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The influence of semantic fields on semantic change*

Introduction

The theoretical activities and insights of the last two decades in linguistics have not spilled over into etymology and the study of semantic change, even though there has been much important work in both historical linguistics and in semantics. One reason for this neglect of semantic change is that the changes themselves seem to be sporadic. Every word has its own history. About the best we have come to hope for is a taxonomy, or classification schema, as found in Ullmann (1957), Stern (1931, 1968), or Williams (1975). These categories of semantic change summarize the tendencies or possibilities, which may in fact have opposite effects, such as narrowing vs. broadening. Our current state of knowledge does not allow us to make interesting, falsifiable statements concerning the lexicon as a whole.

In this paper I shall show that some insights into the principles of semantic change can be found by looking, not at the whole lexicon, but at words which belong to a single semantic field. A semantic field is a set of lexemes which cover a certain conceptual domain and which bear certain specifiable relations to one another. An example of a simple semantic field would be the conceptual domain of cooking, which in English is divided up into the lexemes *boil, bake, fry, roast*, etc. A basic premise of semantic field theory is that to understand lexical meaning it is necessary to look at sets of semantically related words, not simply at each word in isolation. By 'semantically related' I refer to relationships between lexical items such as synonymy, as in *big* and *large*, antonymy, as in *big* and *small*, hyponymy, as in *rose* and *flower*, converseness as in *buy* and *sell*, incompatibility, as in *cat, dog, cow, horse, pig*, etc. A list of such lexical relationships and their entailments can be found in Lyons (1977) or Lehrer (1974). I hope to show that our understanding of semantic change can be enriched by looking at the histories of semantically related words.

Semantic fields and semantic change

The connection between semantic change and semantic fields was stressed by Trier (1931), one of the earliest linguists to develop semantic field theory. Trier showed that semantic change affects the structure of semantic fields. His famous example of the meaning of words dealing with knowledge in medieval German shows that both the inventory and the semantic structure changed between 1200 and 1300. The words that remained in the language had different meanings.

1200	
Wîsheit	
Kunst	List

Figure 1

1300		
Wîsheit	Kunst	Wizzen

Figure 2

Around 1200 *Wîsheit* was a general term covering the whole field of knowledge. A century later the meaning narrowed to ‘religious or mystical knowledge’. *Kunst* at the earlier time referred to courtly knowledge and later to mundane skills and knowledge. *List*, which was used for technical skills, moved out of the field, and *Wizzen*, relating to art, moved in. These two figures show that the “semantic space” was divided into two parts in 1200, with a superordinate word for the whole, whereas in 1300 the space was divided into three parts.¹

Trier concludes that a change in the meaning of one word in a field requires changes in the meaning of other items because of two assumptions he makes:

- (1) There are no overlaps of meaning in a field.
- (2) There are no gaps.

Both of these assumptions are false, however. The existence of partial synonymy – a very common phenomenon – shows that the first assumption is false, and the discussion of lexical gaps in Lehrer (1974, chapter 5) provides many counterexamples to Trier’s second assumption.

This study will take a different direction. It will show how semantically related words show parallel semantic changes. One earlier

study which demonstrates this phenomenon is by Stern (1931, 1968), who traces the semantic changes of a set of words in English from the meaning of 'rapidly' at Stage I to both 'rapidly' and 'immediately' at Stage II to 'immediately' at Stage III. (See table 1). The chronological discrepancies in the table are explained by Stern as due to the

