1 Introduction

Semantic shift is most immediately associated with the change in meaning that can be observed at different historical stages of a language in the way one might trace semantic shifts of words from Middle English to Modern English. This is semantic shift on the grand stage of history. But semantic shift can also be understood in ways which make it manifest in very ordinary kinds of language activity as happens in our lived experience, without reference to the historical stages of a language spanning centuries. It is this kind of semantic shift that will be the focus of this chapter, even if the study of semantic shifts of meaning change on the grand scale can still contribute, importantly, to this approach.

As a simple example of shifting that has occurred in the course of the author’s lifetime, consider the well-known changes that have occurred in computer terminology. The advent of computers has given rise to a prolific and ongoing recruitment of words to describe new ways of interacting with computers. Familiar words have come to be used in innovative ways to serve this domain of experience: hardware, application, programme, browser, desktop, navigate, search, domain, flame, memory, virus, and, of course, many more. The semantic shifts evident in these words are well established in English. Lexicographic practice, as seen in contemporary dictionaries, typically accords these semantic shifts the status of full-fledged meanings (leaving aside the question of whether such practice agrees with what a semanticist might determine, following a particular theory of polysemy: see Chapter 13). But one can point to other more isolated and less permanent kinds of semantic shifts that are less often remarked upon and less likely to find their way into the codified language described by dictionaries. I recently happened to hear the following snippet of speech (from a single speaker, a veterinarian) on a radio program, in reference to how doctors and veterinarians should see themselves: “We are all veterinarians; it’s just that some of us specialize in human populations.” It was a funny and thought-provoking way of trying to lead listeners to rethink and re-examine how they prioritize veterinarians vis-à-vis doctors and the animal kingdom vis-à-vis humans. The snippet of speech, at the moment I heard it, required some semantic shifting of the word veterinarian in my mind (and presumably in the minds of others if they were listening as attentively as I was) from the sense of “a medically trained person who specializes in animals” to “a medically trained person”.

These two types of semantic shift have very different consequences in terms of the impact made on the English language. The former is so widespread it has become codified in modern
English, as reflected in the changes made to entries such as *virus* in modern dictionaries. The latter, on the other hand, remains a relatively fleeting experience on the part of some speakers, without any obvious lasting effect on language usage for the vast majority of speakers. Clearly, there is a great difference in the acceptance of these shifts and their spread through society, but this difference in the social impact and the time span of the shifts should not distract us from the commonality of the semantic shifting that underlies both phenomena. They are both semantic shifts that I, for one, have experienced within my lifetime; they form part of my genuinely lived experience of language. This chapter considers key issues that arise for theorizing about language when one makes such phenomena a focus of study. Given that semantic shift, as understood here, is such a commonplace, even mundane, phenomenon, a linguistically naïve person might well expect that the phenomenon would be central to, and hence readily accommodated, in any sophisticated theorizing about language. In point of fact, the phenomenon has not always been the focus of interest in contemporary linguistics that one might have expected it to be and a conceptual framework for adequately dealing with it has yet to be fully developed.

2 Critical issues

In this section I will review a few critical issues that arise in discussions of semantic shift: (i) the flexibility of meaning, (ii) the construction of meaning as a dynamic, cognitive process, and (iii) the context of use.

The observations in section 1 point to a profoundly important characteristic of meaning in reference to natural language: meaning is flexible. Semantic shift, in this view, is an undeniable and ubiquitous facet of our ordinary experience of language. In the words of Lichtenberk (1991: 477):

> Word meanings are not fully determinate; they are open-ended, flexible. This is what allows words to be applied to new experiences, to express newly perceived relations among phenomena and thus to form new categories or to alter the make-up of existing categories, and to relate to each other phenomena from different cognitive domains.

The flexibility of meaning lends support to viewing language more as an ongoing, never-to-be completed work in progress, rather than as a static state of affairs – a viewpoint that sits uncomfortably with much of linguistic theorizing that prefers to assume a more fixed, synchronic state of language. In the early twentieth century, Saussure (1959: 100) had elaborated on what he considered to be a necessary conceptual move in studying language synchronically:

> An absolute state is defined by lack of change. But since languages are always changing, however minimally, studying a linguistic state amounts in practice to ignoring unimportant changes. Mathematicians do likewise when they ignore very small fractions for certain purposes, such as logarithmic calculations.

