语言哲学选读

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Man at the Mercy of Language

Every human being is creative both in putting together
novel statements and in employing them in various
speech situations. Yet no one is free to employ his
innate capacity in any way he wishes. Indeed, freedom
of speech does not exist anywhere, for every community
on earth forbids the use of certain sounds, words, and
sentences in various speech situations. In the Ameri-
can speech community, for example, the habitual liar
faces social sanctions—and criminal punishment should
he lie under oath. Speakers are not allowed to misrep-
resent what they are selling, to defame other people
in public, to maliciously shout "Fire!" in a crowded
movie theater, or to utter obscenities on the telephone.
In addition, less obvious constraints upon freedom of
speech may exist. They may be the structures of lan-
guages themselves—and they may restrict the speaker
as rigidly as do the community's social sanctions.

Every moment of the day the world bombards the
human speaker with information and experiences. It
clamors for his attention, claws at his senses, intrudes
into his thoughts. Only a very small portion of this total
experience is language—yet the speaker must use this
small portion to report on all the experiences that exist
or ever existed in the totality of the world since time
began. Try to think about the stars, a grasshopper, love
or hate, pain, anything at all—and it must be done in

terms of language. There is no other way; thinking is language spoken to oneself. Until language has made sense of experience, that experience is meaningless.

This inseparableness of everything in the world from language has intrigued modern thinkers, most notably Ludwig Wittgenstein, of Cambridge University, who was possibly this century's most influential philosopher. He stated the problem very directly: "The limits of my language mean the limits of my world." Wittgenstein offered pessimistic answers to questions about the ability of language to reveal the world. He claimed that language limited his capacity to express certain ideas and opinions; nevertheless, he did manage to say a great deal about topics he felt were inexpressible. By the time of his death in 1951, Wittgenstein had arrived at a more positive view of language. If its limits—that is, the precise point at which sense becomes non-sense—could somehow be defined, then speakers would not attempt to express the inexpressible. Therefore, said Wittgenstein, do not put too great a burden upon language. Learn its limitations and try to accommodate yourself to them, for language offers all the reality you can ever hope to know.

For tens, and perhaps hundreds, of thousands of years, people regarded language as a holy instrument that let them look out upon the world in wonder and fear and joy. "In the beginning was the Word" is the reassuring first line of the Gospel According to St. John. Only in the last few decades have people suspected that their window on the world has a glass that gives a distorted view. Language no longer is certain to open up new sights to the imagination; rather, it is thought by some to obscure the vision of reality. The French philosopher Jean-Paul Sartre, who has often written about what he calls today's "crisis of language," has stated: "Things are divorced from their names. They are there, grotesque, headstrong, gigantic, and it seems ridiculous to . . . say anything at all about them: I am in the midst

of things, nameless things." Indeed, in this century many of the foundation "things" of civilization—God, truth, fact, humanity, freedom, good and evil—have become nameless and have lost their traditional reference points. An entire generation has grown up that distrusts language's ability to express a true picture of reality and that relies upon the empty intercalations of *like, you know, I mean*. The world has grown inarticulate at the very time that an unprecedented number of words flood the media. The output has burgeoned, but speakers have retreated into the worn paths of stock phrases. A statistical study of telephone speech showed that a vocabulary of only 737 words was used in 96 per cent of such conversations. Apparently people speak more, yet say less.

Exaggerated anxieties about language's ability to express reality result in the pathology of "logophobia" (literally, "fear of words"). Logophobia has found popular expression in recent decades in the movement known as General Semantics. Two books with this point of view have had a wide readership—Stuart Chase's *Tyranny of Words* and S. I. Hayakawa's *Language in Action*—and both derive their ideas largely from the writings of a Polish count, Alfred Korzybski (1879–1950) was an engineer, an officer in the Russian army, an official at the League of Nations, and a researcher into mental illness after he migrated to the United States. The key element in his theory about language was: "The map does not represent all of the territory." That is, no matter how much detail a cartographer puts into a drawing of a map, it can never represent all of the ridges, slopes, valleys, and hillocks in a territory. Korzybski similarly believed that language can no more say everything about an event than the map can show everything in a territory. *The grass is green* cannot be a true utterance because it is incomplete. What kind of grass? Where is it growing? What shade of green is meant?

Korzybski felt that speakers could nevertheless emancipate themselves from the tyranny of language by changing their orientation. They must imitate mathematics as a way to state precise relationships between things; they must avoid abstractions; they must be wary of the troublesome word *is* because it often implies an identification that does not exist in reality. Freedom from language's distortions would be achieved by rigorously rating all statements to determine whether speakers could back them up. And no longer would general words that expressed categories be acceptable. A *cow* would not be just a cow, but a particular kind of animal, with certain characteristics, named "Elsie" or "Bossie."

