

The Great Whorf Hypothesis Hoax:

Which Whorf do you dock at?

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How many "Whorfs" are there? As many as Eskimo words for snow? More?

Decades ago one scholar [Max Black?] estimated over 200 different conceptions of Benjamin Whorf in academic literature -- basically one per researcher, all different -- but I suspect some interesting generalities can still be squeezed out of this old puzzle.

Watching intensely the way academe treats Benjamin Whorf ever since returning to California after my four years on the Northern Cheyenne Reservation in the early '70s, I've witnessed a pendulum swing: from an inseparable disdainful sneer on their faces when they uttered Whorf's name (i.e., he's been 'disproven' now and is worthless, so don't bother me) to a magnificent explanation of the *Whorf Theory Complex*, by Penny Lee, highlighting Whorf's subtleties and complexities over the easily dismissed stereotypes and strawmen so common under the name "Whorf Hypothesis".

Of course, those interested in Whorf fell into more categories than just the two extremes. I've personally been told by many linguists that reading Whorf in an Introductory class helped them decide to be a linguist; that certainly was the case for me at UCLA as an English major taking a required linguistics class. He claimed, among other things, a different worldview in some Native American languages than our familiar one presenting Newtonian ideas of reality -- and that such an alternative worldview was supported by their cultural languages and just as valid as our own, especially given last century's physics advances in relativity and quantum principles.

Of those positively influenced by Whorf's own writing, some (like me) actually wound up investigating Native American languages while others got caught up in a kind of academic McCarthyism devoted to showing that Whorf was just plain wrong. Unfortunately, quoting anything Whorf actually wrote when calling him wrong became an exercise in optional scholarship under that regime.

That brings up the title of this piece -- which is supposed to make you flash on Geoffrey Pullam's excellent *The Great Eskimo Snow Vocabulary Hoax* -- and for the same reason: shoddy scholarship. *How many words for snow are there in Eskimo? 3? 20? 100? 200?* As a matter of scholarship, the source anthropological linguist, Franz Boas, listed three distinct forms, and all the higher numbers came from people not doing their homework and pulling numbers out of their butts. Similarly, I suspect actually reading Whorf's own words went out of style during the early '70s as the "Whorf Hypothesis" literature began growing, and those interested scrambled to see the latest trashing. That's where the hoax aspect comes in: when researchers take someone else's word for something (like what Whorf "meant") instead of doing the scholarship.

Then there were some, such as those in Contrastive Rhetoric, who basically paid no attention to the Whorf Hypothesis rhetoric and just kept reading and citing what Whorf actually wrote.

If you're reading this, you must be interested in Whorf at least a little. Which Whorf do you dock at? His Hypothesis-literature stereotype? What he actually wrote? Not sure?

If you don't know the controversy -- maybe were just caught by the title -- you may be asking why anyone cares or what this is all about.

Benjamin Lee Whorf died about 60 years ago, an anthropological linguist who was a student of one of the profession's most revered writers and thinkers, Edward Sapir (hence often seen references to "the Sapir-Whorf Hypothesis"). Though Whorf never quit his day job as a fire investigator for Hartford Insurance (he devised many of his examples from his work, in fact, showing that people tend to act around things the way they talk about them: careless around "empty drums" of gasoline containing vapors more explosive than the liquid in full drums; industrial "waste water" which was quite flammable despite the innocuousness that "water" conveys; flammable "spun limestone" despite the nonflammability suggested by the "stone" part; etc.), his collected writings (*Language, Thought and Reality*, John Carroll, ed., MIT Press), first published in 1952, have never been out of print even though some of what he wrote continues to haunt the profession to this day.