	Sense I 'Rapidly'	Sense II 'Rapidly, Immediately'	Sense III 'Immediately'
Hrædlice	OE	OE	OE
Hraþe (Rape)	OE	OE	OE
Ardlice	OE	OE	OE
Lungre	OE	OE	OE
Ofstlice	OE	OE	OE
Sneome	OE	OE	OE
Swiþe	OE	OE	1175
Swiftly	OE	OE	1200
Caflice	OE	OE	1370
Swift	OE	1360	1300? 1400?
Georne	OE	1290	1300
Hizendliche	1200	1200	1200
Quickly	1200	1200	1200
Smartly	1290	1300	1300
Snelle	1300	1275	1300
Quick	1300	1290	1300
Belife	1200	1200	1200
Nimbly	1430	1470	1400
Rapely	1225	1300	1325
Skete	1300	1300	1200
Tite	1300	1350	1300
Wight	1300	1360	14th cent.
Wightly	1350	1350	1300

scantiness of the OE and ME texts... It is only about 1300 that there is a satisfactory supply of texts to illustrate the state of the language... In other cases, a meaning may have arisen in colloquial language, which is scarcely represented in our texts. Also, in some cases, the words are comparatively rare. In these circumstances, it is evident that a meaning may be much older than the earliest preserved record ...

The semantic change of any of the words is quite ordinary. It can be viewed in either of two ways:

- (1) Stage I → broadening Stage II → narrowing Stage III
or
(2) Single addition Ambiguous loss of Single
meaning → of a sense → a sense meaning
Sense x Senses x, y Sense y

The first model views Stage II ‘rapidly/immediately’ as a case of vagueness; the second views it as ambiguity (which apparently is how Stern treats the matter). What is striking about the data is that the same change occurred throughout this relatively large set of synonymous or partially synonymous words. Words meaning ‘rapidly’ entering English after 1400 did not undergo this semantic change (Stern 1968: 189).

Given the uncertainty of dating the earliest instances of these words and their meanings, Stern’s arguments and conclusions about this particular case are not particularly convincing. However, he has proposed an important hypothesis — one that is worth further investigation — which is that semantically related words may undergo parallel semantic changes. In fact, I wish to propose an even stronger hypothesis: semantically related words are more likely to undergo parallel semantic changes than semantically unrelated ones precisely *because* of their semantic relationships. Semantic relationships tend to remain constant, so that if one word changes meaning, it will drag along other words in the domain.

Animal Metaphors

The first set of semantic fields I will examine is a set of conventionalized animal metaphors, based on an analysis by Battan (1978). The words basically denote animals (*wolf, mouse, turkey*), but they can be applied to people, as in

John is a wolf (mouse, turkey).

These extended meanings are conventionalized. (Definitions are taken from the *American Heritage Dictionary* and the *Oxford English Dictionary*.) Therefore, the mature speaker-hearer has learned the extended meaning of the words and need not figure out the

interpretation as he or she would have to for a truly novel metaphor. These animal words as applied to humans have originated as metaphors, of course, and because the literal meaning — that is, the meaning which denotes the animal — remains in the language, the relationship between the animal and the transferred meaning is salient for the speaker. The main point here is that since the transferred meaning is conventional, the hearer does not need to compute the meaning.

Animal metaphors are also interesting to look at because they are offered as paradigm cases of metaphors that involve some similarity between the objects which are implicitly compared. (Black (1954) points out that what is important here is our stereotypes, which could be false.) The semantic field of animal words provides a good case for testing the effects of semantic change of one word on other items in the field, since the meaning of each word — at least in its literal sense — is influenced and limited by its denotation. We should not expect the meaning of *tiger* to be affected by the existence or non-existence of co-hyponyms: *lion*, *cheetah*, *panther*, *leopard*. If cheetahs were to become extinct and if the word *cheetah* were to disappear from the active vocabularies of speakers, the meaning of *tiger* should not be affected. And if a new species of felines were discovered and named, then that fact also should not affect the meaning of *tiger*. What would change the semantic structure would be a reclassification by taxonomic zoologists, e. g., a decision that lions and tigers are really the same thing. However, given the current state of such taxonomies and the words for the classes of animals, one would expect there to be little influence of the meaning of one word on another.

Fourteen words have been selected, which can be grouped into classes corresponding to zoological classes and exhibiting a similarity of semantic extension. Current meanings are taken from the *American Heritage Dictionary* and earlier meanings from the *Oxford English Dictionary*. The diagrams are to be interpreted as follows:

_____ (straight line) shows the period of time for which the word has been recorded in the language with its zoological meaning.