Almost all linguists reject Korzybski's theories on the basis of their logophobia and their inadequate solutions. Nevertheless, he did isolate a logical contradiction: Language is supposed to communicate experience, yet by its very nature it is incapable of doing so. A moment's thought reveals how ill-equipped language is to render a true account of an experience. Picture an autumn scene with a single leaf close up: its color scarlet and edged with burnished gold, the spaces between the veins eaten out by insects in a filigree pattern, the edges gracefully curled, the different textures of the upper and lower surfaces, the intense light of Indian summer falling on the leaf. And this leaf which I have scarcely begun to describe is only one out of the countless millions that surround a stroller in the autumn woods, each unique in its color and shape, the way it catches the light and flutters in the breeze.

How can language possibly render such an experience? The obvious fact is that it cannot—and few people would want it to, for such detail would bog down language in a morass of trivial observations. People do not demand that language describe an entire experience, even if it could. No one confuses speech

about a leaf with a real leaf any more than people confuse a painting of a leaf with a leaf. The function of language is not to duplicate reality, but to recall it, comment upon it, and make predictions about it. A much more significant limitation upon language is that each language can comment upon experience only in its own way. Some languages of interior New Guinea, for example, are severely hampered in conveying even leaf color because they lack a convenient terminology to describe colors other than black and white.

Since human beings are born with the same senses and approximately the same degree of intelligence, they should be able to report equally well whatever they experience. But different languages make such equality difficult to achieve. Imagine two forest rangers, one a white speaker of Standard English and the other an Indian speaker of Navaho, riding together on inspection in Arizona. They notice a broken wire fence. When they return to their station, the English-speaking ranger reports *A fence is broken*. He is satisfied that he has perceived the situation well and has reported it conscientiously. The Navaho, though, would consider such a report vague and perhaps even meaningless. His report of the same experience would be much different in Navaho—simply because his language demands it of him.

First of all, a Navaho speaker must clarify whether the "fence" is animate or inanimate; after all, the "fence" might refer to the slang for a receiver of stolen goods or to a fence lizard. The verb the Navaho speaker selects from several alternatives will indicate that the fence was long, thin, and constructed of many strands, thereby presumably wire (the English-speaking ranger's report failed to mention whether the fence was wood, wire, or chain link). The Navaho language then demands that a speaker report with precision upon the act of breaking; the Indian ranger must choose between two different verbs that tell whether the fence

was broken by a human act or by some nonhuman agency such as a windstorm. Finally, the verb must indicate the present status of the fence, whether it is stationary or is, perhaps, being whipped by the wind. The Navaho's report would translate something like this: "A fence (which belongs to a particular category of inanimate things, constructed of long and thin material composed of many strands) is (moved to a position, after which it is now at rest) broken (by nonhumans, in a certain way)." The Navaho's report takes about as long to utter as the English-speaking ranger's, but it makes numerous distinctions that it never occurred to the white ranger to make, simply because the English language does not oblige him to make them.

Each language encourages its speakers to tell certain things and to ignore other things. *The women bake a cake* is an acceptable English sentence. Speakers of many other languages, though, would regard it as inadequate and would demand more specific information, such as whether exactly two women or more than two women did the baking, and whether the women are nearby or distant. Some languages would force their speakers to select a word for "cake" that tells whether the cake is round or rectangular and whether or not the cake is visible to the listener at the time of speaking. Many languages are not as concerned as English that the tense of the verb tell whether the cake was baked in the past, is being baked now, or will be baked in the future—although some languages make even finer distinctions of tense than English does. Several American Indian languages of the Pacific Northwest divide the English past tense into recent past, remote past, and mythological past.

The way people talk about the color spectrum, and even perceive it, varies from one speech community

to another, although all human eyes see the same colors because colors have their own reality in the physical world. Color consists of visible wavelengths which blend imperceptibly into one another. No sharp breaks in the spectrum separate one color from another, such as orange from red. But when speakers in most European communities look at a rainbow, they imagine they see six sharp bands of color: red, orange, yellow, green, blue, and purple. Chopping the continuous spectrum of the rainbow into color categories in this way is an arbitrary division made by European speech communities. People elsewhere in the world, who speak languages unrelated to European ones, have their own ways of partitioning the color spectrum. The Shona of Rhodesia and the Bassa of Liberia, for example, have fewer color categories than speakers of European languages, and they also break up the spectrum at different points, as the diagrams show:

ENGLISH

red	orange	yellow	green	blue	purple

SHONA

cipsuka	cicena	citema	cipsuka

BASSA

ziza	hui

The Shona speaker divides the spectrum into three portions, which he pronounces approximately as *cipsuka, cicena,* and *citema* (*cipsuka* appears twice because it refers to colors at both the red end and the purple end of the spectrum). Of course, the Shona speaker is able to perceive and to describe other colors —in the same way that a speaker of English knows that *light orangish yellow* is a variant of yellow—but the Shona's basic divisions represent the portions of the spectrum for which his language has convenient labels.

