

**THE THEORETICAL ROLE OF NOVELTY IN CONVERSATION**

by

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# Abstract

Mainstream contemporary linguistics is founded on Saussure's assumption that linguists must abstract away from all variation in conversation from an assumed linguistic norm, since such variation is a product of language-external influences that interfere with the natural homogenizing effect of language. Saussure and his followers are keen to apply this method to language because it forms the basis of nearly all successful physical science. However, the structure of conversation is such that novel variation can affect the basis of further variation, however locally and however minutely. This makes conversation more akin to the subject matter of biology than that of the physical sciences. For this reason, linguists might profit from setting aside the method of physical science and adopting instead the method of biology, in which variation and difference are assumed to be of theoretical importance.

**Keywords:** Essentialism in linguistics; Metaphor; Conversational novelty; Population thinking in linguistics

**Subject terms:** Language and languages—Philosophy; Metaphor

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# Chapter 1

## Saussure, Chomsky and the significance of conversational novelty

### 1.1 Introduction

In this chapter, we consider Saussure's plausible reasons for assuming that conversational novelty is always the result of language-extrinsic interference with the natural state of conversation, and never of linguistic interest. Next, we examine Chomsky's claim that a form of novelty is the central issue to which any significant theory of language must address itself, and find against appearances that Chomsky's programme is not radically different from Saussure's. Like Saussure, and for roughly the same reasons, Chomsky and his followers do not believe that conversational novelty is of any interest from the point of view of linguistics.

### 1.2 Novelty and Saussure's "natural state model" of conversation

Many language theorists have been struck by how much of ordinary human conversation appears to be novel, and in how many different ways. Wherever people are talking, there seem to emerge new words, new uses for old words, new syntactic forms, and many other innovations along a great many dimensions. This ongoing novelty adds up to very noticeable

historical change, so that for example at a mere thousand years' remove, the language of *Beowulf* is practically impenetrable to contemporary English speakers. Given the apparent ubiquity of novelty in conversation, it is interesting that many linguists accept the founding methodological assumptions of Ferdinand de Saussure's programme in linguistics: that *conversation is naturally homogeneous, language is a static structure that informs conversation thus construed, and variation and change in conversation occur only in response to language-extrinsic interference*. In fact, this method is so important to so much of the work that follows Saussure's that, significant dissent notwithstanding, he is now known as the father of contemporary linguistics. Obviously something about Saussure's method is highly persuasive and attractive to linguists. In this section we will explore what that something might be.

### 1.2.1 *Langue-parole*

At the end of his *Course in General Linguistics*, Saussure summarizes his view of language and linguistics in a well-known slogan.

*...the true and unique object of linguistics is language studied in and for itself*  
(de Saussure, 1959, 232, emphasis original).

Methodologically, Saussure's declaration that linguistics ought to study language "in and for itself" is quite of a piece with Galileo's consideration of motion in the absence of friction. In fact, the method Saussure is pursuing is foundational to a great mass of the best and most successful work in the physical sciences, up to and including contemporary work. Ernst Mayr (1976b) calls this method *typological thinking*. In Sober's helpful clarification of Mayr's notion (Sober, 1980), a typological thinker posits that objects within a theoretical category share essential properties that impose identical tendencies towards a single *natural state*. Variation among the objects within a category is assumed always to be the product of extrinsic interference; and, it is supposed, we gain understanding of the objects as we come to see through these surface differences to the essential underlying unity. Mayr notes that the assumption of identity across many instances of the basic constituents of a particular science "permits the determination of extremely precise constants for all the properties of these constituents as well as their inclusion in general laws" (Mayr, 1976a, 408). Although the term "natural state" sounds medieval, Sober notes that natural state

models have many outstanding exemplars in the post-Aristotelian physical sciences, up to and including contemporary physics.

Newton made use of Aristotle's distinction, but disagreed with him about what the natural state of physical objects is. The first law of motion says that if a body is not acted upon by a force, then it will remain at rest or in uniform motion. And even in general relativity, the geometry of space-time specifies a set of geodesics along which an object will move as long as it is not subjected to a force. Although the terms "natural" and "unnatural" no longer survive in Newtonian and post-Newtonian physics, Aristotle's distinction can clearly be made within those theories. If there are no forces at all acting on an object, then, *a fortiori*, there are no interfering forces acting on it either. A natural state, within these theories, is a zero-force state. (Sober, 1980, 360)

The obvious success of typological thinking in all areas of physical science is appealing to the linguists who use this method today, and certainly it did not escape Saussure. He sees his focus on language in and for itself as the basis for a science of language, and he must have hoped that this new science would enjoy a degree of success similar to that of other sciences that use typological thinking. He is certainly not optimistic about the prospects of non-typological approaches to linguistics.

In static linguistics, as in most sciences, no course of reasoning is possible without the usual simplification of data (de Saussure, 1959, 102).

In simplifying the data of conversation, Saussure proposes that the "natural state" of this data is simply homogeneity among the members of a particular community of speakers. To put the point more simply, he proposes that it is natural for us to talk as our neighbours do. Saussure supposes that language, for which he introduces the technical term *langue*, is the socially realized force that tends to establish this conversational homogeneity. The influence of a particular language is common to all speakers within a linguistic community. It is realized psychologically in every speaker within a community, and it is formally identical in every case.

Language exists in the form of a sum of impressions deposited in the brain of each member of a community, almost like a dictionary of which identical copies

have been distributed to each individual... Language exists in each individual, yet is common to all. Nor is it affected by the will of the depositaries. Its mode of existence is expressed by the formula:

$$1 + 1 + 1 + 1 + 1 \dots = I \text{ (collective pattern)}$$

In contrast, the executive decisions that speakers make when they use their language in conversation, for which Saussure introduces the term *parole*, are all individual and particular.

What part does speaking [*parole*] play in the same community? It is the sum of what many people say and includes (a) individual combinations that depend on the will of speakers, and (b) equally wilful phonational acts that are necessary for the execution of these combinations.

Speaking is thus not a collective instrument; its manifestation are individual and momentary. In speaking there is only the sum of particular acts, as in the formula:

$$1 + 1' + 1'' + 1''' \dots$$

(de Saussure, 1959, 19)

Saussure believes that these particular features of conversation are always the consequence of forces external to language, and thus that they obscure what is really of linguistic interest.

Language is comparable to a symphony in that what the symphony actually is stands completely apart from how it is performed; the mistakes that musicians make in performing the symphony do not compromise this fact (de Saussure, 1959, 18).

Since conversation has partially to do with individual human action and individual circumstances, Saussure says that it tends to become a “heterogeneous mass” in spite of the homogenizing influence of language. In innumerable ways, and for as many reasons, individual speakers fail to talk exactly alike. In doing so they tend to distort the natural unity and order of conversation. The end product, says Saussure, is a chaotic mess that simply cannot be comprehended as a whole.

Taken as a whole, speech is many-sided and heterogeneous; straddling several areas simultaneously—physical, physiological and psychological—it belongs both to the individual and to society; we cannot put it into any category of human facts, and we cannot discover its unity (de Saussure, 1959, 9).

In Saussure's view, it is the task of the linguist to learn to disregard this unpredictable distortion as Galileo disregarded the effects of friction, and to see through to the underlying unity that *langue* imposes. Since the interfering forces at work in conversation are inherently unsystematic, we can only be certain of understanding it in this partial fashion.

Language, on the other hand, is a self-contained whole and a principle of categorization. As soon as we give language first place among the facts of speech, we introduce a natural order into a mass that lends itself to no other classification (de Saussure, 1959, 9).

Like Galileo, and more generally like all who apply the method of typological thinking, Saussure is not denying that empirical reality is more complicated than his model. He is merely considering how things would be in an ideal environment in which conversation in a particular language was allowed to be just as it is, without the influence of interfering forces. If no such environment exists in practice, this is not a problem for Saussure or indeed for any typological thinker. Classical physics, for example, is not impugned by the non-existence of frictionless planes.

### 1.2.2 Synchrony and diachrony

None of Saussure's contemporaries saw any pressing need to separate the study of language from the study of linguistic change. In fact, their natural tendency was towards quite the reverse. Many nineteenth-century linguists were interested in historical relationships between languages, and in reconstructing the ancient common ancestors of each linguistic family. Though earlier examples of this sort of work exist (see Aarsleff, 1982), linguists' lore has it that Sir William Jones, a British judge in India, sparked this interest in an address to the Asiatic Society in 1786. In researching local legal statutes, Jones had noticed apparently systematic similarities between Sanskrit, Greek, and Latin. He suggested in his address that all three languages have a common ancestor that is the cause of these similarities. Thereby, it is said, Jones introduced the idea of linguistic ancestor-descendent relations as

the basis of a theoretically interesting criterion of linguistic “relatedness”. Neither Jones nor any of his contemporaries was able to pursue this hypothesis systematically, for no clear conception of any of the forces at work in language change was available. However, rigorous study of relations of the kind Jones had noticed became possible after the discovery of particular regularities in linguistic change, beginning in the early 1800s with the formulation of Grimm’s Law of phonemic change. As theorists’ understanding of such regularities improved, so did their empirical understanding of the changes that had occurred. This exciting new understanding of linguistic change contributed to the prevailing theoretical attitude of nineteenth-century linguistics, according to which the study of language is not clearly distinct from the study of linguistic change. Linguistics was often compared to the rapidly developing science of biology. In fact, nineteenth-century biologists interested in the newly discovered phenomenon of biological evolution actually looked to linguists’ approaches to language change as a model for theories of biological change (Alter, 1999). The first half of the century saw linguistic change likened to an Aristotelian teleological understanding of the life cycle of an organism. On this line of thought, a language has periods of growth and development towards an eventual flourishing and subsequent decline (Schleicher, 1983). Later in the nineteenth-century the *Junggrammatiker* (“Young Grammarians”) saw language change in a more Darwinian mode, as “uniform” rather than as signifying movement towards or away from some ideal state (see e.g. Strong, 1891).

Saussure made important contributions to this dominant strand of nineteenth-century linguistics. Most significantly, his observation of particular regularities in vowel change formed the basis of bold predictions concerning the consonants of the lost Indo-European language (de Saussure, 1879) that were confirmed fifty years later by Kuryłowicz’s study of the newly deciphered ancient Hittite language (Kuryłowicz, 1927). However, unlike most of his contemporaries, Saussure does not see this sort of work as central to linguistics. Saussure wants language to be a force that imposes a homogeneous natural state on conversation, and for him it is obvious that the natural state of conversation, that standard to which individual instances of conversation are approximations, is not the way that people used to talk. Rather, he thinks, the natural state of conversation within a community is simply the way that people in that community talk *right now*. The linguist “can enter the mind of speakers only by completely suppressing the past” (de Saussure, 1959, 81). This is a very plausible line of thought. It is easy to accept that contemporary Canadian English speakers are not “really” speaking degenerate British English, very degenerate Anglo-Saxon,

or extremely degenerate Indo-European. As a homogenizing force in conversation, one thinks, Canadian English is an entity that is entirely independent of the history that has produced it.

Accordingly, for Saussure a description of a language is complete in every detail without mentioning any aspect of the sequence of changes that generated it. Saussure gives the name *synchronic linguistics* to his project of describing *langue* thus construed. He consigns the change observed by his contemporaries in historical linguistics to an area of study he calls *diachronic linguistics*. The job of diachronic linguistics is to chart succession relations between particular synchronic states of language. This distinction places the historical work of Saussure's contemporaries in a distinctly secondary and auxiliary position. Historical linguistic change may be interesting, but it is completely irrelevant to an understanding of particular states of language. Saussure uses a well-known analogy with chess to make this point. A complete account of a chess game requires descriptions of individual states of the board, but any description of a state within the game is entirely independent of whatever series of moves might have created it<sup>1</sup>. That is, a state of a chess game is not "really" one of its predecessors distorted by extrinsic interference. It is an independent entity, and "really" just as it is.

