

## PROBLEMS OF ETHNOLINGUISTICS

The Sapir-Whorf hypothesis is closely linked to the ethnolinguistic research of the American school of anthropology, which can take pride in its number of leading scholars, all more or less formed or influenced by F. Boas.\* The anthropological and linguistic interest in the life of the American Indians is understandable within the framework of the social problems posed by the existence of numerous and varied Indian communities in the United States. From this stem the first attempts to transcribe and understand the languages of the Indian tribes which by no means can be separated from later theoretical research. On this practical basis an especially active school of anthropology was founded and has developed. It collected the empiric materials on the basis of which the theoretical generalizations of what is now called the Sapir-Whorf hypothesis were built.

The major lines of this hypothesis were crystallized in the twenties and thirties of this century (Sapir died in 1939 and

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\* This article is taken from a work to be published on the role of language in the process of knowledge.

Whorf in 1941). But it became famous only in the late forties, giving an impetus quite recently to a number of works and further research.

Sapir's major thesis, which especially concerns us here, may be summarized as follows: the language of a given community is the organizer of its experience and thus forms its "world" and its "social reality." In a more general way, one can say that each language contains its own vision of the world.

Sapir's fundamental idea, which provided the theoretical basis for Whorf's research, is expounded in a famous article, *Language*, written for the *Encyclopedia of the Social Sciences*, in "Conceptual Categories in Primitive Languages"<sup>1</sup> and above all in his study, "The Status of Linguistics as a Science."<sup>2</sup> It is only here that we hear language spoken of as "a guide toward the social reality," the "real world" spoken of as a projection—frequently unconscious—of our linguistic habits in the reality that surrounds us. The thesis concerning the creative nature of language in the process of thinking is here set forth in the most radical fashion, which makes it an ideal target for criticism. But let us see what the author himself has to say on this subject:

"Language is a guide to 'social reality'. Though language is not ordinarily thought of as of essential interest to the students of social science it powerfully conditions all our thinking about social problems and processes. Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression in their society. It is quite an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the 'real world' is to a large extent unconsciously built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the

<sup>1</sup> E. Sapir, "Conceptual Categories in Primitive Language," *Science*, vol. 74, 1931.

<sup>2</sup> E. Sapir, "The Status of Linguistics as a Science," in *Selected Writings of Edward Sapir*, University of California Press, 1958.

same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached.

"The understanding of a simple poem, for instance, involves not merely an understanding of the single words in their average significance, but a full comprehension of the whole life of the community as it is mirrored in the words, or as it is suggested by their overtones. Even comparatively simple acts of perception are very much more at the mercy of the social patterns called words than we might suppose. If one draws some dozen lines, for instance, of different shapes, one perceives them as divisible into such categories as 'straight,' 'crooked,' 'curved,' 'zigzag' because of the classificatory suggestiveness of the linguistic terms themselves. We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation."<sup>3</sup>

The excerpts from Sapir's work, which we have just extensively quoted, have been the subject more than once of the most diverse philosophical interpretations. It all depends on how they are read, that is, on the choice of the elements we stress, what we consider important, and in what context we place them. This is not the first time in philosophy that we see several philosophers reading the same text not only in a different way but even in a mutually contradictory way. That is why, before tackling such critical reading, it would be well to remember that among other things the various ways of reading a text are characterized first of all by the amount of good sense they display. One only reads a text correctly that one rejects, even a text written from a philosophical point of view, if one is capable—without relinquishing his critical attitude toward it—of seeing and understanding in what way it constitutes the discovery of a new scientific problem or a valuable contribution to a better understanding of the problem under study. A critic who reads a text not in order to learn something but in order to compile from it a one-sided collection of theses that appear false and erroneous to him, while remaining blind to the truth which they may contain, not only performs false but also highly detrimental

<sup>3</sup> E. Sapir, "Status of Linguistics as a Science," *loc. cit.* p. 162.

work—above all to himself, by limiting his own scientific horizon. One would not consider, for instance, the typically nihilistic criticism contained in the only work of Soviet philosophy devoted to Sapir (M. M. Guchman, "E. Sapir i etnograficheskaia lingvistika...," *Voprosy iazykosnania*, No. 1, 1954, pp. 122-127), a worthwhile criticism, which could provide the basis for a Marxist judgment of his conceptions.

There can be no doubt that Sapir's extremist views, which attribute to language a creative role in relationship to "human reality," and which approach idealism, would not only not be sustained by a materialist philosopher, but not even by any anthropologist or sociologist who understands the social determinants of language. Moreover, from this point of view, Sapir obviously contradicts even himself, in affirming at the same time diametrically opposed theses. But precisely for this reason it is improper to consider his statements outside of the context of his other opinions. If one is attentive, one will quickly realize that he is not an idealist. On the contrary, as we have already stressed, he sees and measures the importance of the social conditioning of the genesis and development of the function of language. He sees and measures the importance of the objective character of the reality that language in a sense reflects. And in the light of these two facts, Sapir's views take on a very different hue.

We find ourselves then facing the real world: a world of physical objects and of social phenomena. We confront men who exist in this world, who perceive, who think, and who, on the basis of their functions of knowledge, act. Men as well as their works must always be considered socially. The anthropologists who emphasize the unity of the individual and the collectivity, more in evidence among the "primitive peoples" than among the so-called civilized peoples, realize this perfectly well. The language too, inasmuch as it reflects physical and social reality, is a social *creation*. But is language *only* a reflection, *only* a creation? Doesn't it possess, rightly, as a social creation great educational power in relationship to the individual, an active, *creative* function—as a sort of catalogue of social stereotypes—of individual behavior, in particular of behavior in the functions of knowledge? And, consequently, if this is the case, the different

systems being reflections *sui generis* of the different communities which created them—always social communities within a certain meaning of the word—don't they lead the people who use these systems and think according to them to different perceptions of the world?