Charts obtainable at paint stores provide samples of hundreds of colors to help homeowners select the exact ones they want. An English speaker who glances quickly at one of these charts recognizes certain colors and can name them immediately as *yellow, green,* and so forth. Other colors require a moment of hesitation before the speaker finally decides that a particular hue falls into the category of, let us say, *green* rather than *yellow.* Still other colors demand not only considerable thought but also a hyphenated compromise, such as *greenish-yellow.* Finally, the English speaker finds himself totally unable to name many colors by any of the categories available to him; he is forced to make up his own term or to use a comparison, such as *It looks like the color of swamp water.* The case with which verbal labels can be attached to colors is known as "codability." The color that a speaker of English unhesitatingly describes as *green* has high codability for him, and it also evokes a quick response from speakers of his language, who immediately know what hues fall into that category. Similarly, when a Shona says *citema,* a high-codability color, other members of his speech community immediately know that he refers to "greenish-blue." In contrast, the color that a speaker describes as *like swamp water* has low codability, which means that other speakers cannot be certain exactly what color is intended.

Some linguists have found in color codability a fruitful way to experiment with the relationships between thought and language. In one such experiment, people who served as test subjects were shown a large selection of plastic squares, each colored differently. Usually, when someone sees a color, his mind stores it for a mere few moments and he can identify the color again only if he sees it almost immediately. If a delay occurs, the stored image is no longer a reliable guide because it has become faint and distorted. Yet when the squares were hidden from sight even for several

minutes, the test subjects could pick out again certain colors—the high-codability ones for which the English language has convenient labels like *red, blue, yellow,* and so on. Subjects were able to remember the high-codability colors because they had simply attached common English-language words to them. In other words, they stored colors in their minds not as colors but as verbal labels for them. Even though the images had completely faded from their memories after a few moments, the subjects still remembered the verbal labels they had given the colors—and they were therefore able to identify the plastic squares again. The human being's ability to encode experience in this way is not limited to color. Similar experiments have been performed with other experiences, such as the recognition of facial expressions, and the results have been the same.

Experiments like these have shown that at least one aspect of human thought—memory—is strongly influenced by language. That is not the same thing, however, as proving that man is at the mercy of his language. The convenient labels that a speech community gives to certain colors are a great aid in remembering them, but the absence of such labels does not prohibit a community from talking about the low-codability colors. When people develop a need for an expanded color vocabulary—as have artists, decorators, and fashion designers—they simple invent one. Witness the recent plethora of colors for decorating the home: *riviera blue, alpine green, lime frost, birch gray,* and so forth.

Nevertheless, the colors that a speaker "sees" often depend very much upon the language he speaks, because each language offers its own high-codability color terms. Recently, two anthropologists at the University of California, Brent Berlin and Paul Kay, have attempted to show that speech communities follow an evolutionary path in the basic color terms they offer their speakers. For example, several New Guinea tribes

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have in their vocabularies only two basic color words, which translate roughly as "black" (or "dark") and "white" (or "light"). A greater number of languages in widely separated areas of the world possess three color terms—and the startling fact is that they usually retain words for "black" and "white" and add the same third color, "red." The languages that have four color terms retain "black," "white," and "red"—and almost always add either "green" or "yellow." Languages with five color terms add the "green" or the "yellow" that was missed at the fourth level, with the result that nearly all such languages have words for "black" (or "dark"), "white" (or "light"), "red," "green," and "yellow," and for no other colors. Languages with six terms add a word for "blue," and those with seven terms add a word for "brown."

The completely unanticipated inference of this study is that the languages of the world, regardless of their grammars, follow an evolutionary sequence, at least so far as color terms go. A language usually does not have a word that means "brown" unless it already has the six earlier color words. A language rarely has "blue" in its vocabulary unless it already has words for both "green" and "yellow." (English, and most western European languages, Russian, Japanese, and several others add four additional color terms—"gray," "pink," "orange," and "purple"—but these languages do not do so until they already offer the seven previous color terms.) Berlin and Kay believe that a language, at any given point in time, can be assigned to only one stage of basic color terms and apparently must have passed through the prior stages in the appropriate sequence. Such regularity on the part of unrelated languages in adding color terms is astonishing, and no one has as yet offered a suitable explanation for it.

Berlin and Kay have also correlated this sequence with the general complexity of the cultures in which the languages are spoken. Languages with only the two color terms "black" and "white" are spoken in cultures at a very simple level of technology—and the only languages known to have all eleven terms are spoken in cultures with a long history of complexity. Between these two extremes are the languages of such peoples as the Tiv of Africa with three terms, the Homeric Greeks and Ibo of Africa with four terms, the Bushmen of Africa and the Eskimos of North America with five, and the Mandarin Chinese as well as the Hausa and Nupe of Africa with six. Of course, it is understandable that cultures have more need to talk about different colors as they grow more complex. Small bands of New Guinea hunters need to evaluate the darkness of shadows which might conceal enemies or animal prey; complex European cultures need additional terms to talk about color-coded electrical circuits. Ever since Berlin and Kay put forth in 1969 their startling analysis of the basic color terms in ninety-eight languages, their findings have been under attack, primarily on the basis of questioned methodology and ethnocentric bias. But their general conclusions have also been defended by other researchers. Apparently Berlin and Kay have isolated some general truths about how people around the world talk about color and the possible evolutionary implications of language—even though neither they nor anyone else has been able to offer a suitable explanation for why languages seem to add words for colors to their vocabularies in such an orderly sequence.