According to Saussure, then, just as mathematicians may sometimes need to round off fractions to whole numbers, so linguists need to ignore unimportant fluctuations in language over the period of time they choose for the synchronic state. *Unimportant* is a critical word in the quote above, since the decision as to what is important or unimportant is the key to
what kind of language practices, acts, facts, etc. will be studied. As seen in the quote above, Saussure well understood the ever-changing nature of language but considered it necessary to “fix” language in some absolute, stable state to proceed with a practical description of language. The assumption of a stable language state has been fundamental to most theorizing about language in the post-Saussure era, along with the correlate that language should be conceived of as a fixed object of study.

Inevitably, changing the focus to flexibility of meaning, rather than stability of meaning, means that human cognitive processes will occupy centre stage in discussions of semantic shift, rather than the notion of an abstract stable system. A congenial home for researchers choosing to make meaning construction and associated human cognitive processes a focal point can be found in the sub-field of pragmatics and the body of research known as Cognitive Linguistics, especially its sub-field Cognitive Semantics (see Chapters 5, 10, and 11). For many researchers working within these approaches, the semantic side of the traditional linguistic unit of the word has been re-conceptualized so that the word is no more than a “prompt” or “trigger” for what the intended meaning might be, leaving it to the listener/reader to construct the fully elaborated meaning (cf. Fetzer’s (2011: 25) description of meaning as “not a product and given, but rather dynamic, multifaceted and negotiated in context”). Each use of a word is understood in its larger context, quite possibly a new context in which the word has not been used before, and the listener/reader will associate that word with a fuller meaning, depending on their prior language experience, the immediate linguistic context in which the word appears etc. The idea that meanings emerge in the minds of language users when various cognitive processes are applied is by no means new and some version of this idea is commonplace in linguistics. Making this aspect of language a centre-point and focus for linguistic theorizing is, however, what distinguishes the above approaches.

Addressing the realities of the meanings associated with words like desktop and veterinarian requires us to recognize that our understanding of a word is closely tied to the context of use of that word and how we interpret the whole context of use, a perspective that lies at the core of the pragmatics tradition in linguistics. An earlier and careful statement of this reality is to found in Stern (1931), a volume that still repays close reading. Stern (1931: 68) distinguished two kinds of word meanings: lexical meaning (the meaning we ascribe to an isolated word or phrase) and actual meaning (the meaning of the word in actual speech). Lexical meaning, for Stern, was a distinctly odd notion, citing the Cambridge psychologist James Ward approvingly:

We never – except for the sake of this very inquiry [i.e. an academic exercise, JN] – attempt to fix our minds . . . upon some isolated concept; in actual thinking ideas are not in consciousness alone and disjointedly, but part of a context.

(Ward (1918: 299), cited in Stern (1931: 68))

In Stern’s view, it was a mistake to speak of lexical meanings as if they existed on their own, independent of linguistic context. Recognition of linguistic context of usage as a critical factor in any attempt to account for word meaning was also a central tenet for Firth who, as is well known, had pronounced: “you shall know a word by the company it keeps” (Firth 1957: 11). Recent decades have seen the rise of newer approaches in the study of context. These include corpus-based approaches in linguistics whereby the preceding and following linguistic environments (sometimes called “co-text”) of a word in use are made readily apparent (see Chapter 6). It is not just the linguistic co-text of a word that is relevant to constructing the meaning of that word, however. Rather, it is the whole context of use that must be considered relevant. This
Semantic shift includes listener/reader expectations, discourse topic, the physical setting of the communication act, etc. The word *veterinarian*, for example, did fleetingly undergo semantic shift to “a medically trained person” for me, but this only happened under the circumstances described above, during a radio program, knowing the background of the speaker, and given the immediate co-text of the use of the word.

3 Conceptual tools

No one contemporary linguistic theory does full justice to all the issues raised in section 2. As indicated above, however, Cognitive Linguistics is one framework that can comfortably accommodate semantic shift and I will adopt that framework in what follows. Here I will focus on two influential ideas that have helped to shape much of the work relating to semantic shift within this field. The first relates to extension of meanings as represented in Cognitive Grammar; the second concerns the notion of conceptual blending.

