

Bloomfield's Concept of Meaning*

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Abstract—Bloomfield's book *Language* has long been recognized for laying down the foundation of formal descriptive linguistic analysis. However, he was criticized too often for his dismissal of serious study of meaning in linguistics. The fact is that in his 1933 book *Language*, a separate chapter is devoted to the discussion of meaning and some of the most important formal units of linguistic analysis introduced by Bloomfield like phoneme and morpheme could not have been properly defined without involving meaning. He forcefully challenged the contemporary popular mentalism in linguistic study, as has often been bypassed. His contention that linguistic study must start from form not meaning should not be taken at face value as neglect of meaning but in the historical context as an opposition to mentalistic subjective interpretation of meaning.

Index Terms—Bloomfield, language as science, mentalism, concept of meaning

I. INTRODUCTION

As a landmark in American linguistics, Leonard Bloomfield's book *Language* has long been recognized for laying down the foundation of formal descriptive linguistic analysis. However, to talk about his "concept" of meaning, or even "meaning" itself, may immediately sound *a-Bloomfieldian*, since Bloomfield's abandonment of mentalism went to such extremes that he was opposed to using terms like 'concept', 'idea', 'notion' etc. (Bloomfield, 1936) in linguistic study, and he was criticized too often for his dismissal of serious study of meaning in linguistics. But the fact is that in his 1933 book *Language*, a separate chapter is devoted to the discussion of meaning and some of the most important formal units of linguistic analysis introduced by Bloomfield like phoneme and morpheme could not have been properly defined without involving meaning. Thus a closer look at Bloomfield's view of meaning is indispensable to an overall understanding of his philosophy of language.

II. BLOOMFIELD'S VIEW OF LINGUISTIC STUDY

Reflecting on the history of language study, Bloomfield pointed out that some major faults in the 19th historical linguistics represented by Hermann Paul, namely, "neglect of descriptive language study" (Bloomfield, 1933/2001, p.15) and "insistence upon 'psychological' interpretation" (Bloomfield, 1933/2001, p.16). For one thing, Bloomfield agrees with Saussure on that linguistic study is composed of synchronic descriptive study and diachronic comparative study. This general congruence is well illustrated by the layout of his book *Language* (1933/2001), the first few chapters of which are devoted to a general outline of linguistic science, the middle to synchronic issues and the latter diachronic ones. And he stresses that descriptions of language must be "unprejudiced" (Bloomfield, 1933/2001, p.19). For another, he rejects any psychological account of linguistic phenomenon on the basis that it adds nothing to but rather obscures the discussion of the latter (Bloomfield 1933/2001, p.16). He goes further to dismiss terminology of mentalism and animism such as "consciousness", "mind", "perception", "ideas" etc. and to assert that "linguistics as actually practised employs only such terms as are translatable into the language of physical and biological science" (Bloomfield, 1936, p. 89).

This rather reductionist approach of Bloomfield's may have stemmed from his role as a "restless opponent of mentalism" (Passos, 2006) and as an active advocate of making the study of language a science. He is "one of those who believe...the entire baggage of mentalism to be empty and useless" (Bloomfield, 1935, p.502). In Bloomfield's perspective,

science shall deal only with events that are accessible in their time and place to any and all observers (strict behaviorism) or only with events that are placed in co-ordinates of time and space (mechanism), or ... shall employ only such initial statements and predictions as lead to definite handling operations (operationalism), or only terms such as are derivable by rigid definition from a set of everyday terms concerning physical happenings (physicalism). (Bloomfield, 1939, p.13, quoted from Passos, 2006).

Several points may be noted here about Bloomfield's notion of science. First, the object of scientific study is physically accessible observables. Second, scientific inquiry is carried out by "definite handling operations", i.e. observation, collecting of specimens, experiment (Bloomfield, 1935, p.499). Thirdly, materialistic or mechanistic terms rather than mental ones are to be used to achieve rigorous discussion of science.

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Taking into consideration the historical context, it is important to recognize Bloomfield's contribution for his strong opposition to the prevalent mentalism and his pursuit of making linguistics a science, though he went to extremes when adopting a behaviorist view of language. But caution is needed when further interpretation of Bloomfield's theory is to be done, especially in terms of his discussion of meaning, which seems to have received the most misunderstanding and misinterpretation from linguists and students of language alike.