Nor is the way in which a speech community rounds off its numbers haphazard; rather it is explainable as an interplay between language and culture. Americans and Englishmen have traditionally expressed excellence in sports by certain round numbers—the 4-minute mile, the 7-foot high jump, the 70-foot shot put, the .300 baseball batting average. Once a speech community has established a general range of goals of excellence that

are within the realm of possibility, the exact number chosen has little to do with the objective reality of measurable goals. Instead, the community chooses an exact goal that makes sense to it linguistically in terms of the measures it uses and the way it rounds off numbers. That is why Americans and Englishmen never talk about the 3⅞-minute mile or the 69-foot shot put.

The American-British target for the 100-yard dash is 9 seconds, but the French speech community, which uses the metric system, expresses the target as 100 meters in 10 seconds. Simple arithmetic shows that the two goals do not refer to equal distances covered in comparable amounts of time. Allowing for 10 seconds of running time, the metric race would mean covering 109.36 yards and the American-British race would mean covering 111.1 yards. Obviously, the French goal for excellence speaks about a different real distance than the American or English—simply because a Frenchman rounds off his numbers for distances and for time in a different way than English-speaking peoples do. When speakers thus round off numbers to make them manageable, they give preference to those numbers that their speech community regards as significant. Americans see nothing wrong with rounding off numbers to 4 because they are familiar with that number for measurement, as in 4 ounces in a quarter pound or 4 quarts in a gallon. A Frenchman, however, would not regard such a number as round at all; because of his familiarity with the decimal system, he would round off to 5.

A speech community's method of rounding off its numbers often bears no relation to the real situation, and it may actually work against the best interests of the community. Fishing laws in some states specify, for example, that half a dozen trout larger than 10 inches may be caught in a day. Research by fish-management specialists might instead indicate that trout would thrive better if fishermen took 7 (not half a

dozen) trout larger than 10½ (not 10) inches—but Americans round off to 6 and 10, not to 7 and 10½. The ideal speed for a stretch of highway, as scientifically determined by engineers, might be 57 miles per hour—but that number will be rounded off to a too-slow 55 or a too-fast 60 because it is customary for highway speeds to be based on the decimal system. Only one justification exists for the use of imprecise rounded numbers: The speech community has decreed that the linguistic ease of inexact combinations is preferable to the linguistic complexity of precise numbers.

That the way speakers round off numbers is often a linguistic convenience is clearly seen by comparing English with other languages. The ancient Greeks rounded off to 60 and 360 for their high numbers; and the old Germanic languages of northern Europe used 120 to mean "many." Most of the Indian tribes in primeval California based their numbers on multiples of 5 and 10. However, at least half a dozen tribes found great significance in the number 4, no doubt because it expressed the cardinal directions. Others emphasized the number 6, which probably represented the four directions plus the above-ground and below-ground worlds. The Yuki of northern California were unique in counting in multiples of 8 and in rounding off high numbers at 64.

A misunderstanding about the way Chinese speakers round off their numbers has led many Europeans to state glibly that "in China you're a year old when you're born." That is because most European systems of stating one's age are different from the Chinese. In English, a speaker usually states his age as his most recent birthday followed by the measure *years old.* Exceptions are young children who often place their age between birthdays, as in *I'm three and a half years old,* and parents who usually express the age of infants in months and weeks. Chinese also use a round number followed by the measure *swei* in place of the English

measure *years old*. Confusion has resulted because *swei* is not exactly equivalent to the English measure but rather is closer in meaning to "the number of years during all or part of which one has been alive." In the case of newborn infants, they have, according to the *swei* measure, already lived for "part" of a year— and therefore their age is *yi swei*, which English translators usually render erroneously as "one year old" instead of as "part of one year."

Each language also encourages certain kinds of place names and makes difficult the formation of others. *Golden Gate* is a typical English place name, a noun (*Gate*) modified by an adjective (*Golden*)—but *Gately Gold* is an improbable construction in English and no place is likely to bear such a name. The importance of a language's structure in determining place names was pointed out by the anthropologist Franz Boas when he compared terms used by the Kwakiutl Indians and the Eskimos. The Kwakiutl are a seafaring people of British Columbia, Canada, whose survival is based almost solely on what they can wrest from the Pacific Ocean and the nearby rivers. So it is no wonder that their place names rarely celebrate history or myth but instead are descriptive in order to give practical benefits in navigation and in food-gathering, such as Island at the Foot of the Mountains, Mouth of the River, Having Wind, Place for Stopping, and so on. The Kwakiutl language makes it easy to form descriptive names because suffixes can be conveniently added to stem words. For example, a Kwakiutl speaker can discriminate among a great number of different kinds of islands—Island at the Point, Island in the Middle, and so on—simply by adding the suffixes for "at the point" and "in the middle" to the stem word for "island."

