A Lethal Fundamental Error: How To Recognize, Reject & Replace It

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Abstract

Experts within various specialties warn of crises in their individual areas of expertise—usually in myopic, single-issue terms. In this paper I present a more holistic view, an alternative frame of reference that offers a novel perspective on our difficulties.

I diagnose our culture as experiencing an **acute suicidal emergency**—we may soon render ourselves extinct (along with most of the rest of the biosphere).

I have found a previously unnoticed **fundamental theoretical error** encoded in the generalized grammar of the **western Indo-European (WIE)** family of languages. This error I find embedded—hidden—in notational (written) as well as discursive (spoken) locutions, and it appears to afflict all of our 'disciplines' (sub-languages) including the WIE logics, mathematics, sciences, philosophies, jurisprudences, religions, etc.

We humans use our languaging as a sort of 'map', by which to represent and transact with the 'territory' of our experiencing (the world). However, no 'map' can satisfy the criteria as **identical with** the 'territory' that it purports to represent. But, by assuming tacitly that it DOES, we continue to generate lethal errors and misunderstandings.

This error leads us to misunderstand our relationship with ourselves-and-our-environments, and has led our culture UNAWARELY to commit a cascade of **survival errors**, the accumulated weight of which now would allow us to exterminate living organisms (that includes us!) from this planet with only a moment's notice.

The fundamental error I have disclosed appears to me of magnitude and scope sufficient to account for the human-species-suicidal emergency in which we have placed ourselves.

In this paper I elaborate on these issues and discuss alternative ways of viewing ourselves-in-the-world that offer the possibility of averting catastrophe.

Here, I suggest, you may come to see your disciplines, your languages, your culture, your place in the biosphere (the terrestrial…sidereal universe), etc., as not fragmented, but as a whole.

Introduction: My diagnosis

More and more people have become concerned about what they sometimes call the "side-effects" of the **currently dominant world culture**. (Quinn, personal communication) (See Legend for Table 1) We even have words or phrases for some of these "side-effects": the *grinding poverty* endured by more than half the current human population; the social institutions of *war*, of *genocide*, of *totalitarian governance*, etc.; the practices of *poisoning the air, the waters and the lands*, of *depleting natural resources*, etc.; what we call *peak oil*; *global warming*; a human-induced *major extinction* of the planet's species, already well underway; and so on.

Many of these concerned persons have analyzed aspects of these "side-effects"—usually in single-issue terms, phrased impersonally. (Note 1)

Some folks have made major efforts to "remedy" problem(s) they addressed.

Some of their efforts have led to small successes. But on a global scale, these efforts have failed. The "best efforts" of the members of this dominant culture take them-and-the-rest-of-the-inhabitants-of-Planet-Earth, human and non-human, at ever-accelerating rates, closer and closer to ultimate catastrophe.

As viewed from my perspective, the most treasured principles of that dominant culture have unexpected "logical consequences". Any human population that follows such principles would make enough, severe enough survival-errors to end up annihilating (a) themselves, (b) each other, (c) the portions of the human species that did not belong to their dominant culture (the members of thousands of other—tribal—cultures, who make up some 2 to 4% of the current human population), and (d) the other organisms with which we humans share Planet Earth.

I request that you credit me—at least tentatively—as having a well-worked out holistic viewpoint. (Note 2)

Perhaps I have something relevant to offer here.

In brief, I diagnose our culture as experiencing an **acute suicidal emergency**.

No one can avert someone's suicide by denying that the signs and symptoms, the behaviors that warn of impending self-destruction, non-verbally OCCUR.

What I have said here

Therapists mostly study self-destructive behavior at the level of individuals or small groups. Sometimes they succeed in catalyzing the participants to alter their self-destructive assumptions-and-behavior. But we have no previous experience with what happens when someone intervenes into self-destructive behavior at the level of culture.

From my own experience opening up this new field of inquiry, I have come to hold an opinion—a "clinical impression": I suggest that, for one to come to grips with a diagnosis concerning one's own culture resembles, at least superficially, what one must go through to acknowledge and take in the diagnosis of dysfunctioning of, and in, one's own family.

Carolyn Baker (2006) develops the analogy which compares facing up to suicidal activities of the United States government with facing up to personal experience with dysfunctioning:

> "First and foremost is the willingness to look at how ugly the situation really is. This is not unlike being willing to look at the extent of dysfunction in a family. In the family system, this may begin with feelings of discomfort, followed by thoughts that someone in the family may have a dirty little secret, followed by the awareness that someone is an addict or alcoholic, followed by the realization that that someone was a child molester, followed by the awareness that that person may have molested many children. The journey from "feelings of discomfort" to the realization that one may have been sexually abused to the realization that it happened many times to oneself and one's siblings is a daunting, painful odyssey of hurt, rage, shame, and a plethora of other negative emotions. At any time in the process, one may choose to go "thus far and no farther," but then one is confronted with the reality that "thus far" is not the whole truth.

> "... Quite often the response is, "I don't want to know the whole truth." That is always a prerogative to which one has every right, and it must be remembered that if one stops there, the remainder of reality always awaits revelation. Like the full disclosure of ugly secrets in dysfunctional families, owning and assimilating the abhorrent realities of our government is a process that requires a willingness to invest time and energy in developing one's learning curve, not to mention extraordinary courage.

> "… All genuine solutions are local. All others are props in the scenario of a crumbling empire." (Baker, 2006)

But in this document, I address the topic of self-destructive behaving-and-experiencing at the level of **culture**, not at the level of individuals or of small groups or of nations or even of empires. The currently dominant world (mega-)culture contains some six billion plus people at present. But the construct of "*culture*," in my opinion, designates an articulated collection of assumptions, more or less shared by its members. So every member contains the culture. "Changing the culture" means changing this collection of assumptions, and, in principle, takes place one person at a time.

In diagnosing our culture as suicidal, I address an observable situation which threatens the continuance not only of you, your currently extant family and the members not yet

born, but also every other human and her/his family and unborn, as well as all our non-human neighbors. Most people have difficulty imagining what **extinct** means. Jonathan Schell (1982) gives a clue by saying, in effect, that the extinction of humans would mean nobody present to assess current conditions and report on them, and nobody present to report to.

By now, our planetary life-support systems approach breakdown. Many people have begun to notice that humans trigger this survival-crisis. Few, however, have noticed that only the activities of members of the dominant culture contribute to this crisis.

I first arrived at this inference, this diagnosis, on or about 2 November 1952, after I heard of the Bikini Atoll H-bomb. I saw that "device" as evidence of a **survival-error**—the mistake of bringing thermonuclear reactions down to the surface of Planet Earth. With such reactions, we heat a few kilograms of metal to temperatures previously found only ninety-three million miles away, on the surface of our Sun, or at indeterminate distances, in the heart of a supernova. Such reactions do our planet and its biosphere no good. And in principle, this amounts to only one of many survival-errors which the dominant culture has committed.