..... (string of dots) shows the period of time that a word has existed with a metaphorical meaning that is either obsolete, archaic, or less salient than the current (and most salient) metaphorical meaning.

xxxxxxxx (string of x's) shows the period of time that the word has been in the language with its current and most salient metaphoric meaning.

The numbers at the top provide the time scale.

Let us look first at figure 3 which shows the semantic transfer for three primate names. These words are arranged chronologically in terms of their length of time in the language. Figure 3 shows that the metaphorical meaning for *ape* 'a fool' developed early and the meaning for *baboon* 'a general term of abuse' developed somewhat later. The meaning 'a brutish person' appeared for all of these words more recently — first for *gorilla*,² then for *ape* and *baboon*. The meaning 'fool' for *ape* has become archaic, according to the OED.

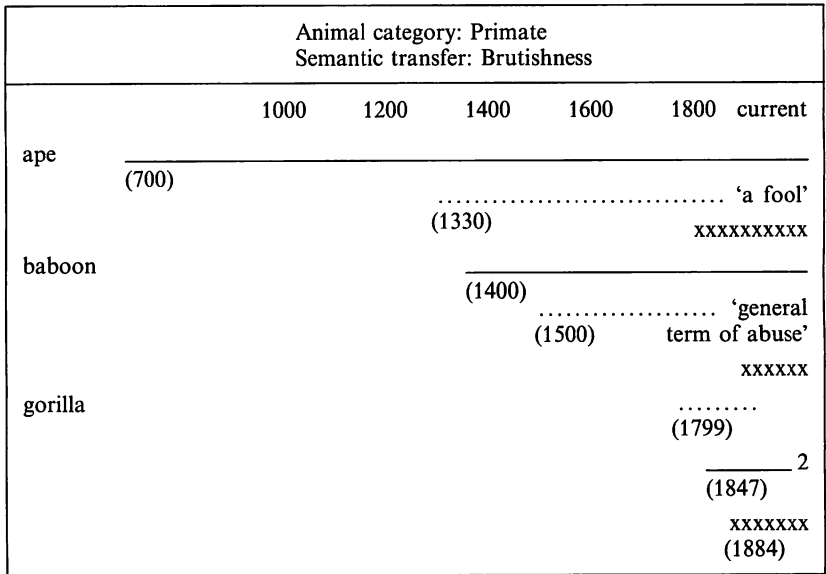


Figure 3

This is a pattern which will recur in other diagrams as well: the animal word to enter the domain most recently (in this case *gorilla*) was the first to acquire the extended meaning of 'brute, brutish person'. At a later time, two other primate names acquired this meaning, even those that already had different metaphorical meanings. In the case of *ape* the earlier metaphorical meaning of 'fool' became obsolete. There appears to be a triggering mechanism.

When a member of an animal word set acquires a metaphorical meaning, it facilitates a comparable change in other members of the set.

Animal category: Bird Semantic transfer: Foolishness						
	1000	1200	1400	1600	1800	current
goose	(1000)			XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
cuckoo		(1240)		XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
pigeon			(1440) 'coward'		
				(1586)		
				XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
coot			(1382) 'general term of abuse'		
				(1430)		
					XXXXXXXXXXXX	
turkey				(1555)		
						XXXXXX

Figure 4

Figure 4 contains five words denoting birds, all of which have a current metaphorical meaning of 'foolish'. Notice that three terms, *goose*, *cuckoo*, and *pigeon* acquired the same metaphorical meaning around the same time, although the three words had been in the language as animal words for 300 to 500 years. This could have been a coincidence, of course, but a better explanation is that the semantic field properties facilitated these changes. The OED gives no precise definition for *coot* as a general term of abuse; rather there are proverbial phrases such as

as bald (mad, stupid) as a coot.

This older, general meaning has become obsolete and replaced by a narrower meaning: 'foolish person, simpleton', in accord with

other bird names. An earlier meaning for *pigeon*, 'coward', also became obsolete.