What he is most "notorious" for is what he clearly labeled *the principle of linguistic relativity* but which other academics, for their own reasons, renamed *the Whorf Hypothesis* -- trying to fit what he was saying into their 19th C. "science" box despite the fact that Whorf was referring here and other places in his writings to a 20th C. understanding of relativity and quantum physics; the critics were outclassed before they began. My deeper research found that linguistic relativity is a concept older than the physics version, going back to the founder of linguistics in the 19th C., Baron Wilhelm von

Humboldt, and that one of Einstein's closest mentors in graduate school, his language teacher and later in-law Jost Winteler (to whom Einstein pointed back in later life as the source of many of his early inspirations), was trained in Humboldt's relativity linguistics. Not that relativity wasn't also an independent issue in physics, but a radio address by Einstein showed he'd thought about the wider language implications as well.

What Whorf did, in effect, was reunite the Einstein physics version with its historical antecedent in the Humboldtian tradition of linguistics -- a magnificent intellectual synthesis requiring mastery of multiple disciplines, multi-disciplinarity being a luxury today's linguists can scarcely afford. To really understand Whorf, to keep up with him in where he goes, I've estimated, you need to know a lot about linguistics and its history, something about physics (classical and relativity/quantum), Native American languages, chemistry, and human consciousness. Critics who've trashed Whorf for his bogus hypothesis (which he never wrote) never quite understood that they had to go through Albert Einstein's physics version to get to Whorf's linguistic version -- or maybe they did and naturally shrunk from the task.

Relativity is an important concept whose physics version has been either confusing or inaccessible to most people for nearly a century. Whorf's linguistic version, understood aright, is easier to grasp.

It's not well understood that, at bottom, even Einstein's physics version was about language -- specifically, about the use of one mathematical language (non-euclidean) over another more habitually used (Euclidean geometry). The difference? Each language contains a worldview, a way of conceiving what "reality" is, each different in subtle or major ways. In Einstein's case he chose a mathematical language which gave him integrated 4-D spacetime over one which forced him to artificially separate Space and Time. Each language provides the *langscape* of the worldview.

It was Whorf's introduction to and experience with the structurally mysterious indigenous languages of North America that propelled his virtual rewrite of Einstein's physics version, writing that the Hopi language, like relativity theory, recognizes integrated spacetime and does not contain in any way our familiar contrast of Space and Time -- in fact, contains no trace whatever of our obligatory tense reference to time. This caused some linguists and other social scientists who didn't understand Einstein to go nuts and attack Whorf's reputation, painting him as a crank you don't have to pay any attention to, thereby avoiding explaining him in class.

More important to ponder is what many of these "timeless" languages have instead: obligatory *evidentials* that force you to say how you know what you're saying. Curiously, you can derive or at least transform our time notions from the evidentials -- if someone knows what they're saying from personal

experience, then we could say from context whether it was past or present experience at utterance -- but not vice versa, since evidentials are a more complex system including what you're saying being cultural common knowledge, or you were just thinking about it or planning or visioning/dreaming, or someone told you about it and they're usually correct, or they often bluff, joke or lie, etc. (as a hypothetical case only for teaching purposes).

While Whorf was aware that something importantly different was going on in Native American languages, my own research in the historic Western/Indigenous Science Dialogues has recorded evidence suggesting that in many languages 1) nouns (techn. Noun-Phrases) are not used in normal conversation, 2) a single word can be a complete sentence, and 3) the meaning pieces (techn. Morphemes) of these word/sentences refer not to "things in the world" but to dynamic living processes and relationships.

Here's what's important about those. 1) "Things" that you can hang noun labels comfortably on do not exist in the quantum realm. Languages which we may call "quantum compatible" include non-euclidean geometric languages and Algonquian-family indigenous languages such as Blackfoot. 2) a one-word sentence does not allow for our usual grammatical and logical processes of analysis into subject/predicate, actor/action, etc. 3) Most radical, Algonquian languages specifically (and I strongly suspect more or even all ancient language families generally) make use of a different perceptual system than Euro-languages like ours. I'll explain.