This is not a negligible problem and it in no way implies an idealistic vision of the world. It furnishes a new point of view and surely permits us to go more deeply into the problem of the subjective element in the process of knowledge. Since, if it appeared in fact—and the last word in this matter belongs to empiric facts and not to speculations, even when they are materialist—that the environment influences in some way human knowledge also *through* language, we would surely have to reconsider the problem of the objectivity of knowledge, and the sociology of the science would be considerably enriched as a result.

This problem, contrary to what some people appear to suggest, does not involve idealism and can very well be integrated as an element into a system of considerations based on materialist thought. Nothing stands in the way in fact of posing the problem of subjective elements in human knowledge, without disturbing the principle of the objectivity and of the material nature of the world. For it is one thing to say that language simply creates the image of reality, while abstracting the problem of the existence of this reality and denying that it is thought by human knowledge, and another thing to say that this reflection is influenced by subjective elements, among which we must also take into account, as we see it, the socially constituted language. What an opponent still must demonstrate when he engages in factual arguments may not be true—but a similar thesis cannot be rejected *a priori*.

Naturally, we are considering here a "sympathetic" interpretation of Sapir's thought, an interpretation that strives to elucidate the problem, to disengage the rational kernel contained in the propositions of this scientist, while abstracting their possible inconsistencies, oversights and even errors. Considering what interests us and the job that we are undertaking, this is the only reasonable attitude. It is not our aim here to pass judgment on the whole of Sapir's conceptions, but to take cognizance

of those of his prolific ideas that entered into the formulation of the Sapir-Whorf hypothesis. Thus, without granting Sapir general absolution for all the philosophical sins that he may have committed, without in the least surrendering in our struggle against them, we can allow ourselves the luxury here of not going into details on this aspect of the problem and of concentrating our attention on what is fruitful in his conceptions, what generates the creative impetuses which the hypothesis, of which he is the co-author, have not ceased to inspire.

We may now look at the two essential ideas of this hypothesis somewhat more objectively. They are set forth in the passages quoted earlier. 1) Language, which is a social product, forms and moulds, as the linguistic system in which we have been raised and are habituated to think since our childhood, our way of perceiving the world around us. 2) Due to the differences that intervene between various systems of language, which reflect the different environments that created them, men who think in these different languages perceive the world differently.

The junction with neo-Humboldtian theses on *Weltanschauung* implied in language is self evident. And yet, they are two different theses, if only because Sapir propagates empirically verifiable generalizations, which proceed from his detailed research. The merit of B. Whorf was in having assumed the task of verification.

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According to his own testimony,<sup>4</sup> a long time before he came into contact with Sapir and his ideas, Benjamin Lee Whorf had been induced by daily observation to reflect on the influence of words, adopted by a social group, on the behavior of these people. Analyzing hundreds of reports on the causes of fires, he arrived at the conclusion that these accidents were not always due to technical causes, but also to the influence of words on human behavior. He cites, for example, the attitude of workers toward safety precautions practiced in gasoline depots. The

<sup>4</sup> B. L. Whorf, "The Relation of Habitual Thought and Behavior to Language," in *Language, Thought and Reality*, Massachusetts Institute of Technology Press, 1956, pp. 135-137.

workers considered that these measures were not in force in the sheds where “empty barrels” were stored, since there was no more gasoline in them. When someone tossed a cigaret butt, it set off an explosive blaze of gas, which was escaping precisely from these “empty barrels,” more dangerous in fact than barrels filled to the brim. The multivocity of the term “empty barrel” produced a significant given situation, which influenced the behavior of the workers. Several accidents of this type gave Whorf the idea that he later developed in his specialized work.<sup>5</sup>

His contact with the culture and the languages of Indian tribes, the studies that he undertook in this field led Benjamin Lee Whorf to accept with enthusiasm the suggestions for research advanced by Sapir, from the moment when he began to follow systematically the latter’s course. Surely it was a question here more of creative impulse than of the usual professor-student relationship; B. Whorf nevertheless developed his hypothesis under Sapir’s influence and on the basis of the general theses formulated by him. Whorf undertook to verify them with concrete documentation, and his knowledge of the language and culture of the Hopi Indians prepared him for this work. In this fashion the works that became famous only after their author’s death were initiated, and all signs lead us to believe that the work that he left behind was only the start of an exceptionally brilliant scientific career. However, in his first writings he had already begun to concretize Sapir’s theses and—as is often the case with continuators—to radicalize them considerably in order finally to arrive at the formulation of the thesis of linguistic relativity, which is the central idea of the Sapir-Whorf hypothesis as we know it today. Here is the most extreme statement of it by Whorf himself:

“We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the

<sup>5</sup> “Such examples, which could greatly be multiplied, will suffice to show how the cue to a certain line of behavior is often given by analogies of the linguistic formula in which the situation is spoken of, and by which to some degree it is analyzed, classified, and allotted its place in that world which is ‘to a large extent unconsciously built up on the language habits of the group.’ And we always assume that the linguistic analysis made by our group reflects reality better than it does.” *Ibid.*, p. 137.

world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds—and this means largely by the linguistic systems in our minds. We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way—an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated one, *but its terms are absolutely obligatory*; we cannot talk at all except by subscribing to the organization and classification of data which the agreement decrees.