III. BLOOMFIELD'S VIEW ON STUDY OF MEANING IN LINGUISTICS

To understand Bloomfield's concept of meaning, we need to start with his behaviorist approach to the study of human speech. In pursuing linguistics as a science, Bloomfield, under the influence of the behaviorist psychologist A. P. Weiss (Belyi, 1967/1999, p.115-118), put forward a behaviorist account of human speech in purely mechanistic terms. He first distinguished the *act of speech* and *practical events* based on the Jack-and-Jill story.

...the incident consists of three parts, in order of time:

A. *Practical events preceding the act of speech.*

B. *Speech.*

C. *Practical events following the act of speech.*

(Bloomfield, 1933/2001, p. 22)

Then the incident was theorized into the following famous diagram:

$S \longrightarrow r \dots\dots s \longrightarrow R$

(Bloomfield, 1933/2001, p.25)

(S= practical stimulus, r= linguistic substitute reaction

s= linguistic substitute stimulus, R= practical reaction)

To put it into a whole, *the practical events* preceding the act of speech, the speaker's stimulus (S), including the speaker, Jill's physical state of being hungry, her seeing the apple, her relation with Jack, etc., prompt her to make an *act of speech*, which serves at the same time a linguistic substitute reaction (r) to her own condition and a linguistic substitute stimulus (s) for Jack, setting him into practical reaction (R) of getting the apple for her.

Bloomfield pointed out that "speech utterance", the major concern of linguistic study, "trivial and unimportant in itself, is important because it has a *meaning*: the meaning consists of the important things with which the speech-utterance (B) is connected, namely the practical events (A and C)" (Bloomfield, 1933/2001, p.26). In other words, language is important precisely because it has a meaning: the practical events connected with speech (Passos, 2006). It may be suspected that Bloomfield might have downplayed the significance of language *per se* by labeling "speech utterance" as "trivial and unimportant", but it is very clear that he attached great importance to meaning, which he considered as the link between speech utterance and practical events. In other words, he pinpointed the relation between language with the human society, and his concept of meaning was tinged with a pragmatic nature, i.e. getting things done by speech.

At another point Bloomfield also stressed the place of the study of meaning in linguistics.

Man utters many kinds of vocal noise and makes use of the variety: under certain types of stimuli he produces certain vocal sounds, and his fellows, hearing these same sounds, make the appropriate response. To put it briefly, in human speech, different sounds have different meanings. To study this co-ordination of certain sounds with certain meanings is to study language.

This co-ordination makes it possible for man to interact with great precision.

(Bloomfield, 1933/2001, p.27)

This clear statement of Bloomfield's on the object of language study reflects his more comprehensive view of language study than many suppose it to be. For him, meaning is an inseparable part of language study. Linguistic study is not only concerned with the "*biophysical* aspect of language", *sounds*, and the "sound producing movements and resultant sound waves and the vibration of the hearer's eardrums", but also the "*biosocial* aspect of language", *meaning*, and how "the persons in a community have been trained to produce these sounds in certain situations and to respond to them by appropriate actions" (Bloomfield, 1939, p.8, quoted from Belyi, 1967/1999, p. 117). People get through to each other by way of sound-waves which stimulate meaningful actions. Language is not just biological and physical, but also social and interpersonal; this co-ordination between sound and meaning is not just of a physiological nature, but of a sociological one.

However, Bloomfield's pursuit of objectivism in linguistic study led him to rely too much on "scientific knowledge" (Bloomfield, 1933/2001, p.145) and "a superficial reading of his discussions of mentalism and mechanism" (Fries, 1954/1999, p.86) contribute to the popular belief that Bloomfield ignored the study of meaning. But the fact that he devoted a separate chapter of the book *Language* (1933/2001) to meaning is self-evident. In this chapter, he not only discussed the definition of meaning, but also analyzed in detail different types and aspects of meaning.