The nearby Eskimos also base their culture on the sea, and so they might be expected to name places in a similar way. But they do not—because the structure

of their language makes it very difficult to do so. What are suffixes in Kwakiutl are in Eskimo the very words to which suffixes are added. Eskimos cannot create the name Island at the Point because in their language "at the point" is not a suffix but a stem word to which other words are added. To describe a place as Island at the Point, the Eskimo speaker would have to put together a circumlocution much too complicated for everyday use. Furthermore, the Eskimo language offers its speakers only a limited number of suffixes to attach to stem words, whereas Kwakiutl offers a great many. The result is that Kwakiutl possesses an extraordinarily rich and poetic catalogue of place names—such as Birch Trees at the Mouth of the River and Receptacle of the North Wind, names that make one's heart yearn to visit the places they identify—whereas the Eskimo list is considerably shorter and much less metaphorical.

Eskimos do not differ significantly from Kwakiutls in intelligence, imagination, the ability to abstract, or other mental capacities. Solely because of the structure of his language, the Eskimo fisherman is unable to talk easily about a place the Kwakiutl names Birch Trees at the Mouth of the River. If an Eskimo has no easy way to talk about a clump of birches at the mouth of a river, will he therefore be less alert to perceive that kind of a place? And is it possible that language, instead of clarifying reality, forces the Eskimo to think about the world in ways different from speakers of Kwakiutl or other languages?

Such a connection between language and thought is rooted in common-sense beliefs, but no one gave much attention to the matter before Wilhelm von Humboldt, the nineteenth-century German philologist and diplomat. He stated that the structure of a language expresses the inner life of its speakers: "Man lives with the world about him, principally, indeed exclusively,

as language presents it." In this century, the case for a close relationship between language and reality was stated by Edward Sapir:

> 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 for their society. . . . The fact of the matter is that the "real world" is to a large extent built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached.

About 1932 one of Sapir's students at Yale, Benjamin Lee Whorf, drew on Sapir's ideas and began an intensive study of the language of the Hopi Indians of Arizona. Whorf's brilliant analysis of Hopi placed common-sense beliefs about language and thought on a scientific basis—and it also seemed to support the view that man is a prisoner of his language. Whorf concluded that language "is not merely a reproducing instrument for voicing ideas but rather is itself the shaper of ideas. . . . We dissect nature along lines laid down by our native languages."

Whorf emphasized grammar—rather than vocabulary, which had previously intrigued scholars—as an indicator of the way a language can direct a speaker into certain habits of thought. The Eskimo speaker, for example, possesses a large and precise vocabulary to make exacting distinctions between the kinds and conditions of seals, such as "young spotted seal," "swimming male ribbon seal," and so on. But such an extensive vocabulary has less to do with the structure of the Eskimo language than with the fact that seals are important for the survival of its speakers. The Eskimo would find equally strange the distinctions that the English vocabulary makes about horses—*mare, stallion, pony, bay, paint, appaloosa,* and so forth. And both Eskimos and Americans would be bewildered by the seventeen terms for cattle among the Masai of Africa, the twenty terms for rice among the Ifugeo of the Philippines, or the thousands of Arabic words associated with camels.

Instead of vocabulary, Whorf concentrated on the differences in structure between Hopi and the European languages—and also on what he believed were associated differences in the ways speakers of these languages viewed the world. In his analysis of plurality, for example, he noted that English uses a plural form for both *five men* and *five days. Men* and *days* are both nouns, but they are otherwise quite different. A speaker can see with his own eyes a group of five men, but he cannot perceive five days through any of his senses. To visualize what a day looks like, the speaker of English has to conjure up some sort of abstract picture, such as a circle, and then imagine a group of five such circles. The Hopi has no such problem. He does not rely on his imagination to provide him with plurals that cannot be detected by his senses. He would never use a cyclic noun—one that refers to "days," years," or other units of time—in the same way that he would use an aggregate noun ("men"). His language is more precise, and he has a separate category altogether for cycles. For him, cycles do not have plurals but rather duration, and so the Hopi equivalent for the English *He stayed five days* is "He stayed until the sixth day."

Nor does the Hopi language possess tenses, which in most European languages stand time in a row as distinct units of past, present, and future. A speaker of English expresses an event that is happening in the present as *He runs* or *He is running,* but the speaker of Hopi can select from a much wider choice of present tenses, depending upon his knowledge, or lack of it,

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about the validity of the statement he is making: "I know that he is running at this very moment." "I know that he is running at this moment even though I cannot see him." "I remember that I saw him running and I presume he is still running." "I am told that he is running."

A further contrast between the two languages concerns duration and intensity. English employs such words as *long, short,* and *slow* for duration and *much, large,* and *high* for intensity. Speakers of English, accustomed to this usage, overlook the fact that these words refer to size, shape, number, or motion—that is, they are really metaphors for space. Such a situation is quite ridiculous because duration and intensity are not spatial. Yet speakers of English unconsciously use these metaphors for space in even the simplest utterances—such as *He* SLOWLY *grasped the* POINT *of the* LONG *story* or *The* LEVEL *of the assignment was* TOO HIGH *and so the student considered it a* LOT OF *nonsense.* The Hopi language is equally striking in its avoidance of metaphors of imaginary space for qualities that are non-spatial.