Saussure says that "everything diachronic in language is diachronic only by virtue of *parole*. It is in *parole* that the germ of all change is found (de Saussure, 1959, 98)". The general picture here begins with small innovations in *parole* upon the natural state of conversation imposed by *langue*, that are "really" just instances of that natural state along with the effects of some interference. Eventually these innovations make their way into the social, involuntary structure of *langue* as they are taken up by society as a whole and become obligatory rather than individual. The gradual and piecemeal nature of this process makes the subject matter of synchronic linguistics a bit hazy, and so the synchronic linguist

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<sup>1</sup>Except, following Shannon (1950), for

1. A statement as to whether the king and rooks have moved. This is important since by moving a rook, for example, the right to castle of that side is forfeited.
2. A statement of the last five moves made. This will determine whether a possible en passant capture is legal, since this privilege is forfeited after one move. It will also determine whether the rule of draw after three repetitions of a position is in effect.
3. A statement of the number of moves made since the last pawn move or capture. This is important because of the 50 move drawing rule.

must ignore a few difficult but unimportant details.

An absolute state is defined by the absence of changes, and since language changes somewhat in spite of everything, studying a language-state means in practice disregarding changes of little importance (de Saussure, 1959, 102).

In this light let us consider Saussure's passage, "The first thing that strikes us when we study the facts of linguistic change is that their succession in time does not exist as far as the speaker is concerned" (de Saussure, 1959, 81). Taken as a simple empirical claim, this statement is obviously false. Many speakers, notably historical linguists such as Saussure himself, are perfectly aware that their language is changing. More significantly, in conversation language users count often enough on historical understanding in their audience, for example in parodies of particularly novel or old-fashioned ways of talking; or the writing of a nineteenth-century author who counted on a fairly sophisticated classical education among his readership in a playful nonce reference to "eucnemic<sup>2</sup> fishermen".<sup>3</sup> Saussure's separation of synchronic from diachronic linguistics survives such counterexamples, for he is not claiming that they cannot occur. Rather, he is claiming that any that do occur are theoretically unimportant. Conversation is naturally homogeneous over time; this stasis is informed by a unified entity called *langue* that is independent of the changes that gave way to it; and we ought to disregard the empirical details that create difficulty for this thesis.

### 1.2.3 Arbitrariness

History offers an abundance of speculative theories of language origins, with many of which Saussure would have been familiar. Many linguists have supposed that human language sprang from some kind of prelinguistic, biologically conditioned behaviour of our ancestors. Jespersen is the author of a still-popular convention for creating hyphenated, playful and vaguely derogatory nicknames for such theories (Jespersen, 1959). Thus "ding-dong" and "bow-wow" theories locate the origin of language in the onomatopoeic imitation of mineral and animal sounds, respectively; "pooh-pooh" theories trace this origin to interjection; "yo-he-ho" theories incorporate claims that language originated in grunts accompanying co-operative work; and so on. "Ding-dong" and "bow-wow" theories are anticipated in

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<sup>2</sup>That's Classical Greek for "well-greaved".

<sup>3</sup>1851 *Fraser's Mag.* XLIII. 249, quoted in OED s.v. "eucnemic".



Socrates' ironic proposal in the *Cratylus* that everything has a "true natural name", chosen by the wise inventors of names based on resemblance relations of particular syllables to their objects. A similar theory of the origins of language is advanced, probably without irony, by Leibniz (see Aarsleff, 1982, for discussion). As well, many Christian historical linguists have earnestly sought the mythical, divinely inspired "Adamic" language mentioned in Genesis 2:19. They suppose that the Adamic language had all the correct words for things; that everyone on earth was able to converse with everyone else while this language was in common use; and that its natural correctness was fouled up after the Tower of Babel fell, when God gave everyone different languages.

This sort of apparently unconstrained speculation became too much for the Société de Linguistique in Paris, and in 1866 they banned papers on language origins. The London Philological Society did the same in 1872. Saussure takes a similarly dim view of theories of the "natural" origins of language, but for reasons that have specifically to do with his essentialist approach to language theory. For Saussure it does not matter if conversation in its current state has far-flung ancestors that were "really" non-language, iconic imitations, Adamic insight, or anything else. Today, the natural state of conversation as imposed by language is simply homogeneity among the members of a speech community. We talk as we do for no deeper reason than that we have picked up the habit from our neighbours. This plausible insight motivates Saussure's well-known notion of *the arbitrariness of the sign*. In his most direct formulation of arbitrariness, Saussure says that there is "no natural connection" between a word and its significance within a language (de Saussure, 1959, 69). He is not particularly clear on what a "natural connection" might amount to. It could plausibly be taken to refer to biologically rooted associations; or to a rationally compelling scheme for mapping forms to significances. It could be something else entirely. The precise nature of a natural connection is unimportant, since the key point for Saussure is that synchronic linguistics alone describes the natural state of conversation. No aspect of conversation that is worth the attention of linguists is "really" a function of biology, rational agency, or anything else that is extra-linguistic. *Within* a language-state, particular aspects of the ordering of that state can influence others. Saussure calls this "relative motivation", and within his linguistics it is involved in phenomena such as the formation of compound nouns and plurals (de Saussure, 1959, 131). However, it is key to his programme that language has no external motivation, but is a sort of natural law unto itself.

Accordingly, for Saussure any part of conversation that has some extra-linguistic “natural” explanation must be a product of extra-linguistic forces that disrupt the natural state of conversation. Like the notion of pure synchrony, then, the arbitrariness of a language-state is not a simple description of empirical reality. Rather, it is advanced as part of Saussure’s simplifying assumption concerning what is essential to conversational data from the linguist’s point of view. Here Saussure plays down the existence of non-arbitrariness in the form of onomatopoeia; but, conspicuously, he will not rule it out entirely.

As for authentic onomatopoeic words (e.g. *glug-glug*, *tick-tock*, etc.), not only are they limited in number, but also they are chosen *somewhat* arbitrarily, for they are only approximate and *more or less* conventional imitations of certain sounds. . . In addition, once these words have been introduced into the language, they are *to a certain extent* subjected to the same evolution—phonetic, morphological, etc.—that other words undergo. . . : obvious proof that they lose *something* of their original character in order to assume that of the linguistic sign in general, which is unmotivated (de Saussure, 1959, 69—emphasis mine).

Non-arbitrary elements of conversation certainly exist; but by Saussure’s fundamental assumption they are of no linguistic interest. As their diachronic descendants drift away from their language-extrinsic origins, such aspects of conversation will come closer to being properly linguistic. “Signs that are wholly arbitrary”, says Saussure, “realize better than others the ideal of the semiological process” (de Saussure, 1959, 68).

For Saussure to establish that some fact of language is arbitrary, it is sufficient for him to point out that it could have turned out otherwise given the basic facts of what might be called “the human condition”—or alternatively, that it is merely “conventional”, grounded only in collective behaviour and nothing deeper (de Saussure, 1959, 68) This allows that the linguist’s explanation of conversation is complete and independent: conversation is not “naturally” anything but what *langue* imposes.

The idea of “sister” is not linked by any inner relationship to the succession of sounds *s-ö-r* which serves as its signifier in French; that it could be represented equally by just any other sentence is proved by differences among languages and by the very existence of different languages. . . (de Saussure, 1959, 67-68).

Thus the arbitrariness of a particular aspect of language is closely related to its dependence

on contingent facts of human cultural history. As Saussure puts it, “Because the sign is arbitrary, it follows no law other than that of tradition, and because it is based on tradition, it is arbitrary (de Saussure, 1959, 74)”. If some fact depends only on a fluke of human history, and not any deeper facts of nature (whatever that might come to), then it can be linguistic in the Saussurean sense. Conversely, insofar as a fact of conversation depends on factors other than mere tradition and convention, it will be excluded from the linguist’s sphere of interest as a fact of some other discipline.

#### 1.2.4 The place of novelty in Saussurean linguistics

We can see now that linguistic novelty is not a coherent concept for Saussure. He holds that from a linguist’s point of view, the natural state of conversation is perfect unity and equilibrium. As variation within a state of language, whatever conversational novelty might occur is the product of language-extrinsic interference with this natural order, and hence is not at all relevant to a theory of language. We understand too that Saussure offers persuasive reasons for us to adopt this method. Typological thinking figures centrally in a vast amount of successful work in physical science. Furthermore, its application in linguistics appears to contradict a kind of unpalatable historicist essentialism, according to which conversation in its current state is “really” a degenerate version of conversation in some bygone language, or even an instance of some kind of pre-linguistic activity.

### 1.3 Arguments from novelty for recursive definitions of language

#### 1.3.1 Novelty and recursion in syntax

Given our observation of Saussure’s dismissive view of novelty in conversation, the following remark of Chomsky’s ought to pique our interest.

The central fact to which any significant theory of language must address itself is this: a mature speaker can produce a new sentence of his language on the appropriate occasion, and other speakers can understand it immediately, though it is equally new to them. . . it is clear that a theory of language which neglects this ‘creative’ aspect of language is of only marginal interest” (Chomsky, 1964, 51).

Those who are familiar with the history of twentieth-century linguistics will recognize Chomsky's remarks in the quotation above as a jab at behaviourism and its ally, the Bloomfieldian school of linguistics. In the mid-twentieth century, Chomsky forcefully turned the attention of many linguists towards conversational novelty (in the form of the production and understanding of "new sentences") when he invoked this sort of novelty in what many regard as a knock-down argument against behaviourism. Perhaps the best-known version of this argument occurs in Chomsky's devastating review of B. F. Skinner's *Verbal Behaviour* (Chomsky, 1962). In this book, Skinner had attempted to form a theory of language that omits mention of any state of a human organism that cannot be defined in terms of the theoretical notions of stimulus and response. Chomsky claims in his review that this approach is fundamentally flawed. In defence of this claim, he observes that language users are able routinely to comprehend sentences they have never before encountered. Since we humans have finite brains, it is obvious that we are not equipped with a pre-programmed, stereotyped response to every possible sequence to which we could ever be exposed. Skinner needs a way of showing how the sentences a speaker copes with are systematically related to each other, so that one's responses to them are not impossibilities for a finite being. The problem, says Chomsky, is that Skinner's austere vocabulary of stimulus and response is not up to this task. Someone's response to a novel sequence of words, in particular, her ability to evaluate it as it is grammatical, cannot be explained by a mere stimulus-and-response model of the relations between that sequence and the sum of past conversation to which she has been exposed.

We constantly read and hear new sequences of words, recognize them as sentences, and understand them. It is easy to show that the new events that we accept and understand as sentences are not related to those with which we are familiar by any simple notion of formal (or semantic or statistical) similarity or identity of grammatical frame. Talk of generalization in this case is entirely pointless and empty (Chomsky, 1962).

In order to explain how a speaker is able to cope with an apparently endless array of novel sentences, says Chomsky, we must postulate a finite set of "mind-internal", and hence anti-behaviouristic resources that allow one to evaluate as grammatical an infinitely large number of sentences. This set of resources is called a *grammar*; it mathematically "generates" all the sentences of a language so that a language user can recognize instances of any of them.

Says Chomsky:

It appears that we recognize a new item as a sentence not because it matches some familiar item in any simple way, but because it is generated by the grammar that each individual has somehow and in some form internalized. And we understand a new sentence, in part, because we are somehow capable of determining the process by which this sentence is derived in this grammar. (Chomsky, 1962)

In characterizing grammars, Chomsky uses the formal notion of recursive definition of a set of well-formed sentences. Since Chomsky first introduced the notion of a grammar, the precise characterization of the nature of the recursive properties of language has developed significantly, from the generalized transformations of *Syntactic Structures* (Chomsky, 1957) to recursive phrase structure systems (Katz and Postal, 1964; Chomsky, 1965) to a recursive X-bar theory (Chomsky, 1970; Jackendoff, 1977) to contemporary Chomskyan minimalism (Chomsky, 1995, 2000). However, through these changes, the intuition that natural language syntax essentially involves recursive generative functions has persisted (Belletti and Rizzi, 2002). Recursive definition can generate an infinitely large set of objects from a finite number of clauses, some of which specify base cases and some of which generate new cases from previously existing ones. Consider the toy syntax called  $\Phi$ , defined as follows.

Define the set  $\Phi$  of grammatical sentences with the following three clauses:

1. "It is raining" is a sentence in  $\Phi$ .
2. For any sentence  $A$  in  $\Phi$ , "it's not the case that  $A$ " is also a sentence in  $\Phi$ .
3. Anything that is not in  $\Phi$  in virtue of 1 or 2 is not in  $\Phi$ .

