

THOUGHTS ON QuAL: QUANTUM ANTHROPOLOGICAL LINGUISTICS

DAN MOONHAWK ALFORD, 4/99, SAC PRESENTATION

DRAFT FORM -- quote only with permission

I. Introduction to QuAL

I usually hang out at the lonely intersection of language, physics, Native America and consciousness, as those of you who know my work know. I recently received enough validation from physicists that my intersection may be useful for them, and decided to examine some cross-over topics between linguistics and physics -- some of which merely arise from shared structuralist concerns underneath the different data.

Quantum linguistics is a term now used by physicists on the moderated Quantum Mind discussion list; I add Anthropological in honor of the fact that my guiding principles have been acquired cross-culturally from indigenous people, who share concerns with many of the points I will be covering.

Long ago, after my acceptance into Native American circles, I began simplifying my knowledge and focus by paying attention to the theories and ideas, out of the millions were bombarded with, that Native Americans pay attention to as the ones that fit in with their philosophies -- using the Natives as cognitive guides the way we've always used them as geographic guides in confusing territory.

All of my teachings, presentations, and writings are about completing the cognitive circle, searching for that which joins our most current thought with archaic thought, finding a balance which honors both in respect, lifting us to a higher level of complementary thinking, which dismisses neither.

So lets examine some cross-over points.

II. Topics for Physics/Linguistics Discussions:

A. Parallel invisible realm

Linguists and physicists alike share recognition of a parallel, invisible realm co-existing, dynamically interactive with, and causal to the physical realm. The Mikmaqs of Nova Scotia, among others, feature these two realms prominently in their fundamental teachings. In Dr. Allison's work this invisible realm is called Thoughtspace, and Castaneda called it the 'nagual'.

B. Languages of fragmentation and wholeness

In the 1980's *Wholeness and the Implicate Order*, physicist David Bohm described the difference in mathematics between languages of fragmentation and wholeness; Benjamin Whorf and I have pointed to Native American languages being hitherto unknown examples of human languages of wholeness. Simply put, it's the difference between paying attention to and reporting about the dancers in a primary way, or to the dancing in a primary way. Ultimately this has to do with the language of our narratives and the pictures and understandings our narratives engender, of fragmentation or of wholeness.

C. Dichotomous and Complementary Thinking

In all my classes I teach the difference between the rightness and respect levels of thinking -- our two-millennium trip down the first road of yes/no, black/white, right/wrong, and our rediscovery of the second, balancing opposites, a road indigenous people never left

D. Collapse of the wave function

This is the phrase physicists use when describing the point at which a bunch of possibles become an actual reality (note the attention to the dancers). Linguistics must similarly describe how phonemes, all of the possible sounds taken to mean a /t/, for instance, become one actual manifestation within a specific spacetime context. Compare Whorf's Hopi word 'tunatya' (pp 59-62) meaning stopping one way of being, in the non-physical realm and starting another at the same time in the physical; it roughly means, "comes true, having been hoped for. This is the kind of insight coming from Native America, from daily languages of wholeness talking about the dancing rather than the dancers, that could help physicists devise ways to talk about relationships and processes as primary.

E. Hilbert space

What is called Hilbert space in physics, a kind of mental scratch pad space, doesn't have a cool name in linguistics; it's just mental space, in the meaning realm -- where systems of phonology, morphology, syntax, semantics, etc., process meaning, where the essential meanings exist as points in a pattern, relational. This is another example of the similar form of structuralism underlying physics and linguistics. I would hazard a guess that in Native America, this space would be called simply 'ceremony'.

F. Quantum jump/leap

In physics, this phrase describes how an electron can be in one orbit and instantly in another without ever having been anywhere between. In language we can analogize this to the 'flap' in words such as 'latter/ladder', which is either /t/ or /d/ and nowhere in-between as you try to figure out which was meant by context. In perception this is like a Necker cube or other optical illusion, with focus and ground first one way and then

another, but it's almost impossible to see both at once.