About then, I expressed my insight in a brief poem:

> dies irae
> nothing living anywhere in sight
> the sands fused to green glowing glass
> the hills scorched dry eroded bare
> the lake foul dead radioactive
> while on the lifeless plain
> a white-eyed skull surveys its handiwork

In the early 1970's, I provided an operational basis for this inference—I performed a detailed analysis of the assumptions encoded in the generalized grammar common to the languages, **notational** as well as **discursive**, that belong to the **western Indo-European (WIE)** family.

As the keystone supposition underlying this crisis, I discerned a previously-unnoticed **fundamental theoretical error**, (Perls, et al., 1951, pp. 243-4) which I recognize as encoded in the generalized WIE grammar. That makes WIE **languaging** (Note 3) a topic central to our inquiry. Our "disciplines"—the logics, mathematics, sciences, philosophies, jurisprudences, religions, etc., of the WIE tradition —arose within the Western cultures, and their linguistic structuring specializes the WIE grammar. (I specify the WIE grammar for two reasons: one, because I don't know any other well enough to analyze, and two, because everyone who does scientific work has "taken over bodily the entire Western system of rationalizations". (Whorf, 1956, p. 214)) Consequently, this unacknowledged fundamental error forms a key part of the premises of each of our "disciplines". Anyone who relies on it unawarely generates one or more **hidden untenable assumptions** within

her/his own personal working presuppositions. From my perspective, that means that those who command our "disciplines", unaware of this fundamental error and its lethal consequences, have used their strengths to hasten our plunge into disaster. Anyone deploying one or more of those traditional "disciplines" can only guide us deeper into the crisis. The traditional methods cannot lead us to avert it.

As Einstein famously expressed the issue: "The world we have made as a result of the level of thinking we have done thus far creates problems we cannot solve at the same level at which we created them." (See Table 1.)

Preview

In the rest of the present document I (a) outline the "fine-structuring" of this fundamental error, (b) show how it gets transformed into at least one unnoticed (hidden) personal presupposition tacitly shared with the other members of the dominant culture, and (c) provide enough of a glimpse of some of the previously-hidden implications to enable you further to explore them for yourselves.

But I do not stop there. It seems futile to make a diagnosis which offers no possibility of remedy. The process of disclosing, rejecting and replacing that egregious error has occupied the members of a small group of humans for over a century. In about 1890, while still a schoolboy, Alfred Korzybski (1879-1950) undertook to answer a question for which his schooling had not prepared him: "How do we tell the humans from the brutes?" In 1920 or 1921, he answered that question for himself: "As a species and as individuals, we start from where our fathers end. Man is not an animal." (Schuchardt, 1950, p 35b) This insight became the seed of his first book, which appeared in 1921, and became a best-seller for a while. In 1941, Korzybski set forth novel assumptions—three **undefined terms** and three **postulates**, which he called the **non-aristotelian premises**. (Korzybski, 1941b) (Note 4) He presented these as the most-fundamental presuppositions of the synthesis which he had by then generated.

I began adopting these assumptions in 1950. Assimilating them as my own came gradually, as I sequentially disclosed and rejected more and more of the traditional assumptions I had learned-and-used from childhood, and replaced them with the ones I had awarely chosen. In the early 1970's, I used the new assumptions to disclose and make explicit the above fundamental error, and the lethal horrors that follow from it.

Examining Languaging

Above, I showed that the topic of WIE languaging appears central to our inquiry. In order to display the fundamental error, I must perform a brief scan of the overall '**territory**' in which what I call *languaging* occurs, and equally briefly examine the '**maps**' provided by the WIE languages that supposedly REPRESENT that 'territory'.

Our alternative frame of reference delivers biological insights the likes of which have eluded WIE biologists for millennia. For example, Earth's known organisms, from

Table 1

1. WHO:	2. DID WHAT:	3. LED TO:	4. LED TO:	5. LEADS TO:
Originators of Proto-Indo-European languages, and their successors.	MADE FUNDAMENTAL THEORETICAL ERROR I: They FAILED and/or REFUSED to distinguish (symbolically) between the NON-VERBAL and the VERBAL, at the level of the Proto-Indo-European and western Indo-European (WIE) (and related) grammar(s).	MADE FUNDAMENTAL THEORETICAL ERROR II: The grammars they generated LACKED forms that make it obligatory in every locution to distinguish grammatically between NON-VERBAL and VERBAL "doings" or "happenings": Name vs. Thing Named, term vs. referent, 'map' vs. 'territory', etc.	Each child learning a WIE language "learns" NOT to distinguish between NON-VERBAL and VERBAL— which amounts to treating 'MAP' and 'TERRITORY' as IDENTICAL. That appears tantamount to CLAIMING TO POSSESS "ABSOLUTE CERTAINTY", which amounts to PRETENDING TO GOD-LIKE POWERS: OMNISCIENCE and OMNIPOTENCE.	Making, and defending, SURVIVAL-ERRORS.

Legend: The members of the currently dominant world culture make up some 96-98% of the current world population of some 6,400,000,000 humans. The remaining 128,000,000 to 256,000,000 humans —2 to 4% of that 6.4 billion—stand as members of intact tribal cultures (if any), and/or as survivors of more or less disrupted tribal cultures. To date, the members of the dominant culture have made so many and such significant survival-errors that they have brought the so-called "life-support systems" of Planet Earth to the edge of total collapse—ultimate catastrophe.

The human population explosion, most conspicuous over the last 500 years, does not signal "evolutionary success" nor "survival of the fittest". We would do better to regard it as yet another survival-error.

viruses to protista to humans, appear in this context to follow a single **protocol for surviving in the biosphere**: They survive (for at least a few moments more) by functioning in ways analogous to the ways in which a **self-correcting system** functions. In contrast, humans can in principle block their own self-correcting, by denying that they make any "guesses"—assumptions— declaring in effect that "I see only what 'is' really there!" I call the resulting pattern **self-defending**. (Note 5)

To human observers, the "doings" or "happenings" which make up organisms-in-their-environments seem '**apparently-purposive**' (Sommerhoff, 1950)—"aimed" at having the organism (in its context) persist. (Note 6)

Overview of the 'territory'

As viewed by a **designated observer** (Hilgartner, 2002a), an-organism(-in-its-environment) generates some kind of survival-oriented 'map' or 'guess' or 'behavioral hypothesis' (e.g., "Approach, capture and eat THIS!", or "Avoid getting eaten by THAT!"). By acting on its 'guess', in effect the organism PUTS IT TO TEST. The encounter proceeds to an OUTCOME; and the organism can, in some sense or other, JUDGE the starting-guess(es) against the outcome, on a scale of **disconfirmed … not-disconfirmed**. (Note 7)

With the kinds of 'guesses' most organisms make, the outcome generally remains "un-ignorable" by the organism, for that kind of outcome usually remains closely related to whether or not, or how well, the organism survives that encounter. For an organism's 'behavioral hypothesis' to get totally disconfirmed might mean its sudden death, whereupon the 'boundary' between 'the organism' and 'the environment' abruptly ceases to function. For the hypothesis to turn out almost completely not-disconfirmed would mean that the organism obtained what it most needed, and that it now feels replete, sated (and survives for at least a while longer).