Langacker’s Cognitive Grammar (Langacker 1987, 1988, 2008) is a sympathetic framework in which to explore and represent semantic shift (see Chapter 5). For a start, Cognitive Grammar incorporates a dynamic view of meaning, summarized succinctly by Langacker (2008: 30) in the following terms:

> meaning is not identified with concepts but with *conceptualization*, the term being chosen precisely to highlight its dynamic nature. Conceptualization is broadly defined to encompass any facet of mental experience. It is understood as subsuming (1) both novel and established conceptions; (1) not just “intellectual” notions, but sensory, motor, and emotive experience as well; (3) apprehension of the physical, linguistic, social, and cultural context; and (4) conceptions that develop and unfold through processing time (rather than being simultaneously manifested). So even if “concepts” are taken as being static, conceptualization is not.

This underlying view of meaning as a dynamic kind of conceptualization and part of mental experience makes Cognitive Grammar an attractive theory for accommodating and representing the relatedness of a word’s senses and the ever-present potential for some semantic shift within the meaning of a word. Figures 15.1 and 15.2 illustrate the core notion of semantic shift as commonly represented in this theory. Figure 15.1 shows a number of key semantic relations, at a very general level, in the diagrammatic form favoured by Langacker. It shows a schematic network in which senses are categorized with respect to other senses. A sense may have the status of a *schema*, i.e. a sense so general that it completely encompasses other senses; these other senses, in turn, elaborate the schematic sense and are indicated by solid arrows extending from the schema. Another kind of semantic relationship exists when one sense is perceived as being an *extension*, which is to say extended from another sense – the *prototype*. A dashed line is used to indicate the extension from a prototype. In so far as the prototype is the basis for the extension, we may speak of the prototype as sanctioning the extension. Figure 15.2, it must be emphasized, purports to represent no more than Langacker’s own judgement about part of the schematic network for *fruit* (cf. Langacker 1987: 74)). In this case, the semantic shift can be attributed, in part, to the increased awareness about the scientific classification of tomatoes as fruit and incorporating that new awareness into a revision of an existing folk belief. Not all semantic shifts on the part of individuals have to be so motivated, of course; semantic shifts can be triggered by any number of factors (simply an imaginative leap, for example). The apple, pear, and
John Newman

Figure 15.1 The core concepts underlying semantic shift in Cognitive Grammar (adapted from Langacker (1988: 140))

Figure 15.2 Core concepts applied to a semantic shift in fruit (adapted from Langacker (1987: 74))

**Banana** senses that appear in Figure 15.2 are categorized as instantiations, or elaborations, of a relatively schematic sense fruit. The less familiar, more technical categorization of tomatoes as fruits can be accommodated as an extension from the earlier schematic category. As a network extends horizontally, one would expect the network to also grow upwards since there are likely to be increasingly general schemas encompassing old and new senses. So, an extension of an earlier fruit sense to include tomatoes goes hand in hand with the creation of a new, even more encompassing schematic sense, designated by fruit’. The concepts of schema, prototype, and extension, as used in Figures 15.1 and 15.2, are the core concepts underlying Langacker’s approach to understanding and representing semantic shift and Figures 15.1 and 15.2 do no more than introduce these concepts and the accompanying notation. More complex examples of schematic networks building on these representational devices can be found in Langacker ((1987: 383) for tree, (1988: 135) for run). Extensions may form a radial network in which all extensions radiate from a single prototype, or they may form a chain such that one extension becomes a local prototype for a new extension, or they may form a network that combines such patterns.