Because of Clause 1, our  $\Phi$  includes "it is raining". Because of Clause 2 and the presence of "It is raining" in  $\Phi$ ,  $\Phi$  also includes "it's not the case that it is raining", "it's not the case that it's not the case that it is raining", "it's not the case that it's not the case that it's not the case that it is raining", "it's not the case that it's not the case that it's not the case that it's not the case that it is raining"; and so on. The trick is that Clause 2 allows its own outputs to serve as its inputs, the basis for forming "new" sentences. The third, extremal clause simply limits  $\Phi$  to sentences produced by the first two clauses; in

its absence it would be impossible to demonstrate that any object is not in  $\Phi$ . Though short, our definition seems to ensure that a computer, human or other being “programmed” with it will always have something new to produce or to evaluate as well-formed. Hence the recursivity in  $\Phi$  seems to Chomskyans to reflect the unbounded possibility of novelty in conversation. Chomsky and many of the linguists working in his tradition suppose that a much more complex, but not qualitatively different version of this sort of definition ought to determine every well-formed sentence in a particular natural language. Equipped with neural or mental resources that realize a Chomskyan grammar, a language user with a finite memory can, paradoxically, “know” an infinite number of sentences.

### 1.3.2 Novelty and recursion in semantics

Chomsky’s argument from novelty fitted well with work in semantic compositionality that had been going on in formal studies since at least the publication of Frege’s *Foundations of Arithmetic*. This tradition merges with Chomskyan concerns in Fodor and Katz’s “The Structure of a Semantic Theory”. Here, Fodor and Katz wonder as Chomsky did at the potentially infinite diversity of sentences with which a fluent speaker can cope.

Since a fluent speaker is able to use and understand any sentence drawn from the *infinite* set of sentences of his language, and since, at any time, he has only encountered a *finite* set of sentences, it follows that the speaker’s knowledge of his language takes the form of rules which project the finite set of sentences he has fortuitously encountered to the infinite set of sentences of the language. A description of the language which represents the speaker’s linguistic knowledge must, accordingly, state these rules (Katz and Fodor, 1962, 482).

The solution Fodor and Katz offer is much like that offered by Chomsky: a recursive decidedly anti-behaviouristic formal model of linguistic “competence” calculated to allow a finite being access to every element of an infinitely large set of objects.

This problem requires for its solution rules which project the infinite set of sentences in a way which mirrors the way speakers understand novel sentences. In encountering a novel sentence, the speaker is not encountering novel elements but only a novel combination of familiar elements. Since the set of sentences is infinite and each sentence is a different concatenation of morphemes, the fact that

a speaker can understand any sentence must mean that the way he understands sentences he has never previously encountered is compositional: on the basis of his knowledge of the grammatical properties and the meanings of the morphemes of the language, the rules the speaker knows enable him to determine the meaning of a novel sentence in terms of the manner in which the parts of the sentence are composed to form the whole (Katz and Fodor, 1962, 482).

By way of illustration, we will now define a compositional semantics for our toy syntax  $\Phi$ , by which any of its infinite number of sentences can be evaluated as “true” or “false”. The definition of our semantics has the same abstract structure as the definition of  $\Phi$ ; a base case is specified in the first clause, and a procedure for deriving new cases from previously existing cases is specified in the second.

Define a semantics for  $\Phi$  as follows.

1. The  $\Phi$ -sentence “It is raining” is true if it is raining, and false otherwise.
2. For any  $\Phi$ -sentence  $A$ , the  $\Phi$ -sentence “it’s not the case that  $A$ ” is true if  $A$  is false, and false if  $A$  is true.

Thanks again to the fact that the second clause can operate on its own outputs and gets the first clause as an initial input, our finite set of instructions specifies how to tell whether any member of the infinitely large set  $\Phi$  is true or false. In parallel with Chomskyan syntacticians, many contemporary semanticists suppose that a far more complex but not fundamentally different version of this sort of definition is a good model of whatever constitutes our semantic knowledge of language, since there is apparently no limit to the number of novel sentences that a competent speaker can evaluate as true or false.

## 1.4 The place of novelty in recursive theories of language

Chomsky sees his focus on unbounded conversational novelty as a major improvement on Saussurean linguistics and the approaches to grammar that preceded it, mostly in classical studies.

...valuable as they obviously are, traditional grammars are deficient in that they leave unexpressed many of the basic regularities of the language with which

they are concerned, This fact is particularly clear on the level of syntax, where no traditional or structuralist grammar goes beyond classification of particular examples to the stage of formulation of generative rules on any significant scale (Chomsky, 1965, 5).

But in spite of the emphasis Chomsky and his followers place on conversational novelty, they assume that conversation is naturally homogeneous, just as Saussure did. A recursively defined language plays a theoretical role that parallels Saussure's conception of *langue*. It is a unified theoretical structure that figures in the explanation of diverse instances of conversation, by imposing a homogeneous natural state on them that is subject to modification by language-external factors. Chomsky makes this point clear by introducing a heuristic device called the "ideal speaker-listener" who is supposed to constitute the primary subject of language theory. In the following passage, he outlines this notion and links it explicitly to typological thinking in science.

Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance. This seems to me to have been the position of the founders of modern general linguistics, and no cogent reason for modifying it has been offered. To study actual linguistic performance, we must consider the interaction of a variety of factors, of which the underlying competence of the speaker-hearer is only one. *In this respect, study of language is no different from empirical investigation of other complex phenomena* (Chomsky, 1965, 3—emphasis mine).

Katz follows suit. Like Chomsky, and like Saussure before him, Katz is eager for linguistics to follow the method of physical science.

Like other scientists, the linguist idealizes away from the heterogeneous phenomena that directly face him in nature. Thus, the linguist makes no effort to describe actual speech, the linguistic behaviour resulting from the speaker's performance, but concentrates on language, the mental structure that constitutes



the speaker's competence in the language... actual speech is a complex product of the interplay of a variety of factors, only one of which is the internalized system of linguistic rules that constitutes the speaker's tacit knowledge of his language (Katz, 1966, 117).

For this reason, it is uncertain whether the conversation that proponents of recursive theories of natural language endorse as "natural" is the sort of thing that one would normally be disposed to call novel. Certainly on this line language provides us with sufficiently many sentences that no matter how long we go on talking, we can always utter something that no one has uttered before. But as committed Saussureans, Chomsky and his followers simply assume that as long as we are engaged in natural conversation, nothing really new can happen. Even if Chomsky's ideal speaker tries never to repeat himself, no matter how long he talks, every sentence he utters will be only another facet of the same structure. The appearance of novelty and uniqueness is always merely an appearance. Chomskyan syntax, and more generally recursive theories of language, show how a conversationalist can be homogeneous forever, and in an infinite number of ways. But no theory of language that uses the methodology of typological thinking can have a place for robust novelty.

It is somewhat ironic that Chomskyan "arguments from novelty" for a recursive, formally defined conception of language are shaped fundamentally by a backgrounded, Saussurean assumption that conversation is naturally static. One who has accepted this assumption cannot take conversational novelty at face value, but only as a kind of Platonic shadow that hints at properties of the object that casts it. In particular, the apparent unboundedness of conversational novelty will indicate that the set of elements of a language must be infinitely large. In turn, human finitude will imply that the single object of the knowledge that allows us humans to engage in natural, homogeneous conversation must have the "productive" quality of a recursive definition. So when Chomsky states that novel sentences are the central fact to which any significant theory of language must address itself, he is misleading insofar as he implies that novelty is of any linguistic interest at all. As committed Saussureans, he and his followers simply assume at the outset that the subject matter of linguistics is not the sort of thing that can be novel.

## **1.5 Conclusion**

In this chapter, we have noted the appeal of conversational novelty to a theory of language, and examined Saussure's plausible argument for a method that ignores novelty altogether. We concluded by noting that in spite of appearances to the contrary, Chomskyan linguistics is based on an essentially Saussurean method. In Chapter 2, we will examine pragmatics theories of metaphor, both to illustrate the application of typological thinking in linguistics and to point out a deficiency.

## Chapter 2

# Metaphor and essentialism

### 2.1 Introduction

In this chapter, we examine what have been called *pragmatics theories of metaphor* as an illustration of how someone committed to Saussure's linguistic method must address conversational novelty in which established conversational patterns form a basis for novel variation. The authors of pragmatics theories of metaphor see metaphorical conversation as an example of this kind of novelty, and accordingly they place it outside the sphere of language in the strict sense. They argue, and effectively so, that any theory of metaphor that does not characterize it as this sort of calculated "deviance" from literal conversation is not really a theory of metaphor at all. The authors of some *psycholinguistic theories of metaphor* seem to agree with our pragmatics theorists' conception of the basic structure of metaphorical novelty, but to disagree with their contention that metaphor is merely "deviant" or "parasitic" upon correct speech. In defence of this point, these psycholinguists have produced empirical studies that, they think, demonstrate that metaphorical utterances take no more time to process than the most "literal" speech. We will argue that the important issue here is altogether deeper than anything that can be established by timing studies. It appears to us—and, we think, to the psycholinguists as well—that there is something linguistically significant about the kind of "derivative" novelty seen in metaphor. But this insight is incompatible with the basic assumptions of Saussurean linguistics, and so to pursue it will require an alternative approach.

## 2.2 Pragmatics theories of metaphor

A long tradition of Western thought has it that metaphor is a kind of deliberate misuse of literal conversation. As with many such traditions, this one has roots in the work of Aristotle. Aristotle thought that metaphor involves “the application of the name of a thing to something else” (Aristotle, 1967, 57b1). He is clear that a metaphorically transferred name must be the wrong name for its object, and the right word for something else: this, he thinks, is the reason why metaphor has its characteristic effect. Aristotle notes that when the poet calls Achilles a lion, since “lion” is the wrong word for Achilles and the right word for lions, the construction draws attention to similarities between Achilles and lions (Aristotle, 1954, 1407a). If “lion” were Achilles’ proper name, then the construction would not make us think of lions and about the respects in which Achilles is like one.

Like Aristotle, the authors of pragmatics theories of metaphor believe that it is essential to a metaphor to be a bit of conversation used deliberately outside its natural state, simply because the natural state of the language exploited is essential to the end effect of the metaphor. Without this alienation, they argue, all sense of metaphor is lost. On these grounds, Searle, a pragmatics theorist, dismisses the idea that metaphor involves a semantic change in meaning.

It is often said that in metaphorical utterances there is a change in meaning of at least one expression. I wish to say that on the contrary, strictly speaking, in metaphor there is never a change of meaning; diachronically speaking, metaphors do indeed initiate semantic changes, but to the extent that there has been a genuine change in meaning, so that a word or expression no longer means what it previously did, to that extent the locution is no longer metaphorical. . . . in a genuine metaphorical utterance, it is only because the expressions have not changed their meaning that there is a metaphorical utterance at all (Searle, 1993, 90).

Davidson, a second pragmatics theorist<sup>1</sup>, makes precisely the same point and for the same reason. Concerning the metaphorical sentences “The Spirit of God moved upon the face of the waters” and “Tolstoy was a great moralizing infant”, he writes,

The idea, then, is that in metaphor certain words take on new, or what is called “extended” meanings. . . This account cannot, at any rate, be complete, for if in these contexts the words “face” and “infant” apply correctly to waters and to the adult Tolstoy, then waters really do have faces and Tolstoy literally was an infant, and all sense of metaphor evaporates. . . [An] adequate account of metaphor must allow that the primary or original meanings of words remain active in their metaphorical setting (Davidson, 1978, 248).

Again because of the transparent dependence of words used metaphorically on a more “natural” use, Jerry Morgan, a third pragmatics theorist, rejects the thesis that metaphor is a matter of resolving ambiguity between two independent available meanings. Morgan comments,

. . . in the case of metaphor, one of the meanings is derivative in some way from the other. If I say “John is a wall”, the metaphorical reading is not a coincidental second meaning, but *derivative* of the literal meaning (Morgan, 1993, 127).