“This fact is very significant for modern science, for it means that no individual is free to describe nature with absolute impartiality but is constrained to certain modes of interpretation even while he thinks himself most free. The person most nearly free in such respects would be a linguist familiar with very many widely different linguistic systems. As yet no linguist is in any such position. We are thus introduced to a new principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated.”<sup>6</sup>

Whorf's thesis, according to which the language and the *Weltanschauung* of the Hopis are not only dissimilar but also opposed to the languages and *Weltanschauung* of the European peoples (S.A.E.—*Standard Average European*), constitutes only a theoretical consequence of the principle of linguistic relativity, which is formulated below. Let us look at it more closely, since there can be no doubt that it is this, and not Sapir's formulations, which gives the tenor to the Sapir-Whorf hypothesis.

We find Sapir's ideas echoed in it, but there can be no doubt that this is already a far-away echo. We have said that the continuators have the habit of radicalizing the ideas of their masters and of pushing them in some respects to their extreme limits. By thus liberating them from what might be

<sup>6</sup> B. L. Whorf, “Science and Linguistics,” *loc. cit.* pp. 213-214.



timorous and uncertain in them, by cutting short the apprehensions and inconsistencies of the authors, the continuators are hardly afraid, as their masters were, to radicalize the conclusions, but they also pay, because of their greater consequence, a higher price. The ingenious and fertile nature of an idea is in fact frequently tied to its uncertain and confused character.

Sapir did not nourish the slightest doubt as to the existence of the objective world which language merely reflects. Whorf, on the contrary, considers that the world is given to us as a kaleidoscopic stream of sensations, which only have to be organized by our mind, in other words, by our linguistic system. From the philosophical point of view, this position is considerably removed from Sapir's ideas, if indeed it is not frankly opposed to them.

Sapir stated cautiously that "human beings do not live in the objective world alone," that language is not "merely an incidental means of solving specific problems of communication or reflection," and that "the 'real world' is to a large extent unconsciously built up on the language habit of the group." But he never said that we comprehend the world in a definite way because "we are parties to an agreement to organize it [nature—A.S.] in this way," an agreement "codified in the patterns of our language." That conventionalist element in Whorf's opinions was alien to Sapir.

Speaking of language and its dialectical relationship with its environment, Sapir thought exclusively of the vocabulary. Along with Boas he contested the existence of a direct tie between the environment and the grammar of a language, its phonetics, its morphology, its syntax, etc.<sup>7</sup> Whorf rejects all these precautions and identifies the linguistic system with the

<sup>7</sup> "We seem, then, perhaps reluctantly, forced to admit that, apart from the reflection of environment in the vocabulary of a language, there is nothing in the language itself that can be shown to be directly associated with environment. [...] If this be true, and there seems every reason to believe that it is, we must conclude that cultural change and linguistic change do not move along parallel lines and hence do not tend to stand in a close causal relation." E. Sapir, "Language and Environment," in *Selected Writings...*, p. 100.

grammar.<sup>8</sup> Again we are dealing with a radicalization of exceptional importance of the theses of the master.

On the other hand, "the principle of linguistic relativity" is already contained *implicitly* in Sapir's theses, when he declares for instance that different communities live in distinct worlds and not in one and the same world, seen only with different aspects. Here also Whorf proceeds in his manner and changes the emphases: for example, by pointing to the impossibility of objective description—impartial, he says—of reality by the scientist, or following the example of Mannheim, in order to extricate himself from an extreme relativism, by imagining this linguist scholar who, knowing diverse languages, could, to use Mannheim's terminology, "analyze the perspectives" and recreate in this fashion the objective state of things. But these are only details; the essential thing—the principle of linguistic relativity with all its consequences—certainly originated with Sapir. Whorf borrowed it from him before making it the corner-stone of his theory.<sup>9</sup>

<sup>8</sup> "It was found that the background linguistic system [in other words, the grammar] of each language is not merely a reproducing instrument for voicing ideas but rather is itself the shaper of ideas, the program and guide for the individual's mental activity, for his analysis of impressions, for his synthesis of his mental stock in trade." B. L. Whorf, "Science and Linguistics," *loc. cit.* p. 212.

<sup>9</sup> The principle of linguistic relativity was also taken up by Korzybski well before Whorf. Also the representatives of the current called "general semantics" (for example, Anatol Rappaport and Arnold Horowitz, "The Sapir-Whorf-Korzybski Hypothesis," ETC, vol. VIII, No. 3, pp. 346-363), speak frequently of the Sapir-Whorf-Korzybski hypothesis. G. A. Brutian as well ("K filosofskoi otsenkie teorii lingvisticheskoi otnositelnosti," *Istoriko-filologicheskii Journal Akademii Nauk Armianskoi SSR*, Erevan, 1961, No. 2, 13, pp. 169-183), indicates Whorf borrowed from Korzybski. This does not seem very likely to me, First, because Korzybski's ideas became known only during World War II. Second, because even then and until today they have not been taken seriously in scientific circles, because of the dilettantism of their creator and the sectarianism of his school. Third and last, because Korzybski—contrary to what is commonly believed, and particularly written in Soviet philosophical literature—manifestly tended in his philosophical interpretations toward materialism and referred to the category of things, whereas Whorf, following the tendency which he attributed to the Hopis, sympathized with the category of significations. The principle of linguistic relativity appears simultaneously in two schools—the dependence of the image of the world on the language in which this image is created—but there are

In B. Whorf's formulation the problem changes its aspect visibly. Sapir's moderation, his bilaterality are lacking, and consequently the possibility of a "sympathetic" interpretation of his ideas. What Whorf presents to us may be philosophically qualified as idealism<sup>10</sup> and, even worse, as absolute relativism, which from the scientific point of view is nihilistic, since it contests the existence of objective truth. The Sapir-Whorf hypothesis, in spite of its name, is not then homogeneous; each of the two authors who gave their names to it present different opinions on problems of the highest importance. But this is not the question. Whorf does not interest us here because of the originality of his conception, since it is commonly known that he derives his theories from Sapir, but because of his contribution to their concretization. Let us then see what he has to say on this subject, what new facts and arguments he can advance in defending his point of view. Don't the irrefutable facts of

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also not inconsiderable differences between them. Thus while it is legitimate to link Whorf with Sapir, it is not permissible to link them with Korzybski. This error is not only imputable to Brutian, it is also characteristic of the representatives of the school of general semantics.

