning through reanalysis: if early speakers of English were using the word *deer* 'wild animal' preferentially of cervids ('*the* wild animal,' for whatever cultural or environmental reason), then succeeding generations could well understand *deer* to refer just to cervids, and not to other animals. We might then say that for the early English, the deer was the wild animal *par excellence*. See also n. 13 below for further discussion of this word.

6 Noted explicitly, for example, in Andersen (1974) and Hughes (1992); but such criticisms clearly have not percolated into the general scholarly consciousness. It may be mentioned in passing, by way of comparison, that the traditional categories of sound change also refer just to results of change: assimilation,

dissimilation, metathesis, lenition, fortition, syncope, epenthesis, and the whole lot of seemingly discrete types are merely different surface manifestations – results – of reanalysis of ambiguous acoustic cues. See on this especially Ohala (1989, 1993a); Blevins and Garrett (1998); and Hale (this volume).

7 I say "a grammar" and not "the grammar" so as not to imply the existence of some ideal grammar that exists independently of individual speakers. See also n. 9 below.

8 For an overview, see, for example, Aitchison (1989) and Pinker (1994).

9 To be picky, it is a misnomer to speak of grammar *transmission*; what occurs is successive instantiations of knowledge states. One also often reads about the acquisition of a "target grammar," but I doubt this phrase is accurate, either. Given the diversity of outputs that people are exposed to, it is difficult (at best) to conceive of some ideal grammar that exists in the air, as it were, toward which any speaker could strive. I therefore disagree with views such as those in Ohala (1993a). At the very least one would have to conceive of a multiple series of "targets" (see Weinreich et al. 1968: 145 and discussion below in the main text).

10 I should stress that the discontinuity described above is what is crucial, not the point in one's life at which the innovations actually occur (during or after early childhood, for example), which is a contentious question. See below in main text for more discussion of this issue.

11 The inadequacy of the term "change" has been pointed out by others, for example, Coseriu (1983: 57): "linguistic change is not 'change' but *the construction, the making of language*" (emphasis in original). See also Ehala (1996: 5); Andersen (1973: 767, and especially 1989: 12), who prefers to speak of "innovation" rather than "change," a practice I have in part adopted. I return to these matters further below.

12 An approach that underscores the importance of ambiguous contexts and combines this with the intergenerational break between grammars goes at least as far back as Jespersen's work in the early 1920s (see, e.g., Jespersen 1921: 175–6).

13 In the case of *bead*, one could argue that the introduction of *prayer*, borrowed from French, was responsible for the change of meaning by "crowding out" the meaning 'prayer' from *bead* itself and leaving the latter open to reinterpretation. Such a position would be taken, for example, in semantic field theory (see below, n. 22). There is, however, no clear evidence from the words' attestations that this is what happened: *bead* and *prayer* happily coexisted for several centuries. They are even found several times in the 1300s and 1400s together in the phrase *beads and prayers*, proving that individual speakers could tolerate this coexistence without trouble.

The historical linguistic literature is full of purported examples of words "crowding out" other words. The textual evidence is always the same: word A, the old word, is attested more and more sparsely during a period in which the attestations of word B, the young upstart, are increasing. Thus *deer*, for example, originally meant 'wild animal' and developed the meaning 'cervid' probably before the twelfth century. By the close of the fifteenth century, its original meaning had died out except in the fixed phrase *small deer*. This period coincides with the introduction of a new word for the concept 'animal,' namely *beast* (from French, in the early thirteenth century) whose attestations become more widespread over time. But correlation is not causation, and there are countless instances where the introduction of a new word did not correlate with the disappearance of an older, synonymous word (consider the pairs *beak/bill, valley/dale, aid/help*, where the first member of each pair is a French borrowing). Such statements in fact leave the speaker and the sociolinguistic situation out of the picture. For whatever sociolinguistic reason, the number of people using *beast* started to increase (first starting in and around the French court and nobility); this in turn increased the likelihood that other speakers and learners of English would hear this word more than *deer* as the word for 'animal,' and the sociolinguistic prestige of French led to more adult speakers adopting the word, whose children then would have heard them say *beast* and not *deer*, and so forth. In other words, I do not think there is clear evidence that the replacement of *deer* 'animal' by *beast* (and, later, by *animal*) has anything to do with the crowding of a semantic field; it happened for the sociolinguistic reasons that *beast* was the new prestige form, and because the linguistic data new generations were exposed to contained more tokens of *beast* than of *deer* 'animal.'