After his painstaking analysis of such differences between Hopi and European languages, Whorf asked the question that was central to his research. Do the Hopi and European cultures confirm the fact that their languages conceptualize reality in different ways? And his answer was that they do. Whereas European cultures are organized in terms of space and time, the Hopi culture, Whorf believed, emphasizes events. To speakers of European languages, time is a commodity that occurs between fixed points and can be measured. Time is said to be *wasted* or *saved;* an army fighting a rear-guard action tries to *buy* time; a television station *sells* time to an advertiser. People in the European tradition keep diaries, records, accounts, and histories; their economic systems emphasize wages paid for the amount of time worked, rent for the time a dwelling is occupied, interest for the time money is loaned.

Hopi culture has none of these beliefs about time, but instead thinks of it in terms of events. Plant a seed —and it will grow. The span of time the growing takes is not the important thing, but rather the way in which the event of growth follows the event of planting. The Hopi is concerned that the sequence of events in the construction of a building be in the correct order, not that it takes a certain amount of time to complete the job. That is why the building of a Hopi house, adobe brick by adobe brick, may go on for years. Whorf's comparison of Hopi and European languages and cultures—considerably more involved than the summary I have presented—convinced him that the contrasting world views of their speakers resulted from contrasts in their languages. He concluded that, linguistically speaking, no human being is born free; his mind was made up for him from the day he was born by the language of his speech community. Whorf questioned people's ability to be objective, and he threw into doubt the rationality of everyday utterances. He suggested that all their lives English speakers have been tricked by their language into thinking along certain channels —and it is small consolation to know that the Hopi has also been tricked, but in a different way.

Whorf's theories about the relationship between culture and language have been greeted enthusiastically by some scholars and attacked or treated warily by others. The weakness of the Sapir-Whorf Hypothesis, as it has come to be known, is the impossibility of generalizing about entire cultures and then attributing these generalizations to the languages spoken. The absence of clocks, calendars, and written histories obviously gave the Hopis a different view of time than that found among speakers of European languages. But such an observation is not the same thing as proving that these

cultural differences were caused by the differences between Hopi and European grammars. In fact, an interest in time-reckoning is not characteristic solely of European cultures but can be found among speakers of languages as different as Egyptian, Chinese, and Maya. And, on the other hand, thousands of unrelated speech communities share with the Hopis a lack of concern about keeping track of time. To attempt to explain cultural differences and similarities as a significant result of the languages spoken is to leave numerous facts about culture unexplained. The great religions of the world—Judaism, Christianity, Hinduism, and Mohammedanism—have flourished among diverse peoples who speak languages with sharply different grammars. Mohammedanism, for example, has been accepted by speakers of languages with grammars as completely different as those of the Hamito-Semitic, Turkish, Indo-Iranian, Tibeto-Burman, and Malayo-Polynesian families. And the reverse is true as well. Cultures as diverse as the Aztec Empire of Mexico and the Ute hunting bands of the Great Basin spoke very closely related tongues.

Nevertheless, attempts have been made to prove the Sapir-Whorf Hypothesis, such as one experiment which used as test subjects bilingual Japanese women, living in San Francisco, who had married American servicemen. The women spoke English to their husbands, children, and neighbors, and in most everyday speech situations; they spoke Japanese whenever they came together to gossip, reminisce, and discuss the news from home. Each Japanese woman thus inhabited two language worlds—and according to the predictions of the hypothesis, the women should think differently in each of these worlds. The experiment consisted of two visits to each woman by a bilingual Japanese interviewer. During the first interview he chatted with them only in Japanese; during the second he carried on the same discussion and asked the same questions in English. The

results were quite remarkable; they showed that the attitudes of each woman differed markedly, depending upon whether she spoke Japanese or English. Here, for example, is the way the same woman completed the same sentences at the two interviews:

> "When my wishes conflict with my family's . . .
> . . . it is a time of great unhappiness." (Japanese)
> . . . I do what I want." (English)

> "Real friends should . . .
> . . . help each other." (Japanese)
> . . . be very frank." (English)

Clearly, major variables in the experiment had been eliminated—since the women were interviewed twice by the same person in the same location of their homes, and they discussed the same topics—with but one exception. And that sole exception was language. The drastic differences in attitudes of the women could be accounted for only by the language world each inhabited when she spoke.

The Sapir-Whorf Hypothesis also predicts that language makes its speakers intellectually lazy. They will categorize new experiences in the well-worn channels they have been used to since birth, even though these channels might appear foolish to an outsider. The language spoken by the Western Apaches of Arizona, for example, has long had its own channels for classifying the parts of the human body, a system which ignores certain distinctions made in other languages and which makes different ones of its own. Then, about 1930, a new cultural item, the automobile, was introduced into the Apache reservation. An automobile, surely, is different from a human body, yet the Apaches simply applied their existing classification for the human body to the automobile. The chart on the next page lists approximate pronunciations of the Apache words for the parts of the human body, the way they are categorized

—and the way their meanings were extended to classify that new cultural item, the automobile.