Animal category: Snake Semantic transfer: Treachery						
	1000	1200	1400	1600	1800	current
snake	(1000)			xxxxxxxxxxxxxxxxxxxxxxxxxxxx		
				(1591)		
viper				(1526)		
				xxxxxxxxxxxxxxxxxxxxxxxxxxxx		
				(1526)		

Figure 5

Figure 5 consists of only two words, both with the same metaphorical meaning. *Viper* was first noted in English in both its zoological and metaphorical sense in Tindale's 1526 translation of the Bible from Old French. *Snake*, which had been in the language centuries before *viper* was introduced, soon acquired the same metaphorical meaning that *viper* had. This change can be explained by assuming that *viper* served as a trigger. Since *viper* and *snake* belong to the same animal set, the semantic transfer of *snake* was facilitated and triggered by that of *viper*.

Animal category: Scavenger Bird Semantic transfer: Greed						
	1000	1200	1400	1600	1800	current
buzzard			(1300)			'worthless person'
					xxxxxxxx
vulture			(1374)			
				xxxxxxxxxxxxxxxxxxxxxxxxxxxx		
				(1602)		

Figure 6

Figure 6 shows the semantic development for two bird names. *Vulture* was recorded slightly later than *buzzard*, and its metaphorical meaning triggered a change in *buzzard*. *Buzzard* has lost its earlier meaning of 'worthless person'.

Figure 7 seems to show a widening of metaphoric meaning. *Mule* and *donkey* had acquired the meaning of 'silly' or 'stupid person' (as had *ass* and *jackass*). However, later *donkey* acquired the meaning of 'obstinate' as well, which triggered or facilitated a similar change in *mule* to include 'obstinate'. The current metaphoric meaning of *mule* probably focuses on obstinacy.³

Animal category: Mule Semantic transfer: Obstinity						
	1000	1200	1400	1600	1800	current
mule	(1000)					
 'silly person'					
			(1470)			
donkey					xxxxxxxx	
					(1785)	
					(1840)	
					'silly person'	
					xxxxxxx	

Figure 7

These examples show the following pattern: there is a domain of animal names in which there are subclasses corresponding to zoological subclasses. One of the words acquires a metaphorical meaning, which in turn triggers or facilitates corresponding transfers among other lexemes in the subclass. In the examples above, the newer word to be recorded was usually the one whose metaphorical meaning determined that of the words for the subclass, often displacing other metaphorical meanings which older words had. Whether this last observation is a coincidence (that is, an accidental feature of the sample) or whether it reveals something important about processes of semantic change remains to be determined.

Gambling terms

A similar phenomenon can be seen in a set of terms from gambling vocabulary (Teske 1983). Most of the terms belong to the slang register or are jargon to the relevant semantic field (see figure 8). All four words have undergone parallel historical development. In each case a specific gambling sense is transferred to an auctioneering meaning. Each transfer involves a common semantic change (widening), but the fact that the whole set is affected in the same way is striking.

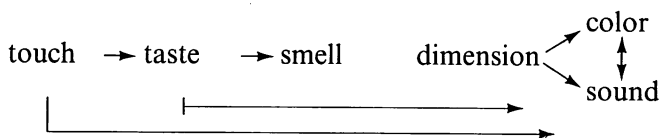
Gambling Terms			
	1800	1900	current
setter	_____ (1591)		'a sharper's decoy'
		xxxxxxxxxxxxxxxxxxxxxxxxx (1840)	'runner-up of prices at auctions'
booster		_____ (1906)	'gambler's decoy'
		xxxxxxxxxxxxxxxxxxxxx (1915)	'auctioneer's confederate'
capper		_____ (1853)	'sharper's decoy'
		xxxxxxxxxxxxxxxxxxxxx (1875)	'auctioneer's confederate'
shill		_____ (1898)	'gambling confederate'
		xxxxxxxxxxxxxxxxxxxxx	'runner-up of prices at auctions'

Figure 8

Metaphorical transfer and semantic change

Many scholars have pointed out the relationship between metaphorical transfer and semantic change. A speaker or writer (or several speakers and writers) uses a word metaphorically, and if this usage spreads to other speakers in the community, the word has acquired a new sense. (The old meaning might remain or it might disappear.)

