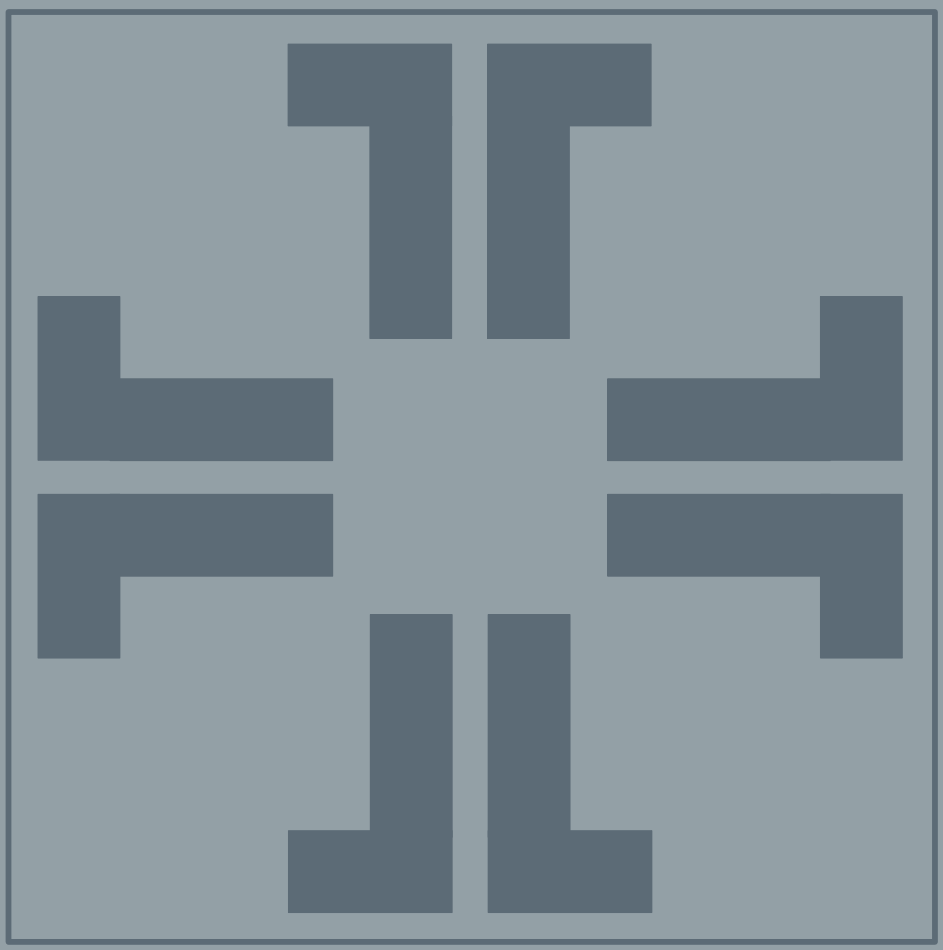
Julia M. Penn

Linguistic Relativity versus Innate Ideas



JANUA LINGUARUM

STUDIA MEMORIAE
NICOLAI VAN WIJK DEDICATA

edenda curat
C. H. VAN SCHOONEVELD
Indiana University

Series Minor, 120

LINGUISTIC RELATIVITY VERSUS INNATE IDEAS

The Origins of the Sapir-Whorf Hypothesis in German Thought

by

JULIA M. PENN

1972
MOUTON
THE HAGUE · PARIS

LIBRARY OF CONGRESS CATALOG CARD NUMBER : 77-170003

Printed in Belgium, by NICI, Printers, Ghent.

PREFACE

The present study was completed essentially as it now stands in 1966. Relevant studies completed up to that time were reviewed and their findings incorporated to the extent that they were deemed important to the questions posed. Since that time, the author's activities have been in other fields. However, concern with the Sapir-Whorf hypothesis continues and interest in the many questions raised by the hypothesis has not dwindled. Requests for the manuscript seemed to warrant its publication at this time. It is offered in the hope that present investigators will find the historical and philosophical analyses attempted here to be of relevance to the timeless questions about the relation of thought to language.

Minneapolis
Spring, 1970

Julia M. Penn

CONTENTS

INTRODUCTION

It is usual to regard the progress of Western thought as toward more freedom from received truths, away from the acceptance of ideas on the authority of others. This seems to characterize the trend of thought in Western culture since the Middle Ages in the realms of religion, ethics and government. It is, however, not often considered that we might still be accepting some ideas on authority. It is the purpose of this study to describe a progression from acceptance of an idea on authority to rejection of the idea because the empirical evidence does not support it. The idea is that the language we speak influences the way we think and act. I suggest that only quite recently have we begun to systematically substitute empirical observation for the voice of authority in establishing this notion in particular and other hypotheses about human behavior in general.

Benjamin Lee Whorf (1897-1941), who was a fire-prevention engineer by vocation and a linguist by avocation, first published his now-famous articles in support of Sapir's hypothesis in the 1930's. The idea was that one's view of the world is dependent on the structure of the language one speaks. The idea is also attributed to Wilhelm von Humboldt and is referred to as his *Weltanschauung* hypothesis. Ever since Whorf's popular articles appeared in the *Technology Review,* scholarly articles and books treating the Sapir-Whorf hypothesis, as it is now called, have continued to appear. The present study will report briefly on these studies in order that opinions on the validity of the hypothesis can be compared, evaluated and put into historical perspective.

The student of German thought might wonder why the idea received so much attention in the fifties and sixties, since it was propounded by Wilhelm von Humboldt in the nineteenth century and earlier by Hamann and Herder in the eighteenth century. Yet until Whorf's articles appeared, only a small group of European scholars, notably Cassirer and Weisgerber, and a few anthropologists and linguists (Boas, Sapir, Lee) seriously entertained the idea that our thought is influenced by the language we speak.[1] However, in the last two decades more than a few scholars from philosophy, psychology and anthropology have attempted either to lend support to the hypothesis or to invalidate it, as will be seen from the references cited.

I will try to give plausible answers to the following questions about the Sapir-Whorf hypothesis and the history of its acceptance and non-acceptance.

1. Why do some empirical tests conclude with supporting evidence and others with nullifying evidence?
2. Is the extreme hypothesis (that thought is dependent on language) tenable?
3. Is the mild hypothesis (that the categories of a language influence the cognition of its speakers) supported by the empirical evidence?
4. Why was the extreme hypothesis held for so long and why might present opinion be returning to the idea of innate ideas (language universals)?

It is suggested that "the" Whorf hypothesis might better be regarded as two hypotheses, an extreme one asserting the dependence of thought on language and a mild one suggesting some influence of linguistic categories on cognition. The extreme hypothesis will be shown to be the one that Whorf, Sapir, Humboldt and Herder each asserted at some time. I will try to show that this

[1] For a critical study of the position taken by the European Neo-Humboldtians, see Robert L. Miller, "The Linguistic Relativity Principle and Humboldtian Ethnolinguistics; A History and Appraisal", diss. University of Michigan, 1963.

extreme position on linguistic relativity can be reconciled only with those theories which posit an extra-human source for language. The milder hypothesis, which asserts some influence of linguistic categories on non-linguistic behavior, will be shown to have been tentatively, but very tentatively, supported by the available empirical evidence.

That Herder, Humboldt, Sapir and Whorf all advocated the extreme view will be suggested as having been in a sense necessary to Western thought — necessary to free us of the notion of innate ideas, e.g. Kant's categories. Linguistic relativity is seen as an antidote to the a priori assumption of innate categories of thought and a God who created language, just as the notion of the cultural relativity of values has been necessary to free us of the conviction that there is a pre-ordained "*Sittengesetz über uns*", a moral law to which all are subject.

Finally, since some empirical evidence has been brought to bear on the question of the relativity of thought to language, the possibility that there may be some innate dispositions of thought common to all human beings can be considered quite seriously again, but this time as an empirical question. That is, the present-day rationalist who proposes language universals expects them to be subjected to empirical testing. I suggest that it may not be a coincidence that Rationalism has become more popular at the same time that linguistic relativity has fallen into disrepute.

I

THE HYPOTHESIS FROM HUMBOLDT TO TODAY

THE TWO WHORF HYPOTHESES

The precise wording of an idea is of little consequence until it is to be tested. At that point, however, any qualifying phrases become crucial to the kind of evidence that can disqualify the idea as a true statement about reality. An assertion about reality of the form "*a* has the quality *b*" is quite impossible to test. Does it mean "all *a* always has the quality *b*" or does it mean "*a* sometimes occurs in some places with the quality *b*"? The former extreme statement can be demonstrated as untrue by citing one occurrence of the phenomenon *a* without the quality *b*. The latter statement, however, can never be invalidated so long as anyone can point to even a few instances of *a* occurring with *b*.

The problem outlined above is the one facing anyone wanting to test the Sapir-Whorf hypothesis: It is stated more and less strongly in different places in Sapir's and Whorf's writings. The fact that few have tried until recently to test the hypothesis may account for the lack of preciseness in wording. The first difficulty is in deciding just what "the" Whorf hypothesis is. Is it "language determines thought", an extreme hypothesis indeed? Or is it "language influences thought", a much milder assertion, and one which can never be disproven as long as some influence of a given language on some non-linguistic behavior of its speakers can be demonstrated.

No statement can be found in Whorf's writing which clears up the ambiguity as to which assertion he intended to be making.

One of the few instances that can be cited from Whorf's writings, where he states his hypothesis at all explicitly, reads, "The background linguistic system (in other words, the grammar) of each language ... is itself the shaper of ideas, the program and guide for the individual's mental activity, for his analysis of impressions ..."[2] The question is, did he mean to assert that the grammar of a language *determines* ideas and *limits* the range of mental activity? Or did he mean to assert that the grammar of a language merely *influences* an individual's ideas, mental activity, analysis of impressions?

The idea that Whorf's hypothesis is stated inadequately to allow for modern empirical research (which would then support or force modification of the hypothesis) is not new. Rulon Wells says that the hypothesis is "an illusion" which merely "looks like an empirical proposition".[3] Lenneberg and Roberts are of the opinion that "it would be in vain if we were to search in their [Whorf's and Cassirer's] works for *practical* working hypotheses whose verification requires compilation of clearly circumscribed data and which can be accepted or rejected in the light of objective considerations".[4]

It is not surprising, therefore, that recent references to the hypothesis indicate disagreement as to exactly what "the" Whorf hypothesis is. It is not a mere matter of wording but a question of the conclusions one is justified in drawing about the truth of the hypothesis. Rapoport says that the hypothesis "states that 'our language does our thinking for us'."[5] Greenberg, however, says, "The general notion is that the grammatical categories of a language determine or at least influence strongly the general

[2] Benjamin Lee Whorf, *Language, Thought and Reality,* ed. John B. Carroll (Cambridge and New York: MIT-Wiley, 1956), p. 212.

[3] Rulon Wells, "What Has Linguistics Done for Philosophy?" *Journal of Philosophy* 59 (1962), p. 703.

[4] Eric H. Lenneberg and J. M. Roberts, "The Language of Experience" (= *Indiana University Publications in Anthropology and Linguistics,* Memoir No. 13) (Baltimore, 1956). Also in Sol Saporta, ed., *Psycholinguistics: A Book of Readings* (New York: Holt, Rinehart and Winston, 1961), p. 494.

