

that divides the analog gesture-call-like forms that are best at conveying emotions and intentions at the top, from the language-like digital communication that is best at conveying referential meaning below. The gesture-call system at the very top is the component of our communication that is most like that of other mammals and least like language. Language, at the bottom, is the most distinctively human. Both the top and bottom halves of the figure are further divided, and the two forms just above the central line and the two just below it all share some features of both language and gesture-calls. Quotable gestures and vocalizations are very much like words, but they are not pulled into either the syntax or phonology of language. Gesticulation and intonation are both used more intimately with language than are either quotable gestures or vocalizations, but they are analog signals and thus quite different from the other parts of

language. Instrumental acts are left out of the figure because they are not intended to be communicative at all.

One purpose of Figure 1.2 is to show how very similar to each other audible and visible communication are. Most of what we can do in one **modality** we can do equally well in the other. The distinctiveness of human communication lies not in our specific ability to use vocal language, but rather in our ability to use language, whether audible or visible, to convey referential and propositional meaning, and to do so by means of principles that are very different from our own gesture-calls as well as from any form of animal communication. Linguistic contrast, syntax, and a massive vocabulary are all unique to language, but they are just as characteristic of visible language as of audible language. It is our minds that changed most profoundly as our ability to use language evolved.

Critical Thinking and Application

- Observe friends talking for a few minutes. How do Burling's distinctions among the various components of the gesture-call system help you analyze the complexity of this (and every) interaction?
- Watch a foreign film without the sound or subtitles. Guess what is occurring. What information do you use to make your inferences? Which gestures are familiar? Are there any gestures that are unfamiliar? Now watch it again with sound or subtitles. How accurate were your guesses?

Vocabulary

analog	heritable, heritability	phonology
arbitrariness	iconicity	productivity
behaviorism	immediacy	quotable gestures
digital	intonation	quotable vocalizations
displacement	manual language	recursive
double articulation	modality	sign language
duality of patterning	morpheme	syntax
gesticulation	paralanguage	
gesture-call	phoneme	

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CHAPTER 2

Nature of the Linguistic Sign

Ferdinand de Saussure

(1907–1911)

Ferdinand de Saussure was a linguist working right around the turn of the twentieth century. He is credited with pointing out many important aspects of language, such as that it can be looked at not only historically (**diachronically**), as most linguists including himself were doing at the time, but also at any given moment in time (which he called **synchronically**). Language forms a system, an orderly set of rules and words related to each other.

But words are more than just items in a list. One of the important things to note is that they are a kind of **sign**—a linguistic sign, though there could be other kinds of signs. Linguistic signs have certain properties, most important of which are that they have two aspects and that the two aspects are bonded in an **arbitrary** way.

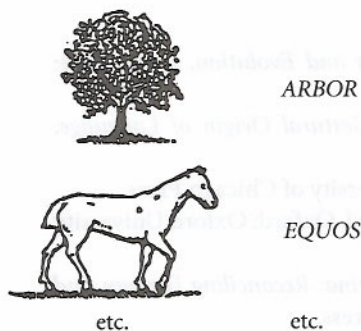
The writings we attribute to Saussure were actually compiled from his students' lecture notes after his death. His influence, however, has been unprecedented in the study of language and other cultural phenomena. He proposed a general science of signs, which he termed **semiology**. It did not exist at the time, but it does exist now, more commonly as **semiotics**. This science can be used to analyze film, literature, clothing, food, and any other aspect of human behavior.

Reading Questions

- What is the linguistic sign unit?
- What are the two aspects of a linguistic sign?
- How can looking across languages emphasize that fact?
- What does Saussure mean by “the arbitrary nature of the sign”?

SIGN, SIGNIFIED, SIGNIFIER

Some people regard language, when reduced to its elements, as a naming-process only—a list of words, each corresponding to the thing that it names. For example:



Ferdinand de Saussure, “Nature of the Linguistic Sign,” pp. 65–70. Reprinted by permission of McGraw-Hill, New York, from *Course in General Linguistics* by Ferdinand de Saussure, edited by Charles Bally and Albert Sechehaye, translated by Wade Baskin, copyright © 1959 by McGraw-Hill and by permission of The Philosophical Library, New York.

