

Bloomfield

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Leonard Bloomfield (1887-1949) is, together with Edward SAPIR, one of the two most prominent American linguists of the first half of the twentieth century. His book *Language* (Bloomfield, 1933) was the standard introduction to linguistics for thirty years following its publication. Together with his students, particularly Bernard Bloch, Zellig Harris, and Charles Hockett, Bloomfield established the school of thought that has come to be known as American structural linguistics, which dominated the field until the rise of GENERATIVE GRAMMAR in the 1960s.

Throughout his career, Bloomfield was concerned with developing a general and comprehensive theory of language. His first formulation (Bloomfield, 1914) embedded that theory within the conceptualist framework of Wilhelm Wundt. In the early 1920s, however, Bloomfield abandoned that framework in favor of a variety of BEHAVIORISM in which the theory of language took center stage: "The terminology in which at present we try to speak of human affairs – ... 'consciousness', 'mind', 'perception', 'ideas', and so on – ... will be discarded ... and will be replaced ... by terms in linguistics.... Non-linguists ... constantly forget that a speaker is making noise, and credit him, instead, with the possession of impalpable 'ideas'. It remains for the linguist to show, in detail, that the speaker has no 'ideas' and that the noise is sufficient." (Bloomfield, 1936: 322, 325; page numbers for Bloomfield's articles refer to their reprintings in Hockett, 1970)

In repudiating the existence of all mentalist constructs, Bloomfield also repudiated the classical view that the structure of language reflects the structure of thought. For Bloomfield, the structure of language was the central object of linguistic study, and hence of cognitive science, had that term been popular in his day.

Bloomfield maintained that all linguistic structure could be determined by the application of analytic procedures starting with the smallest units which combine sound (or 'vocal features') and meaning (or 'stimulus-reaction features'), called *morphemes* (Bloomfield, 1926: 130). Having shown how to identify morphemes, Bloomfield went on to show how to identify both smaller units (i.e., phonemes, defined as minimum units of 'distinctive' vocal features) and larger ones (words, phrases, and sentences).

Bloomfield developed rich theories of both MORPHOLOGY and SYNTAX, much of which was carried over more or less intact into generative grammar. In morphology, Bloomfield paid careful attention to phonological alternations of various sorts, which led to the development of the modern theory of *morphophonemics* (see especially Bloomfield, 1939). In syntax, he laid the foundations of the theory of constituent structure, including the rudiments of XBAR-

THEORY. (Bloomfield, 1933: 194-195) Bloomfield generated so much enthusiasm for syntactic analysis that his students felt that they were doing syntax for the first time in the history of linguistics. (Hockett, 1968: 31)

Bloomfield did not develop his theory of SEMANTICS to the same extent as he did his theories of PHONOLOGY, MORPHOLOGY, and SYNTAX, contenting himself primarily with naming the semantic contributions of various types of linguistic units. For example, he called the semantic properties of morphemes 'sememes', those of grammatical forms 'episememes', etc. (Bloomfield, 1933: 162, 166) Bloomfield contended that whereas the phonological properties of morphemes are analyzable into parts (namely phonemes), sememes are unanalyzable: "There is nothing in the structure of morphemes like *wolf*, *fox*, and *dog* to tell us the relation between their meanings; this is a problem for the zoölogist." (162) Toward the end of the heyday of American structural linguistics however, this view was repudiated, (Goodenough, 1956; Lounsbury, 1956) and the claim that there are submorphemic units of meaning was incorporated into early theories of GENERATIVE GRAMMAR. (Katz and Fodor, 1963)

Bloomfield was aware that for a behaviorist theory of meaning such as his own to be successful, it would have to account for the semantic properties of nonreferential linguistic forms such as the English words *not* and *and*, and was also aware of the difficulty of this task. His attempt at defining the word *not* is particularly revealing. After initially defining it as "the linguistic inhibitor (emphasis his) in our speech-community," he went on to write: "The utterance, in a phrase, of the word *not* produces a phrase such that simultaneous parallel response to both this phrase and the parallel phrase without *not* cannot be made." (Bloomfield, 1935: 312) In short, what Bloomfield is attempting to do here is to reduce the logical law of contradiction to a statement about possible stimulus-response pairs.

However, such a reduction is not possible. No semantic theory which contains the law of contradiction as one of its principles is expressible in behaviorist terms. Ultimately, American structural linguistics failed not for its inadequacies in phonology, morphology, and syntax, but because behaviorism does not provide an adequate basis for the development of a semantic theory for natural languages.

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