[5] Anatol Rapoport, "General Semantics: Its Place in Science", *Etc* 16 (1956), p. 89.

manner of conceiving the world of those who speak it".[6] The latter statement is much less extreme. The qualifying words "or at least influence strongly", make this hypothesis a more conservative assertion. Similarly conservative is the phrasing of the Sapir-Whorf hypothesis in the title of an article by D. W. Brown et al.: language structure "influences" thought.[7] By comparing the latter statement with the first statement by Rapoport ("language does our thinking for us"), it becomes clear that there is an extreme position and a more cautious position. Only two of the many studies of the hypothesis mention that there are two possible positions. Carroll mentions a "liberal interpretation" and "a conservative hypothesis".[8] Basson and O'Connor also point out that there is "a moderate and an extreme view of the influence of language on philosophical thought".[9] But neither study comments on the importance of distinguishing clearly between these two positions in any testing of the hypothesis.

The same ambiguity is to be found in the works of all the major proponents of the idea: Herder, Humboldt, Sapir and Whorf. None of them makes it clear which position he intended to take, but all four did at some point advocate the extreme position in their respective works.

The following consideration of several empirical tests of "the" Whorf hypothesis will demonstrate the importance of distinguishing between two hypotheses: a cautious one that language influences thought and an extreme one that language determines thought. The results of these several empirical tests are disturbingly different. I suggest, however, that a clarification of "the"

[6] Joseph Greenberg, "Language and Linguistics", in Bernard Berelson, ed., *The Behavioral Sciences Today* (New York: Basic Books, 1963), p. 138.

[7] Donna W. Brown, Anatol Rapoport and A. Horowitz, "The Sapir-Whorf Hypothesis: Does Language Structure Influence Thought. Report and Reply", *Etc* 17 (1960), pp. 339-345.

[8] John B. Carroll, *The Study of Language: A Survey of Linguistics and Related Disciplines in America* (Cambridge, Mass.: Harvard University Press, 1955), p. 46.

[9] A. H. Basson and D. J. O'Connor, "Language and Philosophy: Some Suggestions for an Empirical Approach", *Philosophy* 22 (1947), pp. 49-65. Reprinted in *Methodos* 5 (1953), p. 203.

hypothesis will explain the varying results without reference to experimental design or possible pre-experiment bias. Those who consider the hypothesis to be "language determines thought" conclude with invalidating evidence; but those who set out to test the mild hypothesis conclude with possibly supportive evidence.

Here are listed, first, a few examples of pro-Whorfian results obtained by testing. Other examples might have been chosen.

Lenneberg reports on a study showing how terms for colors influence the actual discrimination.[10] English-speaking subjects were better able to re-recognize those hues which are easily named in English. This finding is clearly in support of the limiting influence of linguistic categories on cognition. Brown and Lenneberg together report a similar experiment using some English-speaking subjects and some monolingual Navaho speakers.[11] These and other experiments reported by Brown and Lenneberg[12] demonstrate the influence of normalized categories (names for colors in a given language) on cognition. Carroll and Casagrande report two experiments with Hopi and Navaho speakers in order to test the "notion that language makes an important difference in behavior".[13] They suggest that their results do support the "notion" quoted above and that if this carefully modified hypothesis is true, then "the potential influence of linguistic patterning on cognitive functioning ... is a fruitful area for further study".[14] Despite their caution in inferring thought (cognition) from beha-

[10] Eric H. Lenneberg, "A Probabilistic Approach to Language Learning", *Behavioral Science* 2 (1957), pp. 1-12. These experiments are also reported in E. H. Lenneberg, "Cognition in Ethnolinguistics", *Language* 29 (1953), pp. 469-470.

[11] Roger W. Brown and Eric H. Lenneberg, "Studies in Linguistic Relativity" in Eleanor E. MacCoby et al., eds., *Readings in Social Psychology* (New York: Holt, Rinehart and Winston, 3rd edition, 1958).

[12] Roger W. Brown and Eric H. Lenneberg, "A Study in Language and Cognition", *Journal of Abnormal and Social Psychology* 49 (1954), pp. 454-462. Also in Sol Saporta, ed., *Psycholinguistics: A Book of Readings* (New York: Holt, Rinehart and Winston, 1961).

[13] John B. Carroll and Joseph B. Casagrande, "The Function of Language Classifications in Behavior" in Eleanor E. MacCoby et al., eds., *Readings in Social Psychology* pp. 18-31.

[14] Carroll and Casagrande, p. 31.

vior, this study as well as those of Lenneberg, and Brown and Lenneberg seem to support the Whorf hypothesis — as cautiously stated.

But what of studies that purport to disprove the Whorf hypothesis? Osgood reports on a lengthy study "to demonstrate that human beings the world over, no matter what their language or culture, do share a common meaning system, do organize experience along similar symbolic dimensions".[15] Although this study was only two-thirds complete at the time of the report, Osgood believes that it contradicts "B. L. Whorf's notion of psycholinguistic relativity according to which people think differently and even create different philosophies".[16] From this quotation it is clear that Osgood considers the Whorf hypothesis to be an extreme statement of linguistic relativity. Also, Greenberg reports on studies (which he does not describe in detail) pointing to "the over-all conclusion that agreement in fundamentals of human behavior among speakers of radically diverse languages far outweighs the idiosyncratic differences to be expected from a radical theory of linguistic relativity".[17]

Several experiments (by Lenneberg, Brown and Lenneberg, and Carroll and Casagrande) testing the Whorf hypothesis lend support to it. But several studies (by Osgood and Greenberg) invalidate it. Reexamination, however, showed that those studies which support the hypothesis were designed to test the cautious formulation that language influences behavior and those experiments which conclude with invalidating evidence had assumed the hypothesis to be the extreme formulation that language determines thought. Seen from this perspective the results of these experiments are not mutually contradictory. Although all investigators said they were testing "the" Whorf hypothesis, the original hypotheses being tested were different.

[15] Charles Osgood, "An Exploration into Semantic Space", in Wilbur Schramm, ed., *Human Communication* (New York: Basic Books, 1963), p. 34.
[16] Osgood, p. 34.
[17] Joseph Greenberg, "Language and Linguistics", in Bernard Berelson, ed., *The Behavioral Sciences Today* (New York: Basic Books, 1963), p. 138.

It remains to be investigated just how extreme were the positions which Whorf and his predecessors, Sapir and Humboldt, took. Each advocates sometimes the mild hypothesis, sometimes the extreme. In order that their respective positions may be understood from a historical and philosophical point of view, we must realize that the extreme position is untenable not only on empirical grounds (a conclusion that has been accessible to us only since the experiments reported above), but on philosophical grounds as well. The extreme statement that "language does our thinking for us" (Rapoport) or "people [who speak different languages] think differently" (Osgood) implies that thought is not possible without language. The proponent of the extreme hypothesis that language determines thought must be prepared to accept the logical consequences of his position, i.e. that there is no prelinguistic thought in the individual and that human thought was not originally responsible for the creation of language. An investigation of the philosophies of Humboldt, Sapir and Whorf, respectively, will reveal to what extent each of them was able to accept these logical consequences. All three seemed, at times, to have been aware of the tenuousness of the extreme position, which they all three, however, *felt* to be true. Hence their positions will be seen to vacillate between the assertion that thought without language is not possible and the more cautious assertion that language influences thought. This contradiction can be found in each of their philosophies. On the one hand they were inclined to take the extreme attitude toward linguistic relativity, but on the other hand, they could not ascribe the origin of language to the divine. Humboldt, however, found it necessary to assign the origin of language to a super-human force *(Geist)*. If he had admitted that language might be a product of the human mind or of a group of minds working together, he would have been forced to admit the possibility of thought without language. This admission would in turn have forced him to weaken his original hypothesis. Almost the same choice faced Sapir and Whorf.

There are historical considerations which will help to explain why Humboldt, Sapir and Whorf may have taken the (extreme)

positions that they did take. It will be argued that the extremeness of their position was necessary as an antidote to the rationalist assertion of innate ideas. But the present concern will be for stating and examining separately Humboldt's, Sapir's and Whorf's philosophies relevant to the hypothesis in order to show that the confusion which at present surrounds the hypothesis arises from their own statements.

HUMBOLDT'S HYPOTHESIS

The ambiguity begins with Wilhelm von Humboldt (1767-1835). Humboldt was the first European to combine the knowledge of non-Indo-European languages with a broad philosophical background. He was also the first to emphasize the magnitude of the difference between cultures as revealed in their languages. The main tenet of Humboldt's linguistic philosophy is that the world-view *(Weltanschauung)* of one people differs from that of another people to a hitherto unheard-of degree, and that this is due to the extreme difference in the "internal structure" *(innere Sprachform)* of their respective languages.

"Die innere Sprachform", he explains as follows:

> Denn die Sprache stellt niemals die Gegenstände, sondern immer die durch den Geist in der Spracherzeugung selbst stätig von ihnen gebildeten Begriffe dar; und von dieser Bildung, insofern sie als ganz innerlich gleichsam dem Articulationssinne vorausgehend angesehen werden muss, ist hier die Rede.[18]

So the "internal structure" of language is something like the semantic labeling of reality *(Gegenstände)*, but even more it is the structuring of the world imposed by semantic units *(Begriffe)*. If Humboldt had limited himself to illustrating merely this milder "Weltanschauung hypothesis" with evidence from the many languages he knew, perhaps our present difficulties in testing the hypothesis would not have arisen. But he went further to assert

[18] Wilhelm Von Humboldt, *Gesammelte Werke* (Berlin, 1841-52) VI, p. 98.

a corollary idea that man does not perceive, conceive or think *except* as he uses language:

Der Mensch lebt mit den Gegenständen hauptsächlich, ja ... sogar ausschliesslich so, wie die Sprache sie ihm zuführt.[19]

And language, furthermore, is identical with thought according to Humboldt:

Die intellectuelle Tätigkeit, durchaus geistig, durchaus innerlich, und gewissermassen spurlos vorübergehend, wird durch den Laut in der Rede äusserlich und wahrnehmbar für die Sinne. Sie und die Sprache sind daher Eins und unzertrennlich von einander.[20]

For Humboldt, language *is* thought, and thought, language. Again and again he identifies the two:

Das Sprechen [ist] eine nothwendige Bedingung des Denkens des Einzelnen in abgeschlossener Einsamkeit.[21]

Humboldt's hypothesis, then, is an extreme one, that language determines thought completely.

If language and thought are one, as Humboldt says, then thought is not possible without language. Was Humboldt prepared to accept this logical consequence? Would he have said, no, there can be no thought without language?

If one agrees to the identity of thought and language, then one must also agree that before there was language, there was no thought. How then, according to Humboldt, was language created? Would he have denied that someone, that is, a human or a group of human beings, must have been able to think in order to create the first language? Yes, Humboldt denied that man collectively created language. He believed that language was, one day, suddenly there. Language, he said, was "eine unwillkürliche Emmanation des Geistes, nicht ein Werk der Nationen, sondern eine ihnen durch ihr inneres Geschick zugefallene Gabe".[22]

19 *Werke*, VI, p. 60.
20 *Werke*, VI, p. 51.
21 *Werke*, VI, p. 54.
22 *Werke*, VI, p. 5.

in turn, have forced him to make his original assertions about the power of language over thought much milder.