The basic elements invoked in the representation of semantic shift in Figures 15.1 and 15.2 provide the means to accommodate, in a representational way, the all-important flexibility of word meaning. While Cognitive Grammar is attractive for this very reason, there are certainly issues that can be raised with respect to this approach. For one thing, there is the question of deciding just how many senses of a word to recognize, even granting that the analysis purports only to represent a single speaker’s intuitions. Arriving at some shared understanding on how to identify vagueness (implying one sense) as opposed to polysemy (implying many individual senses) remains a highly contentious issue in semantics (cf. Chapter 13). A common strategy adopted by linguists has been to proceed to differentiate interpretations of words in context, regardless of whether one treats the differences as vagueness or polysemy. Distinguishing word senses is an issue in any approach to word semantics,
quite independently of the presence of any semantic shift, and it is no less an issue when it comes to constructing or evaluating the semantic networks in the Figures above. The construction of semantic networks like those shown in Figure 15.2, as far as current practice in Cognitive Grammar is concerned, relies upon a speaker’s own judgement about different senses and how they are related and so take the differentiation of senses to be a “given” or at least something that the speaker or linguist could arrive at through introspection and reflection. Even when a speaker might intuit some semantic relatedness in the many uses of, say, the noun head in English (head of the bed, head of the department, head of lettuce), the task of representing these intuitions as schemas, prototypes, and extensions in a diagram like that in Figure 15.2 is not something that can be simply reduced to intuitions.

In recent years, attention has become focused on a kind of semantic shift referred to as conceptual blending or conceptual integration, as described in publications such as Fauconnier and Turner (1998) and Fauconnier (2009). Very briefly, conceptual blending refers to a cognitive operation in which elements from structures in two different mental spaces are integrated, giving rise to a new blended structure distinct from the two input structures. Fauconnier and Turner (1998: 137) describe mental spaces as “small conceptual packets constructed as we think and talk, for purposes of local understanding and action. Mental spaces are very partial assemblies containing elements, and structured by frames and cognitive models”. The use of desktop to refer to an entity on a computer, referred to above, exhibits conceptual blending of the mental space associated with a traditional three-dimensional desktop and the mental space associated with a computer screen (an example discussed at some length by Fauconnier and Turner (1998: 156–157)). Conceptual blending is to be thought of as a dynamic cognitive process, underlying countless instances of production and interpretation of expressions that invoke different “frame structures” from two inputs. Conceptual blending comfortably allows for, and indeed encourages, a focus on the actual moment in time when a blend comes about as a cognitive process, having as its outcome a new kind of pairing of form and meaning. Conceptual blending is pervasive in language and other realms in which the human mind is exercised.

The idea of a semantic network incorporating semantic shifts can also be applied to units of language besides words. Indeed, in Cognitive Grammar, morphemes, words, and larger constructional assemblies of morphemes and words are all instances of the same kind of symbolic entity in which there exists a pairing of form and meaning. Just as we may discern semantic shift in a word, so, too, we may discern it in these other kinds of units. One can equally well inquire into the relations among the senses of a suffix like –er (agentive sense in builder, instrumental in ruler etc.), the question tag hey? as used at the end of some utterances in colloquial English, or the various senses of a V1 and V2 construction (reflecting the different kinds of semantic relations that hold between the verbs in conjoined structures such as go and sit, wait and see, try and come, etc.).

Figures 15.1 and 15.2 are intended to capture, in very summary form, the process of semantic shift without any attempt to incorporate details of the actuation or spread of the shift. Figure 15.2, for example, says nothing about the circumstances under which the semantic extension originally took place or just how widespread this conceptualization of fruit is. It is not common practice to document the actuation of semantic shifts, with linguists preferring to see their task more in terms of identifying the beginning and end stages of such shifts and what those stages may share. And when there is such discussion, it is often speculative rather than authoritative, and therefore viewed as less than scientific. But there can be satisfying accounts of the origin of semantic shifts, even if they must be labelled “speculative”. Wells’ (1975) analysis of how fine, (as in be sure to read the fine print) might
have given rise to *fine* (as in *it's a fine day*) is a case in point. For Wells (1975: 210), the challenge with a pair of meanings like this, where the meanings could possibly overlap, is to imagine a plausible scenario whether there was indeed a probable overlap. Wells imagines a process involving a speaker (a salesclerk) and the hearer (a prospective buyer) and where the hearer is examining cloth. The speaker might use *fine* to refer to fine-grained cloth while at the same time (through gesture, expression, and manner) indicate that the speaker admires the cloth and that the hearer is expected to admire the cloth. In this particular case, then, the semantic shift originates in acts of communication in which the speaker intends his utterance one way and the hearer, upon hearing the utterance in a particular context, understands it another way (Wells 1975: 205). Stern (1931) has extended discussion of similar cases where some mismatch between intended and understood meanings might have arisen in acts of communication, e.g. the shift in the meaning of *want* from “to be in want of something, to be lacking something” to “to desire something”. Stern uses the terms equivocal and equivocation to describe the condition which holds when either one of two meanings could be present simultaneously in communication. For Stern, the choice of one meaning over another in such situations was the result of a change in attention focus such that “if the speaker turned his attention to the matter, either of the two possible meanings might emerge as the one really intended” (Stern 1931: 356). Equivocation is by no means the only kind of circumstance, or even the most common kind of circumstance, in which semantic shift can take place (there does not need to be any “misunderstanding” on anybody’s part, for one thing). It represents one type of unintentional semantic shift only, ignoring the large class of deliberate semantic shifts that take place (and see the chapter on a general theory of sense change in Stern (1931: 162–191) for an attempt at a comprehensive overview). Nevertheless, equivocation, as illustrated by the *fine* example above, is a good example of how semantic shift can be intertwined with the act of communication (and dependent on the larger context) and how, within that act of communication, semantic shifts can “develop and unfold through processing time” (Langacker 2008: 30). Many semantic shifts leading ultimately to grammaticalization also have their origin in subtle shifts of understanding in the act of communication. Bybee et al. (1994: 268) discuss a range of examples based on conversational implicatures of the type *going to X* “be travelling to a destination X” implying a future event and in turn giving rise to the use of *be going to* as an auxiliary-like verb indicating futurity. Acts of communication, it should be said, play a critical role not just in the actuation of a semantic shift but also in the spread of semantic shifts through a population.