APACHE WORDS
FOR PARTS OF THE HUMAN BODY
AND THE AUTOMOBILE

HUMAN ANATOMICAL TERMS		EXTENDED AUTO MEANINGS
EXTERNAL ANATOMY:		
daw	"chin and jaw"	"front bumper"
wos	"shoulder"	"front fender"
gun	"hand and arm"	"front wheel"
kai	"thigh and buttocks"	"rear fender"
ze	"mouth"	"gas-pipe opening"
ke	"foot"	"rear wheel"
chun	"back"	"chassis"
jnda	"eye"	"headlight"
FACE:		
chee	"nose"	"hood"
ta	"forehead"	"auto top"
ENTRAILS:		
tsaws	"vein"	"electrical wiring"
zik	"liver"	"battery"
pit	"stomach"	"gas tank"
chih	"intestine"	"radiator hose"
jih	"heart"	"distributor"
jisoleh	"lung"	"radiator"

Many linguists nowadays are wary of the Sapir-Whorf Hypothesis. Attempts to confirm the hypothesis, such as the experiment with the Japanese women or the study of Apache terms for the automobile, are usually regarded as fascinating examples rather than as universal truths about the way speech communities view the world. Neither Whorf nor any of his followers has proven to everyone's satisfaction that differences between two speech communities in their capacity to understand external reality are based entirely or even overwhelmingly on differences in their languages. Whorf overemphasized one point (that languages differ in what *can* be said in them) at the expense of a greater truth (that they differ as to what is *relatively easy* to express in them). Languages, rather than causing cultural differences between speech communities, seem instead to reflect the different cultural concerns of their speakers. The history of language is not so much the story of people misled by their languages as it is the story of a successful struggle against the limitations built into all language systems. The Western Apache system for classifying the human body did not lock them into certain habitual patterns of thought that prevented them from understanding the automobile. In fact, the existence of these patterns may have aided the Apaches in making sense out of that new cultural item.

The true value of Whorf's theories is not the one he worked so painstakingly to demonstrate—that language tyrannizes speakers by forcing them to think in certain ways. Rather, his work emphasized something of even greater importance: the close alliance between language and the total culture of the speech community. No linguist today doubts that language and culture interpenetrate one another; nor does any linguist fail to pay due respect to Whorf for emphasizing this fact.

How long does it take to understand a sentence?

And if we understand a sentence for a whole hour, are we always starting afresh?

Chess is characterized by its rules (by the list of rules). If I define the game (distinguish it from draughts) by its rules, then these rules belong to the grammar of the word 'chess'. Does that mean that if someone uses the word 'chess' intelligently he must have a definition of the word in mind? Certainly not. – He will only give one if he's asked what he means by 'chess'.

Suppose I now ask: 'When you uttered the word, what did you mean by it?' – If he answered 'I meant the game we've played so often, etc. etc.' I would know that this explanation hadn't been in his mind at all when he used the word, and that he wasn't giving an answer to my question in the sense of telling me what 'went on inside him' while he was uttering the word.

When someone interprets, or understands, a sign in one sense or another, what he is doing is taking a step in a calculus (like a calculation). What he *does* is roughly what he does if he gives expression to his interpretation.

'Thought' sometimes means a particular mental process which may accompany the utterance of a sentence and sometimes the sentence itself in the system of language.

'He said those words, but he didn't think any thoughts with them.' – 'Yes, I did think a thought while I said them'. '*What* thought?' 'Just what I said.'

On hearing the assertion 'This sentence makes sense' you cannot really ask 'what sense?' Just as on hearing the assertion 'this combination of words is a sentence' you cannot ask 'what sentence?'

4

Intentionality

would call a *state*. Let us compare with each other propositions which all in various senses describe states.

'I have had toothache since yesterday.'
'I have been longing for him since yesterday.'
'I have been expecting him since yesterday.'
'I have known since yesterday that he is coming.'
'Since yesterday I can play chess.'

Can one say: 'I have known continuously since yesterday that he is coming?' In which of the above sentences can one sensibly insert the word 'continuously'?

If knowledge is called a 'state' it must be in the sense in which we speak of the state of a body or of a physical model. So it must be in a physiological sense or in the sense used in a psychology that talks about unconscious states of a mind-model. Certainly no one would object to that; but in that case one still has to be clear that we have moved from the grammatical realm of "conscious states" into a different grammatical realm. I can no doubt speak of unconscious toothache, if the sentence 'I have unconscious toothache' means something like 'I have a bad tooth that doesn't ache'. But the expression 'conscious state' (in its old sense) doesn't have the same grammatical relationship to the expression 'unconscious state' as the expression 'a chair which I see' has to 'a chair which I don't see because it's behind me'.

Instead of 'to know something' we might say 'to keep a piece of paper on which it is written'.

If 'to understand the meaning of a word' means to know the grammatically possible ways of applying it, then I can ask 'How can I know what I mean by a word at the moment I utter it? After all, I can't have the whole mode of application of a word in my head all at once.'

I can have the possible ways of applying a word in my head in the same sense as the chess player has all the rules of chess in his head, and the alphabet and the multiplication table. Knowledge is the hypothesized reservoir out of which the visible water flows.