<sup>10</sup> Let us do justice to Whorf: he too is not consistent in his idealism to the end. Even Zviagintsev is wrong in this, despite his calm and objective judgment of Whorf's ideas. (W. A. Zviagintsev, "Teoretikolingvisticheskie predpasilki guipotezy Sapir-Whorf," *Novoie v lingvistikie*, Moscow, Foreign Literature Publications, pp. 111-134.) As ethnologist Whorf occasionally tended towards a clearly materialistic interpretation of the evolution of the Hopi language and culture. For instance: "In Hopi history, could we read it, we should find a different type of language and a different set of cultural and environmental influences working together. A peaceful agricultural society isolated by geographic features and nomad enemies in a land of scanty rainfall, arid agriculture that could be made successful only by the utmost perseverance [hence the value of persistence and repetition], necessity for collaboration [hence emphasis on the psychology of teamwork and on mental factors in general], corn and rain as primary criteria of value, need of extensive *preparations* and precautions to assure crops in the poor soil and precarious climate, keen realization of dependence upon nature favoring prayer and a religious attitude toward the forces of nature, especially prayer and religion directed toward the ever-needed blessing, rain—these things interacted with Hopi linguistic patterns to mold them, to be molded again by them, and so little by little to shape the Hopi world-outlook." B. L. Whorf, "The Relation of Habitual Thought...", *loc. cit.* pp. 157-158.

experience silence all philosophical objections? But the facts still must be irrefutable and the argumentation sensible.

To think, says Whorf, is always to think in some language. And every language is a large system of stereotypes which, in a way imperceptible to man, control the forms of his thought.<sup>11</sup> What are these stereotypes in the concrete case of a comparison between an S.A.E. and the Hopi language? Whorf held that we perceive the world in such or such a fashion, according to the way in which our language sifts the stream of events. The European languages have the tendency to apprehend the world as a cosmos of things. The Hopi language opposes another image to this image of the world, namely, the world apprehended as a cosmos of events ("The Relation of Habitual Thought...", *loc. cit.*, pp. 147-148). The S.A.E. languages concentrate their attention mainly on the products of human activity, such as chairs, tables, etc., which are objects artificially detached from the whole of the world. But how can two different languages render the changing aspect of natural events? Here is an example of Whorf's thought on this subject:

"We might isolate something in nature by saying 'It is a dripping spring.' Apache erects the statement on a verb *ga*: 'be white [including clear, uncolored, and so on].' With a prefix *nō-* the meaning of downward motion enters: 'whiteness moves downward.' Then *tó*, meaning both 'water' and 'spring', is prefixed. The result corresponds to our 'dripping spring', but synthetically it is 'as water, or springs, whiteness moves downward.' How utterly unlike our way of thinking. The same verb, *ga*, with a prefix that means 'a place manifests the condition'

<sup>11</sup> "Actually, thinking is most mysterious, and by far the greatest light upon it that we have is thrown by the study of language. This study shows that the forms of person's thoughts are controlled by inexorable laws of pattern of which he is unconscious. These patterns are the unperceived intricate systematizations of his own language—shown readily enough by a candid comparison and contrast with other languages, especially those of a different linguistic family. His thinking itself is in a language—in English, in Sanskrit, in Chinese. And every language is a vast pattern-system, different from others, in which are culturally ordained the forms and categories by which the personality not only communicates, but also analyzes nature, notices or neglects types of relationship and phenomena, channels his reasoning, and builds the house of his consciousness." B. L. Whorf, "Language, Mind and Reality," *loc. cit.* p. 252.

becomes *goblga*: 'the place is white, clear; a clearing, a plain.' These examples show that some languages have means of expression—chemical combination, as I called it—in which the separate terms are not so separate as in English but flow together into plastic synthetic creations. Hence such languages, which do not paint the separate-object picture of the universe to the same degree as English and its sister tongues, point toward possible new types of logic and possible new cosmical pictures."<sup>12</sup>

One of the consequences of this state of things is the construction of sentences, which differ from the subject-object structure once codified by Aristotle. It is precisely the reified image of the world that provokes opposition between the subject and the verb, the acting person and the action, things and relationships, objects and qualities. But the category of the verb is still attached to things; it does not enjoy an autonomous existence. The ideology of the reification of the world is imposed on us by the language, although it enters more and more often into conflict with modern space physics, mathematics, etc. The Indian languages are opposed in this regard to the S.A.E. languages. On the basis of concrete examples from the Nootka language, Whorf concludes:

"When we come to Nootka, the sentence without subject or predicate is the only type. The term 'predication' is used, but it means 'sentence.' Nootka has no parts of speech; the simplest utterance is a sentence, treating of some event or event-complex. Long sentences are sentences of sentences [complex sentences], not just sentences of words."<sup>13</sup>

There are also other differences, although less astonishing, and all have as an effect that the Indian languages, which otherwise divide reality into parts, condition another way of perceiving the world. Thus, for instance, the Navaho Indians divide all the inanimate bodies into categories of "round objects" and "long objects," which naturally changes the entire system of classification with regard to the S.A.E. languages.<sup>14</sup>

<sup>12</sup> B. L. Whorf, "Language and Logic," *loc. cit.*, p. 241.

<sup>13</sup> *Ibid.*, p. 242.