4 Empirical methods

While the concepts introduced in section 3 provide some scaffolding for thinking about and representing semantic shift within contemporary linguistics, those concepts remain, for the most part, relatively (or entirely) subjective in their approach. Above all, the components that make up the semantic networks proposed above and how those components relate to each other are in need of more empirically grounded support to be entirely satisfying. This section introduces some of the methods that are relevant to a more empirically based approach to studying semantic shift.

Most of the research described in this section is not concerned directly with establishing the presence or absence of semantic shift as such, but rather with the goal of finding empirical support for miscellaneous kinds of relations existing between the senses of a word. This research can still inform our understanding of semantic shift, albeit in indirect ways. So, for example, Figure 15.2 above represents some senses (*apple*, *banana*, *pear*) as a sub-group in
their own right as part of a larger semantic network, but how much empirical support can be found among speakers or in language usage for such a grouping? Here I will focus on a few key methods for establishing the reality of different aspects of the semantic networks, drawing upon empirical research in experimental psychology, dictionary practice, corpus linguistics, and linguistic typology.

4.1 Experimental methods

One class of empirical results relates to subjects’ understanding of prototypical vs. non-prototypical senses of a word, sometimes couched in terms of central vs. non-central senses or uses. Descriptive terms like central and prototypical in such research may not always be equivalent to how prototypical is used in Cognitive Grammar (as seen in Figures 15.1 and 15.2), and one must bear this in mind. However, the psycholinguistic research suggests fruitful lines of research into the different status of senses of a word with some senses being more prominent for a speaker than other sub-senses. A number of studies have preferred to work with the relation of dominance of one sense over another (here, more salient in the mind of the language user), without requiring that a dominant sense be the one and only central sense within a semantic network, e.g. Brisard et al. (1997). As part of the preliminaries required for their actual psycholinguistics study, these authors identified dominant and subordinate senses for a set of Dutch (polysemous and homonymous) adjectives using the following method. Participants had to produce for each adjective as many nouns as possible, nouns understood here as being those that might occur in the adjective + noun frame. The resulting nouns were then classified into semantic types by three judges. The two most frequent semantic domains represented in these semantic types were the basis for identifying the dominant and subordinate meanings for each item. In this study, the dominant senses for polysemous words averaged at 86% for frequency of the semantic domains, the subordinate at 14%, pointing to a clear division between dominant and subordinate types of senses. While the results of these and the many other experiments constructed along similar lines do not necessarily confirm or disconfirm the kind of representation of an individual’s awareness of semantic shift in terms of schema, prototype, and extension (as in Figures 15.1 and 15.2), they do point to ways in which more empirically grounded research can throw light on the different status of the senses in such semantic networks.