Occasionally he seems to be aware of the contradictions in his system of ideas, but at these times, his efforts to resolve them seem only to cloud the issue by suggesting that the paradox was really not a contradiction. For example, he says of a similar contradiction in his tenets,

> Es ist kein leeres Wortspiel, wenn man die Sprache als in Selbsttätigkeit nur aus sich entspringend und göttlich frei, die Sprachen aber als gebunden und von den Nationen, welchen sie angehören, abhängig darstellt.[25]

The above suggests that the reader is to accept both statements as simultaneously tenable.

Perhaps to Humboldt's readers in the nineteenth century such internal contradictions seemed "mere" paradox. Steinthal, for instance, in the nineteenth century, pointed out these same contradictions in Humboldt's position, but he calls it "Humboldts Dualismus" by noting that although Humboldt does assert the identity of *Geist* and *Sprache,* he (Humboldt) continues to regard them as harmoniously cooperating separate forces.[26] Whether Humboldt considered *Geist* to be language more often than he considered the two to be separate forces, is impossible to ascertain. In any case, he did not make it clear in his writings how his assertions about the power of language over thought could be reconciled with his ideas about the origin of language.

It is now clear that Humboldt's *Weltanschauung* hypothesis represents the extreme position of linguistic relativity. Humboldt's identification of language and thought led him to assert that "man lives in the world about him principally, indeed exclusively, as language presents it to him",[27] an extreme hypothesis indeed.

[25] *Werke,* VI, p. 5.

[26] Heymann Steinthal, *Ursprung der Sprache im Zusammenhange mit den letzten Fragen alles Wissens* (Berlin, 1858, 3rd ed., 1877), p. 84.

[27] See footnote 19 for reference to the original (German) quotation.

SAPIR'S POSITION

Edward Sapir (1884-1936) at one point stated his position carefully, using modifiers which exclude the notion that language is the only influence on thought. Taking this often quoted passage to represent Sapir's view one would say that it is the mild hypothesis.

> 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 for 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 ... The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached.[28] [Emphasis not in the original.]

Note that the italicized phrases qualify considerably the bare thesis that language influences thought. Sapir's careful choice of words, e.g. "language habits", where he might have used "language structure" or some even more specific term, leave the reader of this passage in no doubt about the "Sapir hypothesis". The global system of cultural beliefs, the *Weltanschauung,* of a culture influences to a large extent the personal *Weltanschauung* of an individual.

One might conclude at this point that the Sapir hypothesis is merely a cautious restatement of Humboldt's hypothesis in more modern anthropological terms with the emphasis on habits of language use rather than on the structure of the language in question. Thus we might look to Whorf as the one who went back out on Humboldt's limb and implied that language and thought are identical and that thought without language is not possible. But we do not have to search so far. As will be seen, Sapir does indeed consider thought without language impossible:

[28] Edward Sapir, "The Status of Linguistics as a Science", p. 209.

Even those who read and think without the slightest use of sound imagery are, at last analysis, dependent on it. They are merely handling the circulating medium, the money, of visual symbols as a convenient substitute for the economic goods and services of the fundamental auditory symbols.[29]

But language, according to Sapir, does not shape thought quite as Humboldt explained. The process is a little more subtle, because

... language and thought are not strictly coterminous. At best language can be but the outward facet of thought on the highest, most generalized, level of symbolic expression. To put our viewpoint somewhat differently, language is primarily a pre-rational function. It humbly works up to the thought that is latent in, that may eventually be read into, its classifications and its forms; it is not, as is generally but naively assumed, the final label put upon the finished thought.[30]

The above sounds like an attempt on Sapir's part to solve the problem that Humboldt was unable to solve satisfactorily, the problem of the source of language in its present structured and "structuring" form. We would ask, if language is not the product of human thought, then of what? Sapir says it is a "pre-rational function". Yet a little further down the same page in *Language* he states unequivocally, "The writer, for one, is strongly of the opinion that the feeling entertained by so many that they can think, or even reason without language is an illusion".[31] At another point, Sapir says that "thought ... is hardly possible in any sustained sense without the symbolic organization brought by language".[32] So we see that, for Sapir just as for Humboldt, language is not the creation of human thought. Language and thought are, according to Sapir, almost identical but not quite.

The question remains, how then was language created if it is a "pre-rational function"? Sapir was faced with the same problem

[29] Edward Sapir, *Language* (New York: Harcourt, Brace and Co., 1921), pp. 19, 20.

[30] *Language,* p. 14.

[31] *Language,* pp. 14, 15.

[32] Edward Sapir, "Language", *Encyclopedia of the Social Sciences* (New York: MacMillan, 1933), 9: pp. 155-169. Also in D. G. Mandelbaum, ed., *Selected Writings in Language, Culture and Personality* (Berkeley: University of California Press, 1949), p. 15.

as Humboldt. That is, on the one hand, he attributed great power to language and on the other hand, he could not ascribe the creation of language to God. Humboldt solved the dilemma by positing the collective "thought" of a nation. Then he equated *Geist* with language. Sapir solves the same dilemma in a strikingly similar way. He does not speak of the *Geist* of a nation, but he speaks of language as a "fully formed functional system within man's 'psychic' or 'spiritual' constitution".[33] The "'psychic' or 'spiritual' constitution" reminds strongly of Humboldt's *Geist*.[34]

> If language can be said to be "localized" in the brain, it is only in the general and rather useless sense in which all aspects of consciousness, all human interest and activity, may be said to be "in the brain". Hence we have no recourse but to accept language as a fully formed functional system within man's "psychic" or "spiritual" constitution. We cannot define it as an entity in psychophysical terms alone, however much the psychophysical basis is essential to its functioning in the individual.[35]

In this passage Sapir is referring to the fact that language is a consensual system shared by the members of a culture (Saussure's *langue*) as well as a system internalized by an individual and adhered to when producing speech *(parole)*. Sapir is, however, making the assertion that the internalization of *langue* is not accomplished *in the brain*. For to admit the identity of mind and body would have meant, for Sapir, giving up some of his belief in the power of language to shape thought. He would not then have been able to account for the creation of language except by human thought. In the above quotation he used the fact that the *langue* of a community is not represented merely in the brain of one individual as his argument for the existence of an extra-physical force capable of shaping thought.

[33] *Language,* p. 9.

[34] The similarity of Humboldt's and Sapir's solutions to the problem is not the only similarity in their works. Sapir occasionally seems to be almost parroting Humboldt. "Language, as a structure, is in its inner face the mold of thought". (*Language,* p. 2) The "inner face" of language is strikingly like "die innere Sprachform". Further reference will be made to the acceptance of an earlier scholar's authority in the history of this hypothesis.

[35] *Language,* p. 9.

Thus, I could agree with Sapir that *langue,* the shared language of an entire speech community, is not localized in a single brain. Those rules which the individual speaker adheres to when producing speech, however, are now regarded as the rules of his dialect (or idiolect) and must be represented somehow in the brain. That most of the rules of any given individual's idiolect are also rules of the language of the community may account for Sapir's confusion in the above quotation.

Sapir has momentarily confounded the language of a community and the language competence of a single individual member of the community and has thus argued for the existence of language as a "spiritual", non-physical entity. He argues that "we cannot define it ... in psychophysical terms alone". I argue that a theory of language can explain language as an abstraction of which (in Chomsky's words) "an ideal speaker-hearer in a completely homogeneous speech-community" has knowledge; and further, that this knowledge (the speaker's competence as opposed to his performance or actual use of language in real situations), like all knowledge, has a neurological representation of a yet unknown sort. In Sapir's terms, I "define" language *competence* "in psychophysical terms". Thus, language knowledge (competence) is knowledge of rules, most of which are also the rules followed by all other members of the community, and language use (performance) is rule-following behavior.

It is only fair to point out that the confusions evident in the preceding quotation from Sapir have only recently been clarified. For instance, in 1949 Ryle showed that to hold the notion of "mind" as an entity on a par with "body" is a category error (an error of logical typing) as it would be to refer to "team spirit" as an entity on a par with the members of a team.[36] Furthermore, the *langue-parole* distinction has only quite recently been made clearer by Chomsky who distinguishes a theory of language competence (a grammar) from a performance model which will specify how the

[36] Gilbert Ryle, *Concept of Mind* (London, New York: Hutchinson's University Library, 1949).

grammar is put to use by the speaker.[37] We now assume that some internalized (learned and/or innate) rules of the *langue* (which rules may or may not be those the grammarian writes) are, on the one hand, shared, to a greater or lesser degree depending on the degree of overlap in their idiolects by those speakers who are able, more or less effectively, to communicate in that given language, and on the other hand are used in producing grammatical utterances *(parole)*.

One further difficulty in distilling Sapir's, Humboldt's, and Whorf's positions has resulted from their confounding the characteristics of group behavior (cultural manifestations) and those of an individual's behavior. Indeed Sapir's argument above may be seen as an example of his failure to distinguish between the group's shared system *(langue)* and the individual's system (his dialect or idiolect). This aspect of the hypothesis has only recently been made clear by Fishman who suggests that the (Whorfian) hypothesis asserts four separate correlations: that of (1) linguistic codifiability (as of colors in Brown's and Lenneberg's experiments) with large group behavior, (2) linguistic codifiability with individual behavior, (3) linguistic structure with group behavior, and (4) linguistic structure with individual behavior.[38] These distinctions help to clarify the difficulty in assessing Sapir's statements and understanding why today equally reputable non-biased empiricists draw what would at first seem to be directly conflicting conclusions.

We are indebted to Sapir for the formulation of the cautious position, which will be seen to be supported by the empirical evidence. But the confusion found in current literature about which position the Whorf hypothesis represents is also to be found in Sapir's writings. His philosophical position vacillated between the cautious assertion that language influences one's view of the world, and the extreme position which equates language and

[37] Noam Chomsky, *Syntactic Structures* (The Hague: Mouton and Company, 1957), 9.3, p. 102 and *Aspects of the Theory of Syntax* (Cambridge, Mass.: The M.I.T. Press, 1965), p. 9.

[38] Joshua A. Fishman, "A Systemization of the Whorfian Hypothesis", *Behavioral Science* 5 (1960), pp. 323-339.

thought. His positing of language as a "spiritual" system may be regarded as an attempt to hide from himself the realization that if language is not extra-physical and "pre-rational" then language cannot be said to determine thought in the individual. He, like Humboldt, would have been forced to weaken his *Weltanschauung* hypothesis. The fact that he lived well into the twentieth century in which paradox is no longer revered made it more difficult for him to cover over the internal contradictions of his philosophical system, but the persistence of mind-body dualism has even today allowed Sapir's inconsistencies to go hitherto unnoticed.

WHORF'S POSITIONS

It has been shown that both Humboldt and Sapir asserted the extreme relativity hypothesis at some point in their writings. The extreme hypothesis identifies language with thought, and this assumption was demonstrated to be incompatible with other of their beliefs. Humboldt's identification of thought and language is irreconcilable with his ideas about the origin of language. The same is true of Sapir. In other words, internal contradictions within their respective philosophical systems were pointed out.