A. Bloomfield's Definition of Meaning

The "meaning of a linguistic form" is defined as "the situation in which the speaker utters it and the response which it calls forth in the hearer" (Bloomfield, 1933/2001, p.145). Apparently, this definition is consistent with what has been discussed concerning meaning in the above-mentioned quotations and Bloomfield's main point about meaning is

reiterated, namely, meaning is practical events (some practical events in a certain situation that stimulate the speaker to utter the linguistic form, and the resultant responsive actions on the part of the hearer) connected with speech. And he chose to “discuss and define meanings in terms of a speaker’s stimulus” because it “will usually present a simpler aspect than the hearer’s response” (Bloomfield, 1933/2001, p.145). We must realize that by this definition of meaning, Bloomfield pointed out two important factors in human communication, namely, situations and participants, both of which are indispensable to the production and conveyance of meaning between people. However, his further exposition on these two main points of the definition of meaning were so closely aligned with his opposition to mentalism and pursuit of scientific objectivity that it may be suspected of causing misunderstanding of his position on the study of meaning and even diverting his followers from serious study of meaning in linguistics.

As to by what means we should define meaning, Bloomfield stressed the importance of scientific knowledge.

The situations which prompt people to utter speech, include every object and happening in their universe. In order to give a scientifically accurate definition of meaning for every form of a language, we should have to have a scientifically accurate knowledge of everything in the speakers’ world. The actual extent of human knowledge is very small, compared to this. We can define the meaning of a speech-form accurately when this meaning has to do with some matter of which we possess scientific knowledge. We can define the names of minerals, for example, in terms of chemistry and mineralogy, as when we say that the ordinary meaning of the English word salt is ‘sodium chloride (NaCl)’...

(Bloomfield, 1933/2001, p.145)

It cannot be denied that part of the meaning of salt is indeed “sodium chloride”, but it is not properly or sufficiently defined just as such. As is defined as “a crystalline compound NaCl that consists of sodium chloride, is abundant in nature, and is used especially to season or preserve food or in industry” (Merriam-Webster Dictionary), salt has not only scientific identity but also functional significance, both of which are fundamental to its basic meaning. Besides, usually a housewife does not need to know the chemical composition of “salt” to be “sodium chloride” to understand what “salt” means and what it is used for, which may well imply that the importance of the functional significance of salt in some cases even overrides that of its scientific composition. At the same time, it must be realized that to “define the names of plants or animals by means of the technical terms of botany or zoology” (Bloomfield, 1933/2001, p.145) is mainly the task of the botanist or zoologist; it is no doubt that the linguist does benefit from scientific knowledge, but does not stop at that, his major concern with the semantic layer of language being far more complicated. Also it is plain that ordinary people will not be able to communicate well only in scientific or technical terminology.

Therefore, it is clear that in his efforts of pursuing objectivity and making linguistics a science, Bloomfield exaggerated the role of scientific knowledge in human speech and confused the language of science with that of daily life. And in this vein of discussion, he dismissed the defining of affection-loaded words like “love” and “hate” for lack of scientific knowledge, since in his time psychology was associated with mentalism which he strongly opposed. However, he soon made the problem more complex by pointing to discrepancies between scientific classification and linguistic categorization in different languages (Bloomfield, 1933/2001, p.146), which do exist. The examples he gave are color terms and kinship terminology, which later prove to be hot topics for study of vague language. Bloomfield then concluded that “the statement of meaning is therefore the weak point in language study, and will remain so until human knowledge advances very far beyond its present state” (Bloomfield, 1933/2001, p.146), which cannot be taken as a negation of meaning or dismissal of the study of meaning in linguistics, but as a result of vigorous opposition to mentalism. As Fries pointed out, “[Bloomfield’s] efforts to achieve statements in physical rather than ‘mentalistic’ terms do not lead to the conclusion that he ‘ignores meaning’ or that ‘he takes no account of meaning.’” (Fries, 1954/1999, p.84), though he might have gone to extremes in a certain sense.

As to the role of situation, Bloomfield stated:

A very important part of every situation is the state of the speaker’s body. This includes, of course, the predisposition of his nervous system, which results from all of his experiences, linguistic and other, up to this very moment—not to speak of hereditary and pre-natal factors. If we could keep an external situation ideally uniform, and put different speakers into it, we should still be unable to measure the equipment each speaker brought with him, and unable, therefore, to predict what speech-forms he would utter, or, for that matter, whether he would utter any speech at all.