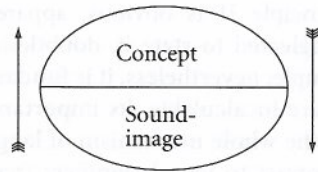
This conception is open to criticism at several points. It assumes that ready-made ideas exist before words...; it does not tell us whether a name is vocal or psychological in nature (*arbor*, for instance, can be considered from either viewpoint); finally, it lets us assume that the linking of a name and a thing is a very simple operation—an assumption that is anything but true. But this rather naive approach can bring us near the truth by showing us that the linguistic unit is a double entity, one formed by the associating of two terms.

We have seen [elsewhere] in considering the speaking-circuit that both terms involved in the linguistic sign are psychological and are united in the brain by an associative bond. This point must be emphasized.

The linguistic sign unites, not a thing and a name, but a concept and a sound-image.¹ The latter is not the material sound, a purely physical thing, but the psychological imprint of the sound, the impression that it makes on our senses. The sound-image is sensory, and if I happen to call it “material,” it is only in that sense, and by way of opposing it to the other term of the association, the concept, which is generally more abstract.

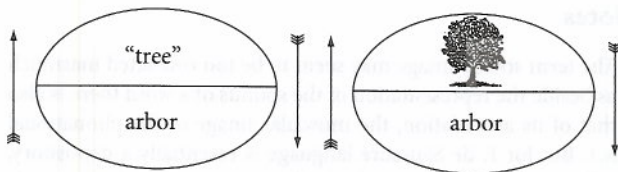
The psychological character of our sound-images becomes apparent when we observe our own speech. Without moving our lips or tongue, we can talk to ourselves or recite mentally a selection of verse. Because we regard the words of our language as sound-images, we must avoid speaking of the "phonemes" that make up the words. This term, which suggests vocal activity, is applicable to the spoken word only, to the realization of the inner image in discourse. We can avoid that misunderstanding by speaking of the *sounds* and *syllables* of a word provided we remember that the names refer to the sound-image.

The linguistic sign is then a two-sided psychological entity that can be represented by the drawing:



The two elements are intimately united, and each recalls the other. Whether we try to find the meaning of the Latin word *arbor* or the word that Latin uses to designate the concept "tree," it is clear that only the associations sanctioned by that language appear to us to conform to reality, and we disregard whatever others might be imagined.

Our definition of the linguistic sign poses an important question of terminology. I call the combination of a concept and a sound-image a *sign*, but in current usage the term generally designates only a sound-image, a word, for example (*arbor*, etc.). One tends to forget that *arbor* is called a sign only because it carries the concept "tree," with the result that the idea of the sensory part implies the idea of the whole.



Ambiguity would disappear if the three notions involved here were designated by three names, each suggesting and opposing the others. I propose to retain the word *sign* [*signe*] to designate the whole and to replace *concept* and *sound-image*, respectively, by **signified** [*signifié*] and **signifier** [*signifiant*]; the last two terms have the advantage of indicating the opposition that separates them from each other and from the whole of which they are parts. As regards *sign*, if I am satisfied with it, this is simply because I do not know of any word to replace it, the ordinary language suggesting no other.

The linguistic sign, as defined, has two primordial characteristics. In enunciating them I am also positing the basic principles of any study of this type.

PRINCIPLE I: THE ARBITRARY NATURE OF THE SIGN

The bond between the signifier and the signified is arbitrary. Since I mean by sign the whole that results from the associating of the signifier with the signified, I can simply say: *the linguistic sign is arbitrary*.

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 sequence is proved by differences among languages and by the very existence of different languages: the signified "ox" has as its signifier *b-ö-f* on one side of the border and *o-k-s* (*Ochs*) on the other.

No one disputes the principle of the arbitrary nature of the sign, but it is often easier to discover a truth than to assign to it its proper place. Principle I dominates all the linguistics of language; its consequences are numberless. It is true that not all of them are equally obvious at first glance; only after many detours does one discover them, and with them the primordial importance of the principle.

One remark in passing: when semiology becomes organized as a science, the question will arise whether or not it properly includes modes of expression based on completely natural signs, such as pantomime. Supposing that the new science welcomes them, its main concern will still be the whole group of systems grounded on the arbitrariness of the sign. In fact, every means of expression used in society is based, in principle, on collective behavior or—what amounts to the same thing—on convention. Polite formulas, for instance, though often imbued with a certain natural expressiveness (as in the case of a Chinese who greets his emperor by bowing down to the ground nine times), are nonetheless fixed by rule; it is this rule and not the intrinsic value of the gestures that obliges one to use them. Signs that are wholly arbitrary realize better than the others the ideal of the semiological process; that is why language, the most complex and universal of all systems of expression, is also the most characteristic; in this sense linguistics can become the master-pattern for all branches of semiology although language is only one particular semiological system.