Leroy Little Bear (Blackfoot elder, law professor, and Science Dialogue moderator for 10 years) and his wife Amethyst First Rider (Blackfoot elder and creator of Trickster Theater in Calgary, ALTA, Canada) have both related how when they say ordinary things in English, such as "A man is riding a horse," pictures come up in their heads -- but when they say the equivalent in Blackfoot, no pictures: just feelings of riding.

In a related language that I did my primary fieldwork in, Cheyenne, I found an example to illustrate this conceptual/perceptual difference. The sound *Se?SE* or *Se?Se* (where *S* = sh, *?* is a glottal stop, and capital vowels are whispered) most often is taken, in our terms, to refer to a duck or ducks. Except, that is, when followed by *-novOtse*, which refers to going into a hole in the ground -- for which the whole term, *Se?SenovOtse*, now refers to a rattlesnake! How'd we get from duck to rattlesnake?! A rattlesnake is a duck that goes down a hole? Huh?! As the old saying goes, you can't get there from here -- especially with pictures in your head the way Euro-languages encourage us to do. We can't even link these metaphorically. So what's the trick?

What can be so similar between ducks and rattlesnakes that this language -- which names creatures for their uniqueness in Nature and front-loads that part in its name (Se?Se) -- has them share and highlight this important meaning piece? To understand, you must perform a cognitive shift and perceive from their perspective: *the sound refers to the combined rustling sound and zig-zag motion when either is going away from you.*

I keep referring to *sounds* instead of *words* because at last year's Science Dialogue, Leroy talked about how Blackfoot "words" are constructed on the fly (no ready-made lexicon) from a kind of Periodic Table of (meaningful) Sounds. And beyond this, my own research into Plains Indian Sign Language strongly suggests to me that the meanings of those sounds are often connected to ancient signs (as I show in "God is not a noun in Native America," where I suspect either the Cheyennes or Lakota people changed their sound for "god" on reaching the Plains to conform with the meaning pieces in Sign, which comes down to us as "Great/Large Spirit/Mystery.")

So while Whorf correctly pointed to the absence of our usual Space/Time distinction in Hopi as an example of linguistic relativity (each language has a unique view of the world, a unique frame, which may or may not share what are felt to be important categories with any other arbitrarily chosen language), my *in-progress* research has revealed even more fundamental differences around noun/verb, subject/predicate, actor/action distinctions, involving a differently preferred cognitive/perceptual system as well. And the possibility that an ancient link still exists between signed and spoken in the languages of the Great Plains.

During my 4 years on the Northern Cheyenne Reservation (1971-5), I found out something important about Sign which doesn't come through in our cultural stereotype of it: its primary use was the tribe, simultaneous with speech to keep deaf tribal members in the loop, and only secondarily between unrelated tribal languages.

This is seeing the phenomenon, as with Se?Se, from the inside -- a principle of fieldwork in a very needed new *post-colonial linguistics* approach. In such an approach, researchers form partnerships with their indigenous language-speaking colleagues and listen deeply to them, instead of steadfastly gripping Eurocentric concepts and theories of language as a filter through which all indigenous information passes or doesn't; I've done both, and so speak from experience.

When I was working on Cheyenne, developing an alphabet and writing system for classroom and community use, my research was instrumental to a task, and some information didn't pertain to the task and was ignored. Larger questions, such as what human language IS, weren't appropriate to the task. Two years after leaving, on entering UC Berkeley for doctoral training, I met a

couple who became my mentors and entered into a kind of intellectual underground in Native America: Sakej Youngblood Henderson and Marie Battiste. What Sakej told me early on, which I dubbed the Cheyenne Tower of Babel Teaching, has guided me for the last 25 years in thinking about larger questions of language:

Long ago, people and spirits and animals and plants all communicated the same way. Then something happened. Afterwards, we had to talk to each other in human speech. But we retained the Old Language for dreams, and for communicating with spirits and animals and plants.

This teaching obviously takes us into different realms of consciousness since everyone will agree, I assume, that working on the job and dreaming involve different states or kinds of human consciousness as well as different evolutionary brains. The Old Language is an important concept that doesn't fit the Eurocentric linguistic research filters.