G. The need for telepathy

Physics this century has embraced the need for something like telepathy, called non-local communication, in such experiments as the EPR (Einstein/Podolsky/Rosen), in Bell's Theory, Aspect's, etc. Non-physical communing is also a feature of Native American understandings, as in my oft-quoted Cheyenne Tower of Babel Teaching:

"Long ago, people and animals and spirits and plants all communicated in the same way. Then something happened. After that we had to communicate with human speech. But we retained The Old Language for dreams, and for communicating with spirits and animals and plants."

Thus far, except for a few scattered remarks by Whorf and my own Evolutionary BrainMind Model of Language, few linguists this century have yet taken this astounding requirement of telepathy by physicists and worked that into linguistics theories, thus linking to current physics and archaic knowledge. Terms such as 'rapport' and 'synchrony' are important here as well.

H. Ways of talking about talking

We generally use the container/conveyor conceptual metaphors when we talk about talk: I put my thoughts into the container of words, send them over to you, and you unpack my meaning from the words. Physicist David Bohm in 1980 wrote of the physical, or explicate, order of reality interacting with the non-physical or implicate order. In his final years he suggested that deciding to say something, for instance, results in sealing that intention into the implicate order, where everything is interconnected. I continue his idea by suggesting that a person hearing or reading me say something, such as you right now, does not have to build the meaning word-by-word alone, but through the implicate interconnected order can tap into the original intent and acquire a semantic target against which the words can be compared. This is a direct application of quantum thinking on language.

I. Imaginary plurals in describing reality

Because we can in English, we project our notion of plural onto reality in the same way whether we were talking about real or imaginary objects: we say 'ten pencils' and 'ten years' the same way, even though we could gather all of the former together at once but never the latter. Physicists also do this when they say 'electronS' in their narrative descriptions of the subatomic realm, since there is absolutely no way known to science to tell whether there is really only one Electron with gazillions of manifestations or really gazillions of separate electrons, because 'same' and 'different'

don't mean anything when applied to electrons. By contrast, many Native American languages label real and imaginary plurals in separate ways.

J. Quantum = Meaning = Spirit

The 1992 Bohmian Science Dialogue produced a consensus that the ways physicists use the term 'quantum' is like the way linguists use the term 'meaning' and Native Americans using the term 'spirit' (and, probably, when anthropologists use 'culture', biologists use 'life', psychologists use 'mind', medical practitioners use 'health', and others) -- as different labels for wholeness.

The similarity was noticed as soon as physicists and Indians discovered fundamental properties in their respective favorite realms: everything that exists vibrates; the only constant is flux; everything is interconnected, in a part/whole relationship.

K. Non-space Time vs. Timing in Spacetime

While for thousands of years our Western European cultures have gotten by just fine with daily and mathematical languages which treat Space and Time as separate, we couldn't notice until physics reunited them as 'spacetime' during this century that other cultures had never separated them to begin with. These Native American language/culture complexes are based on animacy and wholeness, as pointed out by Whorf and verified by Native Americans I've discussed this with -- and there is only integrated spacetime in their systems. The best word I've found to call this is 'Timing', as in when to begin a ceremony in a certain space -- and our baggage-filled cultural notion of 'Time' does not seem to be present anciently, including the tripartite past/present/future segmenting of reality; what they have is more like a 2-value system of manifested stuff outside, and the unmanifested futures inside. [If time, Time as a verbal hallucinatory construct of culture: river of time for us vs. Ancient Greek notion, then Hopi]

L. Animate and inanimate worldviews

Worldview: animate or inanimate in essence? Although the Newtonian worldview became excessively mechanistic, 20th century physics seems headed toward the notion of an animate universe that looks more like a great thought than a great machine, again a place Natives never left.

M. Back action

Sarfatti's back-action: does the physical realm influence the non-physical as well as vice versa? Is there mutual influence? Are quantum essences unchanging? In linguistics, we know that changes in phonology causes changes in sounds, but also that changes in sounds cause phonological system changes.