<sup>14</sup> "A linguistic classification like English gender, which has no overt mark actualized along with the words of the class but which operates through an

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What is most interesting, however, and upon which in fact the whole hypothesis rests, are Whorf's theses on the categories of time and space in the Hopi language. They are summarized as follows: The Hopis do not have the category of time as it exists in S.A.E. languages; instead, the category of space is similar.

In his study devoted to the pattern of the world as the Hopi language reveals it to us, he presents his fairly radical point of view on the category of time in this language:

"I find it gratuitous to assume that a Hopi who knows only the Hopi language and the cultural ideas of his own society has the same notions, often supposed to be intuitions, of time and space that we have, and that are generally assumed to be universal. In particular, he has no general notion or intuition of *time* as a smooth flowing continuum in which everything in the universe proceeds at an equal rate, out of a future, through a present, into a past; or, in which, to reverse the picture, the observer is being carried in the stream of duration continuously away from a past and into a future. [...] Hence the Hopi language contains no reference to 'time', either explicit or implicit.

"At the same time, the Hopi language is capable of accounting for and describing correctly, in a pragmatic or operational sense, all observable phenomena of the universe. [...] Just as it is possible to have any number of geometries other

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invisible 'central exchange' of linkage bonds in such a way as to determine certain other words which mark the class, I call a *covert* class, in contrast to an *overt* class, such as gender in Latin. Havado has a covert classification of the whole world of objects based partly on animation and partly on shape. Inanimate bodies fall into two classes which linguists have styled 'round objects' and 'long objects.' These names, of course, misrepresent: they attempt to depict the subtle in terms of the gross, and fail. Navaho itself has no terms which adequately depict the classes. A covert concept like a covert gender is a definable and in its way as definite as a verbal concept like 'female' or feminine, but is of a very different kind [...] The Navaho so-called 'round' and 'long' nouns are not marked in themselves nor by any pronouns. They are marked only in the use of certain very important verb stems, in that a different verb stem is required for a 'round' or a 'long' subject or object." B. L. Whorf, "Thinking in Primitive Communities," *loc. cit.* pp. 69-70.

than the Euclidean which give an equally perfect account of space configurations, so it is possible to have descriptions of the universe, all equally valid, that do not contain our familiar contrasts of time and space.”<sup>15</sup>

Then, according to Whorf, the Hopis replace the metaphysics of three-dimensional space and one-dimensional time by the metaphysics of what is objective and what is subjective (“An American Indian Model...,” *loc. cit.*, p. 59 et seq.). The future is replaced by what is subjective. The verbs do not appear linear in the three dimensions of time, but on the basis of an operational gradation “before-after.”<sup>16</sup>

Whorf then does not affirm that the Hopis do not perceive in time, which would really be inconceivable, but that they do it differently than in the S.A.E. languages, that there is a difference between our category of “time” and that of “duration” for the Hopis. This is furthermore the most weighty of Whorf’s arguments in favor of the principle of linguistic relativity that he defends.

Whorf’s argumentation is situated on two different levels: the relationship of language—as vocabulary and grammatical

<sup>15</sup> B. L. Whorf, “An American Indian Model of the Universe,” *loc. cit.*, pp. 58-59.

<sup>16</sup> “Hopi, as we might expect, is different here too. Verbs have no ‘tenses’ like ours, but have validity-forms [‘assertions’], aspects, and clause-linkage forms [modes], that yield even greater precision of speech. The validity-forms denote that the speaker [not the subject] reports the situation [answering to our past and present] or that he expects it [answering to our future] or that he makes a nomic statement [answering to our nomic present]. The aspects denote different degrees of duration and different kinds of tendency ‘during duration.’ As yet we have noted nothing to indicate whether an event is sooner or later than another when both are *reported*. But need for this does not arise until we have two verbs: i.e., two clauses. In that case the ‘modes’ denote relations between the clauses, including relations of later to earlier and of simultaneity. Then there are many detached words that express similar relations, supplementing the modes and aspects. The duties of our three-tense system and the tripartite linear objectified ‘time’ are distributed among various verb categories, all different from our tenses; and there is no more basis for an objectified time in Hopi verbs than in other Hopi patterns; although this does not in the least hinder the verb forms and other patterns from being closely adjusted to the pertinent realities of actual situations.” B. L. Whorf, “The Relation of Habitual Thought and Behavior to Language,” *loc. cit.*, pp. 144-145.

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structure—to language, and the relationship of language to individual behavior. And at these two levels he has to submit to verification. In the first case, it is a question of the translatability of one language into another, whether *ex hypothesi* they are of different “categories” of reality and different visions of the world; in the second case, it is a question of the influence of language on human behavior, and above all on behavior in the process of knowledge if, again *ex hypothesi*, a different vision of the world contained in the language influences the manner of perceiving the world by those who speak and think in this language.

These then are the theses of B. L. Whorf, sketched in their main lines, which give concrete form to Sapir’s general hypothesis with the example of the Hopi language. As I stated earlier, Whorf died prematurely, before finishing his scientific work. Far from ending his work, he had only begun it. The fragmentary character of his studies and also his rather narrow range of extension, did not permit him to give a definitive answer of “yes” or “no” to the problems that he raised. Nothing remained but the hypothesis, around which a fierce debate has arisen, a debate of interest also to philosophy.

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Let us first see what has been done, and in what sense, by other scholars, in order to verify the Sapir-Whorf hypothesis. It must be recognized, and we have already done so, that up to now the hypothesis has been more commented upon than its bases have been effectively verified. Nevertheless a whole literature exists which, directly or indirectly, contributes arguments to the debate on the Sapir-Whorf hypothesis.