Morgan, Searle and Davidson have a good point here, and one that seems to apply to any attempt to assimilate metaphor into a purely synchronic theory of language. If metaphor indeed consists in a use of language that exploits its natural state but is outside that state, then no semantic theory of metaphor can be adequate, because all such theories involve the claim that metaphorical conversation is part of the same natural state as literal conversation. We can see how convincingly this argument shuts down the possibility of a semantic theory of metaphor by applying it to the particular case of L. Cohen’s semantic theory of metaphor (Cohen, 1993). In arguing for the claim that metaphor is “a problem for our theory of *langue*, not our theory of *parole*” (Cohen, 1993, 58), Cohen says that the key factor at work

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<sup>1</sup>In placing Davidson as a pragmatics theorist of metaphor, we follow other commentators and certainly the text of “What Metaphors Mean”. However it bears mentioning that Davidson’s later position on language as advanced in “A Nice Derangement of Epitaphs” (1985) appears to be more concordant with the view of language we advance in Chapter 3 than it is with the view of Searle, Morgan or any other linguistic essentialist.

in metaphorical conversation is an instance of a more general linguistic phenomenon, the *cancellation of semantic features*.<sup>2</sup> Cohen claims that the difference in meaning between (2.1) and (2.2) is not due to any difference of meaning between the lexemes transcribed as “lion” in both sentences.

(2.1) A lion eats ten pounds of meat a day.

(2.2) A stone lion needs no feeding.

Rather, says Cohen, the coincidence of *lion* with the lexeme *stone* in (2.2) results in the cancellation of one of the characteristic semantic features of *lion*, +ANIMATE. The meaning of the full sentence is then compositionally derived as usual. According to Cohen, metaphor involves just the same sort of cancellation.

(2.3) The new budget is a rocket to the moon.

In (2.3), he says, the coincidence of the phrase *the new budget* with *is a rocket to the moon* results in the cancellation of some of the features of *is a rocket to the moon*, such as +MATERIAL and +AIRCLEAVING. The difference between metaphorical and non-metaphorical cancellation is derived from a property Cohen ascribes to semantic features, their being ordered within a predicate in terms of *importance* to that predicate. Metaphorical cancellation operates on relatively important features; non-metaphorical cancellation on relatively unimportant ones.

Cohen tries to sell his theory as one that might satisfy the intuitions of particularly “creative” language users.

... it is characteristic of a natural language sentence like [“He is a lion”] that it is indefinitely rich in possible meaning. Alongside one or more literal readings it admits also an indefinite variety of metaphorical ones. A theory that does not allow this will never satisfy the intuitions of people who are expert in the use of language, like the best creative writers (Cohen, 1993, 59).

However, on Cohen’s theory metaphors are not creative or novel in any robust sense. In placing metaphorical conversation within the fold of natural conversation, Cohen simply

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<sup>2</sup>We may think of semantic features roughly as two-valued atoms that combine to form word meanings, and of their cancellation as the assignment of a value that is opposite to what is normal.

makes the set of possible conversational expressions of an essence larger than it might be within a theory that permitted just one meaning per word. The end result is that on Cohen's account, metaphorical conversation is completely homogeneous with literal conversation. Neither Searle nor Davidson nor Morgan anticipates this curious strategy; each seems to take it as obvious that a fresh metaphor is robustly novel. However, their argument from the basic structure of metaphor still finds its mark here. On Cohen's account "literal" conversation has no theoretical significance over metaphorical conversation; literal conversation is just one of many possible conversational expressions of a linguistic essence, distinguished from the others by the fact that all of the essence's "feature switches" are turned on at once. Certainly on this account metaphorical conversation cannot be said to "depend" on literal conversation any more than literal conversation depends on the possibility of every "feature switch" being turned *off* at once. And so whatever Cohen might be talking about here, he has changed the subject from metaphor to something else.

### 2.2.1 Nature and interference in metaphorical conversation

Assuming a basic Saussurean understanding of the distinction between language and that which is extra-linguistic, the approach of pragmatics theories of metaphor is justified considerably by the observation that many aspects of metaphorical conversation involve obviously extra-linguistic forces. As we learned in Chapter 1, to a Saussurean this implies that metaphor is not a natural state of conversation, but is instead a product of the interference with the natural state of conversation by whatever extra-linguistic force is at work. One general area within which these forces appear to work is in the cueing of metaphorical interpretation in conversation. Intuitively, a metaphor has a "first reading" that is not identical with its final effect, and metaphor theorists usually try to explain why the interpreters of a metaphor do not simply stop interpreting after having completed this first reading. Semantic theories of metaphor rely on the thesis that "first readings" of metaphors have some special semantic defect. Views of this sort sit within a long tradition of thought about metaphor, according to which "first readings" of metaphors are false. The OED article on "metaphor" features a nice encapsulation of this view, courtesy of Henry VIII.

And rather then men would note a lye when they know what is meant, they will sooner by allegory or metaphor draw the word to the truth.<sup>3</sup>

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<sup>3</sup>1533 in Wotton Lett. (1654) Suppl. 8, quoted in OED, 2nd ed., s.v. "metaphor"

Interestingly, Cohen and other semantic theorists of metaphor considerably strengthen this view by asserting that all metaphor involves a kind of semantic absurdity that precludes all possibility of model construction, and thus *guarantees* falsehood (Beardsley, 1962; Henle, 1958; Matthews, 1971). In a metaphorical sentence like (2.4), for example, the presence of quadrupedality in the meaning of “wolf” might be supposed to clash fundamentally with the presence of bipedality in the meaning of “man”, so that the sentence as a whole simply cannot be satisfied.

(2.4) Men are wolves.

Construed as a universal generalization, this position is rather strong and hence risky. We can suggest a purely strategic reason why Cohen and other semantic theorists of metaphor may have assumed this risk: if they were to admit that metaphors are generally false but still semantically satisfiable, it could be difficult for them to show that metaphorical interpretation is cued by semantic rather than pragmatic factors, i.e. that metaphor is natural to conversation rather than part of the effects of the interference of language users with conversation’s natural state.

It does not matter much whether our suggestion here is correct, since it appears that the generalization it concerns was falsified conclusively when theorists observed that many metaphors do not appear to be “literally” false, let alone semantically ill-formed. T. Cohen (Cohen, 1975), for example, notes that simple-hearted “literal” readings of many of a large class of what might be called *inapt description metaphors* such as Picasso’s (2.5) and Brecht’s (2.6), appear to be trivially true.<sup>4</sup>

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<sup>4</sup>Of course, perhaps outside of cases of cognitive impairment, no English speaker takes such sentences as trivial truths. A sophisticated formalization would classify the negation in this kind of sentence as *metalinguistic*: both Picasso and Brecht are denying an assumed proposition that a particular “metaphorical” description is apt. In fact, in the non-elided versions of these quotations, both speakers go on directly to provide what they consider to be apter metaphorical descriptions of their subjects. It is easy to find other examples of speakers and writers negating an inapt metaphor, then offering an apter specimen—a Google search on “is not a” in quotations turns up many examples. This kind of metalinguistic negation also occurs, with prosodic marking of the inapt term and the proposed alternative, in such constructions as “I didn’t like it, I loved it!”; Frosted Flakes *good?* They’re *grrrrrrr-reat!* and so on. In “*That’s not a knife, this is a knife!*” Crocodile Dundee offers an example of a structurally similar phenomenon, in which a term is held constant and an inapt referent is juxtaposed with an apter specimen. Of course metalinguistic negation occurs outside these prosodically marked contexts; Hamlet’s “Not so, my lord; I am too much i’ the sun” in response to Claudius’ “How is it that the clouds still hang on you?” is an example. It is certainly false that Hamlet has clouds hanging on him, let alone that they remain still while doing so, but that isn’t Hamlet’s objection to Claudius’ sentence.



(2.5) A painting isn't a market basket or a woman's handbag, full of combs, hairpins, lipstick, old love letters and keys to the garage . . .<sup>5</sup>

(2.6) Art is not a mirror held up to reality . . .

Cohen's point is well taken here; there is simply no clear sense in which such sentences as (2.5) and (2.6) are *incorrect*. We must conclude that mere incorrectness cannot suffice as a "triggering condition" for metaphorical interpretation; nor, *a fortiori*, can semantic absurdity or unsatisfiability. Other students of metaphor and figurative language (Johnson, 1980; Glucksberg and Keysar, 1993) have focussed on class inclusion assertions that have perfectly acceptable "literal" interpretations in some contexts, and yet receive "metaphorical" interpretations in others. A Google search for "My dog is an animal", one of Glucksberg's favourite examples, turned up the following pair of examples, both from written language in blog entries.

(2.7) At the end of the day Jocelyn is 18 months old and my dog is an animal and they should not be unsupervised hanging out together.<sup>6</sup>

(2.8) My dog is an animal! As cute as she may look this little girl can chew through steel!<sup>7</sup>

In this vein is (2.9), a well-known example of Reddy (1969), which might receive one kind of interpretation when uttered by a geologist on an expedition, and another when the same geologist utters it while exiting the office of an eccentric professor emeritus.

(2.9) The rock has become brittle with age.

Or take (2.10), a sentence that is, apparently, literally true, but nevertheless can receive metaphorical interpretations.

(2.10) Moscow is a cold city.

Pragmatics theorists of metaphor conclude from such examples that in picking up the cue to make a "special" metaphorical interpretation, listeners exploit such language-external features of conversation as features of the context of utterance, norms of human social interaction, and so forth. Black muses:

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<sup>5</sup>(As quoted in the New York Times, 1973)

<sup>6</sup>Retrieved from [uppereastsidemoms.blogspot.com/2006\\_06\\_01\\_uppereastsidemoms\\_archive.html/](http://uppereastsidemoms.blogspot.com/2006_06_01_uppereastsidemoms_archive.html/), July 23, 2006.

<sup>7</sup>Retrieved from [mormondaddy.wordpress.com/2006/02/16/my-dog-is-an-animal/](http://mormondaddy.wordpress.com/2006/02/16/my-dog-is-an-animal/), July 23, 2006.

The decisive reason for the choice of interpretation may be, as it often is, the patent falsity or incoherence of the literal reading—but it might equally be the banality of that reading's truth, its pointlessness, or its lack of congruence with the surrounding text and nonverbal setting (Black, 1993, 450).

Davidson (1978) states that a metaphorical interpretation may be triggered by either patent falsity or contextual "oddness". Searle (1993, 105) writes that metaphorical interpretations of sentences can be triggered by "falsehood, semantic nonsense, violations of the rules of speech acts or violations of conversational principles of communication". Altwerger (1987) makes do with violations of Gricean maxims, while the still more parsimonious theories of both Martinich (1984) and Grice himself (1975) call upon only violations of the Gricean maxim of Quality.

After metaphorical interpretation is cued, somehow a metaphor's "special" significance must be derived from the straightforward significance that has been violated and thereby exploited. Pragmatics theorists argue that the factors that govern this stage of metaphorical interpretation are as extra-linguistic as those that they think cue metaphorical interpretation. Sadock links these forces more particularly to those involved in the non-linguistic cognition of analogies.

Whatever might be unclear about the way metaphor is used and understood, I take it for granted that the underlying principles governing metaphor are of a general psychological sort and are thus not specifically linguistic. While the intellectual faculties involved might be *prerequisites* to speech, they are independent of it. The fact that a certain group of stars in the night sky reminded someone of a bull and the fact that a lion on a warrior's shield suggests that its bearer is brave are, I think, nonlinguistic instances of the same analogical urge that functions in the issuance and apprehension of metaphor (1993, 42).

Some who work in the tradition of implicature and speech act theory suggest that listeners process metaphors using rational inference along with an understanding of general principles of communication to recover the propositional "speaker's meaning" of a metaphor (Altwerger and Strauss, 1987; Grice, 1975; Martinich, 1984; Morgan, 1993; Searle, 1993). Davidson, on the other hand (1978), disregards the intentions of the authors of metaphors, and focuses instead on what he sees as an entirely non-propositional effect that a compositionally derived

“literal” utterance meaning has on an addressee. All agree that the factors at work in the derivation of a metaphor’s effect are ultimately aspects of what might broadly be called “human cleverness”. Whatever the mental apparatus used in metaphor might come to, for our pragmatics theorists it is not linguistic. Hence for them it interferes with the natural expression of language in conversation, creating heterogeneity that is “unnatural” from a strictly linguistic point of view.