The word **symbol** has been used to designate the linguistic sign, or more specifically, what is here called the signifier. Principle I in particular weighs against the use of this term. One characteristic of the symbol is that it is never wholly arbitrary; it is not empty, for there is the rudiment of a natural bond between the signifier and the signified. The symbol of justice, a pair of scales, could not be replaced by just any other symbol, such as a chariot.

The word *arbitrary* also calls for comment. The term should not imply that the choice of the signifier is left entirely to the speaker ([since] the individual does not have the power to change a sign in any way once it has become established in the linguistic community); I mean that it is unmotivated, i.e., arbitrary, in that it actually has no natural connection with the signified.

In concluding let us consider two objections that might be raised to the establishment of Principle I:

1. *Onomatopoeia* might be used to prove that the choice of the signifier is not always arbitrary. But onomatopoeic formations are never organic elements of a linguistic system. Besides, their number is much smaller than is generally supposed. Words like French *fouet* “whip” or *glas* “knell” may strike certain ears with suggestive sonority, but to see that they have not always had this property we need only examine their Latin forms (*fouet* is derived from *fāgus* “beech-tree”, *glas* from *classicum* “sound of a trumpet”). The quality of their present sounds, or rather the quality that is attributed to them, is a fortuitous result of phonetic evolution.

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 (cf. English *bow-wow* and French *ouaoua*). 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 (cf. *pigeon*, ultimately from Vulgar Latin *pīpiō*, derived in turn from an onomatopoeic formation): obvious proof that they lose something of their original character in order to assume that of the linguistic sign in general, which is unmotivated.

2. *Interjections*, closely related to *onomatopoeia*, can be attacked on the same grounds and come no closer to refuting our thesis. One is tempted to see in them spontaneous expressions of reality dictated, so to speak, by natural forces. But for most interjections we can show that there is no fixed bond between their signified and their signifier. We need only compare two languages on this point to see how much such expressions differ from one language to the next (e.g., the English equivalent of French *āie!* is *ouch!*). We know, moreover, that many interjections were once words with specific meanings (cf. French

diable! “darn”! *mordieu!* “golly”! from *mort Dieu* “God’s death”, etc.).²

Onomatopoeic formations and interjections are of secondary importance, and their symbolic origin is in part open to dispute.

PRINCIPLE II: THE LINEAR NATURE OF THE SIGNIFIER

The signifier, being auditory, is unfolded solely in time from which it gets the following characteristics: (a) it represents a span, and (b) the span is measurable in a single dimension; it is a line.

While Principle II is obvious, apparently linguists have always neglected to state it, doubtless because they found it too simple; nevertheless, it is fundamental, and its consequences are incalculable. Its importance equals that of Principle I; the whole mechanism of language depends upon it. In contrast to visual signifiers (nautical signals, etc.), which can offer simultaneous groupings in several dimensions, auditory signifiers have at their command only the dimension of time. Their elements are presented in succession; they form a chain. This feature becomes readily apparent when they are represented in writing and the spatial line of graphic marks is substituted for succession in time.

Sometimes the linear nature of the signifier is not obvious. When I accent a syllable, for instance, it seems that I am concentrating more than one significant element on the same point. But this is an illusion; the syllable and its accent constitute only one phonational act. There is no duality within the act but only different oppositions to what precedes and what follows.

Notes

1. The term sound-image may seem to be too restricted inasmuch as beside the representation of the sounds of a word there is also that of its articulation, the muscular image of the phonational act. But for F. de Saussure language is essentially a depository, a thing received from without. The sound-image is par excellence the natural representation of the word as a fact of potential language, outside any actual use of it in speaking. The motor side is thus implied or, in any event, occupies only a subordinate role with respect to the sound-image. [Ed. (Bally and Sechehaye)]

2. Cf. English *goodness!* and *zounds!* (from *God’s wounds*). [Tr.]

Critical Thinking and Application

- Why was it important for Saussure to show that the relationship between sign and signifier is arbitrary? Can you think of an (unmentioned) argument that he is refuting?
- Why does he argue that *onomatopoeia* and interjections are not central parts of language? What do they have to do with his claims about arbitrariness?
- Pick an aspect of human behavior (clothing, food, art, film, etc.) and see how you might begin to look at it as a set of signs.