From this perspective, living-organisms-in-their-environments consist of 'apparently-purposive' "doings" or "happenings." Then what I call *languaging* comprises a "special case" of apparently-purposive "doings" or "happenings".

Overview of the WIE 'maps'

The non-aristotelian premises proposed by *Korzybski (1941b)* (Note 4) provide criteria against which to judge the WIE 'maps' that REPRESENT the 'territory' I call *human languaging* (or any other 'maps'). The first postulate states that no 'map' can satisfy the standards as **identical with** the 'territory' for which it stands. At best (as I surmise), a 'map' can provide **predictions** which, when **tested**, turn out **not-disconfirmed**. Then I may infer, tentatively and provisionally, that that 'map' qualifies as **similar in structuring** to the 'territory' in question (as judged by the test(s) performed). If **disconfirmed** by one or more tests, I must infer that that 'map' qualifies as **not-similar in structuring** to that 'territory'.

Few people, I believe, have critically examined the ways in which WIE 'maps' represent the 'territory' of *human languaging*. In order to make the provisions of those WIE 'maps' stand out clearly, I ask the following two questions—each of which, to a first approximation, has a simple, unambiguous answer. Taken together, the answers to these questions provide a sufficient scan of the crucial setting in which *languaging* occurs:

The 'territory'

A. Who DOES NOT engage in languaging?

> With one exception, all the organisms I know of—the non-verbal examples of what biologists call *viruses*, *protista*, *bacteria*, *fungi*, *protozoa*, *multicellular plants and animals*, *higher plants and animals*, up through *higher apes*—live only on non-verbal levels (live in— **transact** (Dewey & Bentley, 1949) in **survival-oriented ways** only with—non-verbal environments). So far as we can tell, they do not engage in human languaging. Or to coin a phrase, they engage only in **not-languaging**.

B. Who DOES engage in languaging?

> So far as I know, ONLY HUMANS live in—transact in survival-oriented ways with—both **non-verbal** and **verbal** environments. Humans engage in various non-verbal "doings" or "happenings", including continuing to beat our hearts, maintain our blood-pressure, breathe, eat, excrete, move, etc. From this perspective, these "doings" or "happenings" appear analogous to the functioning of a self-correcting system, that operates only non-verbally. But we also engage in verbal-level "doings" or "happenings"—generate mainly verbal 'maps', and use them to guide ourselves in our survival-oriented transactings with our non-verbal-and-verbal environments—including other humans and other kinds of organisms. In so doing, we potentially engage in "doings" or "happenings" that appear analogous to the functioning of a self-correcting system that operates on verbal levels.

These two questions, and their answers, give a preliminary scan of the crucial 'territory': specifically, a scan of just what the different kinds of organisms that inhabit the biosphere of Planet Earth observably DO and DON'T DO. So any valid answer to Korzybski's early question, "How do we tell the humans from the brutes?", must **center on** (or at least **take into account**) human languaging. According to Korzybski, humans accumulate a **heritage** (he considered it composed of human 'knowledge'; I prefer to say it consists of **tested guesses**, many of them verbal). Each human born assimilates some portion of this heritage; each human contributes to this heritage; and each human passes on the enriched heritage to peers, progeny and the generations yet unborn. And they do so mainly by means of human languaging.

To use Korzybski's analogy to geometry, we humans have—live in—at least one more "dimension" than do the non-human fellow organisms with which we share the planet.

Humans language; non-human organisms do not.

The WIE 'map'

As I said, few people have critically examined the ways in which WIE 'maps' represent the 'territory' of *human languaging*. To display these ways clearly, I need to borrow several tools—notably, one from Whorf and a couple from Polanyi.

As Benjamin Lee Whorf (1896-1941) points out,

Languages differ not only in how they build their sentences but also in how they break down nature to secure the elements to put in those sentences. *(Whorf, 1956, p. 240)*

Many grammars make **distinctions.**

I have no idea just how many observably different patterns for building sentences one would find if we humans had surveyed the world's currently-available tongues. The grammar common to the WIE languages, and the grammars of other tongues that build their sentences along similar lines, use several different patterns to specify an interlocking collection of distinctions. Their vocabularies consist of **forms**—some of them we call "words"—which speakers modify by means of various prefixes, infixes, suffixes, or other grammatical devices. For example, in English, we modify some of our **nouns** in terms of grammatical **number:** the distinction **singular** vs. **plural**. With some "count-nouns", we indicate this distinction by means of a suffix:

one *cat*, two or more *cats*.

With others, we use an infix:

one *man*, two or more *men*.

(With "mass-nouns", e,g, *water*, we can indicate "more" or "less":

a glass of water, a drop of water

instead of counting

**one water, two or more waters*.)

In another pattern, we choose among several alternative, related forms. For example, we have at least two different **demonstrative pronouns**, which we spell as *a* and *the*. When a speaker precedes a noun-form with *a*, s/he uses that form to indicate "any example of that noun-form whatsoever"; when s/he precedes it with *the*, s/he indicates "the example of that noun-form already under discussion."

In general, the WIE grammar, and others like it, encode(s) *distinctions*.

Children learn to language by intelligently imitating their languaging caretakers. *(Polanyi, 1964, pp. 206, 207-8; Hilgartner & Randolph, 1969c, pp. 17-20)* In so doing,

they learn to make-and-use the distinctions encoded in the grammar which their caretakers use. Where that grammar does not ENCODE a distinction, the young don't just not-learn that distinction—they "learn" TO NOT-MAKE it.

In my scan of the 'territory' (see **A.** and **B.** above), I find that humans engage both in *not-languaging* and in *languaging*; whereas non-human organisms engage only in *not-languaging*. In order faithfully to represent this 'territory', the 'map' provided by any language must somehow faithfully represent the distinction between *languaging* and *not-languaging*. In a language that uses the WIE grammar, that would mean that the grammar must include grammatical devices, REQUIRED IN EVERY LOCUTION, which have the effect of indicating that "When I use this pointer-word here, I refer to **non-verbal "doings" or "happenings'**, whereas when I use it there, I refer to **verbal "doings" or "happenings"**".

Criterion:

If, in a grammar which I scrutinized, I found no grammatical devices for representing the distinction between *non-verbal* and *verbal*, I would have to conclude that that grammar **eliminated that key distinction from consideration.**

My findings:

In the WIE grammar, I find no evidence of grammatical forms or other devices by which to distinguish between *non-verbal* and *verbal*.

I must conclude that the 'maps' encoded in the generalized WIE grammar—which underlie both the discursive and the notational languages of that linguistic family—eliminate from consideration that key distinction. Or otherwise stated, I conclude that any user of that grammar unawarely makes the error of TACITLY positing that *the non-verbal* and *the verbal* satisfy the criteria as *identical*.

Therefore the WIE grammar DOES NOT QUALIFY AS *SIMILAR IN STRUCTURING* TO THE 'TERRITORY' IT SUPPOSEDLY REFERS TO— the 'territory' of *a-human-transacting-with-her/his-non-verbal-and-verbal-environments*.