So we mustn't think that when we understand or mean a word what happens is an act of instantaneous, as it were non-discursive, grasp of grammar. As if it could all be swallowed down in a single gulp.

It is as if I get tools in the toolbox of language ready for future use.

'I can use the word "yellow" ' is like 'I know how to move the king in chess'.

In this example of chess we can again observe the ambiguity of the word 'understand'. When a man who knows the game watches a game of chess, the experience he has when a move is made usually differs from that of someone else watching without understanding the game. (It differs too from that of a man who doesn't even know that it's a game.) We can also say that it's the knowledge of the rules of chess which makes the difference between the two spectators, and so too that it's the knowledge of the rules which makes the first spectator have the particular experience he has. But this experience is not the knowledge of the rules. Yet we are inclined to call them both 'understanding'.

The understanding of language, as of a game, seems like a background against which a particular sentence acquires meaning. – But this understanding, the knowledge of the language, isn't a conscious state that accompanies the sentences of the language. Not even if one of its consequences is such a state. It's much more like the understanding or mastery of a calculus, something like the *ability* to multiply.

Suppose it were asked: 'When do you know how to play chess? All the time? Or just while you say that you can? Or just during a move in the game?' – How queer that knowing how to play chess should take such a short time, and a game of chess so much longer!
(Augustine: '*When* do I measure a period of time?')

It can seem as if the rules of grammar are in a certain sense an unpacking of something we experience all at once when we use a word.

In order to get clearer about the grammar of the word 'understand', let's ask: *when* do we understand a sentence? – When we've uttered the whole of it? Or while uttering it? – Is understanding, like the uttering of a sentence, an articulated process and does its articulation correspond exactly to that of the sentence? Or is it non-articulate, something accompanying the sentence in the way a pedal note accompanies a melody?

otherwise I might find a better expression for it. And 'essentially inexpressible' means that it makes no sense to talk of a more complete expression.

The psychological processes which are found by experience to accompany sentences are of no interest to us. What does interest us is the understanding that is embodied in an explanation of the sense of the sentence.

To understand the grammar of the word 'to mean' we must ask ourselves what is the criterion for an expression's being meant *thus*. What should be regarded as a criterion of the meaning?

An answer to the question 'How is that meant?' exhibits the relationship between two linguistic expressions. So the question too is a question about that relationship.

The process we call the understanding of a sentence or of a description is sometimes a process of translation from one symbolism into another; tracing a picture, copying something, or translating into another mode of representation.
In that case understanding a description means making oneself a picture of what is described. And the process is more or less like making a drawing to match a description.

We also say: 'I understand the picture exactly, I could model it in clay'.

We speak of the understanding of a sentence as a condition of being able to apply it. We say 'I cannot obey an order if I do not understand it' or 'I cannot obey it before I understand it'.
'Must I really understand a sentence to be able to act on it? – Certainly, otherwise you wouldn't know what you had to do.' – But how does this knowing help me? Isn't there in turn a jump from knowing to doing?
'But all the same I must understand an order to be able to act according to it' – here the 'must' is fishy. If it is a logical must, then the sentence is a grammatical remark.

Here it could be asked: How long before obeying it *must* you understand the order? – But of course the proposition 'I must understand the order before I can act on it' makes good sense: but not a metalogical sense. – And "understanding" and "meaning" are not metalogical concepts.

If 'to understand a sentence' means somehow or other to act on it, then understanding cannot be a precondition for our acting on it. But of course experience may show that the specific behaviour of understanding is a precondition for obedience to an order.

'I cannot carry out the order because I don't understand what you mean. – Yes, I understand you now.' – What went on when I suddenly understood him? Here there are *many* possibilities. For example: the order may have been given in a familiar language but with a wrong emphasis, and the right emphasis suddenly occurred to me. In that case perhaps I should say to a third party: 'Now I understand him: he means . . .' and should repeat the order with the right emphasis. And when I grasped the familiar sentence I'd have understood the order, – I mean I should not first have had to grasp an abstract sense. – Alternatively: I understood the order in *that* sense, so it was a correct English sentence, but it seemed preposterous. In such a case I would say: 'I do not understand you: because you can't mean *that*.' But then a more comprehensible interpretation occurred to me. Before I understand several interpretations, several explanations, may pass through my mind, and then I decide on one of them.

* * *

'Understanding a word' may mean: *knowing* how it is used; *being able to* apply it.
'Can you lift this ball?' – 'Yes'. Then I try and fail. Then perhaps I say '*I was wrong*, I cannot'. Or perhaps 'I can't now, because I am too tired; but when I said I could, I really could.' Similarly 'I thought I could play chess, but now I have forgotten how', but on the other hand 'When I said "I can play chess" I really could, but now I've lost it.' – But what is the criterion for my being able at that particular time? How did I know that I could? To that question I would answer 'I've always been able to lift that sort of weight', 'I lifted it just a moment before', 'I've played chess quite recently and my memory is good', 'I'd just recited the rules' and so on. What I regard as an answer to that question will show me in what way I use the word 'can'.

Knowing, being able to do something, a capacity is what we