Internal contradictions cannot be pointed out in Whorf's writings because he makes no serious statements about the origin of language. There seems to be, in back of Whorf's assertion of the extreme influence of language on thought, the assumption that language is a manifestation of the mind or soul of man apart from his body and hence not the creation of his (collective) neurological organization. But, while the assumption of mind-body dualism could be pointed to as explicit in Sapir's writings, it cannot be found in Whorf's, even though dualism probably constituted one of his implicit beliefs. Therefore Whorf's assertions and his evidence in support of his assertions will be examined separately and assessed not merely on the basis of non-contradiction, but on the basis of whether modern philosophy and modern science have provided nullifying arguments or evidence.

Benjamin Lee Whorf called his hypothesis "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".[39] The language one speaks, according to Whorf, determines not only one's world-view, but also they way one thinks. He says 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".[40]

Whorf often phrased his hypothesis somewhat less strongly, using qualifying adverbs like "largely" to soften the assertion. For instance, he says, with a caution reminiscent of Sapir's less extreme statements of linguistic relativity, that "we cut up and organize the spread and flow of events as we do largely because, through our mother tongue, we are parties to an agreement to do so, not because nature itself is segmented in exactly that way for all to see".[41] One might then assume from this quotation that the Whorf hypothesis is a mild assertion. Whorf is, however, quite explicit about the identity of language and thought.

> 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 a 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.[42]

[39] Benjamin Lee Whorf, *Language, Thought and Reality: Selected Writings of Benjamin Lee Whorf,* John B. Carroll, ed. (Cambridge and New York: MIT Press and John Wiley 1956), p. 214.
[40] *Whorf,* p. 212.
[41] *Whorf,* p. 240.
[42] *Whorf,* p. 252.

It is clear, then, that Whorf asserts the extreme hypothesis of linguistic relativity which identifies thought with language.

Indeed, it is only by considering language and thought to be identical that Whorf would have been capable of using examples of the way a given language "segments reality" as evidence to support his hypothesis. In his articles about the hypothesis, he repeatedly cites linguistic evidence particularly from the Hopi language as evidence for the hypothesis that thought is influenced by language. If thought is not language, then such examples cannot support the hypothesis.

Others have made the same criticism of Whorf but have not explained that it was precisely because Whorf considers language and thought to be identical that he, in all probability, considered his examples as valid evidence of thought being influenced by language. Max Black says that Whorf "identified the 'conceptual system' and the 'world-view' with the language in which they were expressed, while also confusedly thinking of them as distinct".[43] (The similarity to Humboldt's identifying *Geist* with language while also sometimes considering them to be separate is striking.)

That Whorf argues for the influence of language on thought with examples from language is one of the most frequent recent criticisms of Whorf's work. Burling points out that Whorf's ideas "could be checked only from the side of language".[44] Carroll reminds the reader of Whorf's works that "when we cite differences between languages as evidence for differences in the mental processes of their speakers, we must realize that this is really no evidence at all; it merely points to the possibility of such differences in cognition that might be confirmed by appropriate investigation".[45] Hymes makes the same point, but suggests that this criticism may not cover all of Whorf's ideas. "In some cases

[43] Max Black, "Linguistic Relativity: The Views of Benjamin Lee Whorf", *Philosophical Review* 68 (1959), pp. 228-238. Also in *Models and Metaphors*, (Ithaca, N. Y.: Cornell University Press, 1962), p. 255.

[44] Robbins Burling, "Cognition and Componential Analysis: God's Truth or Hocus Pocus?" *American Anthropologist* 66 (1964), p. 27.

[45] John B. Carroll, *Language and Thought* (Englewood Cliffs, N. J.: Prentice-Hall, 1964), p. 107.

Whorf claimed the presence of cognitive traits shaped by language for which the evidence consisted only of the linguistic traits from which they were inferred".[46]

Whorf's well known examples collected as a fire insurance investigator might, however, be cited in support of the hypothesis that non-linguistic behavior may be influenced by language. For example, people smoking near "empty gasoline drums'' is, Whorf argues, the result of "empty" in English suggesting "lack of hazard".[47] He cited this, the "scrap lead" (each piece covered with paraffin paper) that caught fire and several similar instances as examples of the name of the situation affecting behavior.[48] The "name of the situation" ("empty gasoline drums" and "scrap lead") may have influenced the behavior of those near the situation, but, as Longacre[49] has argued, the naming of a situation is a function of language *use,* and not of the *structure* of the language in question. The fact that the users of the English language did not properly label the drums as "gasoline fumes — danger", or something similar, and the pile of lead as "flammable refuse" is not because the English language is not equal to the task. Hence, the behavior relative to the labeled situations cannot be considered as evidence of thought (as revealed in behavior) being influenced by the language in which the situations were labeled.

To be sure, the people in the above situations may have mistaken the name of the situation for its reality. The drums were not really empty, but were full of gasoline vapor. The scrap pile was not just lead, but lead, paraffin and paper. Perhaps Whorf's examples are of people confounding the (poorly) described situation with the real situation. If so, then, it might be fairer to say that "the" Whorf hypothesis is something like "the way people name or describe situations influences the way they behave relative

[46] Dell Hymes, "Directions in (Ethno-) Linguistic Theory", *American Anthropologist* 66 (1964), p. 33.
[47] *Whorf,* p. 135.
[48] *Whorf,* p. 135.
[49] Robert A. Longacre, Review of *Language and Reality,* by Wilbur M. Urban and *Four Articles on Metalinguistics,* by Benjamin Lee Whorf, *Language* 32 (1956), pp. 298-308.

to those situations". This interpretation of Whorf's evidence has received much attention, particularly from adherents of the General Semantics movement who call this the Whorf-Korzybski[50] hypothesis. However one regards the modified "Whorf-Korzybski hypothesis", it is an hypothesis about language use *(parole)* and not about language *(langue)*.

It has been shown that Whorf did assert the extreme hypothesis of linguistic relativity. His evidence adduced in support of the hypothesis was however drawn only from the structure of language (Whorf's extensive examples from Hopi and other Amerindian languages) or from instances where people were misled by certain names of situations. These examples do not demonstrate the influence of language on thought.

While the modified Whorf-Korzybski hypothesis seems to be supported by Whorf's evidence from fire insurance investigation, it is not the hypothesis he claimed to be defending, nor is it the hypothesis he explicitly asserted. Hence I suggest that some of Whorf's assertions are understandable only if regarded as philosophical gifts from Hamann and Herder to Humboldt, and from Humboldt (via Baudouin de Courtenay and Sapir) to Whorf. I argue that these assertions are without empirical support and have been accepted by Humboldt, Sapir and Whorf as true on the authority of their predecessors or on the strength of their own feelings that the assertions were true rather than on the strength of compelling evidence. The original assertions by Hamann and Herder will be shown to be attempts to counteract the positing by Kant of innate faculties in the human mind, for which there seemed to be no evidence.

A MODERN POSITION: THE EMPIRICAL EVIDENCE

Before reviewing early positions on linguistic relativity, it is relevant to ask if the hypothesis is tenable. The eventual fate of the linguistic

50 Alfred Korzybski, *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics* (Lakeville, Conn: The International Non-Aristotelian Library Publishing Co., 4th ed., 1958).

relativity hypothesis, i.e. the extreme hypothesis, rests on philosophers' judgments, for, as was shown at the beginning of this work, the extreme statement is not an empirical proposition because thought is not a demonstrable phenomenon. Hence it is impossible to ascertain whether all thought is dependent on language or not. Also, enough empirical studies testing the mild hypothesis have been made that some conclusions can now be drawn concerning its validity as an empirical hypothesis. After reviewing available studies, philosophical as well as empirical, I will ask why the extreme hypothesis was maintained for such a long time and why it is at present in disrepute. These questions will be answered in the context of historical investigation.

Any formulation of the extreme hypothesis asserting the complete relativity of thought to the language of the speaker immediately raises the question of the egocentric quandary. Is there any way out of our (false) ways of thinking? If so, is it by changing the structure of our language? Then we would need a criterion of truth according to which our language might be changed. Is this knowledge of the "true" way to categorize gained by learning many languages? Whorf suggests that it is:

> The person most nearly free ... would be a linguist familiar with very many widely different linguistic systems.[51]

But Whorf does not specify how even such a linguist is to decide which categories most adequately describe reality.

This unsolved problem alone renders the linguistic relativity hypothesis questionable unless one is prepared to assert that we humans can not know whether our linguistic (and, according to the extreme hypothesis, therefore cognitive) categories are valid ways of describing reality. In short, if one believes in linguistic relativity, one finds oneself in the egocentric quandary, unable to make assertions about reality because of doubting one's own ability to correctly decribe reality.

Bertalanffy provides one way out of the dilemma with an

[51] *Whorf*, p. 214.

argument from biology.[52] He cites Jacob von Uexküll's *Umwelt-lehre* according to which each creature perceives and reacts to reality according to its own psychophysical organization. Bertalanffy points out that, since the human species is still extant, its cognitive categories must be adequate to the contingencies of reality:

> The fact that animals and human beings are still in existence proves that their forms of experience correspond to some degree with reality.[53]

If our ways of thinking were seriously defective, we as a species would not have survived this long.

Bertalanffy's position would seem to argue for the validity of the categories in any language that has survived today, or it would suggest that our cognitive categories are not relative to our respective linguistic categories.

An argument against the suggestion that the categories of only the extant languages are adequate to reality is offered by Feuer[54] and others.[55] Feuer says unequivocally that "linguistic relativity is the doctrine of untranslatability in modern guise".[56] For, if an idea originally the product of one culture can be communicated to members of another culture in their own language, then the gap between their respective categories has somehow been bridged. As Max Black expresses it,

> The admitted possibility of translation from any language into any other renders the supposed relativity of such systems highly dubious.[57]

[52] Ludwig von Bertalanffy, "An Essay on the Relativity of Categories", *Philosophy of Science* 22 (1955), pp. 243-263.
[53] Bertalanffy, p. 257.
[54] Lewis S. Feuer, "Sociological Aspects of the Relation between Language and Philosophy", *Philosophy of Science* 20 (1953), pp. 85-100.
[55] Black, *Models and Metaphors,* p. 249; John T. Waterman, "Benjamin Lee Whorf and Linguistic Field Theory", *Southwest Journal of Anthropology* 13 (1957), pp. 201-211; Charles F. Hockett, "Chinese versus English: An Exploration of the Whorfian Thesis", in Harry Hoijer, ed., *Language in Culture* (= *American Anthropological Association Memoir* 79) (1954). Also (Chicago, University of Chicago Press, 1954), pp. 106-123.
[56] Feuer, p. 95.
[57] Black, *Models and Metaphors,* p. 249.

The fact that Whorf was able to explain the Hopi *Weltanschauung* in English is proof that the categories of English are adequate to describing reality, even the (putatively different) reality that the Hopi sees. If, in fact, anything in one language can be translated into any other language, then thought cannot be relative to the language of the thinker.

The question is then, can indeed anything in one language be translated into any other. Hockett suggests that

> languages differ not so much as to what *can* be said in them, but rather as to what it is *relatively easy* to say in them.[58]

He says further that we know "from many well attested instances" that the linguistic patterns of a community adapt quickly to the exigencies of a new reality such as radically different weather conditions or new fields of learning — as would be the case, for example, with Arab families settling in central Minnesota or Australian aborigines learning arithmetic and algebra in their native language (Hockett's examples).[59] I would agree that most things *can* be said in any language, but that some things are more difficult to express in some languages than in others. I would also agree with Hockett that "some types of literature ... are largely impervious to translation",[60] but I would add, also in essential agreement with Hockett, that the types of literature that cannot be adequately translated are not descriptions of phenomenal, tangible reality, but rather statements reflecting cultural differences. In agreement with Hockett is Roger Brown,[61] who concludes after extensive empirical research that the "cognitive differences suggested by the data of anthropological linguistics may be differences of category availability",[62] in other words, differences in the ease with which a native speaker can label a certain category.