From this, my readers can infer that the WIE grammar encodes at least one fundamental theoretical error. It eliminates the topic of human languaging—verbal transacting—from consideration. This error, at the very least, impairs the ability of users of WIE languages to generate reliable predictions.

Un-written languages leave no material traces—no evidence concerning their linguistic structuring. We have no documentary evidence prior to the development of writing, but for at least the last 5500 years or so, at the level of grammar, the WIE languages have observably failed to distinguish between what I might call *the non-verbal* and *the verbal*. At the level of **content**, however, the story gets more complicated. Starting with Gottlob Frege (1848-1925) in the late 1870's, more and more users of WIE technical and

discursive languages have come to distinguish between *non-verbal* and *verbal* at the level of content (rather than of grammar). They have used polar terms such as **Thing Named** vs. **Name**, or **referent** vs. **symbol**, or 'territory' vs. 'map', etc.

The trouble with making a key distinction solely at the level of content comes from the fact that making the crucial distinction becomes optional rather than obligatory. Then when a speaker/writer THIS TIME reverts to the grammatical baseline and neglects to use the relevant term or term-pair, it could perhaps happen that no one (not even the speaker/writer) notices the omission. So—although present at the level of *content*, the distinction still "does not much matter". Indeed, despite the examples set by Frege, Quine, etc., no WIE logician, mathematician, philosopher or other worker has, so far as I know, set forth premises which introduce the distinction between *non-verbal* and *verbal* into even one notational language. (Non-aristotelian 'logicians'—Korzybski, and Hilgartner— have done so.)

Since the WIE grammar eliminates from consideration the key distinction between *non-verbal* and *verbal*, that makes it difficult if not impossible for WIE languagers to characterize humans as the only known organisms that engage in languaging.

Therefore the WIE grammar corrupts our picture of "where we humans fit into the **terrestrial…sidereal universe".**

A novel view of Korzybski's contributions

I and my collaborators, standing upon the shoulders of Korzybski, appear to have taken at least one major step towards averting our self-generated survival-crisis. The above discussion of languaging expresses one version of our findings. The above inferences rest on a novel way of viewing Korzybski's major innovations, and on four ways of testing these inferences.

Korzybski (1921) answered his early question (1890's—"How do we tell the humans from the brutes?") by expressing a novel insight. He initially stated this as, "Humans have the capacity to transmit from generation to generation; one generation or one person can begin where the other left off.…Man is not an animal." *(Schuchardt, 1950, p. 35b)* In his first book, Korzybski broadened this insight, making the three main points I listed above. Let me here elaborate on those points:

> a) Each human gets born at-a-date; almost every baby emerges into a group of languaging humans, who share a heritage. In the course of growing up, each one ASSIMILATES a unique fraction of this heritage—makes it her/his own.
>
> b) During her/his lifespan, s/he not only guards and protects this heritage, s/he also CONTRIBUTES to it—whether or not s/he can NAME, or even point to, her/his contributions.

c) S/He PASSES ON the enhanced heritage to her/his peers, successors, and to the generations as yet un-born.

Korzybski calls this whole process **time-binding**.

Bartter (2003) succinctly summarizes the core of this construct. In a Tutorial on my website, I further develop the construct of time-binding. *(Hilgartner, 2003a)*

To me, it appears that Korzybski may have failed to notice a key part of his innovation—the part that makes it perhaps the most momentous insight in at least 5,500 years. The "received wisdom" of the currently dominant world culture views Mankind either in zoological terms—

"Man is some kind of animal"—

or in mythological terms—

"We are animals plus something, a 'soul' or 'mind' or what not." *(Korzybski, 1948, p. 628)*

This "received wisdom" purports not to express a theory, conjecture, hypothesis, guess, supposition, etc.—it 'tells' "how things REALLY 'ARE'". It expresses what the members of the dominant culture regard as an "absolute certainty"—a **'map'-'territory' identity**. When Korzybski answered his early question by arriving at his own inferences, based on his own observings over the preceding thirty years, he NON-VERBALLY REJECTED that tacit, non-verbal usage of identity. Key point: He actually rejected that usage of *tacit identity* some twelve years before he explicitly, verbally rejected EXPLICIT *identity*.

To return to what makes these insights, the construct of time-binding and the concurrent rejecting of a usage of tacit identity, so momentous: Korzybski thereby HIGHLIGHTED the keystone presupposition that has held in place what Whorf calls "the entire Western system of rationalizations". *(Whorf, 1956, p. 214)* In so doing, he opened the way toward disclosing and rejecting that presupposition, and thereby CORRECTING the fundamental theoretical error(s) encoded, in particular, in the WIE grammar.

By means of both his books taken together, Korzybski distinguishes between humans and other kinds of organisms in terms of *who languages*. Thus he demonstrably posits a Cosmos that harbors living organisms, including humans. In his second book, Korzybski (1933) teaches that (in such a Cosmos) **the logical construct of identity** (the notion of "absolute sameness in all respects, or negation of difference") appears **invalid**—it CANNOT SURVIVE SCRUTINY.

In my opinion, no human could or would explicitly regard *identity* as valid unless s/he had already tacitly, unawarely relied on it and unawarely regarded it as valid, prior to explicitly asking her/himself whether or not to accept it.

So—as Korzybski suggests—we should not rely on *identity*. *(Hilgartner, et al., 1991, pp. 177-8)* He suggests reserving it as a vocabulary item with which to discuss **a human making a mistake**.

Test 1: Do we find anything wrong with the construct of identity?

Never mind the argument from authority—so what, that "Korzybski says so!"—When we scrutinize the construct of *identity* for ourselves, do we find anything wrong with it?

An E-Prime (Note 8) version of Korzybski's Postulate of Non-identity says, "No 'map' can satisfy the standards as *identical with* the 'territory' for which it stands".

Allow me to exhibit some of the difficulties we create if we disagree with that version of that postulate. For the sake of this demonstration, accept for the moment an "absurdity": Accept the assumption that I can generate a 'map' identical with the 'territory' for which it stands. Assume that my 'map' of YOU qualifies as identical with YOU—and let's see where that takes us.

A theologian, reading or hearing this description of circumstances, would say "Ah, yes! Those comments describe what we theologians call **omniscience** and **omnipotence**. You do, of course, attribute those god-like 'powers' solely to the Deity, do you not?"

The consequences that follow from this "absurd" presupposition turn out unacceptable. So far as I know, mortal humans do not, cannot command god-like powers. As our theologian colleague quietly points out, to assume that humans do wield such powers looks like the most egregious error so far described for humans to make.

But—to say it as gently as I know how—this contra-positive fantasy suggests that any human who EXPLICITLY accepts **identity** as valid at the very least TEMPTS her/himself to make this egregious error.

Worse yet, any human who TACITLY relies on identity—who unknowingly relies on this hidden assumption—tends to let it "run" her/him. At worst, s/he promotes the claim that s/he commands god-like powers to the status of a **delusion**—a 'belief' held REGARDLESS OF EVIDENCE.