N. What lies beyond quantitative measurement?

Qualitative patternment, as Whorf declared (Linguistics as an Exact Science, p230-1): "Linguistics is ... an experimental science. ... Experimental need not mean quantitative. Measuring, weighing, and pointer-reading devices are seldom needed in linguistics, for quantity and number play little part in the realm of pattern, where there are no variables but, instead, abrupt alternations from one configuration to another. The mathematical sciences require exact measurement, but what linguistics requires is, rather, exact patternment -- an exactness of relation irrespective of dimensions. Quantity, dimension, magnitude are metaphors since they do not properly belong in this spaceless, relational world. ... I might perhaps liken the case to the state of affairs within the atoms, where also entities appear to alternate from configuration to configuration, rather than to move in terms of measurable positions. As alternates, quantum phenomena must be treated by a method of analysis that substitutes a point in a pattern under a set of conditions for a point in a pattern under another set of conditions -- a method similar to that used in analysis of linguistic phenomena."

O. Consciousness

Beyond the more popular *Tao of Physics* and *Dancing Wu Li Masters*, I guess my biggest surprise since subscribing to the Quantum Mind moderated list is that consciousness is a red-hot topic within physics these days. -- just as it is, in its own way, in Native America, a consequence of living in an animate universe, and as it is with the anthropologists gathered here. Unfortunately for me, linguists in general seem to be way at the back of the line.

III. Conclusion

Quantum linguistics is no more than a nascent idea at the moment, and I'm offering the above thoughts as ways of focusing on points of crossover where linguists and physicists might dialogue without the actual disciplines getting too much in the way. But it's something that's grown out of SAC, which is why the fuller phrase is QuAL -- meant to suggest the 'qualia' I'm after by using language to link the futique with archaic.

Last year I joined the Quantum Mind list, run by physicists. These thoughts arise out of what I'm now pushed to as a consequence of opening my big mouth, because after four tentative postings, they up and invited me to moderate a roundtable discussion on Quantum Linguistics at their conference this summer (1999) in Flagstaff AZ. I've arranged with my former students, now PhD Navajos, Nancy Maryboy and David Begay, to meet with the Quantum Linguistics Roundtable participants a couple of days before the conference starts, on the res, talking about the above issues. With that and the planned purification lodges, Blessingway Ceremony, and camping out overnight in Canyon de Chelley and listening to stories and teachings over a campfire, these participants will show up

at the Roundtable with some real EXPERIENCE to talk about and from, rather than just everyone making it up as they go along.

Wish me luck! I hope I've added equally to the excellent quality of papers presented so far at this conference!

IV. Appendix -- Origin of term Quantum Linguistics

As far as I know, the first usage of the term Quantum Linguistic occurred in an acronym I coined in the early '80s for a piece in a newsletter I was publishing at the time (Not Just Words: The Newsletter of Transpersonal Linguistics), occurring in the acronym QLAOT (pronounced clout), standing for "Quantum Linguistic Aspects of Telepathy".

Vol 1, No 1, Summer 1981

TELEPATHY

How can telepathy, with no physical words spoken, be a topic for linguistics? Well, that depends on whether linguistics investigates only speech, or also that nebulous concept language which underlies it. Telepathy epitomizes why I think linguistics should be concerned with more than just words -- or, in this case, less: silence ... dynamic, vibrating, supporting communication.

Alas, telepathy simply doesn't fit into the modern worldview, and so its subtle workings are generally ignored. The ancients know about it [see my Origins of Speech in a Deep Structure of Psi] and its modern proponents include academics in physics (Einstein, Bohm, Sirag, Wolf, Sarfatti -- see QLAOT next issue), parapsychology (Tart, Honneger, etc.), biology and other disciplines. Oxford biologist Sir A. Hardy saw telepathy as an evolutionary missing link for explaining genetic species-specific communication. Whorf referred to indirectly on p239, and that mysterious entity Seth claims that speech couldn't happen without it. In both its dramatic conscious manifestations (emotionally laden, as in accidents and certain experimental situations) and its milder variety of emotional rapport, telepathy is and always has been an everyday occurrence -- one which we have been enculturated not to notice. ...