[58] Hockett, in *Language in Culture*, p. 123.
[59] Hockett, in *Language in Culture,* p. 109.
[60] Hockett, in *Language in Culture,* p. 123.
[61] Roger W. Brown, "Language and Categories". Appendix to *A Study in Thinking,* Jerome S. Bruner, Jacqueline J. Goodnow and George A. Austin (New York: John Wiley and Sons, 1956), p. 312.
[62] Brown in *A Study of Thinking,* p. 312.

In summary, the fact that the human species is extant suggests that our cognitive categories have been adequate to provide for our survival at least so far. This argument provides an answer to those who would see man as in an egocentric quandary, unable to make credible statements about reality because of doubting the validity of his own view of reality. Further, the possibility of translation of any description of reality from one language into another — even though some aspects of reality may be more difficult to describe in one language than in another — provides another argument against the extreme statement of linguistic relativity.

But what of the mild hypothesis? Do the data from anthropological linguistics support the hypothesis that a language sometimes influences the thought of its speakers? Is there support from empirical studies for the notion that the *grammatical structure* of a language affects cognition, or is all evidence of semantic categories (categories marked by separate words) affecting cognition? The categories used in most of the experiments were semantic categories (as opposed to grammatical categories) — either categories of color or of kin-type (e.g., 'sister-in-law', 'great grandfather') or of plants and diseases (folk taxonomies). Has the extensive anthropological research provided support for the mild hypothesis?

Brown and Lenneberg report on how the presence or absence in a language of discriminatory terms for certain colors influences the actual discrimination of those colors.[63] For example, where terms for different shades of the same hue are present in the subject's language, he is more likely to re-recognize the shade when it is presented to him a second time. Their evidence reported up to 1957 seems to lend support to an hypothesis of semantic categories influencing behavior. In a 1961 article, however, Lenne-

[63] Eric H. Lenneberg, "Cognition in Ethnolinguistics", *Language* 29 (1953), pp. 463-471, and "A Probabilistic Approach to Language Learning", *Behavioral Science* 2 (1957), pp. 1-12; Roger W. Brown and Eric H. Lenneberg, A Study in Language and Cognition", *Journal of Abnormal and Social Psychology* 49 (1954), pp. 454-462.

berg cites evidence of the very opposite phenomenon where singularly low availability of specific color terms in the subject's language seemed to aid re-recognition of the original stimulus.[64]

Carroll and Casagrande offer similarly supportive, but in the last analysis inconclusive, data.[65] They found that predominantly Navaho-speaking Navaho children made choices in a sorting task which reflected more nearly the Navaho verb stem dichotomy than did Navaho children who were not predominantly Navaho speakers. On the other hand, they subsequently found that middle-class Boston children, who matched the original subjects in age, classified objects more in accord with the Navaho verb stem dichotomy than the predominantly Navaho-speaking Navaho children. Subsequently, however, Casagrande has used a group of Harlem children and has gotten the expected results.[66]

One further experiment by Brown,[67] also with children, was designed to show how cognition may be affected by *grammatical* categories. Brown's subjects took the part-of-speech membership of a new word as a clue to the nature of the new word's designation. According to Brown this evidence shows how a "grammatical feature of a language affects the cognition of those who speak the language".[68] The evidence from this experiment seems to show, rather, how the name of a situation can affect people's behavior relative to the situation. The evidence here is on a par with Whorf's evidence gathered from fire insurance investigation. The children in Brown's experiment apparently assumed that the experimenter's name for the unknown object or action correctly described the

[64] E. H. Lenneberg, "Color Naming, Color Recognition, Color Discrimination: A Reappraisal", *Perceptual and Motor Skills* 12 (1961), pp. 375-382.

[65] Carroll and Casagrande in Eleanor E. MacCoby et al, ed., *Readings in Social Psychology,* pp. 18-31.

[66] Fishman, *Behavioral Science* 5 (1960), 335. Reported to Fishman by Casagrande in a personal communication in 1960.

[67] Roger W. Brown, "Linguistic Determinism and the Part of Speech", *Journal of Abnormal and Social Psychology* 55 (1957), pp. 1-5. Also in Sol Saporta, ed., *Psycholinguistics: A Book of Readings* (New York: Holt, Rinehart and Winston, 1961), pp. 503-509.

[68] Brown in Saporta, *Psycholinguistics,* p. 509.

real object or action. Ignorance of the reality of the situation caused the children, like the people smoking near "empty" gasoline drums, to act in accordance with the verbal description.

In a review of Whorf's works, Marshall has discussed evidence of semantic categories correlating with non-linguistic behavior revealed by the componential analysis of kinship systems and folk botanical and disease taxonomies.[69] He suggests that such evidence (reported by Wallace[70]) presents "limited instances of Whorfian relativity with clear behavioral consequences".[71] My opinion as to the validity of evidence from componential analysis is less favorable than Marshall's, but, once again, some parts of the evidence from anthropology may be regarded as lending support to the mild Whorf hypothesis.[72]

Having reviewed evidence in support of the mild hypothesis, I can now make statements about its probable truth in the light of empirical tests. The only two articles offering evidence of grammatical structure affecting behavior (and thus, by inference, cognition) are by Carroll and Casagrande (footnote 65) and by Brown (footnote 67). The evidence is suggestive but not at all conclusive, for Carroll and Casagrande's experiments yielded conflicting data. Brown's experiment with children, it has been suggested, may not have yielded data in support of grammatical categories affecting cognition, but rather data which, like much of Whorf's evidence, would support a modified "Whorf-Korzybski hypothesis" that names for situations sometimes affect behavior.

[69] John C. Marshall, Review of B. L. Whorf, *Language, Thought and Reality*, *Linguistics* 15 (1965), pp. 78-81.

[70] A. F. C. Wallace, "Culture and Cognition", *Science* 135 (1962), pp. 351-357.

[71] Marshall in *Linguistics* 15 (1965), p. 80.

[72] The question of the validity of componential analysis as a predictor of group behavior and as a way of deciding on the validity of the Whorf hypothesis is a debated issue. The pros and cons of the problem are too numerous to be discussed here. The reader is referred to an entire issue of the American Anthropologist devoted to *Transcultural Studies in Cognition,* A. K. Romney and R. G. D'Andrade eds., *American Anthropologist* 66 (1964). For debate on the validity of componential analysis as a prediction method see especially pages 20-28 and 116-119.

On the other hand, the evidence from anthropological studies plus the evidence from experiments with color recognition suggest that the semantic categories of a language may sometimes affect cognition. These data are definitely not unequivocally in support of the mild Whorf hypothesis, but much of the evidence seems to support it.

To conclude that semantic categories may sometimes affect cognition is a far cry from Whorf's suggestions that the grammar and the lexicon determine cognition. But, since "language" includes lexicon and the semantic categories implied by the use of one word instead of another, it is possible to state a modern position, which takes cognizance of the empirical data, as follows: Some aspects of language may affect cognition, but probably only the semantic categories — and then only when ignorance of reality leaves a person dependent on other people's verbal labels for a description of the bit of reality in question.

II

THE HISTORICAL PERSPECTIVE

THE HYPOTHESIS FROM PLATO TO LOCKE

The extreme hypothesis of linguistic relativity has been argued against as invalid on several counts: (a) because it is based on the assumption that thought and language are identical, which assumption precludes language being the product of collective human thought; (b) because it cannot be accepted unless one is willing to say we are in an egocentric quandary, unable to make assertions about reality because of doubting the validity of our own cognition; (c) because, if the cognitive categories of human beings were not adequate to reality (but were relative to the language of the group), we as a species would be extinct; and (d) because anything (except perhaps poetry) can be translated from one language into any other (with more or less difficulty, depending on the languages and subjects involved).

Since the extreme hypothesis can be so readily argued against on philosophical, not empirical, grounds — why was the extreme hypothesis held so long? Humboldt, Sapir and Whorf all advocated the extreme position, yet only recently has the extreme position been seriously challenged. It is not surprising that empirical tests were not instituted earlier, for suitable methods in the behavioral sciences have only recently been developed. But the question of how the extreme position could have gone unchallenged until after Whorf's time is more difficult to answer.

Reasons for the unchallenged immunity of the extreme view are to be sought, not just in the period since Humboldt, but also prior

to Humboldt. A brief outline of how, when, and by whom the hypothesis was put forward prior to Humboldt may enable us to suggest why the extreme relativity hypothesis was advocated in the first place. And this, in turn, may suggest why it continued to be propounded for so long a time.

Various aspects of linguistic relativity were put forth by several thinkers prior to the eighteenth century, but the clear statement that a language influences the thought of those who speak it is not found until Hamann (1730-1788) and Herder (1744-1803).

The first suggestion (in Western culture) that there is some influence of language on thought is to be found in Plato's *Cratylus* where Socrates is made to say that "agreement and custom do contribute to the expression of that which we are thinking when we speak".[1] This can be regarded as an hypothesis that the way we think is influenced by the language we speak. But it is clear that the extreme position is not being asserted here, for language and thought are not equated in Plato's works, as can be seen from the following quotation from a later dialogue, *Theaetetus*. Speech is there defined as "making one's thoughts perceptible by means of nouns and verbs (subjects and predicates), with the aid of the voice".[2] From this quotation it is clear that thought processes are, according to Plato, prior to and at least to some extent, independent of language.

A similar idea is expressed in *On Interpretation* (Pèri hermēneías), an Aristotelian work, if not by Aristotle himself:

> Vocal expressions are the symbols of mental impressions, and letters are the symbols of vocal sounds. Speech, like writing, differs from culture to culture; but all mental impressions, which are for the most part expressed by their corresponding symbols, are the same for all men, as are the objects they represent.[3]

In other words, our thoughts (which are conceptual universals) must be coded into the language we speak in order that we can

1 Plato, *Cratylus*, 435 b. Unless otherwise indicated, translations are my own.
2 Plato, *Theaetetus*, 206 d.
3 Aristotle (?), *Perì Hermēneías*. Second, third and fourth sentences of the work.

be understood. Thought, then, is separate from and prior to language, as in Plato. And this quotation implies that there would be some distortion of thoughts as they are coded into a given language. That is, there would necessarily be distortion if on the one hand all men think in the same cognitive units, while on the other hand the units of their language are not the same as other men's. If indeed thought ("mental impressions") and language ("verbal expressions", "speech") are related in the manner Aristotle describes, then perfect translation from one language to another is precluded. For, if thought units are the same, but language units differ from culture to culture, it is hard to imagine how the thoughts of a member of one culture could be communicated to a member of another culture. But, since linguistic relativity is only implicit in Aristotle's work, he cannot be considered to be an actual proponent of the hypothesis. It is well to note, however, that Aristotle's ideas on language were very like those of modern proponents of the extreme hypothesis.