(Bloomfield, 1933/2001, p.147)

It should be noted that on one hand Bloomfield was right to recognize its importance in communication, that is, a speaker is to be influenced by “every object and happening” in his surroundings and the hearer need have an accurate knowledge of the speakers’ world to understand him. In other words, we can say that the speaker and the hearer must have shared background knowledge for any communication to be successful. Interestingly, Bloomfield seemed to contradict himself when he pointed out the unpredictability of speech-forms of the speaker given ideally the same external situation. But his identifying in passing the predisposition of the speaker’s nervous system resulting from all the experiences of the speaker, and his hereditary and pre-natal factors as factors influencing the state of the speaker’s body seems not without similarity to embodied experientialism of the latter embodied experientialism of cognitive linguistics. Besides, it also points to the scientific study of human neurology and even hereditary studies in relation to human speech, neither of which was very advanced at Bloomfield’s time. Therefore, it is unjustifiable to say that Bloomfield was ignorant of the study of meaning in linguistics, but rather he was aware of the difficulty of this aspect of linguistic study since it may be related to many other aspects of human life, which requires interdisciplinary research

for more accurate knowledge and more profound understanding.

In a word, Bloomfield's purpose was not to downplay the importance of semantic study but to show its difficulty given the current state of arts. As was expressed by him, "the present-day knowledge does not suffice to unravel all the entanglements of meaning." (Bloomfield, 1933/2001, p.155) Up till now, semantics is still a tricky subject of study in linguistics though we have taken many steps forward since Bloomfield's time. Despite its obvious defects such as a reductionist view the process of human communication and a neglect of cognitive factors in human speech, the behaviorist definition of meaning has disclosed to some extent the pragmatic aspect of a linguistic form, and the defining in terms of situation, speaker and hearer, and the notion of appropriateness of response are not without some significance for non-behaviorist interpretation of speech utterances. Moreover, Bloomfield's more detailed analyses of different types of meaning are not without value to semantic study of language.

B. Bloomfield's Taxonomy of Meaning

Bloomfield's further discussion of meaning can be summarized into two types, lexical meaning, and grammatical meaning (Bloomfield, 1933/2001, p.173-4). And he also touched upon different aspects of meaning, such as pragmatic and dialectal etc. Although he did not really develop a systematic theory of semantic study, it cannot be denied that he conducted serious study on meaning.

a. Lexical Meaning

One of the most important features of Bloomfield's discussion of lexical meaning is that he distinguished *normal* (or *central*) meanings and *marginal* (*metaphoric* or *transferred*) meanings (Bloomfield, 1933/2001, p.158). He gave many examples of lexical metaphors and examined the motivations for these metaphorical expressions. One of the reasons that forces people to look to a transferred meaning lies in "some feature of the practical situation" (Bloomfield, 1933/2001, p.156). For example, in the sentence "He married a lemon", the word "lemon" is not to be taken literally because "we know that men do not go through a marriage ceremony with a piece of fruit" (Bloomfield, 1933/2001, p.156). Another factor for the generation of transferred meaning is "the structure of the language: (Bloomfield, 1933/2001, p.157), or in other words, "a transferred meaning is *linguistically determined* by an accompanying form." (Bloomfield, 1933/2001, p.156) The examples are *cat* in *catkin*, *pussy* in *pussy-willow*, *eye* in *eyelet*, *dog* in *to dog someone's footsteps* etc. It is noteworthy that Bloomfield pointed out not only extralinguistic or contextual factors but also linguistic or textual factors for transferred meanings. Despite that he did not give any clear definitions as to central meanings and transferred meanings, the distinction definitely has certain pragmatic and even etymological significance in actual analysis. For example, in the sentence "Old Mr. Smith is a fox", the metaphorical meaning of "fox" is an "unscrupulous and clever person" (Bloomfield, 1933/2001, p.156), its meaning being transferred pragmatically from an animal to a person. And for the word "catkin", referring to a certain plant, it bears a metaphorical link with cat as it originates from a resemblance in shape with a kitten's tail.

b. Grammatical Meaning

Bloomfield's discussion of form-classes and class-meanings in Chapter 9 is actually about grammatical aspect of meaning. According to him, form-classes are form groups "by some recognizable phonetic or grammatical feature", and "in any one form-class, every form contains an element, the class-meaning, which is the same for all forms of this form-class" (Bloomfield, 1933/2001, p.152). A good case in point is pronouns, e.g. "somebody, someone have the class-meanings of substantives, singulars, personals" (Bloomfield, 1933/2001, p.153). This reminds us of the latter popular discussion of semantic fields in formal semantics.