Any behavioral hypothesis framed and enacted by a human who assumes s/he commands god-like powers will end up disconfirmed—by any competent test of the 'god-like powers' part of that hypothesis. WIE languagers cultivate the skill of NOT competently testing at least some of (or some aspects of) their hypotheses, and/or ignoring at least some disconfirming evidence, e.g. by classifying such evidence as "side-effects". So, at least at times, they do their best NOT to learn from their (not-immediately-lethal) survival-errors.

Under those circumstances, I would find myself possessed of "absolute certainty" concerning you. I would know all that exists to know about that (self-identical, and

therefore necessarily static) 'entity' we call *you*. Furthermore, anything I wanted to do with, for, or to you, I would know how to do; and the results I would obtain by doing those things would produce exactly the results I expected and intended, no more and no less.

Test 2: Inter-personal consequences of (tacitly or explicitly) accepting identity as valid.

What difference does it make, whether or not one relies on the logical construct of identity?

> I REGARD THE ANSWER TO THIS QUESTION AS CENTRAL TO THE THESIS OF THIS PAPER.

Here, let ≡ signify *identical with*.

IF

> My 'map' ≡ the 'territory' (and so, I find myself possessed of "absolute certainty")

AND

> Your 'map' ≡ the 'territory' (and so, you find yourself possessed of "absolute certainty")

THEN

> Your 'map' ≡ My 'map'.

That means that you and I "should" (operationally speaking, you and I EXPECT to) find ourselves in a condition of "perfect agreement".

If we should get into a conversation, however, I predict that not even three minutes will have passed before one or the other of us will have "said it wrong" (in the opinion of the other one).

Now, I think of myself as a generous fellow. I feel almost sure that I would take the trouble to try to persuade, manipulate, or coerce you into "saying it right".

If my effort succeeded, then fine, fine—we could continue as "friends".

If my efforts failed, however, I would find myself with no available choices other than to DEFEND my TRUTHS against your ERRORS.

The euphemism "defend", in this context, warrants some scrutiny. Operationally, it refers to a "ladder" or hierarchy, ordered in terms of increasing degree of (perceived) "THREAT" (to the person doing the "defending"), which s/he meets with increasing degrees of violent "RESPONSE". In the list which follows, I only imply the "THREAT", but name the "RESPONSE".

1. Verbal put-down of the "errors"

2. Non-verbal and/or verbal put-down of the person in "error"

3. Fisticuffs

4. Boy Scout-level murder-weapons (rope, fire, knife, gun)

5. Military-grade weapons

6. Nuclear "devices" or other "'weapons' of mass destruction"

In short, anyone who tacitly and/or explicitly accepts identity as valid—relies on it—lives a **pattern of universal discord**. *(Hilgartner, 2003b)*

In contrast, as Korzybski points out,

It is amusing to discover, in the twentieth century, that the quarrels between two lovers, two mathematicians, two nations, two economic systems, [etc.], usually assumed insoluble in a 'finite period' should exhibit one mechanism—the semantic mechanism of identification—the discovery of which makes universal agreement possible, in mathematics and in life. *(Korzybski, 1933, p. 761)*

I attribute to Korzybski the opinion that the only valid form of conflict amongst humans consists of the conflict of 'ideas' (not conflict OVER 'ideas'). I tentatively suggest that we regard discord amongst humans on any other topic as evidence of a survival-error based on relying on the logical construct of *identity*.

Test 3: Who relies on the logical construct of identity?

An answer based on how the WIE speech-communities build their sentences

In the passage quoted above, Whorf points out that languages differ mainly in two ways: In how they build their sentences, and in how they "break down nature to secure the elements to put in those sentences." In this paper, I haven't room to discuss the second of these topics, which spells out how humans move from the non-verbal to the verbal. Elsewhere, Hilgartner, Carter & Bartter (2002, p. 10) briefly deal with that topic.

To show the basics of how WIE languagers build their sentences, I shall state the simplest, most fundamental linguistic generalization about WIE languages; and shall ask, and answer, a "simple" key question.

The generalization:

To form a "complete sentence" in a WIE language such as English or the mathematical theory of sets, **we place at least one *noun* or *noun-phrase* or *noun-surrogate* next to at least one *verb* or *verb-phrase* or *verb-surrogate*.**

Here, let ~ signify *not-*, and ⊂ signify *subset (of)*.

>*The cat grinned*. (Intransitive example)

>*The cat wagged his tail.* (Transitive example)

>~ *C* (Not-C) (Formal analog of intransitive usage)

>*C* ⊂ *D* (C subset of D) (Formal analog of transitive usage)

The key question:

Forget what the grammarians, logicians, mathematicians, philosophers or other "experts" may say—**Operationally speaking, how do we distinguish the *nouns* from the *verbs*?**

My answer:

We users of WIE grammar do that by means of some tacit rule of the form of Aristotle's "Law of Identity" (which says: ***"Everything is identical with itself"***).

In short, we do so by regarding, and treating, the *nouns* as IDENTICAL WITH THEMSELVES: We say, or write, and (outside of the E-Prime dialect of English) we regard as acceptable, sentences such as
The cat is the cat.
…**and by regarding, and treating, the *verbs* as NOT-IDENTICAL WITH THEMSELVES**: We virtually never say or write,

>**Grinned is grinned*. or

>**Wagged his tail is wagged his tail*. or

>**Is is is*. or

>** ⊂ ⊂ ⊂*   (Subset subset of subset.)

These examples remind us that verb-forms, which we do not regard-and-treat as self-identical, cannot fill the two "places" in Aristotle's Law of Identity reserved for self-identical noun-forms.

My findings, the inferences I must draw, seem unpleasant. To answer the question posed for this Test: It appears that we, whenever we build our sentences or **well-formed formulations (WFF)** on the patterns encoded in the generalized WIE grammar (including the *noun-verb* distinction), at least tacitly rely on the logical construct of identity—which, in Test 1, I just showed as invalid, unacceptable.

That makes any languaging in a WIE tongue (discursive or notational) which we have done, currently do or may henceforth do, disastrously dysfunctional. For example, starting as far back as we humans have written records, we have clear evidence that the

members of the currently dominant world culture, as they spread it across the planet, have systematically destroyed more and more of the "life-support systems" of Planet Earth. Today we continue to do so, at ever-increasing rates.

Test 4: What happens if we reject that concealed usage of identity?

Korzybski advises us not to rely on *identity*. The foregoing examination makes this point even more strongly.

If we act on Korzybski's advice—if we reject the usage of *identity* concealed in the WIE grammar—then: what happens to our WIE languaging?

> 1. We can no longer tell *the nouns* from *the verbs*.

> 2. Therefore we can no longer generate even one complete sentence in a WIE discursive language, nor even one WFF in even one notational WIE language.

> 3. In other words, the WIE grammar collapses.

> 4. I gratefully sweep away the rubble, leaving the field clear so I can

> 5. Derive a 'grammar' from my chosen (non-aristotelian) premises, and

> 6. Build up a "Let's Keep Track of What We Say" notation on that derived grammar.