Finally, I'd like to say more about the historic Western/Indigenous Science Dialogues happening since 1992. Members of the Native American intellectual underground discovered in 1980, when famed (and intellectually curious) colleague of Einstein, David Bohm, published his *Wholeness and the Implicate Order*, that Bohm was presenting in his quantum physics theory a worldview which resonated with their own tribal teachings about reality. And so they began working toward a meeting and his own Bohmian Dialogue with him -- enlisting the support of Fetzer Institute where Bohm's colleague and co-author, David Peat, was working, and culminating in the early 1992 Dialogue and its historic consensus between Native Americans and quantum physicists: In the invisible realm physicists call *quantum* and Indians call *spirit*, 1) everything that exists vibrates (the primary reality is frequency or vibration based); 2) the only constant is Flux (eternal change and transformation); 3) everything is interconnected and interrelated in part/whole relationships (no separate objects).

So while the Native languages do not use nouns in normal conversation (though can drop into a different explanatory mode and create nouns, leave them there, and jump back to the nounless conversational mode), and therefore are not ideal for classic or Newtonian science use, surprisingly they resonated with the relativity and quantum insights of the advances in 20th C. physics -- as if they'd had it all along and never strayed from it to follow the merely physical fallout, and had been waiting for 500 years for the Invaders' science to get back on the same important page with them.

Everyone felt the first Dialogue was so important that there should be more. Leroy Little Bear arranged with the Banff School of the Arts (I think it was called then) to host a Dialogue later that year, but soon beforehand David

Bohm (who'd been obviously frail months before and propped up daily by the Indians' prayers) died of a heart attack in London in a taxi taking him home from work. Nonetheless, what I have dubbed the Northern Circle began a run of six Dialogues over the next six years, with both Indians and physicists pushing the envelope to discuss their teachings about reality. These Dialogues were privately funded and had no audience present -- if you were there, you were a participant; artists from the School were occasionally invited in.

In 1999, disappointed in how long it'd been since a Dialogue and throwing out a suggestion for my friend and former student Glenn Parry, Executive Director of SEED, an Open University in Albuquerque NM (<http://www.seedopenu.org>), who wanted to put on a "big" event after doing so many relatively small classes. Glenn and I began planning an Albuquerque Dialogue which he publicized as "The Language of Spirituality Conference". We couldn't find a private sponsor, and since so many people I told about it over the years had expressed the wish that they could've been a fly on the wall, I decided we'd let a paying audience be the sponsor. This tactic has worked well now for three years, with audience members (Outer Circle) even occasionally invited to ask questions of the Inner Circle participants. See the [seedopenu.org](http://www.seedopenu.org) website for details of the 2002 Dialogue on July 5th if you wish to witness it for yourself, or to purchase past Dialogue tapes and transcripts. Who knows what will come out next time as they all push the envelope once again?!

The three Southern Circle Dialogues have been most important for my own research into human language, due in part to the respect given me by the Indians for organizing it, and using that title, but there has been an important new development: one of our members has persuaded the National Science Foundation to sponsor a Dialogue in Oklahoma (Central Circle) in early April, which could probably lead to a series of NSF-funded Dialogues. For me, this symbolizes a return to the interest in Native America displayed by our some of our more scientifically minded founding fathers.

What does all this have to do with the Great Whorf Hypothesis Hoax? When linguistics professionals and students spend more time (as in the '70s) reading what critics of Whorf were writing about him than what Whorf himself wrote (much less following Whorf's pointing and finding out how fundamentally different from ours some of the indigenous languages can be), passing along misquotes and misinterpretations without checking the original (such as Pinker's "Apache" words for *beach* and *canoe*, really Nootka), then the Hoax aspect Pullum attributed to the Eskimo words for snow are clearly present. What's needed instead is deep listening to a different and ancient worldview of reality and language for what it can tell us about our potential for how to become more fully *human*.