One particularly interesting case has been among words denoting sensation and perception. Williams (1976) has proposed a law of semantic change among such adjectives where transfers are unidirectional:



Lehrer (1978) has proposed an alternative analysis for these data. I will not review the specific disagreements, but I will draw on part of Williams' research because it shows quite convincingly the ways in which lexical sets may undergo parallel semantic development.

If there is a set of words that have semantic relationships in a semantic field, and if one or more items pattern in another semantic field, then the other items in the first field are available for extension to the second field. The semantic relationships will remain the same: synonyms will remain synonyms, antonyms will remain antonyms, etc.

Lehrer (1978: 96)⁴

I will illustrate the process by considering dimension words which were transferred to the taste domain, primarily for beverages, and more particularly for wine (Lehrer 1983).

Figure 9, based on Williams (1976: 475–6), gives the dimension words with their earliest recorded dates, shown by a straight line, and then the appearance of these words in the taste domain, shown by x's. Many of the words with the taste meaning can readily be found in books and articles about wine. Therefore, I have added this meaning with the label 'wine' under the heading for current. Since these meanings have not yet been recorded in the major dictionaries (but are found in wine glossaries), I cannot date their first uses with the taste meanings. My guess is that their use is fairly recent (that is, within the last century).⁵

I have tried to show that semantic field theory — the view that our lexicon is organized into semantic fields — can contribute to our understanding of semantic change. The phenomenon I discuss does not replace other explanations of why words change meaning in the first place or why they change from A to B instead of from A to C. But I hope to have shown that the histories of words are not completely independent. Sometimes semantically related words share a historical development.

Semantic Field: Dimension ⁶						
Transfer: Taste						
	1000	1200	1400	1600	1800	current
small	(725)				xxxxxxxxxxxxxxxxxxxxx (1676)	(wine)
high	(825)		xxxxxxxxxxxxxxxxxxxxx (1430)			
deep	(854)					xxx (wine)
thick	(888)					xxx (wine)
fat	(893)			xxxxxxxxxxxxxxxxxxxxx (1609)		(wine)
even	(893)					xxx (wine)
thin	(900)		xxxxxxxxxxxxxxxxxxxxx (1377)			(wine)
empty	(971)					xxx (wine)
full	(1000)					xxx (wine)
little	(1000)					xxx (wine)
hollow		(1250)				xxx (wine)
big			(1386)			xxx (wine)
flat			(1400)	xxxxxxxxxxxxxxxxxxxxx (1609)		(wine)
acute						xxx (wine)

Figure 9

Notes

* This paper is an expanded version of Lehrer and Battan (1983). I wish to thank Richard Janda and Bruce Mannheim for their comments on an earlier draft.

1. The accuracy of Trier's description has been challenged by Scheidweiler (*ZDA* 79. 1942: 249–268) and Spence (1961), but that does not concern the theoretical points in this paper.
2. *Gorilla* was first applied to the name for a wild hairy person in a Greek tale of the 5th or 6th century B.C. It was first recorded in English in 1799 as a term for a group of hairy savages and only later applied to the animal. However, I hypothesize that the later transferred meaning sprang from the animal name, not the earliest Greek or English use.
3. The OED reports that in Greek fables and proverbs, the ass was a figure of clumsiness, ignorance, and stupidity. In the Bible and the earliest English texts, *ass* and *mule* did not have this connotation, however, *donkey* began to replace *ass* in the 18th century.
4. Kittay and Lehrer (1981) provide further examples of the process where whole fields of words transfer metaphorically.
5. Some taste meanings are listed by Williams as obsolete. However, if they are used as wine descriptors, I have extended the x's to the column for 'current', although the current use may indeed have been a new transfer from dimension to taste.
6. Williams also lists three words which were first used in the touch domain before transferring to taste and dimension.

	touch	taste	dimension
sharp	825	1000	1537
crisp	900	wine	1398
smart	1023	1648	1668

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