Vol 1, No2, Autumn/Winter 1981/2

QLAOT -- Quantum Linguistic Aspects of Telepathy

It is time for a serious examination into the way theories in physics influence theories in linguistics. Only a handful of linguists this century have understood the drastic worldview shifts that have occurred in physics this century; only a few have told us that relativity and quantum views of reality open the door to a new, post-Cartesian/Newtonian kind of linguistics.

The most important theoretical news is that quantum theory recognizes the existence of thought and mind in the universe; there is room for thought space and for studying how that dimension relates to and influences physical dimensions. Classical physics had no room for mind, thoughts, emotions,

intuitions, spirit; therefore, both popular and theoretical models did not reflect their existence. We in linguistics are still using models which do not allow for consciousness or telepathy as active factors in human communication -- models which still implicitly assume a dualistic, pre-Twentieth Century view of the world.

For instance, instead of assuming a simple dichotomy of observer and observed, speaker and hearer, the [informed] theorist must be willing to view the particle, wave, and field aspects of the linguistic interaction, and the relationships between them. [The way the speaker speaks the discourse to the hearer depends on the speaker's knowledge of the hearer.] This means we must study the context as well as the structure of the language.

For another instance, we linguists have lost the habit of writing about the spirit of language the way founders of linguistics like Wm. v. Humboldt did. But now, in light of modern physics, we must look again at our classic languaging individuals, Speaker and Hearer, and understand that as well as being individuals, they are also quantumly connected to each other, the historical spirit of the language they speak, and the universe at large.

It is towards incorporating this quantum connectedness, the power as well as context and structure of language, that I last year coined the word QLAOT ... to encapsulate a way of approaching the power of language to influence human behavior and the personal reality structure. This label integrates findings of quantum physics with new directions for linguistics.

Saul-Paul Sirag, a leading consciousness physicist, told a 1979 Transpersonal Psychology plenary audience (in a talk entitled *Consciousness and Physics*) that Einstein spoke favorably of telepathy at least three times in print (eg, *Quantum theory seems to imply telepathy.*) Its existence is therefore recognized in physics (as was validated at a recent Conference on *The Nature, Role, and Power of Thought* -- reviewed next issue), independently of recognition in either psychology or linguistics. My favorite quantum physics cartoon book, *Spacetime and Beyond* (Bob Toben, Fred Wolf and Jack Sarfatti), gives an excellent and plausible account of how information can move instantaneously through the wormholes of cosmic foam called space. Sarfatti gives a simple diagram of how telepathy works in an appendix to Jeffrey Mishlove's *Roots of Consciousness*, and elsewhere talks about the faster-than-light Einstein-Podolsky-Rosen transmissions as information without transportation. Finally, a somewhat technical but satisfying account of biological, structural, mathematical, and other theoretical considerations of telepathy can be found in Andrija Puharich's *Beyond Telepathy*.

For those readers still asking, So I still don't understand -- what's the fuss about telepathy?. Well, WHAT IF linguistics got re-grounded in a top-down semantic way -- one which took the multitudinal facts of consciousness into account?

This really New Linguistics would realize that our total bodymind is activated during communication, as reflected in the gestalt and interplay of various brainwave rhythms in various parts of the brain, and that one of these levels includes the ancient (though modernly culturally repressed) species-specific

linkage called telepathy. New Linguistics would recognize the power of emotions in storing and accessing speech in memory, and its power in organizing semantic fields ['linguistic fields' in David Peats late-90's phrase] of words during speech. New Linguistics would recognize that all words hypnotize, and put hearer/readers -- trance-like -- into somebody else's verbally induced hallucination; would recognize, that is, the power of language to induce altered states of consciousness in others. This new linguistics, which is really a revival of aspects of pre-technological linguistics, is already among us. The age-old question is: how many have the proverbial eyes to see and ears to hear?