The next philosopher to deal with the relation of thought to language in terms approaching the hypothesis here in question was Francis Bacon (1561-1626). As noted by Weimann,[4] Bacon foreshadows Humboldt's idea that the language of a people and their *Weltbild* are correlated. Bacon may also be considered a forerunner of Herder in expressing the idea that language is an expression of that which is characteristic of a people. There is a passage in *De dignitate et augmentis scientiarum* where Bacon comments on certain similarities between the cultures of the Greeks, Romans and Jews and their respective languages.[5] He notes, for instance, that the Greeks leaned more toward art and science than did the Romans, who, he said, were more practical-minded. This was, in Bacon's opinion, because the Greek language compounds words more freely than Latin does. In these comments, Bacon may be seen as antedating Cassirer, Weisgerber and Boas by attempting to isolate correlates between characteristics of language and other

[4] Karl-Heinz Weimann, "Vorstufen der Sprachphilosophie Humboldts bei Bacon und Locke", *Zeitschrift für deutsche Philologie* 84 (1965), pp. 498-508.
[5] Francis Bacon, *De dignitate et augmentis scientiarum,* Book VI, Ch. 1.

characteristics of culture. In this respect then, Bacon can be considered as advocating a mild hypothesis of the influence of language on the collective non-linguistic behavior of a people. No evidence is cited by Bacon, however, for the influence of language on the thought of an individual. Thus it can be said that he did not advocate even the mild hypothesis in its entirety.

Prior to that, however, certain aspects of the hypothesis were put forth by others. The first, in Western culture at least, to assert that language phenomena actually lead us astray was John Locke (1632-1704): "Words ... by constant and familiar use ... charm men into notions far remote from the truth of things".[6] But Locke did not suggest that it was language (as distinguished from language use or *parole*) that leads us astray. He was quite explicit in saying that it is use (or as we would say today, common usage) that can deceive us.

> It is not easy for the mind to put off those confused notions ... it has imbibed from custom and common conversation.[7]
>
> Men having by long and familiar use annexed to them [to words] certain ideas, they are apt to imagine so near and necessary a connexion between the names and the signification they use them in, that they forwardly suppose one cannot but understand what their meaning is.[8]

The latter quotation seems to be a formulation of the hypothesis that Whorf's examples from fire insurance investigation would support. Thus Locke can be considered as the earliest proponent of the Whorf-Korzybski hypothesis which holds that the way people name situations influences their behavior relative to the situations. Indeed, the idea that is considered to be Korzybski's main tenet, currently popularized by the General Semantics Movement, is clearly stated by Locke:

> Another great abuse of words is, the *taking of them for things*. This, though it in some degree concerns all names in general, yet more particularly affects those of substances ... We should have a great many

[6] John Locke, *Essay Concerning Human Understanding*, Book III, Ch. 10, Sec 16.
[7] Locke, II, 13, 28.
[8] Locke, *Essay*, III, 10, 22.

fewer disputes in the world, if words were taken for what they are, the signs of our ideas only; and not for things themselves.[9]

Much of the thinking that later went into Humboldt's *Sprachphilosophie* is, to be sure, foreshadowed in Locke's *Essay,* as shown by Weimann,[10] but Locke cannot be considered as an actual early proponent of Humboldt's hypothesis. He did not confuse *langue* and *parole,* but rather insisted that the verbal habits or usages of a community can lead an individual member to mistake the verbal description for the reality or to actually mistake the name of something for the thing itself.

It has been shown that Plato first advocated the notion that thought can be influenced by language. Aristotle took a position similar to Plato's on the relation of language to thought, but the idea that language influences thought can be found in Aristotle's writings only by implication. Francis Bacon first suggested a correlation between the characteristics of language and other characteristics of culture, a notion later expressed by Humboldt (and investigated by Neo-Humboldtians Weisgerber and Cassirer)[11] and representing only one aspect of the hypothesis here being considered.[12] Locke has been shown to be a precursor of the Whorf-Korzybski hypothesis discussed in Part I of this work.

LOCKE VERSUS LEIBNITZ

As yet no advocates of the extreme hypothesis prior to Humboldt have been discussed. Before considering Hamann and Herder as proponents of the extreme hypothesis, I will note other views of Locke's that are relevant to an historical investigation of the hypothesis and its acceptance. That is, Locke's *Essay* represents one of the first polemics against the then empirically unsupported

[9] Locke, *Essay,* III, 10, 14-15.
[10] Karl-Heinz Weimann, *ZfdP* 84 (1965), 498-508.
[11] See Robert Lee Miller, University of Michigan Diss. 1963.
[12] Reference is here made to Fishman's analysis of the hypothesis into four assertions. See footnote 38.

assumption of "innate ideas", in modern parlance, innate capabilites for learning from experience.

The *Essay Concerning Human Understanding* was intended to discover the origin of our ideas and to delimit the mind's capacity for knowledge so that philosophers might abandon speculation into things "beyond the reach of our capacities".[13] Possible targets of Locke's attack were, among others, Descartes, who believed certain capabilities, ("ideas" in eighteenth century terminology), to be innate and in no way derived from experience, and the last Scholastics who insisted that all knowledge is obtained by deduction from previously known self-evident truths.[14] That Locke, whose ideas on language and thought are like Whorf's, is attacking Descartes' notion of innate ideas is particularly to be noted here, since the early proponents of linguistic relativity (Hamann and Herder) were motivated primarily by the desire to combat Kant's posited "innate ideas" — the categories. That Locke is attacking Descartes is also to be noted because Vico (1668-1744), who first developed the principle of *cultural* relativity (i.e., the idea that our values are relative to the culture we belong to), developed his ideas at least partially in reaction to the unhistorical dogmatism of the Cartesians, as did Herder also.[15]

Locke's *Essay* was directed against the idea that our knowledge comes by deduction from a priori truths. This fact is significant for the present study because the polemic between Locke and Leibnitz on the origin of ideas can be regarded as an important struggle between speculative deductive reasoning and the modern Empiricist doctrine advocating reasoning from facts to conceptions. It could be said that the winning out of the empirical *method* of testing general statements against the fact has finally allowed a decision to be made as to the validity of the hypothesis that language influences thought. It is possible that the triumph of

[13] Locke, *Essay*, I, 1, 3.

[14] Isaiah Berlin, *The Age of Enlightenment: The Eighteenth Century Philosophers* (New York: New American Library, 1956), p. 39.

[15] Robert T. Clark, Jr., "Herder, Cesarotti, and Vico", *Studies in Philology* 44 (1947), pp. 645-671, esp. p. 648.

empirical method (to be sharply distinguished from Empiricist view of mind as a *tabula rasa*) aided in the present reinstatement of the rationalistic position on innate ideas.[16]

The significance of the Locke-Leibnitz controversy for the present study has already been mentioned, but its content has not been reviewed. For present purposes, it is relevant to show briefly how Leibnitz' position differed from Locke's. Leibnitz said that a monad has no windows, hence ideas are innate, within the soul itself (the soul being a monad in Leibnitz' system). Experience through the senses, he said, is an illusion and thought is autonomous but not free from law — that is, it obeys the principles of non-contradiction and of sufficient reason.

Locke had maintained in the *Essay Concerning Human Understanding,* to which Leibnitz' *Nouveaux essais sur l'entendement humain* was an answer, that there are no innate ideas, but rather that the mind (soul) is at birth a *tabula rasa* on which experience writes ideas — gradually, as we learn the terms which express the ideas and then come to "understand their true connection".[17] Sensation and reflection produce simple and complex ideas; and "nothing is present in the understanding which was not first perceived by the senses".

Locke's theory leans heavily on language in that the acquisition of ideas is mediated through words (terms for ideas), but, as has been shown, Locke was by no means suggesting that these terms always lead directly to the truth. Thus thought, in Locke's works, is independent of language when (Locke when) the word is not mistaken for its designate.

Leibnitz concedes that ideas are not actually present in the mind at the start, but that they are "virtually" present. That is, the germ of all ideas is innate in the understanding. Ideas, however, are not acquired through language as in Locke's theory, but languages provide the possibility of learning about the workings

[16] Reference is made to recent concern for universals of language, established on empirical grounds. Further discussion follows.

[17] Locke, *Essay,* I, 2, 15.

of the mind. Thoughts, the operations of the mind, are reflected in language:

> Je croye veritablement, que les langues sont le meilleur mirroir de l'esprit humain, et qu'une analyse exacte de la signification des mots feroit mieux connoistre que toute autre chose les opérations de l'entendement.[18]

The above quotation shows that Leibnitz too considers thought as prior to and separate from language. In another passage from the *Nouveaux essais,* he suggests that language is an aid to thought, in that it helps us hold fast to abstract ideas:

> Je crois qu'en effect sans le désir de nous faire entendre nous n'aurions jamais formé de language; mais estant formé, il sert encor à l'homme à raisonner a part soy, tant par le moyen que les mots luy donnent de se souvenir des pensées abstraites, que par l'utilité qu'on trouve en raissonant a se servir de caracteres et de pensées sourdes ...[19].

Language, then, is an aid to thought, but is not, in Leibnitz' writing, the same as thought.

Leibnitz' and Locke's theories on the origin of ideas were different. Furthermore, their controversy represents one of the first between innate ideas and ideas as learned with the help of language. Yet Locke admitted "intuitive knowledge" which is "certain beyond all doubt, and needs no probation, nor can have any ..."[20] Locke's "intuitive knowledge", as Leibnitz pointed out, seems very like innate knowledge. Neither Locke nor Leibnitz identified thought processes and language processes. This is significant because, as will be shown, Hamann and Herder, as well as Humboldt, Sapir and Whorf (as has been shown) did consider thought and language to be identical.

I suggest that Hamann and Herder were, like Humboldt, forced to endow language with great power in order to effectively combat Kant's Rationalism. Neither Hamann nor Herder was as familiar with Empiricist thought as was Locke. Their writings cited hardly

[18] Gottfried Wilhelm Leibnitz, *Nouveaux essais sur l'entendement humain,* Book III, Ch. 7, Sec. 6.
[19] *Nouveaux essais,* III, 1, 2.
[20] *Essay,* IV, 17, 14.

less empirical evidence in support of their propositions than did those of the Rationalists, whose position on innate ideas they were fighting. Locke's conviction that whatever we are not aware of in ourselves (innate ideas) cannot be there[21] presumably made him confident that he could delimit the mind's capacity without positing the identity of thought and language. Apparently Locke's Empiricist conviction that nothing should be asserted "of whose truth ... we have no certain knowledge",[22] kept him from offering a linguistic relativity hypothesis to counter the notion of innate ideas because he had no evidence that thought is relative to language. Lack of evidence, however, did not inhibit either Hamann or Herder.

HAMANN AND HERDER VERSUS KANT

Johann Georg Hamann was a friend of Kant, but no friend of Kant's ideas. Hamann's life can be seen as a continuous battle against the abstraction and atomization of rationalism, which, he thought (in O'Flaherty's words) "did violence to virile life in the effort to arrest the flow of life and imprison it in conceptual chains".[23] Natural language alone was adequate to reality in all of its subtlety and dynamism. If we take Hamann's distaste for rationalism to be a primary motivation, it is not surprising that he would find Kant's almost complete neglect of the role of language in the acquisition of knowledge highly objectionable.

Indeed many ideas, in Kant's system, were not acquired at all but were innate forms of intuition, regulative principles of reasoning presupposed in all judgments which give us knowledge of phenomena. The *Critique of Pure Reason* is an inquiry into the nature of causality as a principle, and Kant's conclusion was that

[21] Locke said that nothing "can be said to be in the mind which it never yet knew ..." *Essay*, I, 2, 5.