We need not rely on the logical construct of *identity*. Any living human can change her/his own assumptions (and thereafter live with the consequences of those assumptions, rather than with those that follow from relying on *identity*).

In the present document, I haven't room even to describe the derived grammar, much less the notation which I and my collaborators built on it. That frustrates me, and perhaps some of my readers. I recommend you examine Hilgartner (2002), in which I intended to include enough detail on these topics to prove convincing.

Meanwhile, various linguists, including Whorf (1956) and Moonhawk (Danny Keith Alford, 1946-2002) (Note 9) have studied some of the languages of ancient America (including Hopi and Cheyenne), whose speakers build their sentences in ways drastically different from each other, and equally different from the WIE patterns. So far as I can tell, the languages of ancient America do not rely on the construct of *identity* at all. By the way, when I wrote the non-standard notation mentioned above, I borrowed some linguistic distinctions from the Hopi language, as described by Whorf.

Eventually, some person or small group will, I predict, develop a spoken-and-written discursive language built up on this derived grammar, or some further development of it. Then any human on the planet will have the means to language in a tongue demonstrably free of the untenable assumption(s) and consequent delusions which I have pointed to.

A Surprise

The four kinds of evidence just presented, considered together, produce an unexpected result. I showed (i) that, for anyone who relies on it, identity has unacceptable consequences; (ii) that identity leads us continually into a pattern of universal discord; (iii) that identity remains built into the WIE grammar; and (iv) that by rejecting this usage of identity, I collapse that grammar. That has left me free to sweep away the rubble, and to create at least one new way of generating sentences.

The rubble includes the mistake of TACITLY holding *the verbal* as identical with *the non-verbal*. Such presuppositions amount to the delusion that the WIE way of building sentences, using the *noun-verb* distinction, 'tells' "the way 'things' REALLY 'ARE'." That would mean that the WIE way of doing things provides 'THE ONLY WAY' to achieve 'communication' or other desirable 'results', and thus provides 'THE ONLY BASIS' for "disciplines"—e.g., the WIE logics, mathematics, sciences, philosophies, jurisprudences, religions, etc.

The surprise arises from the achievement of rejecting and replacing the *noun-verb* distinction, and its encoded, concealed delusions, by generating an alternative grammar and notation.

Steps towards averting species-suicide, extinction, and pan-biocide

As I have pointed out above, the long-term trouble of the currently dominant world culture came from the fact that, for thousands of years, its members aspired to "absolute certainty", and repeatedly ACTED as if they had ATTAINED it. This has led, and continues to lead, to survival-errors—self-destructive behaving-and-experiencing at the level of culture.

Hilgartner, Harrington & Bartter (1989) inter-weave three suppositions ((a) Korzybski's third postulate, the Postulate of Self-reflexiveness, one version of which states that any 'map' or "picture" includes some kind of representation of the 'map'-maker; (b) the notion of *lived theory* (as contrasted to *abstract, written theory*); and c) the construct of *directively correlated* (please read this as designating a model for 'apparently purposive') (Note 6 again) (Sommerhoff, 1950)). They use these strands to display the kinds of 'maps' that WIE frames of reference provide; and what happens when WIE languagers act on such 'maps'.

[Let us] explore in some detail the supposition that humans *expect* or *assume*—the construct of **lived** theory.

As we have indicated above, we assume that human assume, that they CANNOT NOT-ASSUME, and that their assumptions (which may remain entirely non-verbal) show up in action. In other words, what one DOES follows from (forms the logical[-and-empirical]

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outcome of) what one ASSUMES. Thus we hold that every human transacts AS IF from some *theory* or other, some structure composed of assumptions, which we call a *lived theory*—whether s/he notices or not. Where her/his lived theories lead to outcomes which s/he regards as unsatisfactory, s/he can alter what s/he habitually DOES only by changing what s/he ASSUMES (and/or vice versa). …

Lived theories have a creative aspect, functioning like self-fulfilling prophecies. As we humans transact on the basis of lived theory, our directively correlated doings re-make everything involved in the transacting into a closer approximation to the pictures of "what goes on" embedded in the theory which we live. For example, a lived theory which tacitly posits 'map'-'territory' identity and so systematically leaves out of account the observer also systematically leaves out any transacting between organism (observer) and environment, and thus in turn leaves out the environment. Such a theory thus provides the symbolic means to represent only inanimate mechanisms, e.g. those that maximize a single variable. Someone who lives such a theory may have the tools to account very well indeed for the non-living, the physical—or for such "variables" as power, or status, or profits. However, in the process of living that theory s/he makes her/himself resemble the kind of mechanism that seeks to maximize such variables. In general, when we humans live a theory which systematically leaves out of account the observer—ourselves-in-our-environments—we transform the environment so that it becomes more hospitable to mechanisms and less hospitable to living systems—transacting persons—while we transform ourselves so that we more resemble the types of mechanisms depicted in the theory than we do persons engaging in mutually-altering transacting. *(Hilgartner, Harrington & Bartter, 1989, p. 136b)*

The WIE World-View models a planet devoid of living organisms. (Note 10) Having rejected that viewpoint, we have replaced it with a World-View which posits a living, habitable planet that harbors a biosphere—a diversity of living organisms, including humans, which transact with themselves-and-each-other, and survive by acting in ways that resemble the functioning of a self-correcting system. The "pictures" encoded in our replacement lived theories offer the potential, if adopted, of putting our self-defending out of operation, re-instating self-correcting, and so moving us towards continuing species-survival.

Summary: What we have accomplished so far

1) Revising our theories of Man

Paleontologists tell us that Planet Earth has harbored morphologically human organisms for three or more million years. Over that geological era, humans developed successful survival-patterns within tribal cultures that followed hunter-gatherer lifestyles.

Over an interval of some thousands of years, the one tribal culture that became the currently dominant world culture subscribed to a tacit theory of Man, a doctrine which holds that Man 'is' somehow defective. Insofar as the members of that (mega-)culture

examined it at all, they considered that doctrine a "self-evident TRUTH"—a matter of "the way things really 'are'," and therefore not subject to scrutiny and test. So far as I can tell, no one gave, or even today, gives a passing glance at the contra-survival consequences of that doctrine.

We cannot now ascertain what "theories of Man" our ancestors held. We can, however, observe that the members of intact tribal cultures of today do not consider themselves "defective".

But the originators of today's dominant culture threw out the life-ways of their predecessors. Most of the 'treasured principles' of today's dominant culture turn upside down—reject—the successful survival-patterns worked out over a geological era by their, and our, ancestors. The tenets of today's 'treasured principles' lead people to "misbehave"—to make survival-errors. And as I showed above, the presuppositions encoded in the generalized grammar which underlies WIE languages represent such "misbehaving" as a 'fixed entity'—posit that our 'misdeeds' manifest "human nature", which in turn manifests "the way things REALLY 'ARE'".