Vocabulary

arbitrary	signified
diachronic	signifier
semiology	symbol
semiotics	synchronic
sign	

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UNIT 2

LANGUAGE ORIGINS

Since being banned by the Linguistic Society of Paris in 1866, the topic of the origin of language has drawn periodic attention. It seemed impossible to answer questions about when and how language might have developed; theorists were simply guessing wildly—hence, the century-long ban. Since the 1990s, however, the subject has been picked up by researchers in a wide range of fields. Some of this is made possible by advances in cognitive science, neuroimaging, and deeper comprehension of the human brain. Some is simply a conversation that has taken off. Individual writers must, of course, first define what they mean by *language*, and only then can they begin to identify the evolutionary precursors, the mechanisms and pressures that led to the facility that all humans possess. Researchers in different fields tend to focus on different facets of the entity, and explanations tend to lie squarely at the heart of each researcher's own expertise.

If you were to read the work of linguists, it might resemble not at all that of biologists, which in turn might be entirely different from that of psychologists. Primatologists have still other things to say. Is language biological? cognitive? social? individual? Does it depend on the vocal tract, on the brain, on social organization? Does it have to be spoken, or can it be signed? What is the really critical, essential aspect of language that sets it apart from other species' communication? Should it even be differentiated so sharply? This unit presents a classic treatment in Charles Hockett's work on the design features of language; a consideration by William Stokoe of the relationship between signed and spoken language; and a summary by linguist Derek Bickerton of recent developments in scholarship on the origin of language. These are not conclusive, but will alert you to some of the issues that must be incorporated in any up-to-date discussion of how language originated.

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CHAPTER 3

The Origin of Speech

Charles Hockett

(1960)

Before scholars can begin to ask the question of how language arose, we have to know what features of language we actually seek to locate in our evolutionary past. Many such discussions end in pure speculation.

Often known as a linguist, Charles Hockett in fact had a PhD in anthropology and considered his work importantly situated within the broadest contours of that field. His classic treatment of the “design features” puts human language on a continuum with—but in some ways distinctive from—the communicative systems of various species. He identifies thirteen aspects of language, all of which apply to human language and only some of which apply to the communication systems of other animals. Most people emphasize, as did Hockett, the features of discreteness, displacement, productivity, traditional transmission, and duality of patterning, which are unique to humans and hominoids. The goal of this kind of analysis is less to understand human language than to set it apart from other forms of communication. [You’ll note, too, that he takes speech, with its features of broadcast transmission and directional reception, rapid fading, and the vocal-auditory channel, as prototypical of human language. Recent work on signed languages suggests orality is not essential for language to exist.]

Reading Questions

- What is *displacement*? How do you see it exemplified in ordinary language? Where else might you find it?
- What is *productivity*?
- What is *duality of patterning*? How is it connected to productivity? What are the ramifications of this design feature?
- How does human language differ from other animals’ communication systems?
- Why is that important for any discussion of language origins?

About 50 years ago the Linguistic Society of Paris established a standing rule barring from its sessions papers on the origin of language. This action was a symptom of the times. Speculation about the origin of language had been common throughout the 19th century, but had reached no conclusive results. The whole enterprise in consequence had come to be frowned upon—as futile or crackpot—in respectable linguistic and **philological** circles. Yet amidst the speculations there were two well-reasoned empirical plans that deserve mention even though their results were negative.

A century ago there were still many corners of the world that had not been visited by European travelers. It was reasonable for the European scholar to suspect that beyond the farthest frontiers there might lurk half-men or man-apes who would be

“living fossils” attesting to earlier stages of human evolution. The speech (or quasi-speech) of these men (or quasi-men) might then similarly attest to earlier stages in the evolution of language. The search was vain. Nowhere in the world has there been discovered a language that can validly and meaningfully be called “primitive.” Edward Sapir wrote in 1921:

There is no more striking general fact about language than its universality. One may argue as to whether a particular tribe engages in activities that are worthy of the name of religion or of art, but we know of no people that is not possessed of a fully developed language. The lowest South African Bushman speaks in the forms of a rich symbolic system that is in essence perfectly comparable to the speech of the cultivated Frenchman.

The other empirical hope in the 19th century rested on the comparative method of historical linguistics, the discovery

Charles Hockett, “The Origin of Speech.” *Scientific American* 203(3) (Sept 1, 1960): 88–96.