4.2 Dictionary-based methods

Some methods for exploring the relatedness of word senses draw upon the prior work of lexicographers as reflected in dictionary-making practice. Williams (1992), for example, turned to the Collins Cobuild English Language Dictionary (1987) to establish tentative central vs. non-central meanings, as a preliminary step in setting up a series of psycholinguistic experiments. Williams relied on the relative ordering of the two sub-senses, A and B, in a dictionary entry to determine dominance, where the order A–B is taken to reflect the relative centrality of A and non-centrality of B. In this way, the adjective deep was found to have a central sense of “low” and a non-central sense of “profound”, awkward was found to have a central sense of “clumsy” and a non-central sense of “embarrassing”, etc. Obviously, this approach to determining the status of word senses depends directly upon whatever principles have been adopted in the dictionary. In the case of the particular dictionary chosen by Williams, the relative ordering involved considerations of frequency of usage (as established through a corpus-based approach to lexicography) and semantics (the more concrete sub-sense would usually be ordered before an abstract sub-sense).
A more sophisticated exploitation of existing dictionary entries can be seen in the work of Venant (2006). Venant was able to build upon the previous work on French synonyms that had been completed as part of the online *Dictionnaire électronique des synonymes* (DES), described in Doualan (2011). The key step in Venant’s approach is to construct a set of *cliques* for the word under investigation. A clique is formed by chaining together words which can replace one another in all contexts of use maintaining the relevant sense of the replaced word and without notably changing the meaning of the whole. Dictionaries (of the conventional kind) are the source for establishing cliques in this approach. The basic idea is that word A will enter into a clique with word B if word A appears as one sense of word B or vice-versa. As an example, consider the following selection of cliques for English *book*, retrieved from the electronic dictionary of English synonyms constructed along similar lines to the DES (http://dico.isc.cnrs.fr): \{book, ledger, register\}, \{book, daybook, ledger\}, \{book, log, record, register\}, \{book, playscript, script\}, \{book, manuscript, script\}. Clearly, some pairs of cliques in this list have more in common than other pairs, suggesting two main sub-groupings of the cliques into a “record of accounts” and “script”. It is possible to quantify the distance between any two cliques associated with a word in a more formal, algorithmic way which is necessary to establish a more objective basis for sub-grouping of senses. Venant (2006), following Ploux and Victorri (1998), opts for the chi-squared distance measure for this purpose. This metric takes into account not just how many synonyms are shared between two cliques, but also the overall number of cliques a synonym enters into and the overall number of synonyms a clique has. Once the distances between all the cliques associated with a word have been calculated, one can construct a two-dimensional representation of this semantic space by a principal components analysis, in effect carrying out a “correspondence analysis” on the data (see the plots in the works just cited for intriguing examples). In this way, the researcher is able to arrive at graphic representations of semantic networks (not unlike Figure 15.2 above), where the clusterings of sub-senses (operationalized as cliques) are determined not by subjective intuitions but by algorithmic methods. As with other dictionary-based methods, ultimately it is lexicographic practice (and the particular kinds of intuitions that are part and parcel of that practice) that underlies Venant’s approach.

### 4.3 Corpus-based methods

Corpus-based methods in linguistics have become increasingly popular as a consequence of the availability of relatively large corpora and the increased interest in usage-based approaches (see Chapter 6). Corpora, and frequencies of occurrence of words, enter into some of the methods alluded to above, e.g. the identification of central and non-central senses of a word in Williams (1992). The corpus allows the researcher to systematically note co-occurring patterns, not just patterns of co-occurring words, but more importantly patterns of co-occurrence of all kinds of linguistic properties, relating to morphology, syntax, semantics, pragmatics, etc. With a dataset constructed in this way, one can proceed to apply quantitative methods, especially multifactorial methods, to discover tendencies that might not be apparent otherwise. The study of the senses of the English verb *run* in Gries (2006) is especially relevant in the current context. Gries distinguished around 50 different senses of *run*, based on an examination of dictionaries and WordNet entries, and then constructed an impressive amount of co-occurring data relating to each of these senses, based on corpora. The data included morphological properties (such as tense, aspect, and voice), syntactic properties (such as transitivity, whether the verb is used in a main clause or a subordinate), semantic properties (whether the subject is animate, human, abstract), and many others. Gries was
then able to apply clustering algorithms to this dataset (similar to what Venant had done with her dataset of cliques), establishing groupings of senses that would not easily be apparent to the researcher without the aid of such quantitative techniques. To be clear, though, Gries takes the sense distinctions as given and it is only clustering of senses that the algorithm leads to, not the individuation of senses.

