# THE FLASHING AND THE LIGHT ARE THE SAME

by BENJAMIN WHORF

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Take the word "hand." In 'his hand' it refers to a location on the human body, in 'hour hand' to a strikingly dissimilar object, in 'all hands on deck' to another reference, in 'a good hand at gardening' to another, in 'he held a good hand (at cards)' to another, whereas in 'he got the upper hand' it refers to nothing but is dissolved into a pattern of orientation. Or consider the word 'bar' in the phrases: 'iron bar, bar to progress, he should be behind bars, studied for the bar, let down all the bars, bar of music, sand bar, candy bar, mosquito bar, bar sinister, bar none, ordered drinks at the bar'! But, you may say, these are popular idioms, not scientific and logical use of language. Oh, indeed?

"Electrical" is supposed to be a scientific word. Do you know what its referent is? Do you know that the "electrical" in "electrical apparatus" is not the same "electrical" as the one in "electrical expert"? In the first it refers to a current of electricity in the apparatus, but in the second it does not refer to a current of electricity in the expert. When a word like "group" can refer either to a sequence of phases in time or a pile of articles on the floor, its element of reference is minor. Referents of scientific words are often conveniently vague, markedly under the sway of the patterns in which they occur. It is very suggestive that this trait, so far from being a hallmark of Babbittry, is most marked in intellectual talk, and—mirabile dictu— in the language of poetry and love! And this needs must be so, for science, poetry, and love are alike in being "flights" above and away from the slave-world of literal reference and humdrum prosaic details, attempts to widen the petty narrowness of the personal self's outlook, liftings toward Arupa, toward that world of infinite harmony, sympathy and order, of unchanging truths and eternal things. And while all words are pitiful enough in their mere "letter that killeth," it is certain that scientific terms like 'force, average, sex, allergic, biological' are not less pitiful, and in their own way no more certain in reference than 'sweet, gorgeous, rapture, enchantment, heart and soul, stardust.' You have probably heard of 'star dust'—what is it? Is it a multitude of stars, a sparkling powder, the soil of the planet Mars, the Milky Way, a state of daydreaming, poetic fancy, pyrophoric iron, a spiral nebula, a suburb of Pittsburgh, or a popular song? You don't know, and neither does anybody. The word—for it is one LEXATION, not two—has no reference of its own. Some words are like that. As we have seen, reference is the lesser part of meaning, patternment the greater. Science, the quest for truth, is a sort of divine madness like love. And music—is it not in the same category? Music is a quasilanguage based entirely on patternment, without having developed lexation.

Sometimes the sway of pattern over reference produces amusing results, when a pattern engenders meanings utterly extra-

<sup>&</sup>lt;sup>1</sup>Compare 'kith' and 'throe,' which give no meaning, and a bewildering effect without the patterns 'kith and kin' and 'in throes of.'

neous to the original lexation reference. The lower mind is thrown into bewilderment, cannot grasp that compelling formulas are at work upon it, and resorts wildly and with glad relief to its favorite obvious type of explanation, even "seeing things" and "hearing things" that help out such explanation. The word 'asparagus,' under the stress of purely phonetic English patterns of the type illustrated in the formula cited in Part 1, rearranges to 'sparagras'; and then since 'sparrer' is a dialectical form of 'sparrow,' we find 'sparrow grass' and then religiously accepted accounts of the relation of sparrows to this 'grass'. 'Cole slaw' came from German Kohlsalat, 'cabbage salad,' but the stress of the pattern tending to revamp it into 'cold slaw' has in some regions produced a new lexation 'slaw,' and a new dish 'hot slaw'! Children of course are constantly repatterning, but the pressure of adult example eventually brings their language back to the norm; they learn that Mississippi is not Mrs. Sippy, and the equator is not a menagerie lion but an imaginary line. Some times the adult community does not possess the special knowledge needed for correction. In parts of New England, Persian cats of a certain type are called Coon cats, and this name has bred the notion that they are a hybrid between the cat and the 'coon' (raccoon). This is often firmly believed by persons ignorant of biology, since the stress of the linguistic pattern (animal-name) 1) modifying animal-name 2) causes them to "see" (or as the psychologists say "project") objective raccoon quality as located on the body of the cat—they point to its bushy tail, long hair, and so on. I knew of an actual case, a woman who owned a fine "Coon cat," and who would protest to her friend: "Why, just LOOK at him—his tail, his funny eyes—can't you see it?" "Don't be silly!" quoth her more sophisticated friend. "Think of your natural history! Coons cannot breed with cats; they belong to a different family." But the lady was so sure that she called on an eminent zoologist to confirm her. He is said to have remarked, with unwavering diplomacy, "If you like to think so, just think so." "He was even more cruel than you!" she snapped at her friend, and remained convinced that her pet was the outcome of an encounter between a philandering raccoon and a wayward cat! In just such ways on a vaster scale is

woven the web of Maya, illusion begotten of entrenched selfhood. I am told that Coon cats received their name from one Captain Coon, who brought the first of these Persian cats to the State of Maine in his ship.

In more subtle matters we all, unknowingly, project the linguistic relationships of a particular language upon the universe, and SEE them there, as the good lady SAW a linguistic relation (Coon = raccoon) made visible in her cat. We say 'see that wave'—the same pattern as 'see that house.' But without the projection of language no one ever saw a single wave. We see a surface in everchanging undulating motions. Some languages cannot say 'a wave'; they are closer to reality in this respect. Hopi say walalata, 'plural waving occurs,' and can call attention to one place in the waving just as we can. But, since actually a wave cannot exist by itself, the form that corresponds to our singular, wala, is not the equivalent of English 'a wave,' but means 'a slosh occurs,' as when a vessel of liquid is suddenly jarred.

English pattern treats 'I hold it' exactly like 'I strike it,' 'I tear it,' and myriads of other propositions that refer to actions effecting changes in matter. Yet 'hold' in plain fact is no action, but a state of relative positions. But we think of it, even see it, as an action, because language sets up the proposition in the same way as it sets up a much more common class of propositions dealing with movements and changes. We ASCRIBE action to what we call "hold" because the formula, substantive + verb = actor + his action, is fundamental in our sentences. Thus we are compelled in many cases to read into nature fictitious acting-entities simply because our sentence patterns require our verbs, when not imperative, to have substantives before them. We are obliged to say 'it flashed' or 'a light flashed,' setting up an actor IT, or A LIGHT, to perform what we call an action, FLASH. But the flashing and the light are the same; there is no thing which does something, and no doing. Hopi says only rehpi. Hopi can have verbs without subjects, and this gives to that language power as a logical system for understanding certain aspects of the cosmos. Scientific language, being founded on western Indo-European and not on Hopi, does as we do,

sees sometimes actions and forces where there may be only states. For do you not conceive it possible that scientists as well as ladies with cats all unknowingly project the linguistic patterns of a particular type of language upon the universe, and SEE them there, rendered visible on the very face of nature? A change in language can transform our appreciation of the Cosmos.

### THE EVENT

#### PETRIFIED LIGHTNING FROM CENTRAL FLORIDA

A PROJECT BY ALLAN MCCOLLUM

CONTEMPORARY ART MUSEUM UNIVERSITY OF SOUTH FLORIDA

MUSEUM OF SCIENCE AND INDUSTRY TAMPA, FLORIDA