First of all, a distinguished group of ethnologists, in continuing their research on the languages and cultures of the American Indians, have increased the capital of our knowledge on this subject, even when they were not directly concerned with the verification of the Sapir-Whorf hypothesis. They have raised furthermore a new culturo-logical problem: how can the fact be explained that tribes, frequently speaking the same language, have different cultures—or inversely, that tribes living



in the same territory and having very similar cultures speak a different language?

The Navaho Indians, neighbors of the Hopis, have been studied from the linguistic point of view also by Clyde Kluckhohn and Harry Hoijer. Clyde Kluckhohn manifestly accepts the tenets of the Sapir-Whorf hypothesis. I would even say that he formulates the ideas that it contains better than Whorf himself, because his formulations are less far away from Sapir.<sup>17</sup>

Kluckhohn's research concerning the Navaho language has demonstrated primarily its concrete nature. A Navaho never speaks of an action in the abstract, but endeavours always to define concretely the circumstances in which it took place. One does not say "to go" in an abstract way; the verbal form requires that it should be exactly stated, whether it is a question of going by car, on horseback, going at a galop, at a trot, etc. By tying them to the appropriate verbal root, we distinguish "round" and

<sup>17</sup> "Any language is more than an instrument for the conveying of ideas, more even than an instrument for working upon the feelings of others and for self-expression. Every language is also a means of categorizing experience. What people think and feel, and how they report what they think and feel, is determined, to be sure, by their individual physiological state, by their personal history, and by what actually happens in the outside world. But it is also determined by a factor which is often overlooked; namely, the pattern of linguistic habits which people have acquired as members of a particular society. The events of the 'real' world are never felt or reported as a machine would do it. There is a selection process and an interpretation in the very act of response. Some features of the external situation are highlighted; others are ignored or not fully discriminated.

"Every people has its own characteristic classes in which individuals pigeonhole their experience. These classes are established primarily by the language through the types of objects, processes, or qualities which receive special emphasis in the vocabulary and equally, though more subtly, through the types of differentiation or activity which are distinguished in grammatical forms. The language says, as it were, 'Notice this,' 'Always consider this separate from that,' 'Such and such things belong together.' Since persons are trained from infancy to respond in these ways they take such discriminations for granted, as part of the inescapable stuff of life. But when we see two peoples with different social traditions respond in different ways to what appear to the outsider to be identical stimulus-situations, we realize that experience is much less a 'given', an absolute, than we thought. Every language has an effect upon what the people who use it see, what they feel, how they think, what they can talk about." Clyde Kluckhohn and Dorothea Leighton, *The Navaho*, Harvard University Press, Cambridge, 1947, p. 197.

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"long" objects, etc. The analysis of the extension of nouns proves that various classes of objects frequently may be grouped under one noun, according to the classification of the English language, but also that sometimes it works for distinctions foreign to European languages. This is research in depth which increases our concrete knowledge on this problem, but it only touches on the Sapir-Whorf hypothesis.

Fairly similar concrete research, primarily to do with the Navahos, is set forth in the works of Harry Hoijer. A partisan and ardent defender of the Sapir-Whorf hypothesis, during a certain period of his activity at least, this scholar supported it with very solid, detailed documentation. He concerned himself with the problem of the perception of colors, family relations, etc., in Indian and European languages. What is characteristic, however, are the precautions with which he envelops his theses: differences in language do not prove differences in the perception of reality, but simply another disposition of the attention of those who speak these different languages.<sup>18</sup>

Dorothy Lee, also a convinced partisan of the Sapir-Whorf hypothesis, analyzed in several studies the Wintu language and

<sup>18</sup> "While these examples, and many other similar ones, seem clearly to indicate that language habits influence *sensory* perceptions and thought, we must not overestimate this influence. [...] ... it is perfectly evident that the Navaho, while they denote 'brown' and 'gray' by one term and 'blue' and 'green' by another, are quite able to discern the difference between brown and gray, blue and green. Again this may be done, should ambiguity otherwise result, by circumlocution, just as we can quite simply express in English the difference between the two Navaho words for our 'black'.

"The fact of the matter, then, is not that linguistic patterns inescapably limit sensory perceptions and thought, but simply, that, together with other cultural patterns, they direct perception and thinking into certain habitual channels. The Eskimo, who distinguishes in speech several varieties of snow surface [and who lacks a general term corresponding to our 'snow'], is responding to a whole complex of cultural patterns, which require that he make these distinctions, so vital to his physical welfare and that of the group. It is as if the culture as a whole [including the language] selected from the landscape certain features more important than others and so gave to the landscape an organization or structure peculiar to the group. A language, then, as a cultural system, more or less faithfully reflects the structuring of reality which is peculiar to the group that speaks it." Harry Hoijer, "The Relation of Language to Culture," *Anthropology Today*, edited by A. L. Kroeber, the University of Chicago Press, 1953, pp. 559-560.

the language of the inhabitants of the Trobriand Islands. While agreeing with the thesis according to which the image of the world depends on the culture and especially on the language in which this image is formed, Dorothy Lee adds, however, that this does not mean that the frameworks of the different cultures are closed, that there is no possibility of going beyond a given cultural circle. The question is rather of certain basic lines and limits within which the individual functions on his own. This is undoubtedly a very moderate interpretation of the Sapir-Whorf hypothesis.

Following the implications of the Wintu language, Dorothy Lee admits the objectivity of *reality* as such, but considers that the fact that we detach particular *objects*, to which we assign agreed-upon names, is already the result of the reciprocal influence of man knowing reality and conversely. What we are talking about therefore does not have a purely subjective character, but neither is it something objective. In the European languages the totality seems to be like a puzzle of parts, whereas in the Wintu language the totality dominates and the part is merely a particularization. This also concerns the category *ego*, which finds its reflection in the whole system of language and the culture. This reduces itself to differences in the classification of reality in different languages, which we must not forget if we want to understand the peoples who speak and think in a language different from ours.