But more significantly, Bloomfield further expounded in Chapter 10 and Chapter 16 on grammatical meaning in relation to form-classes, which is of great value not only to descriptive analysis of language but also to a proper understanding of the relation between form and meaning, as manifested in the following passages.

A phonetic form with its meaning is a linguistic form; a tactic form with its meaning is a grammatical form.

(Bloomfield, 1933/2001, p.173-4)

Any utterance can be fully described in terms of lexical and grammatical forms; we must remember only that the meanings cannot be defined in terms of our science.

(Bloomfield, 1933/2001, p.175)

The meaningful features of linguistic signaling are of two kinds: lexical forms, which consist of phonemes, and grammatical forms, which consist of taxemes.

(Bloomfield, 1933/2001, p. 279)

Meaningful unit of linguistic signaling, smallest or complex: linguistic form; the meaning of a linguistic form is a linguistic meaning;

a) lexical: lexical form; the meaning of a lexical form is a lexical meaning;

b) grammatical: grammatical form; the meaning of a grammatical form is a grammatical meaning.

(Bloomfield, 1933/2001, p.279)

It can be clearly seen that Bloomfield considered grammatical forms and meanings as inseparable, as is reiterated many times throughout the book, and he stated clearly that he remained doubtful as to the study of meanings to be fully conducted in "our science" (Bloomfield, 1933/2001, p.175), i.e. linguistics. It is in no way to be taken superficially as a negation of meaning or a dismissal of semantic study in linguistics. Besides, Bloomfield also pointed out four ways of arrangement of linguistic forms, namely, selection, order, modulation and phonetic modification, all of which together

contribute to the meaning of a linguistic form. Furthermore, Bloomfield classified the grammatical forms of a language into three great classes, that is, sentence-types, constructions and substitutions (Bloomfield, 1933/2001, p.176-7), which allow for study of grammatical meanings at these different levels of linguistic forms.

IV. LIMITATIONS OF BLOOMFIELD'S VIEW OF MEANING

Although Bloomfield's attention to the study of meaning may be proved scanty, his position on this point is worth rethinking. First and foremost, ontologically, as to the question of what meaning is, Bloomfield provided only a behaviorist account, locating meaning in a stimulus-response relation and reducing it to the practical events that stimulate responses. Such a partial view does not help greatly to unveil the complex nature of meaning, especially the cognitive aspect of meaning. Second, epistemologically, Bloomfield exaggerated the role of scientific knowledge, ignoring non-physical aspects which cannot be explained in terms of physics or mathematics alike. This position, misunderstood by many, almost led to a kind of agnosticism. Thirdly, methodologically, Bloomfield was limited to observation and dismissed any so-called mentalistic methods such as introspection. However, language is different from objects of study in natural sciences. Much language phenomena are not directly observable. Moreover, language is so closely related to human thought that it is unimaginable to study it by such simple and undiversified ways. Apart from all these philosophical drawbacks, Bloomfield's study of meaning also has some confusion in its own system, for example, his discussion of meaning was not consistently in the behaviorist vein when it concerns formal analysis of language, which turns out a blessing. And lexical and grammatical meanings may not be as clear-cut as he stated it to be in actual human speech since lexicon and grammar are very often interrelated.

V. CONCLUSION

Nevertheless, Bloomfield's contribution to linguistic study and his influence on generations of linguists are immense, not only because he set the foundation for descriptive linguistics as has been generally recognized, but because he forcefully challenged the contemporary popular mentalism in linguistic study, as has often been bypassed. His contention that linguistic study must start from form not meaning should not be taken at face value as neglect of meaning but in the historical context as an opposition to mentalistic subjective interpretation of meaning. An advocate of making linguistics a science, Bloomfield also indirectly pointed to the necessity of interdisciplinary research of language, as he stated in an article on meaning, "...we should have to wait for manuals of physiology and sociology that would read as unambiguously as do our present manuals of botany" (Bloomfield, 1943, p.102, quoted from Esper, 1968/1999, p.133). Fortunately, the advancements in science and technology have made all this feasible and the interdisciplinary studies not only contribute to linguistics but other sciences as well, and human understanding of the world and themselves have come to an unprecedented height.

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