[22] *Essay*, I, 1, 4.

[23] James C. O'Flaherty, *Unity and Language: A Study in the Philosophy of J. G. Hamann*, (= *University of North Carolina Studies in the Germanic Languages and Literatures*, No. 6) (Chapel Hill, 1952).

causality is not an analytic proposition (where the predicate is contained in the meaning of the subject). Hence it must be synthetic, as are facts. But facts are known a posteriori, while causality is a priori — that is, we don't *learn* that things are caused, we just *know* that they are. Kant "discovered" other such a priori synthetic principles and called them categories. The categories and the *leges intellectūs,* such as the rules of logic and our notions of space and time, can justifiably be called innate ideas in Kant's system.

Our idea of space, Kant said, is not gained through experience with particular spaces. Rather, we think of relations in space with reference to our notion of "space". It is thus also with the other *leges intellectūs,* which are essential components, along with sense data, of all knowledge.

Locke, as we have seen, was of exactly the opposite opinion regarding ideas and their acquisition and described in detail how we acquire ideas by degrees as we learn the names of them. Thus language helps us acquire knowledge together with the faculties of the mind, but, as noted in the discussion of Locke, language can also lead us astray.

Hamann took a much more extreme stance against innate ideas. For him reason *is* language; language is reason — and not merely, as in Locke, an aid to knowing: "Vernunft ist Sprache, *logos*. An diesem Markknochen nage ich und werde mich zu Tode darüber nagen".[24] Thus it is clear that for Hamann language and thought are identical. Language was for Hamann an *Urfaktum*, a primary given, an inexplicable but powerful force; the source of all our knowledge.

Miller properly notes that Hamann's "explicit statements of linguistic relativity are sparse",[25] but it is clear that if thought is language and if languages differ from one another then thought is relative to language.

Hamann's concern with differences among languages is clear

[24] Johann Georg Hamann, *Schriften,* Ed., F. Roth and G. J. Wiener. 8 vols, (Berlin, 1821-42) VII, pp. 151-152.
[25] Robert Lee Miller, Univ. of Mich. Diss., 1963, p. 15.

from his belief that language (as well as other forms of symbolic expression, such as ritual) expresses the innermost soul of individual cultures;[26] the "genius of a language" is the expression of "die natürliche Denkungsart und Vorstellungen" of a people.[27] The language of everyday talking and the language of parable, i.e. the speech of the folk (by definition different from culture to culture), is the source of truth, for it alone captures the immediacy of reality.

Hamann, as has often been noted, was far from being a systematic thinker, and his metacritique of Kant's *Critique of Pure Reason* has had, if possible, even fewer "discernible effects in the philosophical guild" than has Herder's.[28] Indeed Hamann hated *Systemdenker* and did not even profess to be thinking consistently. Considering only the doctrine of the relativity of thought to language, however, I will outline Hamann's position along lines similar to those used previously in analyzing Humboldt's position.[29]

As was discussed with reference to Humboldt, belief in the absolute identity of language and thought precludes belief in collective human thought as the source of language. Hamann posits language as a sort of primitive given, an *Urfaktum,* he calls it, which postulation is potentially reconcilable with the identity of language and thought. But how Hamann solved the problem of the origin of language becomes crucial.

He thought that God taught man language in paradise, but that since then, language and "die natürliche Denkungsart" of a people have been reciprocally affecting each other. "Die natürliche Denkungsart", as noted by Miller, is the only limitation on the *Urfaktum,* the only thing which makes language a complete prime

[26] Berlin, *Age of Enlightenment,* p. 273.
[27] Hamann's *Schriften,* II, p. 122.
[28] The quotation is from Robert T. Clark, Jr., *Herder: His Life and Thought* (Berkeley and Los Angeles: University of California Press, 1955), p. 413, who makes the comment about Herder's *Metacritique.*
[29] For more detailed analyses of Hamann's *Sprachtheorie,* see Miller, University of Michigan Diss. 1963 and O'Flaherty, *Unity and Language.*

or given.[30] The "natural mentality" (Miller's translation) influences language in that it gives rise to the "genius of a language". On the other hand, however, the "genius of the language" influences the "natural mentality" of the people. The circle of causation in Hamann's thought is almost that previously pointed out in Humboldt's. Language *is* thought, Hamann says. But if so, then thought cannot be prior to language. However, in Hamann's system God and the way a people thinks *(die natürliche Denkungsart)* are the source of language. In other words, some thought must have been there prior to language or God must have given both language and *die Denkungsart.*

The main points to be noted here are that Hamann was the first to completely identify thought and language, i.e., the first to advocate the extreme hypothesis of linguistic relativity. And the extreme position is not compatible with any theory which does not ascribe the origin of language to an extra-human entity of some autonomous sort capable of providing men with language. Hamann ascribed the origin of language to God, who taught the first man language, and to "die natürliche Denkungsart" of a people, which influences language; Humboldt ascribed the origin of language to the "Geist" of a nation; Sapir, to "man's psychic or spiritual constitution". Herder posits "Besonnenheit" as present in man before language, as will be shown. He ascribes the origin of language to an (innate?) ability to reflect *(Besonnenheit, Reflection).*

Herder's prize-winning essay on the origin of language was to have been an answer to the question, "Haben die Menschen, ihren Naturfähigkeiten überlassen, sich selbst Sprache erfinden können?" Herder's answer is yes, but he posits language with the power to shape our thoughts:

> Ich würde also die Sprache als das Werkzeug, den Inhalt und die Form menschlicher Gedanken ansehen und fragen:
> Wenn das menschliche Denken meistens symbolisch ist, ja wenn wir meistens mit, in, und oft nach der Sprache denken; was giebt dies der

[30] Miller, Univ. of Mich. Diss. 1963, p. 14.

menschlichen Känntnis überhaubt für Umriss, Gestalt und Schranken? ... Was muss es der Denkart für Form geben, dass sie sich in, mit und durch eine Sprache bildet, da wir jetzt durch das Sprechen Denken lernen?[31]

From the above quotation it would seem that Herder does not necessarily consider language and thought to be strictly coterminous. But Herder says further,

Was heisst *Denken*? *Innerlich Sprechen* d.i. die inne gewordenen Merkmale sich selbst aussprechen, sprechen heisst laut denken.[32]

Thus Herder equates thought and language. As Weber puts it, "So vollzieht sich ... eine wenn auch nicht mathematische so doch eine philosophische Identität von Denken und Sprechen".[33] Herder, then, is a proponent of the extreme hypothesis of linguistic relativity which identifies language and thought.

Herder studied under Kant in Königsberg, but Hamann, his older friend and informal teacher, influenced Herder's thought much more. Herder rejected the divine origin of language which Hamann believed in, but pointed out the circularity of Süssmilch's argument about the divine origin of language (which was very like Hamann's):

Ohne Sprache hat der Mensch keine Vernunft und ohne Vernunft keine Sprache. Ohne Sprache und Vernunft ist er keines göttlichen Unterrichts fähig und ohne göttlichen Unterricht hat er doch keine Vernunft und Sprache — wo kommen wir denn je hin.[34]

This problem of how man could learn language without possessing reason is circumvented by Herder by postulating *Besonnenheit* as present in man before language was created. And in Herder, of course, words come not from God, but they were "just there": "Kurz, es entstanden Worte, weil Worte da waren, ehe sie (die

[31] Johann Gottfried Herder, *Sämmtliche Werke* (Berlin, 1877-1913), 33 vols., II, p. 24-25.
[32] Herder's *Werke,* XXI, p. 88.
[33] Hanna Weber, *Herders Sprachphilosophie: Eine Interpretation im Hinblick auf die moderne Sprachphilosophie* (Berlin: Emil Ebering, 1939). Also *Germanische Studien,* Nr. 214.
[34] Herder's *Werke,* V, p. 40.

Menschen) da waren".[35] And *Besonnenheit,* or *Reflection,* is the capacity man had to learn the words. This capacity is in no way related to instincts in animals, but is peculiarly human. With the postulation of *Besonnenheit,* Herder's circular reasoning meets itself. Language and thought are the same, but thought *(Denken)* did not create language. Rather *Besonnenheit* is the peculiarly human talent which allowed man to create language from magically given words. But is Besonnenheit as used by Herder not the same as thought?

And in answer to Kant's positing of space and time as innate ideas, Herder offers language as the teacher of these ideas.[36] But Herder, like Hamann, was fighting fire with fire: Kant postulated innate ideas (categories and *leges intellectūs*) without supporting evidence; Hamann, God and "die natürliche Denkungsart"; Herder, *Besonnenheit*.

LINGUISTIC RELATIVITY VERSUS A PRIORI RATIONALISM

The extreme relativity hypothesis was propounded first by Hamann and Herder. Both were interested in asserting the ineffable, magical individuality of each separate people. Therefore, both were interested in countering Kant's rationalist doctrine of innate ideas (which assumed all people are alike in certain ways, regardless of their nationality). By placing great weight on the power and individuality of languages, by saying that the thought of a nation is relative to the language the people speak, one has simultaneously, emphasized that which is peculiar to the nation (expressed in the "genius" of their language), and combatted the notion that the various nationalities might possibly be quite similar to one another, as would be the case if all men had a set of innate ideas born with them.

Linguistic relativity, then, was originally proposed as an antidote to innate ideas, posited by Kant. But from then on, the

[35] Herder's *Werke,* V, p. 19.
[36] Herder's *Werke,* XXI, p. 49.

hypothesis was accepted by each successive proponent on the authority of his teacher. Herder borrowed some of his notions on the subject from Hamann as can be seen by comparing their systems and even on occasion, their expressions (such as *Denkungsart*). Humboldt's system and expressions are similar to Herder's. His saying that language was "mit einem Schlag da", for example, sounds very like Herder's "Kurz, es entstanden Worte". Other similarities are cited by Heintel.[37]

Sapir and Whorf also took over ideas from their predecessors and from Herder and Humboldt. From his lengthy article on the *Ursprung der Sprache*[38] we know that Sapir was early in life concerned with Herder's ideas. Also, Sapir's Master's degree was taken under Franz Boas, who first brought Humboldt's *Weltanschauung* hypothesis to America.[39] Whorf studied under Sapir at Yale and he also read the works of Jan Baudouin de Courtenay (1845-1929), a Polish linguist who wrote, among other things, "Einfluss der Sprache auf Weltanschauung und Stimmung".[40] Baudouin de Courtenay's ideas concerning the influence of language on thought were primarily from Humboldt. Thus the linear descent of the idea is easily traced from Hamann to Whorf.

But the interesting question is not how each of the proponents learned of the idea but rather why they asserted so extreme an hypothesis which is compatible only with a theory which posits an extra-human source of language. It has been suggested that Hamann and Herder, as opposed to Locke, had only a priori notions to combat Kant's categories as innate ideas, and that subsequent pupils of Herder's linguistic ideas accepted them on authority. But why did Humboldt and Sapir and indeed Whorf assert the extreme hypothesis just as their teachers had?

[37] See Erich Heintel, Introduction to Herder's *Sprachphilosophische Schriften* (Hamburg: Felix Meiner, 1960), pp. XVIII ff.