14 This is assuming that *harked* is not a delocutive to the interjection *hark*, along the lines of Latin *negāre*, German *be-ja(h)-en*, etc., in which case we are not dealing with semantic change at all, but with the productive formation of a new lexical item.

15 A more complicated sort of reanalysis, more overtly involving a lack of "connection" between the old and new meanings, is when a word's meaning is assigned on the basis of a similar-sounding word; a recent example is *enervated*, which has been enjoying usage in the opposite sense from its "correct" meaning, namely, 'energized' instead of 'drained.' There is a certain similarity to folk etymology here, except that rather than the phonological shape changing under the influence of another lexeme (and the meaning remaining intact), the phonological shape remains but the meaning is analyzed on the basis of another lexeme. Such cases go to show that context is not the only information used to assign meaning to unfamiliar words. Ringe (1989: 149n.26), following an oral suggestion of Richard Janda (who noted the influence of *indifferent* on the meaning of *diffident* in contemporary non-standard English), says that such changes only happen when the two words are in the same semantic sphere. However, this claim is not true; consider, for example, the infiltration of forms of the Old Irish verb *benaid* 'strikes' into the paradigm of the substantive verb ('exists') due purely to the phonological similarity of forms of these two verbs in the subjunctive and preterite (see Thurneysen 1980: 480).

16 Essentially the same thing was realized already by Paul (1880: 77): "In most of the cases adduced, it is completely impossible without historical study to recognize the

original connection between the individual meanings, and these are not otherwise related to each other than if the phonetic identity were just coincidental." Stern (1931: 180–1, 356) saw this as well, but drew different conclusions from it.

17 See also Bickerton (1973) and Kay (1975), to mention two of the more well-known studies to follow.

18 This claim must be understood in the context of sociolinguists' usage of the term 'change,' which refers not to linguistic innovation (my usage) but to diffusion of innovations through a speech-community. I address the use of this term further below in the main text. Linguistic *innovation* (change in the narrow sense) is possible under any environment because of the discontinuity of transmission; a child that grows up hearing the speech of only one person is just as likely to make reanalyses as one surrounded by variation.

19 The Neogrammarians, it should be noted, also did not limit language innovation to the agency of children; see Paul (1880: 86). Two well-known examples of adult reanalyses are *derring-do* (a misconstrual of what was originally just a verbal phrase meaning 'to dare to do'; see the OED, s.v.) and *premises* (originally 'the [*sc.* properties, possessions] listed above' in legal deeds; discussed in Stern 1931: 358).

20 Note that in the case of children, the crucial role of discontinuity holds regardless of what theory one adopts to explain the acquisition of semantics, about which there is much controversy (Barrett 1995 has a good recent overview). In their present state of development, I do not know how much these theories have to offer the historical linguist. For example, prototype theory, one of the more popular ones in recent years (see, e.g., Kay and Anglin 1982), claims that meanings of words are first acquired in the form of a specific referent (the "prototype") rather than as bundles of semantic features. Thus, the meaning of *dog* for one child might be its household's pet Fido in the first instance. Different children would be exposed to different prototypical dogs, which would have an effect on what sorts of referents the words could then be extended to; and conceivably the original prototype could have some sort of lasting effect on the semantics stored in the speaker's head for a given word. This makes a lot of intuitive sense, but whether this is in fact the (or a) mechanism of semantic acquisition, ultimately it adds nothing to our initial observation that discontinuity in language transmission leads to the instantiation of different grammars across generations.

21 Even under the first definition, it is only from the viewpoint of the children who "unconsciously imitate those around them" that children do not initiate language change; what about the other children in their social groups from whom they are picking up innovations? Surely they are not all copied from adults – some of them must be the children's own reanalyses made during grammar acquisition. If any of those reanalyses are diffused to other members of their social group, as some of them must be, then children do instigate at least *some* language change, under either definition of the term; and that includes semantic change.

22 I shall here mention briefly two other approaches to semantic change that I cannot discuss in detail. One is the functionalist explanation of semantic change (e.g., Ullmann 1957, 1962; Geeraerts 1983, 1986), which claims essentially that semantic change has a function, such as to increase communicative efficiency. While it is certainly true that language has a communicative function, that does not automatically mean that language change has one. There is not a whit of evidence that, for instance, the languages of 3000 years ago with modern-day descendants were any less "efficient" (whatever exactly that means, given the well-known redundancy inherent in language) than their descendants (surely enough time for all the supposed improvements to have added up and become noticeable as such). Another approach which may be mentioned here is the use of semantic field theory to account for semantic change (see, e.g., Lehrer 1985 with references, and n. 13 above for an example of where this theory might be claimed to apply). This theory argues that semantically related words share historical developments and that relationships among words bear crucially on their synchronic meanings. This appears to work fairly well in some cases, but Lehrer herself (ibid.: 293) admits that it does not in others. I rather suspect that when semantically related words share historical developments, it can be deduced from more basic principles.