"...for true communication, we cannot assume as a matter of course that our classifications are the same for people of all cultures; that translation is merely the substitution of one sound-complex for another. Once we are aware that the basis of classification is not a universal one, we can find out whether our different words do name the same thing, and if they do not, we can qualify our word."<sup>19</sup>

Since we are now dealing with ethnolinguistics and with the testimony it brings to bear in the debate around the Sapir-Whorf hypothesis, works concerning family ties should also be mentioned. Alongside the research on numerical systems, this is the

<sup>19</sup> Dorothy Lee, "Symbolization and Value," *Freedom and Culture*, A Spectrum Book, Prentice Hall Inc., 1959, p. 82.

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field best represented in the literature, although it has never been systematically exploited, to my knowledge, in conjunction with the problem which concerns us. In the American literature one could cite as an example the work of Floyd Lounsbury.

One could also cite a number of other examples as links uniting ethnolinguistics with the problematic of the Sapir-Whorf hypothesis. But these are only practical ties, due to the fact that the fields of investigation border on each other. This research was not undertaken with the aim of verifying the hypothesis—which interests us. I know only of two major scientific enterprises organized in recent years with the conscious intention of discussing and verifying the Sapir-Whorf hypothesis. The first was a seminary, presided over by Harry Hoijer, for the discussion of the hypothesis. We owe to it a valuable collection, *Language and Culture* (The University of Chicago Press, 1954), but, by the nature of things, it could not go beyond a confrontation of points of view on the subject of already existing material. The second enterprise was to undertake, within the framework of the *South-Western Project*, authentic research on the bases of the hypothesis. But this research proceeded from psycho-linguistics and would lead us to an entirely different field of the science.

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Criticism of the Sapir-Whorf hypothesis has been undertaken many times, and it must be said that most of the time it has been severe but just. As John B. Carroll, Roger Brown, Eric Lenneberg and others have pointed out, it is insupportable in its actual form, for its foundations seem too equivocal and confused, its generalizations too hasty and its empiric bases too weak. Nevertheless, it conceals an idea which even its severest critics have been unable to contest and which should be reserved for further empirical verification, since it is well known that too hasty refutation causes as much damage to science as too hasty affirmation.

This idea is the thesis according to which the system of language in which we think influences the manner in which we perceive reality and, consequently, also our behavior ("behavior" is understood here in the broad sense of the word; we

encompass within this term all human activities, including scientific activity). At the same time we are far from supporting the idea that this influence is equivalent to the formation of an *entire Weltanschauung* or that it leads to the reciprocal untranslatability of all languages, and to the formation of noncontiguous visions of the world, just as there are noncontiguous surfaces. But we are also far from dismissing this possibility *a priori*, leaving the formulation of generalizations of this type solely to empirical proof. As a working hypothesis—based in part on the observation of linguistic material, and in part on an appropriate interpretation of the unity of language and thought and of the relationship of language-thought to objective reality—we subscribe to the moderate thesis according to which the constituted language as a system enters into the composition of human knowledge not only as an instrument of communication but also, considering its ties with thought, as a constituent factor of knowledge.

To put an end to the objection of idealism and a vicious circle, an objection that is often raised with regard to the Sapir-Whorf hypothesis (the danger of idealism arises when language is considered as an arbitrary convention, and the vicious circle in the line of reasoning when the differences in *Weltanschauung* are viewed as issuing from structural differences in the systems of languages and these are explained in turn by cultural differences), we submit then that language, understood as a unity of language and of thought, is through its genesis a social product, as a reflection of an historically constituted physical and social environment. What interests us then is the influence of this social product, once it had assumed the form of a concrete system, on man's perception of the world and his behavior. These positions of principle are surely open to discussion and can be differently interpreted, according to the philosophical theory on the basis of which they are approached, but in any case they also eliminate the objection of idealism, as well as that of the vicious circle in the reasoning, while the question itself remains. This is the question of the active role of language in the process of knowledge and in human behavior, and even the most rational materialist could not discard it *a priori*, since in the question thus posed he will recognize

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materialism as well as dialectics. And the problem is a problem of fact and cannot be resolved in the sense that it cannot be verified or falsified except on the bases of empiric facts.

Is this still the Sapir-Whorf hypothesis? Surely not! But the idea derives from it directly, and despite the basic modifications to which it has been subjected, it belongs to the authors of the hypothesis who furnished the first impetus toward its formulation. There is not the least doubt that in such a general form the same idea could also be deduced from the Herder-Humboldt philosophy of language. But the difference is great, above all for a materialist. Because, as opposed as one may be to the Sapir-Whorf hypothesis, it was nonetheless conceived as a generalization—hasty and one-sided perhaps, but still a generalization—of empiric data. Hence, whoever wants to tackle the problem today of the active role of language in the process of knowledge, unless he wants to get involved in philosophical speculation, must necessarily pass on to it by way of the Sapir-Whorf hypothesis. I specify: not necessarily to support all its implications, but necessarily to take them into account, for the good reason that its original authors posed this problem on the basis of empiric positions and thus created a movement of mind, of creative impulses which are by themselves positive, even if the hypothesis itself is judged negatively. The problem is one thing and its positive solution another. In this case, as in many others, in rejecting the solution which it proposed, one cannot reject the problem nor the merit of those who were able to see it and who formulated it, even though imperfectly.

The most important task incumbent on us today, since we are rich in so much experience and so many failures, consists in formulating a positive program of research. It would be a program which, taking into account the small success of the research carried out until now, would provide the maximum opportunity for us to reach a solution. But before such a program could be initiated, it would be necessary to do justice to these criticisms of the Sapir-Whorf hypothesis, which by rebound could also bear on our enterprise. Although we have no intention of proceeding still toward verification of the hypothesis in its primitive form, we feel we are agreed on what we have recognized as constituting the rational core of this conception.