### 4.4 Lexical typological methods

Historical and cross-linguistic studies of the lexicon provide further kinds of empirical evidence for attested semantic shifts. The field of lexical typology, in particular, can enrich our understanding of how semantic networks can vary and the limits on how they can grow (see Chapter 25). Wilkins’ (1996) research on semantic shift associated with body-part terms is a good example of this kind of research, systematically exploring cross-linguistic tendencies, leading to insights such as, to choose but one, how the natural direction of change is for a body-part term referring to a visible part to come to refer to the visible whole, but not vice-versa.

François (2008) has proposed one highly effective method for constructing a kind of semantic map of polysemies. The starting point for François’ analysis is the identification of the senses of a word and he adopts a very practical way of proceeding. The researcher first selects a word, like English *straight*, and identifies, in a preliminary and tentative way, the senses associated with it (“rectilinear”, “frank”, “honest”, “heterosexual”, etc.). To avoid arbitrariness in making such decisions, the analyst turns to a second language to determine which additional senses need to be recognized. This procedure is repeated over many languages resulting in the most defensible separation of senses, based on the language under consideration. François illustrates the application of this method for the concept “breathe” (and its nominal counterpart “act of breathing”) to produce a number of visually striking maps. Figure 15.3 is François’ semantic map for Russian “breathe/breath” (noun- and verb-like senses are combined in the same map). Language-specific semantic maps for one concept will all share a common grid in which all relevant senses have been arranged in such a fashion that there will be a continuous chain of network nodes as part of any extension of meaning. So, for example, a semantic shift from “act of breathing” to “whisper” is claimed to proceed via the sense of “(someone) blow”. The shaded area surrounded by a bold, continuous line represents the “territory” occupied by senses of Russian *dux*. The shaded area contains examples of “strict co-lexification” whereby the senses attach to the morphological base form, e.g. “act of breathing” and “(human) puff of breath”. The network nodes outside of the shaded area surrounded by a dashed line, on the other hand, represent “loose co-lexification” referring to senses that are found with cognate, derived and compound forms of *dux*, e.g. *zaduvat* “(wind) start blowing; (someone) blow (candle)”. Still other senses lie outside of any enclosed area, indicating semantic shifts that have been attested in some language but not Russian, e.g. “whisper”. One should bear in mind that as more languages are considered, more senses may need to be added or existing senses may need to be subdivided, so that the task of drawing such maps must always remain open-ended, awaiting further confirmation or disconfirmation. The resulting “isolectal” maps give some indication of the possible paths of semantic shifts of “breathe” and contribute to a better understanding of attested and unattested kinds of shifts.

Zalizniak (2008) outlines a project designed to produce a *Catalogue of Semantic Shifts* which, like François’s cross-linguistic approach just described, combines data from across languages and language families to identify patterns of relatedness of senses. In Zalizniak’s case, though, both synchronic polysemy and diachronic shifts are taken into account, based
Figure 15.3 Isolectal map for Russian dux (François 2008: 208)
on a number of different kinds of relatedness of forms/senses. Polysemy of a single linguistic form would be taken into account, but so too would diachronic semantic evolution of a single linguistic form in a language or between a parent language and a descendant language, as well as senses of cognate words in related languages. And, as with François’ approach, the sense of a linguistic form as part of a derived word or a compound word can also be taken into account. So, for example, an entry for the semantic shift “to grasp” → “to understand” is supported by the data in (1).