23 See Heine (this volume) for a good overview of the history of grammaticalization studies.

24 For further examples see Blake (1994: 168).

25 In such cases, where the original negator no longer needs to be expressed, it is said to have undergone *ellipsis*. Ellipsis is sometimes considered a separate type of semantic change, but it too stems from a reanalysis: in *ne . . . pas*, where it is ambiguous which word is expressing the negative alone, some speakers analyzed *pas* as the salient negator.

26 This view is probably not standard; I argue for it more fully in Fortson (2002).

27 "[I]t is a salient characteristic in most studies of grammaticalization that they are phrased in terms implying that morphemes exist apart from mortal speakers and so may undergo continuous evolution governed by processes lasting centuries" (Janda 2001: 283).

28 I would even hesitate to use the word "process" to describe the events leading up to a reanalysis such as this. No change in language makes another change inevitable, to my knowledge; it may make it more likely, but that is all. "Process" reifies an arbitrarily chosen sequence of historically contingent events. Of course the study of these events, and how they contribute to making certain reanalyses possible, is very important; but since these changes, taken together as a group, occur over many generations, and since (again) each generation has to construct a grammar from scratch, the appearance of an overarching direction taken by a sequence of events is quite illusory.

29 See Fortson (1998: 21n.1) for the phonological details. A different etymology is argued for in Joseph (1981).

30 The other possible route would be to form a delocutive verb, but that is a different matter since that is just the synchronic creation of a new lexical item using available productive morphology. We would not want to claim, for example, that

the Latin delocutive verb *negāre* is a reanalysis of the negative *nec* as a verb.

31 Such a reanalysis is even harder to imagine given the use of causals like *because* as an answer to questions using *why*. Notice that *since* is not so used.

32 Orthographically, of course, they sometimes do (e.g., Avestan spellings with word-dividing interpuncts between base and ending, as in the dative pl. *γžaraiiaṯ.biiō* '(over)flowing' Yasht 15.2), but that is a separate issue.

33 Compare also Janda (2001, kindly forwarded to me by the author after these lines were written), which is a significantly lengthier study than mine and makes several points against the unidirectionality hypothesis that – happily – coincide with my own. In particular, this study makes use of examples of degrammaticalization (essentially the same as demorphologization, the term used in Joseph and Janda 1988), whereby a grammaticalized element becomes a full-fledged lexeme. (I think the examples are even rarer than at first appears; several putative cases of degrammaticalization are in fact not reanalyses, but nominalization of a bound morpheme, as in English *pro* and *con*; these must be carefully separated, which has not been done consistently in the literature. Cf. also nn. 14 and 30 above.)

34 Tendencies and directionalities of change have been adduced in other contexts besides grammaticalization, but rarely. One interesting example is Williams (1976), who notes particular directional tendencies in English and Japanese in adjectives of sensory perception. He speculates (ibid.: 472) on possible cognitive and evolutionary reasons for this. As he notes, though, some exceptions to his scheme can be found from the history of English. Traugott and Dasher (2002), an important new work on directionality in semantic change, appeared after this chapter went to press, and is reviewed by me in *Diachronica* (forthcoming issue).

35 For example, it is often claimed that words are more likely to undergo sound change if they are frequent (a view I disagree with), while morphological change is less likely to affect words that are very frequent, since their frequency makes it hard for the language learner to "miss" their morphological properties.

36 To be fair, of course, no one has claimed that frequent words do *not* undergo semantic change, just that it is less common. But this is also a vacuous assertion: even if it is nominally true, it surely just restates the distributional fact that there are fewer frequent words than infrequent ones.

37 In the 1,014,232-word corpus analyzed by Kučera and Francis (1967), the token *pitch* (in all senses) occurs but 22 times, and *pitch-black* and *pitch-dark* do not occur. (The number of distinct tokens in the corpus was 50,406.)

38 This opacity might or might not get reversed later; I have known people for whom the brandname *Frigidaire* was opaque for the first four to five decades of life, even though the phrase *frigid air* was quite familiar to them. A Frigidaire at home while one is learning English is all that is needed for that word to be acquired quite early on, and well before the adjective *frigid*.

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