### **2.2.2 The illustrative significance of pragmatics theories of metaphor**

Pragmatics theories of metaphor illustrate a property of all essentialist linguistics: any theory of novelty in the form of variation on available conversation must treat its object as an unnatural state of conversation. Such novelty can be of no interest from a linguistic point of view outside of the natural, homogeneous states on which it is a variation. We will see that this outlook raises interesting problems for pragmatics theories of metaphor, and more generally for essentialist theories in linguistics.

## **2.3 Psycholinguistic theories of metaphor and the empirical “pragmatics controversy”**

Generally, psycholinguistic models of metaphor processing are predicated on the assumption that metaphorical conversation involves the online generation of psychologically realized structures that emerge as the result of real-time modification of already existing structures. In this respect they are quite in agreement with pragmatics theorists of metaphor. A brief survey of some psycholinguistic models of metaphor processing will make this point clear.

### **2.3.1 A few psycholinguistic models of metaphor processing**

#### **Similarity theories**

Aristotle’s account of metaphor as a means of pointing out similarities has enjoyed millennia of influence. Thus traditionally<sup>8</sup>, metaphor has been treated by rhetoricians as a means of

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<sup>8</sup>A representative example reads,

Metaphor is one of the commonest modes of transfer. It depends on a similarity of some sort—in shape, in size, in function, in color, or in any hundreds of other ways—between the established referent of a word and some new referent. When a metaphor is first used, both

pointing out some similarity between the two objects referred to by the vehicle and tenor of the metaphor, respectively. In naive formulations of “comparison views” of metaphor, a metaphor is simply a “condensed” or “elliptical” simile, such that uttering (2.4) is in some sense equivalent to uttering (2.11).

(2.11) Men are like wolves (in certain respects).

This view is far too undeveloped to be of much theoretical use. The authors of *similarity theories of metaphor* in psycholinguistics variously attempt to remedy this. Generally, such theorists assert that metaphor involves a neural search within representations corresponding to the vehicle and tenor for identical items. What might be called *predicate matching* models show the comprehension of metaphor as involving a search for the intersection of two sets of “predicates” (roughly, two-valued semantic atoms that combine to form word meanings) corresponding to the vehicle and tenor of a metaphor, respectively. The intersection is then applied as a complex predicate to the tenor. Perhaps the simplest possible formulation of this sort of view is diagrammed in Figure 2.1, and predicts that an assertion of the metaphor “Men are wolves” should be equivalent in effect to an assertion that men have all the properties we suppose they have in common with wolves.

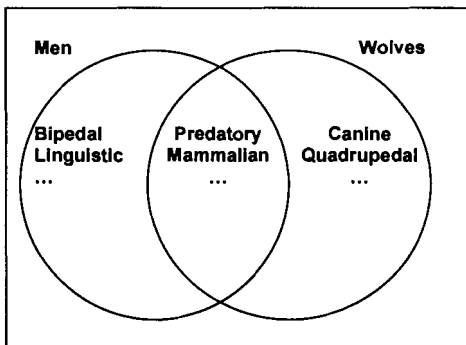


Figure 2.1: Predicate-matching interpretation of the processing of the metaphor “Men are wolves”.

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the user and the hearer or reader are conscious of both referents and of the similarity between them that makes the metaphor apt (Francis, 1963).

This is a very crude example of a predicate-matching theory of metaphor, and probably not one that any contemporary psycholinguist actually advances. However, its deficiencies highlight desiderata for theories of metaphor processing that many similarity theorists take seriously in formulating their own models. First, our model predicts that a metaphor ought to be utterly interchangeable with its “transposition”, i.e. that uttering (2.4) ought to be equivalent to uttering

(2.12) Wolves are men.

This prediction seems hopeless. In a seminal paper, Tversky (1977) shows that even overt comparison statements of the form “A is like B” are not interchangeable in conversation to converse similarity statements of the form “B is like A”.<sup>9</sup> With respect to metaphors, this resistance to transposition appears to be even stricter (Glucksberg et al., 1997). Thus, many researchers in metaphor theory take accounting for this apparent “irreversibility” of metaphor as a requirement for a good theory. Second, our minimal formulation of a feature-matching view does not satisfy the intuition that metaphors typically convey new, surprising or at least non-platitudinous information; we do not suppose that (2.4) informs anyone that men are mammals, even though, as noted in Figure 2.1, both men and wolves are mammals.

So typically there is more than Figure 2.1’s minimum to the apparatus provided by a predicate-matching theory. For example, predicate-matching views formulated in terms of *salience imbalance*, typified by the work of Ortony and his colleagues, (Ortony, 1979, 1993b), follow Tversky’s influential treatment of similarity in ranking predicates by “salience” with respect to their subjects, and assert that the comprehension of metaphor involves a search within the intersection of the predicate sets of the vehicle and tenor for predicates of high salience for the vehicle, but low salience for the tenor. The metaphor has the effect of increasing the salience of these features for the representation corresponding to the tenor. This provides a straightforward account of the irreversibility of a metaphor. Ortony handles the problem of how metaphors can introduce new information by distinguishing *predicate promotion metaphors*, which have the effect of increasing the salience of predicates already present, from *predicate introduction metaphors*, which actually introduce predicates not

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<sup>9</sup>Participants in Tversky’s study preferred to place the object of comparison whose salient features are more important to the comparison (the “prototype”) in the second position (Tversky concludes that in a comparison, we offer information about one object by suggesting that it has features particularly salient to another).

already present as the metaphor's addressee or reader attempts to find a ground for the comparison (Ortony, 1993b, 205).

Some psycholinguists who advance comparison theories of metaphor take as the important object of metaphorical "comparison" not sets of unary predicates borne by representations of the vehicle and tenor, but instead more complex structures within those representations, created by  $n$ -ary predicates for  $n \geq 1$ . Such theories handle the unary predicates of feature-matching models as a special case. Max Black's *interaction view* of metaphor (Black, 1962, 1993) is an early and sketchy example. According to Black a metaphor mediates an isomorphism between an "implication complex" associated with the metaphor's tenor and one associated with its vehicle. The metaphor incites its hearer to search for implication complexes associated with the vehicle that have isomorphic implication complexes associated with the tenor. Brian Bowdle, Dedre Gentner and their associates (Bowdle and Gentner, 2005; Gentner and Wolff, 1997; Gentner et al., 2001) offer a more detailed theory of this kind that they call the *structure mapping view* of metaphor. In their view, metaphor involves an alignment of two structured representations containing objects, unary predicates, relations and higher-order relations. Roughly, one of these representations, that of the *source* domain, is searched for objects that satisfy predicates not satisfied by their counterparts in the second, *target* domain. These predicates are then transferred as an "inference" to the counterpart objects in the target domain. Thus in the analysis of the metaphor "Socrates was a midwife", the structure mapping view predicts the following series of events (See Figure 2.2): First, identical predicates in the "concepts" associated with the vehicle and tenor are mapped to each other—Bowdle and Gentner locate the binary predicates *help*( $x, y$ ) and *produce*( $x, y$ ). Next, each of the arguments of these predicates is mapped to its counterpart at the same abstract position in the other domain, creating a structure-preserving system of matches. Thus, each of the arguments of the relational structure formed by Socrates' helping the student to produce an idea is mapped to an argument of the same predicate in the structure formed by a midwife's helping a mother to produce a child. Finally, structures created by predicates that are unique to the source representation but connected to its aligned structure—in this case, one created by *develop within*( $x, y$ ) and the adverbial *gradually* ( $x$ )—are mapped to the target representation. Thus the midwife's helping the mother develop something *within herself*, and *gradually* is carried over to Socrates. The directionality of this mapping (from source to target) allows Bowdle and Gentner to account for the irreversibility of a metaphor as well as its conveying new information.

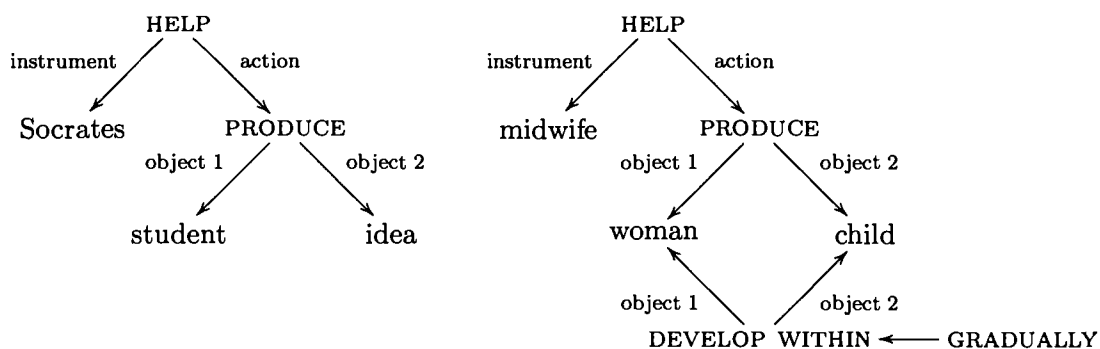


Figure 2.2: Structure-mapping interpretation of the metaphor *Socrates was a midwife*.

### Categorization theories

*Categorization theories of metaphor* in psycholinguistics involve claims that a metaphor is actually a “literal categorization statement”, in which the vehicle of the metaphor forms the name of a category, of which the object it typically names is a prototypical member (Glucksberg and Keysar, 1993; Glucksberg et al., 1982; Cacciari and Glucksberg, 1994; Jones and Estes, 2005; Kintsch, 2000). In some cases, the category is an existing “concept” in the repertoire of an addressee or reader, but in others, it will have to be produced on-line during the processing of the metaphor. In the case of our sentence (2.4) (*Men are wolves*), the proponent of a standard categorization theory might claim that wolves are prototypical members of a class of canny and amoral predators (on a suitably metaphorical reading of “predators”), and so “wolves” is pressed into service as the name for that category and (2.4) is an assertion that men are members of this class. Thus men, as members of the category “wolves”, inherit all the characteristic attributes of members of that class.

In the most recent version of the categorization view of metaphor, the *attributive categorization theory* (Glucksberg et al., 1997; McGlone and Manfredi, 2001), the metaphor’s vehicle and tenor interact to select which properties of the vehicle will be used to select the category the vehicle represents, and into which the tenor will be placed. This interactive

aspect of categorization helps to solve a problem with the earlier categorization theories, that they cannot account for the fact that a given word can apparently represent different categories in different metaphors. “Wolves”, for example, appears to refer to non-identical categories in (2.4) and the following example.

(2.13) Teenage boys are wolves.

By allowing the topic to select which features of the vehicle activate the creation of a category, the vehicle is then free to represent different categories when it is paired with different tenors. This feature of attributive categorization theory renders the distinction between comparison and categorization theories fairly hazy, since both involve first the interaction between two structures to create a complex “predicate”, and second the application of the predicate to the grammatical subject of the metaphorical sentence.

### 2.3.2 The empirical pragmatics controversy, and a deeper issue

Since the late 1970's, certain proponents of various psycholinguistic models of the processing of metaphor have pitted their models against those of pragmatics theories in laboratory studies. Their ultimate goal in doing so is, in one commentator's words, to show that “‘ordinary language’ and metaphor are continuous phenomena, involving common cognitive and linguistic processes” (Paivio and Walsh, 1993, 327); on the assumption, of course, that according to pragmatics theory metaphor and ordinary language are discontinuous phenomena, involving distinct cognitive and linguistic processes. These psycholinguists assume that pragmatics theories of metaphor imply a “serial” model of the processing of metaphor, in which a “literal meaning” for a sentence is always processed first and in a genuinely linguistic fashion, to be followed by the non-linguistic processing of a “figurative meaning” if some defect in the literal meaning is detected. Pragmatics theories thus construed appear to predict that “literal” sentences should be processed more quickly than “figurative” sentences. A wave of psycholinguistic studies (See for example Glucksberg et al., 1982; Harris, 1976; Inhoff et al., 1984; Ortony et al., 1978; Gibbs., 1984; Gibbs and Gerrig, 1989; McElree and Nordlie, 1999) was purported to demonstrate the equivalence of processing times for the interpretation of “literal” and “nonliteral” utterances, particularly given the right kind of contextual primes. The authors of these studies interpreted their results as disconfirming pragmatics theories of metaphor. More generally they interpreted these results as disconfirming a stodgy and philistine view of metaphor as “rather unimportant,



deviant, and parasitic on ‘normal usage’” (Ortony, 1993a, 2), and conversely as vindicating the place of metaphor in “normal” language. An entry in the *Encyclopedia of Cognitive Science* exemplifies this point of view.