Korzybski's work (Korzybski 1921, 1933, 1941) provides a novel, explicit "theory of Man", — which he calls time-binding. For me, this innovation opened the way toward detecting and correcting the fundamental theoretical error(s) encoded in the WIE grammar and in Western frames of reference.

I and my collaborators, relying on Korzybski's premises, made those traditional errors explicit. (Hilgartner, 1977/1978, 1978a,b) That enabled us to reject the errors, by rejecting the key presuppositions that underlie them. We made time-binding the obverse side of the foundations for our revised "disciplines": the human psycho-social sciences, logics, mathematics, physics, biology, etc. In the process we generated a growing frame of reference, derived from and based on Korzybski's explicit premises, which we consciously chose. This framework corrects at least those traditional errors.

As I see the matter, the premises of the currently dominant world culture remain implicit, unstated and largely unexamined. However, I have shown, here and in earlier studies, that major errors arise from them—whenever someone relies on those errors, s/he generates untenable assumption(s) amongst her/his own personal presuppositions. If we humans leave in place those fundamental theoretical errors, and the untenable assumptions which we generate when we rely on them, we cannot hope to avert species-suicide, extinction, and annihilation of the biosphere. >/p>

2) Revising our theories of 'behavior'

In my opinion, a culture whose theories of biology and human 'behavior' don't work will become extinct: Its members disorient themselves concerning how to live in a biosphere. So they make survival-errors—they inexorably move themselves and the rest of the human race towards species suicide, and non-human organisms towards extinction.

I have generated a revised "theory of human 'behavior'", grounded upon Korzybski's premises, and embodying Gestalt perspectives offered by Perls, et al. (1951), by Polanyi (1964), and others. In 1963-65, I framed this doctrine in ordinary scientific English. *(Hilgartner, 1963, 1965)* During the interval 1965-68, I performed a logical analysis on my own doctrine and put it into the form of an axiomatic system stated in an algebraic set theory notation. (Hilgartner & Randolph, 1969a,b,c,d) By now it amounts to a **general theory of human behaving-and-experiencing**, which transcends the WIE **dualism** (e.g., as expressed in terms of 'mind' vs. 'matter', or 'experience' vs. 'behavior'—see Note 11). It provides a model by which we, today's humans, might re-orient ourselves concerning how to survive as participants in a biosphere.

3) Revising the foundations of WIE logics and mathematics

I regard the WIE logics and mathematics as sub-languages which utilize the generalized WIE grammar. Those who language in them explicitly accept *explicit identity* as a valid 'relation', and by unquestioningly building on the noun-verb distinction (as encoded in the WIE grammar), they unawarely rely on *tacit identity*. Therefore, as professionals, they commit themselves to live patterns of universal discord. (Hilgartner, 2003) Many of our logicians and mathematicians blithely present themselves as a case in point. Above (in Test 2), I tentatively suggested that we regard any intra-personal and/or inter-personal discord, other than the conflict of 'ideas', as evidence of at least one survival-error.

In the early 1970's, from Korzybski's premises (which do not accept the logical construct of *identity* as valid), I derived a 'grammar'. Up till then, we humans had not had a DERIVED grammar to play with. On it, I and the late Ronald V. Harrington (1925-1993) built up a **non-standard notation**. (Hilgartner 1977/78, 1978a,b, 2002a,) It does not deal with non-living "things", nor with "what really 'IS'", nor other sterilities. Unlike WIE logics and mathematics, our non-standard notation seems particularly suited to representing the "doings" or "happenings" that we call *living organisms transacting with their 'internal'-and-'external'-environments* (Note 12). That means that, to a first approximation, we have already provided revised foundations for the WIE logics and mathematics—a revised "discipline" which does not (so far as I know)embed explicit or tacit premises that commit users to make survival-errors.

4) Revising the foundations of modern physics

We have used our developing frame of reference and our non-standard notation to criticize, and to propose revisions to, relativity and quantum theory *(Hilgartner, Harrington, & Bartter, 1984; Hilgartner, Harrington, & Bartter, 1989; Hilgartner and diRienzi, 1995)*. This work re-defines the boundaries around what Westerners have traditionally called 'physics' We re-cast the discipline of physics as a special form of human transactional behaving-and-experiencing.

In the Prologue to his *The Universe is a Green Dragon*, Brian Swimme calls rather precisely for what we have provided:

How does the deeper understanding of [the origin and development of the universe as a whole] empower us? By enabling us to reinvent the human within the new cosmic story. Nothing less will suffice. A new sociological viewpoint or a new psychological theory is inadequate to deal with the magnitude of our concerns. We need to understand the human within the intrinsic dynamics of the Earth. Alienated from the cosmos, imprisoned in our narrow frames of reference, we do not know what we are about as a species. We will discover our larger role only by reinventing the human as a dimension of the emergent universe. (Swimme, 2001, p. 18)

In my opinion, no "discipline" that separates the verbal-level construct of 'humans' from the verbal-level construct of 'the universe' can survive scrutiny (and so merit the appellation of 'similar in structuring to the 'territory' it (allegedly) refers to'). Thus, for me, no "discipline" which fails to survive such scrutiny merits human use and study.

In my hands, the version of 'physics' which I propose amounts to a theory of time-binding that describes human-organisms-taken-as-wholes-transacting-with-their-environments-at-a-date —human organisms securely surrounded by their environments— as viewed by a designated observer (e.g., physicist) who subscribes to the non-aristotelian premises first set forth by Korzybski (1941b).

My most fundamental premises prohibit me from treating "me" and "my environment" as separable. In a biological context, I have expressed my sense of the relation between my sense of "me" and my sense of "my environment" by saying, "'I' form the other side of 'my environment's' skin; 'my environment' forms the other side of 'my' skin." I could construct a similar sentence concerning the relation between the verbal-level construct of "a time-binding organism" and that of "the terrestrial…sidereal universe".

Swimme asserts that "…we do not know what we are about as a species. We will discover our larger role only by reinventing the human as a dimension of the emergent universe."

It appears to me that, in the work presented in this paper, I and my collaborators have already "reinvent[ed] the human within the new cosmic story", and thus have made explicit this "larger role", at least to a first approximation.

Humans who clearly see our "larger role" will not, I contend, consent to have humans commit species suicide and, in the process, annihilate the biosphere.

5) Revising WIE biology

Our derived grammar, and the alternative notation we built up on it, posit what at first glance might seem a convoluted "dramatic situation". It can deal with any topic whatsoever—provided that we structure the topic in terms of "a-particular-organism-taken-as-a-whole- transacting-with-her/his/its-environment-at-a-date, as viewed by a designated observer (e.g., biologist) who subscribes to the non-aristotelian premises of Korzybski."

