

The Methodology of Semiotic

We have seen how the modern goals of achieving truth-guaranteeing certainty, simplicity, and linear comprehensiveness are incapable of being realized. There is no foundation to which we can reduce or logically relate areas of knowledge and human culture in a linear progression from what is simple and certain to what is relatively complex and controversial. This chapter discusses the revised goals of consensus, primitiveness, and nonlinear comprehensiveness that are applicable to sign comparisons. We begin with a discussion of the concept of primitiveness, and apply it to some examples of sign levels. We then relate the problems of comparing and contrasting signs at different levels to the discipline known as “semiotic,” and contrast this to related forms of inquiry. The last section of the chapter introduces some methodological problems arising when we attempt to compare and contrast features at differing sign levels.

2.1. Primitiveness and Sign Levels

We saw in Section 1.1 how simplicity was defined within modern philosophy in terms of part-whole relations, reductions of certain forms of expressions to others, and logical derivations. The definitions were precise enough to generate the various constructive projects of its later linguistic phase. If primitiveness of sign levels is to be a philosophically useful interpretation of simplicity, it too must be a concept sufficiently precise as to provide a base of comparisons to what is more complex and an ordering of the different levels. Temporal evolutionary priority, specificity of pragmatic functions, and degree of referential scope all combine to enable us to satisfy these requirements. For two sign levels L_1 and L_2 we can say that L_1 is more primitive than L_2 if at least one of the following conditions is met: (1) L_1 is evolutionarily prior to L_2 , that is, made its appearance at an earlier stage of evolution than L_2 ; (2) the signs within L_1 combine more pragmatic functions than do those of L_2 ; and (3) the signs within L_1 are more restricted in referential scope than are those of L_2 . As we shall see, at least one of these conditions is a sufficient but not necessary condition for relative primitiveness, and in cases of conflict the logical condition (3) has priority over either (1) and (2). A primitive base for ordering of levels is provided by that sign level for

which we cannot specify some other level as more primitive. Some examples may help to explain these three conditions.

Evolutionary Priority. Natural events paired to other signified events through associative learning would be more primitive than sentences of a natural language by this first condition, for the capacity for associative learning obviously evolved earlier than did the use of natural languages. Single-celled amoebae are capable of learning through association, as is shown by observing correlations between the presentation of small pieces of glass and ejection responses. When the glass is presented it will at first be ingested by the organism and then ejected. The interval between ingestion and ejection shortens after repeated trials until no ingestion occurs after contact with the glass. Through what seem to be associations between the feel of the glass and pain or taste the amoeba learns to inhibit the ingestion of the foreign substance. The feel becomes a sign of pain and ejection. We can speculate that cells of plants have the capacity for this type of association insofar as they can learn to discriminate between nutrient sources and toxic substances passing through their cell membranes. Such learning thus seems to have evolved with the first appearance of living organisms, and the signs interpreted during this learning seem to provide us with a base of comparison to more advanced signs.

Combination of Pragmatic Functions. Animal warning cries are clearly more primitive than the sentences of natural languages by the pragmatic criterion. The warning cries of vervet monkeys studied by Cheney and Seyforth¹ combine descriptive, expressive, and prescriptive functions in ways that are typically eliminated for subject-predicate sentences. The warning cry for a leopard, for example, combines the descriptive function of reporting the presence of the predator, an expression of fear, and a command for others to flee to the nearest tree or bush. At the linguistic level these functions are typically performed by sentences of differing indicative, optative, and imperative moods, with mood indicated by verb forms and word ordering. At the level of natural languages, sentences of the indicative mood can sometimes assume a combination of descriptive, prescriptive, and expressive functions, as when a person says 'Your house is on fire' as a means of getting another to respond to the emergency and as an expression of alarm. Such combinations of functions are typically eliminated at the level of the specialized discourses of the natural sciences. Here language can assume a purely descriptive function that is distinguished from the prescriptive functions of legal language and the expressive functions of literary texts. Thus by the pragmatic criterion natural language sentences in which functions may be combined are more primitive than these specialized forms of discourse.

Referential Scope. A third criterion for ordering sign levels in terms of primitiveness is extent of referential scope. An odor may be an associative sign for a deer of an unseen predator, but for the sign to have this significance requires the predator to be located by the deer in the immediate vicinity of the odor. Use of signals within animal communities enables an extension of this reference. The sentinel for a tribe of baboons can emit a warning cry that enables other members to anticipate the approach of a predator beyond their range of vision. A dramatic further extension occurs at the level of subject-predicate sentences of spoken natural languages, where the principal function of the subject term is to extend reference far beyond the environment of both speaker and hearer. The development of writing and specialized forms of discourse enables a still further extension. This has progressed to the point where physical theories can refer to material elements at the fringes of our universe.

As these examples illustrate, these three conditions combine to enable ordering of the four principal sign levels. These four levels are constituted by (1) primitive associative signs, (2) signals without subject-predicate structure, (3) sentences of natural spoken languages, and (4) specialized discourses that develop with the appearance of writing. But there are many levels intermediate between these four, and for these one or more of the conditions may be absent when ordering by primitiveness. For example, Strawson seems to be correct in describing feature-placing sentences such as 'It is raining' and 'There is gold here' as more primitive than subject-predicate sentences such as 'Socrates is sitting' and 'Every piece of gold is malleable' that contain proper names and count nouns.² The basis for this ordering would seem to be referential scope, as feature-placing sentences are restricted in use to the immediate environment, while names and count nouns enable reidentification of objects and extension of reference. But feature-placing sentences don't seem to combine pragmatic functions to a greater degree than standard sentences. They are clearly in the indicative mood, and their standard functions are descriptive. Whether feature-placing sentences appeared earlier than count nouns in the development of natural languages is uncertain. According to the linguist Jespersen, first in development are single-word sentences such as 'Raining', with the pronoun 'it' in 'It is raining' later added as a filler for the subject position normally occupied by a proper name or count noun.³ Because feature-placing sentences depend for their grammatical structure on standard subject-predicate sentences with count noun subjects, they seem to have made their appearance during a later stage of language evolution.

Strawson's ordering of these intermediate levels within the broad level of natural languages seems to show that in cases of conflict the logical criterion of referential scope has priority over pragmatic and evolutionary



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