In the past, metaphor was viewed as a peripheral aspect of communication, secondary in status to literal language. Early models of metaphor comprehension treated metaphors as deviations from proper literal language—as literally false expressions that violate the usual norms of communication. Current models view metaphor more positively, as a normal part of language (Bowdle and Gentner, 2002).

This exuberance abated somewhat after a second wave of psycholinguistic studies apparently demonstrated that unfamiliar and novel metaphors really do seem to involve more processing “work” than literal language, or richer contextual priming (Blasko and Conine, 1993; Bowdle and Gentner, 2005; Fraser, 1993; Gentner and Wolff, 1997; Gibbs., 1990; Janus and Bever, 1985; Onishi and Murphy, 1993). Some authors re-evaluated the studies that supported non-serial models of metaphor processing as relying excessively on “stale” metaphors (Janus and Bever, 1985); others brought into question the modes of data collection and interpretation involved in the studies (Hoorn, 2002). One illuminating study (Giora, 1999) suggests that the “meanings” activated most frequently by addressees, be they pre-theoretically construed as metaphorical or not, tend to be the ones activated first and with least regard to context.

## 2.4 Conclusion: the incompatibility of “significant” novelty with Saussurean linguistics

It is a trivial truth that a linguist who believes that conversational novelty has linguistic significance must adopt a method other than Saussure’s. Our discussion of the debate between pragmatics and psycholinguist theorists of metaphor furnishes a nice, if not necessary illustration of this point. Our psycholinguists use vocabularies such as those of deviance, parasitism and abnormality in describing the attitude of their opponents towards metaphor. This is not an inaccurate description of the pragmatics theorists’ position. However, the psycholinguists just discussed interpret it in a way that is counterproductive to their own ends. The vocabularies of deviance, parasitism and abnormality respectively suggest the

material conditions of variation on a theme, the dependence of one sort of thing on another, and distinctness. They also suggest an *evaluative* theoretical outlook on these sorts of things, essentially the dismissive attitude of the typological thinker. The psycholinguists want to show that the pragmatics theorists' position is false, and so they mount timing studies. In thus attempting to show that metaphor is no more difficult than "normal" conversation, they place themselves in danger of damning metaphor with the same faint praise given it by semantic theorists of metaphor (Toolan, 1996). That is, instead of arguing for the significance to linguistics of robust, creative metaphor and figuration as per their rhetoric, they seem to want to find a place for metaphor in the stereotyped, homogeneous structure of conversation as envisaged by their pragmaticist opponents. The psycholinguists' position on the importance of poetic and figurative conversation in language would be better served by attacking the evaluation implied in the language of deviance, parasitism and abnormality: by taking this language as *inapt* rather than *false*. The psycholinguists and the pragmatics theorists clearly agree that metaphor is a novel variation on pre-existing forms of conversation. Where they really seem to differ is with respect to the question of whether metaphor and "literal" conversation are of equal theoretical significance. This is a rather deep question of method, and not one to which timing studies are obviously relevant. The pragmatics theorists are bound by their Saussurean assumptions to answer in the negative. The psycholinguists' attitude towards metaphor, on the other hand, suggests that they incline towards a positive answer. If they are to be in a position to actually give such an answer, they must reject Saussurean essentialism. To accept that metaphorical conversation is significant from a linguistic point of view requires accepting that novelty in the form of variation from established forms is interesting in its own right, rather than a distortion of that which is interesting.

This issue raises two questions. First, we want to know what it is about the sort of novelty seen in metaphor that makes it interesting in a way that (for example) the effects of air friction are not interesting from the point of view of Galilean mechanics. Second, we wonder whether there is any method adequate to the study of this sort of novelty, given Saussure's pessimism about the prospects of any non-essentialist approaches to linguistics. In the next chapter, we address both these questions.

## Chapter 3

# A linguistics of novelty

### 3.1 Introduction

In Chapter 2, we examined pragmatics theories of metaphor to illustrate some interesting aspects of the Saussurean method in linguistics that we outlined in Chapter 1. Pragmatics theorists of metaphor reason along essentially Saussurean lines that since metaphor is obviously derived from “literal” conversation, metaphorical conversation must involve extralinguistic interference with essentially literal conversation. The psycholinguists we examined in section 2.3 find something objectionable in this approach to metaphorical novelty; but, we thought, they lose sight of what this might be in their focus on timing studies. It seems as if in arguing that a metaphor takes no more time to process than “literal” conversation, they are trying to demonstrate that metaphor is just as pedestrian and conventional as literal conversation, although apparently they do feel that there is something significant to linguistics in robust metaphorical novelty. Since Saussurean linguistics is incompatible with the idea that novelty could be interesting to linguistics, it turned out that the psycholinguists’ disagreement with pragmatics theories of metaphor may be more philosophical than empirical. In this chapter we examine just what it is about “deviant” novelty in conversation that might be said to give it genuinely linguistic significance, and offer *population thinking* as outlined by Mayr as a method well suited to novelty of this kind and a counterexample to Saussure’s pessimism about the prospects of non-essentialist approaches to language. We also attempt to reconcile this alternative method with the perceptive insights about language that originally motivated Saussure to adopt his essentialism.

### 3.2 Population thinking and novelty in biology

The method of typological thinking (Mayr, 1976b, and see also our discussion in Chapter 1) is characteristic of pre-Darwinian biology. We see a clear example in this passage from Buffon's *Histoire Naturelle* of 1753, quoted by Sloan (1987, 121).

There is, in nature, a general prototype in each species upon which each individual is modeled, but which seems, in realizing itself, to be altered or perfected by circumstances. So that, relative to certain characteristics, there is an unusual variation in the appearance in the succession of individuals, and at the same time a constancy in the species as a whole which appears remarkable.

The use of this method in biology goes at least as far back as Aristotle, who needed a way to square the essentialism he had inherited from Plato with observed biological diversity. Although Sober (1980) credits Aristotle with the invention of the natural state model in biology, arguably the book of Genesis furnishes another early example. Apparently Eden's sinless humans, tame animals and natural abundance are a natural state hypothesis, the serpent is an interfering force, and suffering of the kind often brought up in arguments for atheism is the product of this unnatural interference.

As long as it appeared that the operations that produce biological diversity have constant inputs, there was no obvious deficiency to the use of this method in biology. Wallace suggests that the appeal of typological thinking has to do with the peculiar selection pressures on domestic animals, with which humans have historically been more familiar than wild animals, that causes them to appear to vary around a stable central type.

ONE of the strongest arguments which have been adduced to prove the original and permanent distinctness of species is, that varieties produced in a state of domesticity are more or less unstable, and often have a tendency, if left to themselves, to return to the normal form of the parent species; and this instability is considered to be a distinctive peculiarity of all varieties, even of those occurring among wild animals in a state of nature, and to constitute a provision for preserving unchanged the originally created distinct species.

In the absence or scarcity of facts and observations as to varieties occurring among wild animals, this argument has had great weight with naturalists, and

has led to a very general and somewhat prejudiced belief in the stability of species (Wallace, 1858, 53).

However, a more thorough empirical examination of nature, including Darwin's own more detailed examination of the circumstances of domestic animals, reveals that the structure of biological variation is quite different from anything envisaged by the typological thinker. As it turns out, the operations that produce biological variation tend to affect the inputs of their future iterations, so that organisms "depart indefinitely" from their ancestors. Wallace puts the point as follows.

... there is a tendency in nature to the continued progression of certain classes of varieties further and further from the original type, a progression to which there appears no reason to assign any definite limits (Wallace, 1858, 62).

In this respect, organisms are completely unlike the phenomena to which typological thinking has been more successfully applied. Generally it is unproblematic for scientists to assume that the hypothesized natural states of physical phenomena remain constant in spite of interference. For example, there is no obvious difficulty in the assumption that the way that the wind interferes with the pure Newtonian motion of a cannonball today will not alter the basic principles of Newtonian physics tomorrow.

This peculiar "indefinite departure" of organisms from their ancestors introduces significant difficulties for typological thinking. It is simply false that there is a single set of properties shared by all past and future members of a species, and passed along in biological reproduction. Organisms do not inherit species-wide characteristics, but only modified versions of the characteristics of their parents. This fact renders unviable a particularly crude style of typological thinking in biology, but for a dedicated typological thinker a few coping strategies are available. For example, the essentialist biologist might take biological ancestor and descendent populations as examples of separate species, and as independent of each other as two successive states of a chess game. Alternatively, he may class members of the descendant population as a degeneration of their ancestors, or perhaps the ancestors as an unfulfilled version of their descendants. A third alternative for an essentialist biologist is to expand his proposed natural states into *spaces* of possible states that include all the members of both populations. The essentialist can thereby deny that what appears to be variation over time is in fact variation; all of it is merely expressions of particular

points within the same space of possibilities. This is quite reminiscent of a strategy disparaged by Wittgenstein in *Philosophical Investigations*, and it has the same distinct flavour of desperation.

But if someone wished to say: "There is something common to all these constructions, namely the disjunction of all their common properties"—I should reply: Now you are only playing with words (1953, section 67).

Nevertheless, it is an option that some choose to exercise. In particular, it is the strategy of some fundamentalist Christian creationists who contend that God created "baramins" or multi-dimensional feature spaces within which the individual organisms of a species are points. On this line of thought, the appearance of evolution is illusory. What appears to be biological change amounts merely to various possible expressions of a single essence. Whatever strategy an essentialist chooses in identifying his species essence, however, the nature of biological inheritance as observed by Darwin is such that sooner or later, the organisms in the essentialist's proposed species will drift away from their assumed essence, and in indefinitely many possible directions, as variations that are assumed to be inessential form the basis of further, apparently "unnatural" variation. Essentialist biology can certainly acknowledge this universal and ubiquitous property of organisms, but must always treat it as the product of extra-biological interference with that which is natural from a biological point of view.

Darwinian evolutionary theory, on the other hand, interprets such variation in a way that addresses the "indefinite departure" of biological change head-on. For a Darwinian, none of the possible genotypes an organism might produce in its offspring can be theoretically irrelevant or "unnatural". Nor is there any environmental factor (biological or not) that can induce any of these genotypes to produce an "unnatural" phenotype or ontogeny. Every possible state of biological nature is "natural" or theoretically significant—be it the result of genetic engineering, toxic spills, extraterrestrial interference, divine intervention, or *whatever*—because every such state is potentially relevant to the basis of future iterations of diversity-producing operations. Here, then, is an approach under which novelty and variation are absolutely central.

According to Mayr, this new focus on diversity is an important and "almost consistently overlooked" (1976b, 27) aspect of Darwin's *Origin of Species*. He frames it as the overturning of typological thinking in biology in favour of a new approach that he calls *population*

*thinking*, according to which *biological diversity should be taken at face value*, and should not be treated as hiding an underlying homogeneity that has been obscured by extrinsic interfering forces. Says Mayr:

The assumptions of population thinking are diametrically opposed to those of the typologist. The populationist stresses the uniqueness of everything in the organic world. What is true for the human species—that no two individuals are alike—is equally true for all other species of animals and plants. Indeed, even the same individual changes continuously throughout its lifetime and when placed into different environments (Mayr, 1976b, 27).

Mayrian population thinkers in biology retain the typological thinker's interest in explaining diversity. However, they do not believe that that this sort of explanation requires showing that a condition of biological diversity is “really” a condition of homogeneity clouded by the effects of external interference, a condition within which each of the members of a species will remain indefinitely if left to its own devices. From this viewpoint all biological diversity is potentially significant, because all of it can affect the basis of future diversity.

### 3.3 Population thinking and conversational novelty in language theory

In Chapter 2, we saw that someone who advances an essentialist theory of language must treat conversational novelty that uses established forms for its basis as irrelevant to linguistics in the strict sense. The psycholinguist detractors of pragmatics theories find something objectionable in this approach as applied to metaphor. It seems to them, we thought, that this kind of novelty is fundamentally interesting from a linguistic point of view. But it is not entirely clear what makes metaphorical novelty interesting in this way.