(1)  

<table>
<thead>
<tr>
<th>Language</th>
<th>Form</th>
<th>Sense</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Old Russian</td>
<td>pojati “to grasp”</td>
<td>Russian ponjat “to understand”</td>
</tr>
<tr>
<td>b</td>
<td>Latin</td>
<td>capere “to get”</td>
<td>Italian capire “to understand”</td>
</tr>
<tr>
<td>c</td>
<td>German</td>
<td>greifen “to grasp”</td>
<td>begreifen “to understand”</td>
</tr>
<tr>
<td>d</td>
<td>French</td>
<td>saisir “to grasp; to understand”</td>
<td>[semantic shift within one polysemous word]</td>
</tr>
</tbody>
</table>

5 Future directions

The overview of semantic shift offered above has repeatedly emphasized the dynamic nature of language, one manifestation of which is the flexibility of meaning. Promising lines of future research on semantic shift may well be found, therefore, in the various strands of research that elaborate the dynamic dimensions of language. One vision for a highly dynamic conceptualization of language is Thorne and Lantolf’s (2006) notion of a “linguistics of communicative activity”, a vision of linguistics that is far-ranging and diametrically opposed to a narrower view of language as a fixed system. For Thorne and Lantolf, communicative activity lies at the core of how language should be studied:

[a linguistics of communicative activity] . . . is based on a view of language as a historically contingent emergent system, one that provides a repertoire of semiotic devices that people can use to realize their communicative intentions, to interpret the communicative intentions of others and, perhaps most importantly, to foster the conditions of possibility for transforming self and community.

(Thorne and Lantolf 2006: 189)

Thorne and Lantolf set out to “disinvent” language as an object and reinvent it as activity – a position that is highly compatible with the research reviewed above. Thorne and Lantolf are not alone in arguing for this view of language; indeed, to some extent they are merely restating a trend observable in much contemporary research (cf., for instance, Langacker’s description of the dynamic nature of Cognitive Grammar above). In their particular vision, the repurposing of words such as desktop to accommodate and facilitate new lifestyles is not some marginal aberration of language use, but a reflection of the core, emergent nature of language. Thorne and Lantolf’s particular vision for linguistics extends well beyond just an academic interest in issues like semantic shift; they speak of the linguistics of communicative activity as creating conditions leading to transformations of the self and community. Somewhat related to the Thorne and Lantolf work is the body of research labelled variously as complex adaptive systems research or dynamic systems research. As the names suggest, this research puts adaptation and dynamic change at the very core of theorizing about language,
and more generally, cognitive processes. De Bot and Larsen-Freeman (2011) provide a helpful characterization of dynamic systems as they understand them which includes as some of the key concepts: change of the system through internal reorganization and interaction with the environment; constant change, with chaotic variation sometimes; nonlinearity in development; and extensive interconnectedness.

Spivey (2008) draws together a vast amount of research in psychology and computational modelling, all of which is concerned with the mind as a dynamic, flexible system. Spivey is particularly interested in the cognitive processes that are evident over extremely small durations of time and this can include the cognitive processes that underlie judgements about the categories that make up the meaning of *fruit*, for example. Among the myriad results that Spivey reports upon in his stimulating book, he includes some discussion of the “semantic saturation” effect (Spivey 2008: 24–25). The essence of this idea is that if you look at the written word (his example is *giraffe*) and read it out aloud about once per second, for a minute, then the meaning of the word seems to fade away. In the course of fading away, and this is the interesting part of this effect for our purposes, the meaning of the word is subject to change. For example, a subject might become conscious of new semantic associations of the word *giraffe*, causing the word to seem more like *raffle*, *Dan Jurafsky*, *draft*, *jejune*, *gauche* etc. The relevance to the present discussion is not that eventually the meaning of such repeated words seems to disappear altogether for the speaker, but that it seems to take on different meanings in the course of the degradation of the original meaning. There is a trajectory of movement in and around multiple senses that can attach, however briefly, to a word subjected to this experiment. It is semantic shift on a tiny timescale of seconds, rather than on the scale of centuries. Clearly, the phenomenon described above is a process associated with a particular kind of thought experiment and is not anything that is observed and recorded as meaning change in, say, a dictionary. Nevertheless, the phenomenon illustrates an interesting kind of semantic shift that is real and is recognized as a psychological reality. It is evidence of the inherent flexibility and, indeed, precariousness of meaning.

Further reading


References


**Related topics**

Chapter 5, Cognitive semantics; Chapter 6, Corpus semantics; Chapter 7, Categories, prototypes and exemplars; Chapter 11, Contextual adjustment of meaning; Chapter 13, Sense individuation; Chapter 25, The semantics of lexical typology.