[38] Eduard Sapir, "On Herder's 'Ursprung der Sprache' ", *Modern Philology* 5 (1907), pp. 109-142.

[39] Levi-Strauss, et. al. *Results of the Conference of Anthropologists and Linguists* (= *Indiana University Publications in Anthropology and Linguistics.* IJAL Memoir No. 8) (Baltimore, 1953), p. 23.

[40] *Prace Filologicznie* 14 (1929).

I suggest that the notions like Kant's categories were alive until after Whorf's time. The extreme hypothesis may have been offered as an antidote to the assumption of innate ideas, because the mild hypothesis, while easier to support and defend, would not have as effectively countered the notion that we are all born with a certain set of cognitive abilities. I am not suggesting that Humboldt, Sapir or Whorf was necessarily aware of combatting Kant's categories any more than modern anthropologists proposing the doctrine of cultural relativity were aware that they were combatting Kant's *Sittengesetz,* supposed by many people to be a normative moral law applicable to all cultures and all times.

There is another parallel in the histories of cultural relativity and linguistic relativity. The successful triumph of the relativistic doctrines over the likewise a priori notions of a transcendent moral norm *(Sittengesetz)* and innate ideas (categories) ironically paved the way for reinstatement of both notions, but this time with empirical foundations. Now that twentieth century behavioral scientists are no longer constrained to judge other cultures on the basis of their own mores, i.e., since cultural relativity has become an accepted doctrine among anthropologists, the pendulum has begun to swing back and one of their main concerns is for finding cultural universals (values or customs common to all cultures). In a similar way, a present concern of linguistics is for discovering universals of language,[41] now that we have gone through the process of doubting the validity of our cognitive powers by having considered them relative to our language. Just as today the anthropologists are free to search for values common to all cultures now that they are free from belief in a normative "Sittengesetz über uns", so also are linguists free from the unsupported assumption

[41] See Joseph H. Greenberg, ed. *Universals of Language* (Cambridge, Mass.: MIT Press, 1963); Kenneth L. Pike, "Dimensions of Grammatical Constructions", *Language* 38 (1962), pp. 221-224; Jerrold J. Katz and Paul M. Postal *An Integrated Theory of Linguistic Descriptions* (Cambridge, Mass.: MIT Press, 1964), pp. 160 ff.; Emmon Bach, "On Some Recurrent Types of Transformations", *Report of the Sixteenth Annual Round Table Meeting on Linguistics and Language Studies* (= *Georgetown University Monograph in Languages and Linguistics,* No. 18) (1965), pp. 3-18; Chomsky, *Aspects.*

of innate ideas and free to search for universals — the modern version of innate ideas.[42]

Modern Rationalists,[43] however, posit linguistic universals on the basis of empirical evidence and expect each hypothesis of innate mechanisms common to all human beings to be subjected to extensive empirical testing.[44] The battle may have been won by the linguistic relativists, but the war was lost to the Rationalists. For a priori Rationalism died in mid-twentieth century scepticism of our ability to know, in "scepticism of the word",[45] but Rationalism was revived and innate ideas (now called linguistic universals) are now posited on empirical evidence.

[42] Both notions "innate ideas" and "language universals" can be defined as "that which is common to all men merely by virtue of their being human". Precedent for using the two notions synonymously is also to be found in Chomsky, *Aspects,* p. 59. "Thus it may well be that the general features of language structure reflect, not so much the course of one's experience, but rather the general character of one's capacity to acquire knowledge — in the traditional sense, one's innate ideas and innate principles".

[43] For a lucid statement of a modern rationalist position explained with historical continuity, see Chomsky, *Aspects,* pp. 47 ff., 58-59.

[44] Chomsky, for example, in *Aspects,* p. 53, says, "When such contrasting views [Empiricist and Rationalist positions on language learning] are clearly formulated, we may ask, as an empirical question, which (if either) is correct. There is no a priori way to settle this issue".

[45] Wilbur Marshall Urban's phrase. See *Language and Reality: The Philosophy of Language and the Principles of Symbolism* (London: Allen and Unwin, 1939).

Brown, Roger, W., and Eric H. Lenneberg,
1954 "A Study in Language and Cognition", *Journal of Abnormal and Social Psychology* 44. Also in Sol Saporta, ed., *Psycholinguistics: A Book of Readings* (New York: Holt, Rinehart and Winston, 1961).
1958 "Studies in Linguistic Relativity", in Eleanor E. MacCoby et al., eds., *Readings in Social Psychology* (New York: Holt, Rinehart and Winston, 3rd ed.).

Burling, Robbins,
1964 "Cognition and Componential Analysis: God's Truth or Hocus Pocus?" *American Anthropologist* 66.

Carroll, John B.,
1955 *The Study of Language: A Survey of Linguistics and Related Disciplines in America* (Cambridge, Mass.: Harvard University Press.).
1964 *Language and Thought* (Englewood Cliffs, N. J.: Prentice-Hall).

Carroll, John B., and Joseph B. Casagrande,
1958 "The Function of Language Classifications in Behavior" in Eleanor E. MacCoby et al., eds., *Readings in Social Psychology* (New York: Holt, Rinehart and Winston, 3rd ed.).

Chomsky, Noam,
1957 *Syntactic Structures* (The Hague: Mouton).
1965 *Aspects of the Theory of Syntax* (Cambridge, Mass.: MIT Press).

Clark, Robert T., Jr.
1947 "Herder, Cesarotti, and Vico", *Studies in Philology* 44.
1955 *Herder: His Life and Thought* (Berkeley and Los Angeles: University of California Press).

Feuer, Lewis S.,
1953 "Sociological Aspects of the Relation between Language and Philosophy", *Philosophy of Science* 20.

Fishman, Joshua,
1960 "A Systemization of the Whorfian Hypothesis", *Behavioral Science* 5.

Greenberg, Joseph,
1963 "Language and Linguistics", in Bernard Berelson, ed., *Behavioral Sciences Today* (New York: Basic Books).

——, ed.
1963 *Universals of Language* (Cambridge, Mass.: MIT Press).

Hamann, Johann Georg,
1821 *Schriften,* F. Roth and G. J. Wiener, eds. 8 vols. (Berlin, 1821-42).

Heintel, Erich,
1960 Introduction to Herder's *Sprachphilosophische Schriften* (Hamburg: Felix Meiner).

Herder, Johann Gottfried,
1877 *Sammtliche Werke* (Berlin, 1877-1913), 33 vols.

Humbolt, Wilhelm Von,
1841 *Gesammelte Werke* (Berlin, 1941-52).

Hymes, Dell,
1964 "Directions in (Ethno-) Linguistic Theory", *American Anthropologist* 66.

Katz, Jerrold J., and Paul M. Postal,
1964 *An Integrated Theory of Linguistic Descriptions* (Cambridge, Mass.: MIT Press).
Korzybski, Alfred,
1958 *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics* (Lakeville, Conn.: The International Non-Aristotelian Library Publishing Co., 4th ed.).
Leibnitz, Gottfried Wilhelm,
n.d. *Nouveaux essais sur l'entendement humain.*
Lenneberg, Erich H.,
1953 "Cognition in Ethnolinguistics", *Language* 29.
1957 "A Probabilistic Approach to Language Learning", *Behavioral Science* 2.
1961 "Color Naming, Color Recognition, Color Discrimination: A Reappraisal", *Perceptual and Motor Skills* 12.
Lenneberg, Erich H., and J. M. Roberts,
1956 "The Language of Experience", (= *Indiana University Publications in Anthropology and Linguistics,* No. 13) (Baltimore). Also in Sol Saporta, ed., *Psycholinguistics: A Book of Readings* (New York: Holt, Rinehart and Winston, 1961).
Levi-Strauss, Claude, et al.,
1953 *Results of the Conference of Anthropologists and Linguists* (= *Indiana University Publications in Anthropology and Linguistics,* IJAL Memoir No. 8) (Baltimore).
Locke, John,
n.d. *Essay Concerning Human Understanding.*
Longacre, Robert A.,
1956 Review of *Language and Reality* by Wilbur M. Urban and *Four Articles on Metalinguistics* by Benjamin Lee Whorf, *Language* 32.
MacCoby, Eleanor E., et al., eds.,
1958 *Readings in Social Psychology* (New York: Holt, Rinehart and Winston, 3rd ed.).
Mandelbaum, D. G., ed.
1949 *Selected Writings in Language, Culture and Personality* (Berkeley: University of California Press).
Marshall, John C.,
1965 Review of B. L. Whorf, *Language, Thought and Reality, Linguistics* 15.
Miller, Robert L.,
1963 "The Linguistic Relativity Principle and Humboldtian Ethnolinguistics; A Historical Appraisal", unpublished dissertation (University of Michigan).
O'Flaherty, James C.,
1952 *Unity and Language: A Study in the Philosophy of J. G. Hamann* (= *University of North Carolina Studies in the Germanic Languages and Literatures,* No. 6) (Chapel Hill).
Osgood, Charles,
1963 "An Exploration into Semantic Space", in Wilbur Schramm, ed., *Human Communication* (New York: Basic Books).

Pike, Kenneth L.,
1962 "Dimensions of Grammatical Constructions", *Language* 38.
Plato,
n.d. *Cratylus.*
n.d. *Theaetetus.*
Rapoport, Anatol,
1966 "General Semantics: Its Place in Science", *Etc* 16.
Romney, A. K., and R. G. D'Andrade, eds.
1964 *Transcultural Studies in Cognition,* special issue of *American Anthropologist* 66.
Ryle, Gilbert,
1949 *Concept of Mind* (London, New York: Hutchinson's University Library).
Sapir, Eduard,
1907 "On Herder's 'Ursprung der Sprache'", *Modern Philology* 5.
Sapir, Edward
1921 *Language* (New York: Harcourt, Brace and Co.).
1929 "The Status of Linguistics as a Science", *Language* 5.
1933 "Language", *Encyclopedia of the Social Sciences* (New York: Macmillan). Also in D. G. Mandelbaum, Ed., *Selected Writings in Language, Culture and Personality* (Berkeley: University of California Press, 1949).
Saporta, Sol, ed.,
1961 *Psycholinguistics: A Book of Readings* (New York: Holt, Rinehart and Winston).
Steinthal, Heymann,
1858 *Ursprung der Sprache im Zusammenhange mit den letzten Fragen alles Wissens* (Berlin).
Wilbur Marshall,
1939 *Language and Reality. The Philosophy of Symbolism* (London: Allen and Unwin).
Wallace, A. F. C.,
1962 "Culture and Cognition", *Science* 135.
Waterman, John T.,
1957 "Benjamin Lee Whorf and Linguistic Field Theory", *Southwest Journal of Anthropology* 13.
Weber, Hanna,
1939 *Herders Sprachphilosophie: Eine Interpretation im Hinblick auf die moderne Sprachphilosophie* (Berlin: Emil Ebering).
Weimann, Karl-Heinz,
1965 "Vorstufen der Sprachphilosophie Humboldts bei Bacon und Locke", *Zeitschrift für deutsche Philologie* 84.
Wells, Rulon,
1962 "What Has Linguistics Done for Philosophy?" *Journal of Philosophy* 59.
Whorf, Benjamin Lee,
1956 *Language, Thought and Reality: Selected Writings of Benjamin Lee Whorf,* John B. Carroll, ed. (Cambridge and New York: MIT-Wiley).

INDEX