Furthermore, we have determined that a linguist who takes variation on existing conversation as a phenomenon of linguistic significance must reject Saussure's assumption that conversation is naturally homogeneous and static. But let us recall from Chapter 1 that Saussure suggests that any approach to language theory other than essentialism is doomed to failure, because the variation in speech as a whole is structured by distinct forces.

Taken as a whole, speech is many-sided and heterogeneous; straddling several areas simultaneously—physical, physiological and psychological—it belongs both

to the individual and to society; we cannot put it into any category of human facts, and we cannot discover its unity.

Language, on the other hand, is a self-contained whole and a principle of categorization. As soon as we give language first place among the facts of speech, we introduce a natural order into a mass that lends itself to no other classification. (de Saussure, 1959, 9)

Chomsky feels that Saussure's view of language as a social phenomenon is hopelessly unclear. He introduces the term "E-language" as a tag for whatever Saussure might be interested in. Rather than E-languages, Chomsky wants to study what he calls "I-languages", or individual states within the space of possible parameter settings of his hypothesized Language Acquisition Device (see e.g. Chomsky, 1982, 1988). Nevertheless, like Saussure, Chomsky is convinced that speech as a whole is inherently unsystematic, except insofar as language structures it, because the interfering forces at work in structuring conversation are unpredictable. For Chomsky all aspects of conversation that are not natural states imposed by this structure represent a "mystery" beyond available understanding, but one which only our working on the soluble-in-principle "problem" of Universal Grammar has any hope of illuminating (Chomsky, 1982).

What is the phenomenon of speech, that Saussure and Chomsky despair of understanding as a whole? If a particular language is thought of crudely as a kind of space within which any pair of its users can "converse successfully" (on the right measure of success, of course), it is clear that over time all such systems give way to other, non-identical systems. Through almost unfathomably complex channels the language of *Beowulf* gave way to the many dialects of contemporary English, but it is practically impenetrable to contemporary speakers. Just as clearly, though, successive states of a language are not disjoint. There is never a single moment of language change after which speakers of an old variety are completely unable to converse with speakers of the new variety. Rather, the possibility of successful conversation must be a continuously valued notion; and hence the notion of a language as we are construing it must also be continuously valued. The language of *The Canterbury Tales* presents some difficulty to many modern English speakers, but generally it requires much less adjustment on our part than that of *Beowulf*. The language of *King Lear* is easier still. Precisely this kind of apparently continuous variation is visible too in language considered purely synchronically. Dialects shade gently into separate languages, so



that contemporary linguists generally agree that that there is no non-arbitrary distinction to be made between separate dialects and separate languages (Hudson, 1981).

These large-scale transitions between intuitively distinct languages are a product of many finer-grained diachronic transitions between more particular linguistic phenomena. In the time since Sir William Jones addressed the Asiatic Society, historical linguists have enjoyed significant success in the study of linguistic change at this level of resolution. As before it is safe to hypothesize that the character of the diachronic emergence of particular linguistic phenomena is sufficiently gradual and locally idiosyncratic to foil all attempts at a taxonomy of these phenomena that is neither continuous nor arbitrary. Though many theorists have claimed that we cannot observe linguistic change, all such change is realized in observable conversation between language users. At this level, new variants are generated by modifying existing structures, and, we must suppose, language users cope with these variants through judicious extension of the “old” resources that are available to them (see Davidson, 1985, for interesting commentary). Here, also, is the locus of the spread of novel innovation through a population of language users, and its simultaneous modification along the way. Saussure himself puts the point in this way.

Time, which insures the continuity of language, wields another influence apparently contradictory to the first: the more or less rapid change of linguistic signs. . . In the last analysis, the two facts are interdependent: the sign is exposed to alteration because it perpetuates itself. (de Saussure, 1959, 74)

We must suppose that the pressures that contribute to this individual, moment-by-moment variation in conversation are the source of the heterogeneity in speech that Saussure despaired of ever getting hold of. Individual conversationalists in the midst of the unpredictable features of individual circumstances cause conversation to diverge and to converge in seemingly endless ways. Language changes because conversation occurs.

From our discussion in Chapter 2, we know that an essentialist understanding of language, no matter how subtle, simply cannot accept variation of this sort as significant. And so for Saussure, none of the variations that collectively add up to large-scale linguistic change is of linguistic interest. As we saw in Chapter 1, Saussure believes that long-term linguistic change is a matter of an individual modification of an available essence/natural state relation in *parole* catching on, so that eventually and somehow it finds its way into the general

structure of *langue*. This notion of large-scale changes of that which is “natural” to conversation beginning with “unnatural” deviance from established norms is common among essentialist metaphor theorists of many varieties, who agree with Searle that “diachronically speaking, metaphors do indeed initiate semantic changes” Searle (1993); and the idea is repeated in accounts of language change such as that of Traugott and Dasher (2002), which claim that language change is a matter of pragmatic phenomena eventually giving way to semantic phenomena. Though none of these authors would disagree with Saussure’s contention that “speaking is what causes language to evolve” (de Saussure, 1959, 19), each is methodologically bound to treat all innovative variation in conversation as accidental and inessential to language, and must simply ignore the minute changes it constantly occasions everywhere as phenomena, in Saussure’s words, “of little importance” (de Saussure, 1959, 122).

The success of twentieth-century linguistics shows that Saussurean essentialism is hardly an unviable strategy, though it has been suggested here as in the case of biology that empirically, there is no making sense of the idea that conversation has an “essence” common across all instances that imposes a natural state upon them (see e.g. Lieberman, 2006). However, we suggest that the fact that linguistic novelty and variation changes the basis of future interventions, however locally and however minutely<sup>1</sup>, justifies our considering it as something of linguistic interest, just as the fact that biological novelty and variation changes the basis of future variation justifies Darwin’s shift to population thinking in biology. But this requires that we see idiosyncrasy and variation in conversation as such, instead of as a distraction from an underlying homogeneity. And so this approach can generally be characterized as the application of Mayrian population thinking to language theory, as Steels (1999) terms his own approach to semantics.

This sort of approach to conversational novelty and idiosyncrasy is far from new. It is nascent in the work of nineteenth-century figures, Humboldt in particular, whose work Saussure displaced and whom Chomsky hails as a forerunner of his own programme. Here, Humboldt offers an evocative version of the main point of this section.

... the *individuality* of a language (as the term is commonly understood) is only comparatively such, whereas true individuality resides only in *the speaker* at

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<sup>1</sup>Future research in this area would benefit from a detailed survey of examples of how conversation affects linguistic change. We have neglected to include such a survey here mostly because of time constraints.

any given time. Only in the individual does language receive its ultimate determinacy. Nobody means by a word exactly what his neighbour does, and the difference, be it ever so small, vibrates, like a ripple in water, through the entire language (1988, 63).

This is a profoundly anti-Saussurean, anti-Chomskyan passage. In contemporary linguistics, our proposed approach finds expression also in the field of dynamic semantics, which involves the assumption that over the course of a conversation the reference of particular words changes based on the details of earlier conversation (see e.g. Eckardt, 2003). The “integrational linguistics” of Roy Harris (quoted below) and his students is a third example. There are many more.

The sterility of modern linguistic orthodoxy is precisely that it relegates the essential features and conditions of language to the realm of the non-linguistic. It treats the renewal of language as a mere accident of the communicational process (Harris, 1981, 62).

From this perspective, there is no mystery to speech as a whole. Speech *is* a mystery to someone who is looking for homogeneity and neatness, probably because the structure of conversational innovation guarantees that there is none to be found. However, to someone who has given up searching for essences and merely wants to understand how the present state of conversational variation and heterogeneity has come to be and how it will change in the future, speech in all its complexity presents only a mind-boggling problem.

### 3.4 “Laconics”

Chomsky observes that conversation appears to offer the possibility of unlimited novelty to conversationalists (see Chapter 1). His recursive definition of language, in which rules that produce sentences from sentences are allowed to operate on their own outputs, allows for this possibility. Our proposed approach also allows for unlimited conversational novelty, and with a structurally similar trick. As Chomsky claims that the output of his sentence-generating operations can serve as inputs, so do we claim that the product of normal conversational novelty affects the basis of future conversational novelty. Thereby, Chomsky and we manage to grow a potentially infinite stock of distinct objects from a finite set of resources. Unlike

us, though, Chomsky does not provide his speakers with an unlimited number of *manageably short* sentences; he achieves infinity only by increasing the length of sentences to literally astronomical proportions, and eventually to proportions that may well be too great for our universe to contain. This draws no sweat from an ideal speaker; he never sweats. However, eventually a human speaker will run out of Chomskyan sentences that are compatible with the basic biological demands of sleep, nutrition, respiration and excretion. Our approach, on the other hand, will never run short of interventions of an easily manageable length, and so we might set it alongside the trinity of Syntax, Semantics and Pragmatics by calling it Laconics.

### 3.5 Out-Chomskying Chomsky

Like Chomsky's argument against behaviourism, the foregoing argument for population thinking in linguistics an argument from novelty. As we saw in Chapter 1, in his own argument from novelty Chomsky tacitly assumes that nothing of linguistic interest is ever novel; and so the sort of conversational novelty he can countenance is limited, indeed to the highest possible extent. Our argument from novelty has as its conclusion the contradiction of this hidden assumption of Chomsky's. Since all conversational novelty affects the basis of later novelty, we submit that the method of typological thinking is inadequate to the study of language. Since on the method advocated here, conversational novelty is indeed the central fact to which language theory ought to be addressed, we note that a theory of language based on it will fulfill Chomsky's requirement for significance. In fact, one might argue that it its success in fulfilling this requirement will exceed that of Chomsky's own theory. Thus, against appearances our approach may be more Chomskyan than Chomsky's.

### 3.6 Population thinking and Saussurean insights

In this section, we explore how the approach advocated here preserves some of the perceptive insights about language that motivated Saussure's essentialism, even as it contradicts some of his fundamental assumptions.

### 3.6.1 The efficacy of socially realized linguistic resources in “circular causality”

Saussure conceives of language as an independent entity that structures the “natural state” of conversation entirely on its own, and he defines linguistics as the description of this entity. That is to say, he applies the method of typological thinking to the study of language. An approach to the study of language that is rooted in population thinking cannot compartmentalize and homogenize its area of interest in this way. Because a population thinker is interested in all possible states of conversation, and because these states are structured by so many different factors, this approach to language theory requires positing more than a single influence on “natural” conversation.

But even if we cannot allow that *langue* considered as a socially realized resource exploited in conversation plays the essential role in conversation, certainly we can salvage Saussure’s insight that thus construed, it plays *an* essential role. Recall that Chomsky dismisses the notion of a language common to members of a speech community as hopelessly unclear, and proposes instead that the essential role in conversation is played by individual states within the space of possible parameter settings of the Language Acquisition Device. Steels suggests that to think of the linguistic resources available to the individual as a social phenomenon can be useful without assuming that those resources are the orderly, reductively definable phenomenon that Saussure and Chomsky consider a requirement of theoretical utility. Steels offers an alternative suggestion in terms of a population-based phenomenon he calls “circular causality” between large-scale, general phenomena and small-scale, particular phenomena. Even if our proposed large-scale phenomena are defined in terms of populations and not readily susceptible to a reductive definition says Steels, they can still play an important explanatory role in regulating the small-scale phenomena.

True, language is an emergent phenomenon, the result of the behaviour of thousands or millions of language users, but this emergent phenomenon has a strong causal impact on the behavior of individuals. This top-down influence is established in two ways: (1) The language already in existence in the group is a strong constraint on the behaviour of an individual. He or she has to abide by the system at the risk of not being understood, even if there is always the flexibility to expand the existing system if the need arises. (2) The language learner will be exposed mostly to examples from the existing language so that

he or she will preferentially acquire its structures, even if they are in constant flux (1999, 4).

Steels writes that such circular chains of causality are not unusual in biological systems. General phenomena emerge from collectivities of particular phenomena, and subsequently affect the particular phenomena in such diverse biological areas as the formation and maintenance of ant pathways; the formation and maintenance of potentially interbreeding populations in sexually reproducing species; and the formation and maintenance of patterns of social interaction (1999, 4).