Let us begin with a psychological rather than logical argument: research on phenomena common to all languages (linguistic universals) will continue to be opposed to the research on what causes the differentiation among the functions of particular languages in a culture. I say that this is a psychological argument because there is no contradiction between the two researches, no more than between the two points of view, although this scientific method could, on occasion, become a dangerous adversary of the research directed in the contrary sense. What in fact prevents the assumption at the same time that there are phenomena and regularities common to all languages and that in each language (or group of languages) phenomena appear which are particular to it? There is no contradiction in this, it is a problem of fact and consists in knowing whether these phenomena exist or not. What could prevent the simultaneous undertaking of research on the two problems?

The problem of *linguistic universals* is, it is true, very fashionable lately, but—as the specialized conference held at Dobbs Ferry (New York) in April 1961 demonstrated—it would still have to be specified what is meant by linguistic universals and in what way they can be studied. The thing is still *in statu nascendi* and the future will witness its progress. But in any case let us repeat this again, there is nothing indicated against proceeding to the study of two problems at the same time. On the contrary, it could enhance to advantage the interest in the research and increase its chances of success.

Genuine criticism of the Sapir-Whorf hypothesis concerns all these elements, proceeding from the philosophical principles on which it is based to the concrete formulations and theoretical and practical implications which ensue from it. It is impossible not to subscribe to the critical remarks of such different philosophers, representing such dissimilar philosophical positions as Max Black and V. Zvieguintsev, Charles Lendesman and G. Brutian, Lewis S. Feuer and John B. Carroll or Eric Lenneberg, etc. The observations of all of these authors are in general more than well founded. The Sapir-Whorf hypothesis in its original form is rightly untenable. Its bases are multivocal and badly defined, its formulations are confused; to submit that it is only language which introduces order and organization into “crude”

knowledge, which is only a "kaleidoscopic torrent of events," is a metaphysical affirmation. The assertion that language in itself contains a vision of the world is equally metaphysical, when language is treated autonomously and not as a reflection of reality. The thesis on linguistic relativism leads finally to the pronouncement of absurdities about the untranslatability of different languages, etc., etc. Each of these critical sallies hits the center of the target. One can only agree with this criticism, which will save us from going into details. But this does not at the same time exclude the possibility that within this much-criticized hypothesis there might be a new problem, a serious problem that should not be ignored. On this, almost all the authors whom we have quoted are agreed.

We have set forth above the essential aspect of the problem. But how do we proceed to its verification? First of all we must dispose of too much comparative material; the ambitious undertaking of the American ethnolinguists was bound to fail from the start because of the narrowness of their basis of research. Its verification would require the selection of about ten centers of research in the world which would have to fulfill the following conditions: 1) languages would have to be historically isolated, so that there could be no question of reciprocal influences (for example, the Eskimo language and the Ewe language in Africa); 2) the languages would have to represent different linguistic types and societies at different levels of civilization (that is, "primitive" and "civilized" languages of all types); 3) the choice should be made primarily of languages spoken by societies whose history—also cultural history—would be known to us, or at least could be to a certain extent reconstituted.<sup>20</sup>

Several levels of research would necessarily need to be stipulated. In the first phase groups of researchers would

<sup>20</sup> Examples of similar work already exist, if only in the study of H. Nakamura, *The Ways of Thinking of Eastern Peoples*, Japanese National Commission for U.N.E.S.C.O., 1960. Documentation provided by works of this type could be utilized advantageously. However, since they are not part of the same initial project and consequently differ in the methods of research and presentation, a comparison with them is difficult and decreases their weight in the domain that interests us.



undertake general work on the languages and cultures of the different peoples selected. Since we are dealing with different aspects of the problem, namely the description of the language (also its structure), an examination of the historical background of the given society—of its culture and its civilization, so that in the end a type of linguistico-cultural monograph of each society would be available—, the group of researchers would have to be composed of specialists of all types, linguists, historians, social anthropologists, social psychologists.

It is only at the next level that we could go on to comparative analyses for which philosophers would be invited. But for this comparison to be possible, the initial data should be comparable. With this aim in view, before undertaking the first stage of the research, a group of carefully chosen scholars would need to draw up a questionnaire and methodic postulates which would constitute the norm for all groups studying the languages. In this manner we would determine the basis and character of the comparative research which could provide the answers to questions that preoccupy us.

It is evident that this is a difficult program of research, requiring years of work and considerable funds, a project, which for any number of reasons could be carried out only within the framework of truly international cooperation—a sort of re-edition of the Geophysical Year on the level of the human sciences. After all that has been said here on this subject, it is hardly necessary to emphasize the scientific importance of this enterprise, as much from the point of view of the special interest of the different disciplines in the human sciences as, and more important still, of their integration.

Only the results of the realization of a similar project could furnish us with the answers to questions which have a definite philosophical significance, although it may be perfectly useless to “philosophise” on the subject. There are possibly common phenomena to all languages as there are phenomena particular to each. But perhaps neither one nor the other exists, or the former exists and not the latter. Each of these answers involves implications in philosophy, but the decision supporting the choice of the right one is within the competence of the experimental facts.

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We must, therefore, wait for these facts, and withhold our judgment for the time being. This "suspension" also has philosophical import. But in this precise case philosophy has not only a passive role to play: its task is to analyze the categories which the concrete research will later tackle. In reality, it is only the preparation of the terrain, but the task is important. It can give the answers more easily to the questions that we are posing, and thus hasten them; or it can make answers more difficult and thus delay them.