### **3.6.2 Independence and dependence in the relationship of conversation to its linguistic ancestry**

Saussure's distinction between synchronic and diachronic linguistics presupposes that conversation is naturally static, i.e. that conversational novelty is outside the subject matter of linguistics. An approach to the study of language that takes conversational novelty as significant can make no such distinction, because novelty is diachronic. However, we can certainly preserve some of the shape of Saussure's distinction by distinguishing the local, short term change that occurs over the course of a conversation from the more general patterns that are the traditional subject matter of historical linguistics, perhaps even in terms of a distinction between changes participants aim to manage in conversation and the longer-term "side effects" of iterated short-term changes. Furthermore, the application of population thinking to linguistics preserves an intuition of Saussure's that motivated his application of typological thinking to linguistics: that conversation in some language is not "really" a degenerate form of conversation in one of that language's ancestral languages. Population thinking in biology allows that like a particular position within a chess game, an organism is an independent entity and not "really" an interfered-with version of any of the objects on which it is a variation. On the contrary, every such variation is also an independent theoretical entity and a basis for further variation. Likewise, to a population thinker linguistic variation can be acknowledged as theoretically significant, and not merely parasitic on the forms on which it is a variation. In this respect chess is a poor analogy for Saussurean static linguistics and a good analogy for population thinking, simply because there are no "unnatural" chess positions. As Saussure saw, the reverse is true: every chess position is quite independent of its predecessor, in spite of being a variation on it.

### 3.6.3 Independence and dependence in the relationship of conversation to its pre-linguistic ancestry

Saussure's Arbitrariness Thesis depends on his distinction between "natural" and "unnatural" states of conversation. To maintain that language, the subject matter of linguistics, is arbitrary, he must hold that every aspect of conversation that is impinged upon by extra-linguistic factors is "unnatural", i.e. of no linguistic concern. On an approach to language that uses the method of population thinking, we do not distinguish between natural and unnatural states of conversation. Therefore, on this kind of approach the subject matter of linguistics is not wholly arbitrary in the Saussurean sense. In this respect, we find ourselves in alignment with many cognitive linguists, who consider as relevant to language theory many aspects of conversation that exploit neurological and other structures whose primary selective value in evolution appears to have been for functions other than language (see e.g. Allwood and Gärdenfors, 1999; Bickerton, 1990; Fauconnier, 1994; Fillmore, 1985; Heine, 1997; Kemmerer, 2005; Langacker, 1987, 1991; Lakoff, 1987; Sweetser, 1990; Talmy, 2000a,b). This focus in turn frees the linguist from the obligation to divorce conversation from its pre-linguistic evolutionary history. For a Saussurean essentialist, it is an *a priori* assumption that the study of those broadly biological activities that gently shaded into the earliest instances of conversation (as in Aitchison, 1996; Bickerton, 1990; Calvin, 2002; Calvin and Bickerton, 2000; Cangelosi and Parisi, 2002; Lieberman, 1991, 1975, 2006) is irrelevant to language theory. It is assumed that any aspects of conversation that currently depend on such apparatus of pre-language are not instances of language, but instead instances of whatever is being exploited along with the effects of some interference. A population thinker has no such methodological commitment, and acknowledges such conversation as perfectly interesting and fundamental from a linguistic point of view.

Of course, we agree with Saussure that from a long-term, historical point of view, it is quite arbitrary that circumstances should have come about such that a particular utterance has some associated novel conversational effect. Since every state of conversation is a variation on some ancestral state, and since the ultimate ancestral states of language must be broadly biological, non-linguistic states, from a suitably distant historical perspective there is no reason why *any* aspect of conversation should be in its current state rather than another. Saussure himself acknowledges the link between arbitrariness and historical contingency when he writes, "Because the sign is arbitrary, it follows no law other than that

of tradition, and because it is based on tradition, it is arbitrary” (de Saussure, 1959, 76). But this understanding of arbitrariness is different from the one that Saussure applies to language, and it cannot fundamentally distinguish Saussure’s “purely conventional” aspects of conversation from those that he saw as “naturally” motivated, and hence non-linguistic. Since language is not the same in all conditions, we agree with Saussure that all language is arbitrary; but add that extant biological variation indicates that from a suitably remote set of initial conditions, all biology is arbitrary too. As Darwin points out, the details of any organism are never merely given, but must evolve by successive modifications of existing states.

Natural selection can act only by taking advantage of slight successive variations; she can never take a leap, but must advance by the shortest and slowest steps (Darwin, 1859, 194)

For this reason, we assert that from a suitably distant historical perspective all biologically conditioned aspects of conversation are arbitrary. Onomatopoeia, for example, clearly depends for its effect on a historically contingent set-up. If onomatopoeia has any effect on a dog or cat, it is probably only bemusement or bafflement. And at least this is something: probably no onomatopoeic imitation, no matter how accurate, could significantly alter the equilibrium of a jellyfish or a mushroom or a piece of granite.

Our conception of historical arbitrariness is relative to a set of initial conditions from which a history might develop, and can be spelled out as follows. One state (say, that the French word for a cat is *chat*) is arbitrary relative to an initial condition (say, a state of the pre-linguistic ancestors of *Homo sapiens*) just in case the probability of the one happening given only the other is approximately 0. Notice that this conception permits continuous shading of degrees of arbitrariness, as the probability of a state’s emerging given some initial condition moves between 0 and 1. The details of a French child’s emerging conversation are very highly motivated given the state of the world five seconds ago, but this motivation is reduced the farther back in history we set the initial conditions.



### 3.7 A population thinker's view of change in the structure of conversation

A population thinker in biology observes that all biological phenomena emerge as variations on existing biological phenomena, and concludes that all biological variation is of theoretical interest. In parallel, a population thinker in linguistics observes that all linguistic phenomena emerge as variations on existing linguistic phenomena, and concludes that all linguistic variation is of theoretical interest. This point has an interesting consequence for the population thinker's view of processes of change. In Figure 3.1 we diagram a "giving-way-to" relationship  $R$  between a population of conversational objects  $P$  and an ancestor population  $P'$ .

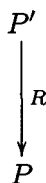


Figure 3.1: Language change characterized in terms of a "giving-way-to" relation  $R$  between non-identical populations  $P$  and  $P'$ .

What is the population thinker to make of processes of change such as  $R$ ? To a certain extent, typological thinking can be successfully applied here as elsewhere; one can abstract from variation and think of such processes of change as more or less approximate instantiations of particular theoretical types. However, this strategy is problematic for the same reason that typological thinking about the members of  $P$  is problematic. Over relatively short time-scales, the relata of relations such as  $R$  must remain relatively stable, so that (for example) the functionalization of the third century B.C.E. is probably sufficiently like the functionalization of C.E. 2006 to justify our ignoring any differences between the two as of no theoretical significance. Yet given the emergence of language from pre-language, this stability cannot hold over relatively long time-scales, because the relata will have changed fundamentally in the interim. Whatever character the relata of the "functionalization" of B.C. 10000 may have had, they were probably sufficiently unlike the relata of the functionalization of C.E. 2006 to justify our thinking of the former process as a sort of proto-functionalization,

a process of change that gave way to the process we now know as functionalization. The ancestor-descendent relation between such ancestor-descendent relations is a higher-order change. We diagram such changes in Figure 3.2. Our linguistic engendering relation  $R$  has

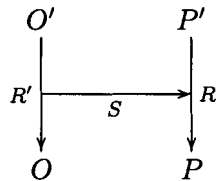


Figure 3.2: A linguistic “giving-way-to” relation  $R$ ; its non-identical ancestor  $R'$ ; and the second-order relation  $S$  between the two.

turned out to have a non-identical ancestor, the earlier engendering relation  $R'$  by which pre-linguistic states in the population  $O$  are connected to their non-identical ancestor states in the population  $O'$ . The ancestor-descendent relation between  $R$  and  $R'$  is itself a second-order ancestor-descendent relation, which we will call  $S$ . This relation is diagrammed in Figure 3.2. This observation is very important from the point of view of a population thinker. Since  $R'$  gave way to  $R$  by iterated, gradual variation, all variation among members of either group affects the basis of further variation. Therefore the population thinker cannot ignore variation among the members of either group;  $R$  and  $R'$  must be considered to be populations, not types.

This point applies to our higher-order relation  $S$  as well, if it has a non-identical ancestral higher-order process of change of which it is a modification. Let us assume that there is such a relation, and call it  $S'$ . This assumption requires a third-order relation of engendering  $T$  between  $S'$  and  $S$ , as diagrammed in Figure 3.3. But this means that like  $R$  and  $R'$ ,  $S$  and  $S'$  are populations, not types.

What then of  $T$ ? Has it emerged from a non-identical ancestor population  $T'$ ? The course of reasoning we have assumed here is functionally similar to the inductive part of the definition of a fractal. Left unchecked, it will generate structures as in Figure 3.4, which illustrates a fourteenth-order relation and will give the reader a good idea of the appearance of a diagram of a relation of an arbitrarily high order—it will look like the diagram, but fuzzier at the tips.

This observation allows us to make an interesting comment on a remark of Max Black in

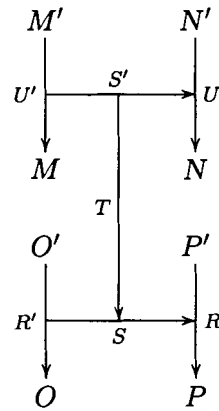


Figure 3.3: A higher-order engendering relation  $S$  between linguistic engendering relations; its non-identical ancestor  $S'$ ; and the higher-order engendering relation  $T$  between the two.

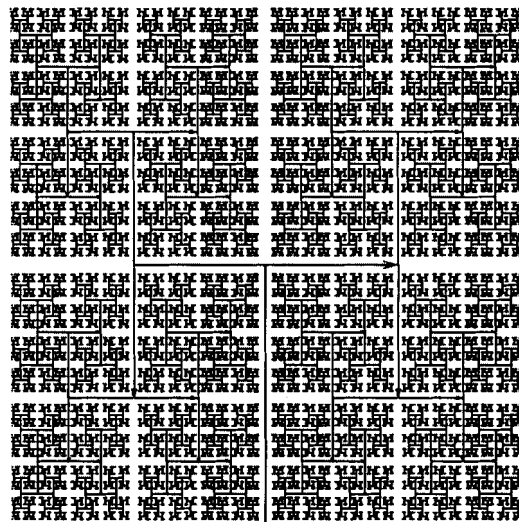


Figure 3.4: Fourteen orders of change.

his discussion of metaphor: “There can be no rules for “creatively” violating rules” (1993, 24). Apparently Black is implying here that since there is no essence to metaphorical novelty, there is no way to offer a theory of that kind of novelty. If this were the case, then perhaps we would have abandon the language of science and resort to a literary idiom in discussing metaphor. However, we suggest that the fact that metaphorical creativity has no essence does not imply that it is unstructured. In a system where derivative novelty is the basis for future novelty, processes of derivation must also be derived. As Darwin said, evolution cannot leap. We must suppose that every linguistic or biological phenomenon has developed by the gradual modification of members of populations of non-identical ancestors, including whatever processes of development we might care to label “linguistic” or “biological” (and see Earl and Deem, 2004, for an interesting discussion of the biological evolution of evolvability). Thus contrary to what Black implies in his claim, there might be a scientific approach to metaphorical novelty; it will simply have to be rooted in the method of biology rather than that of physics or chemistry.

### 3.8 Conclusion

Over the three chapters of this thesis we have examined the role of novelty in the linguistics of Saussure and of Chomsky, and found the treatment wanting in both cases. The difficulty we identified is that no account of language that is rooted in typological thinking can capture the structure of a domain that is built up of successive modifications of existing objects, since a typological thinker must treat variation on a theme as irrelevant from a strictly theoretical point of view. Typological thinking is tremendously powerful and productive in most physical science. However, in the case of language as in that of biology, it appears that a method based on Darwinian “population thinking” is better suited. Contemporary biology is a radically different kind of science from physics, chemistry, and other physical sciences that Saussure uses as a model for his own approach linguistics; but still it is a science. Thus the application of its method to linguistics is certainly scientific, as Saussure himself wanted.

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