However, this constraint has enabled us to provide a general theory of biology (Hilgartner, 1998; Hilgartner, et al., 2004): (a) It offers a formal criterion for how to use terms such as *life* or *living*—according to an explicit, rigorous pattern of symbols. Any non-verbal "doings" or "happenings" that we traditionally have classified as *living* must non-verbally satisfy this pattern for us to continue to classify them as *living* Any non-verbal "doings" or "happenings" which we traditionally have classified as *non-living* but that turn out to satisfy this pattern warrant our classifying them as *living*. (b) It offers a novel proposal for how living organisms arose on Planet Earth. (c) It makes explicit the *protocol for surviving in the biosphere* which earth's organisms observably follow, and also provides a specialized version expressing how humans survive in the biosphere, which confers similar advantages. (d) It expresses what I might call *the 'organizing principle' of the biosphere*.

WIE biologists have in general not generated rigorous abstractions such as these I just listed.

At least some humans today see, and can account for the origin of, the global survival-crisis which (in my opinion) the members of the dominant culture have inflicted on themselves-and-all-other-planetary-inhabitants. Our further development over the short term could still go, alternatively, in either of two main 'directions': From the current actuality, short-term development could proceed: a) the rest of the way to species-suicide and pan-biocide, or b) in an ALTERED 'course', in which other humans build on the beginnings laid out here, and a sufficient number of humans join us in revising their own most-fundamental presuppositions so as to correct the error(s) discussed in detail in this paper, and so reject the shared untenable assumptions. Then, if we intend actually to succeed in averting the global survival-crisis, from such beginnings we will have to go on to elaborate and act upon viable, sustainable, life-affirming ways for humans to live.

Notes

1) As one example, the non-personal, single-issue focus of the *Ideologies of War and Terror* listserv appears in its title. Or to re-frame my comment so as to mention humans, the humans who set up the *Ideologies of War and Terror* listserv chose to focus on three impersonal, abstract nouns, *ideologies*, *war* and *terror*—rather than on the "doings" or "happenings" of those humans who subscribe to some collection of ideologies, who engage in warring, and who inflict, and/or experience, terror. The humans who participate in the discussion mostly do not violate the boundaries which the initiators of the listserv drew by choosing that way of framing their implied key questions. (http://www.ideologiesofwar.com/ Listserv address: e-mail to Orion Anderson, oanderson@ideologiesofwar.com).

2) As one way to back up that claim to holism, I mention that I have proposed (and published, including in refereed journals) radical, synoptic innovations in mathematics and logic, in physics, in biology and in the human psycho-social sciences. For a listing of some forty of my one-hundred-plus papers, including some unpublished ones (or published only on my website), sorted in terms of these categories, see the references section of Hilgartner, 1997.

3) By the term *languaging*, I mean the activities of **speaking-and-listening**, **writing-and-reading**, **signing-and-"reading"-signing**, **painting-and-viewing-paintings**, or any other processes of generating-and-receiving-symbolizing that living humans can DO.

4) **Premises:** In 1941, Korzybski set forth three key terms (I regard them as his **undefined terms**): *structure*, *order*, and *relations*; which he treats mostly as noun-forms; and three key presuppositions, which later workers came to call the **non-aristotelian postulates**. Here I give them their customary names, and copy the wording of them from Korzybski's very last paper *(Korzybski, 1951, p. 189; reprinted in Korzybski, 1990, p. 704)*. In each item, the sentence on the left uses the **map-territory** analogy, while that on the right uses **language-referen**t or **word-referent** imagery.

Non-identity: A map *is not* the territory. (Words are not the things they represent.)
Non-allness: A map covers *not all* the territory. (Words cannot cover all they represent.)
Self-reflexiveness: A map is self-reflexive. (In language we can speak *about* language.)

As I carried out my long-term research project, I disclosed more and more aspects of *what humans DO in order to language*, removing these from the 'mental' (which remains in principle unobservable) by showing them as SOMETHING SOMEONE DOES-AND-EXPERIENCES. In the early 1970's, after I derived a 'grammar' from Korzybski's premises and, in collaboration with Harrington, set out to generate a "Let's Keep Track of What We Say" notation on that derived 'grammar', I found that I had to revise completely the way I explain my theoretical constructs—including how I structure the explanatory protocol I use, which I still call *axiomatic system*.

Setting: So far as I know, no WIE logician or other worker has discussed the topic which I call *setting*. In its general sense, I use the term *setting* to designate SOMETHING EVERY HUMAN LANGUAGER DOES. As Whorf points out in the passage quoted in the text under the rubric of *The WIE 'map'*, languages differ in at least two main ways. I use the term setting to designate the second of these ways—the highly specific, entirely non-verbal **search-pattern** by which a languager "break[s] down nature" to secure 'pieces', the designations for which s/he can then fit into the grammar s/he uses.

Undefined terms: I completely re-work the notion of *undefined terms*. In my non-standard notation, I avoid importing *tacit identity* by disallowing the *noun-verb* distinction. When I discuss my undefined terms in English, I treat them mainly as *verb*-forms—the best way I've yet found to discourage people from importing inappropriate baggage, e.g. WIE assumptions.

As Korzybski (1933, p. 154) points out, undefined terms represent "blind creeds which cannot be elucidated further at a given moment." To paraphrase that insight, I hold an undefined term as a special kind of postulate, the CONTENT of which the person who subscribes to it cannot state in words.

Then I propose that the person generating a formalized axiomatic system relies on—uses—her/his undefined terms to bridge between two adjacent, but distinct, "logical levels", e.g. between the *non-verbal* and the *verbal*. When generating a theory, such a person might well consider that her/his undefined terms bridge between those non-verbal "doings" or "happenings" which the theory purports to describe or model and those verbal constructs which languagers often regard as "the actual theory".

Postulates: I frame this version of the non-aristotelian postulates in the E-Prime dialect of English proposed by Bourland (1965/1966), in the process re-naming them (here, since I do this in English, I re-name them as *verb*-forms).

Non-identifying: Presume that no structuring, ordering, or relationing satisfies the criteria as *identical with* any structuring, ordering or relationing (including itself).
Non-alling: Presume that no structuring, ordering, or relationing can represent ALL aspects of any structuring, ordering, or relationing.
Self-reflecting: Presume that no structuring, ordering or relationing can occur FREE of aspects which refer to itself and/or to the organism which elaborates it.

5) **Self-defending:** When a human speaks or acts upon an unrecognized assuming of *identity*—of "absolute certainty"—and then proceeds to defend that choice, that which gets 'defended' in the process consists of THE ASSUMING. I dall this protocol **self-defending**. As I perceive the matter, for a human to DO self-defending not only confers no survival advantage, but, in general, damages survival prospects, her/his own and/or those of others. That damage can have major—even global—extent (e. g. de-forestation, the Aswan High Dam or the Three-Gorges Dam, etc.).

6) **'Apparently purposive' and 'directive correlation':** The text printed on the dust-

jacket of Sommerhoff's 1950 book briefly explains the traditional term 'apparently-purposive'; points to difficulties which that construct poses; and names the mathematical construct, 'directive correlation', which Sommerhoff provides to clarify the issues involved.

The aim of this book is to provide the biologist, psychologist, and philosopher with a formal analysis of the abstract characteristics which distinguish the activities of living beings from inorganic activities. These differences are frequently described in terms like those of the following statement: Living beings possess a 'distinctive level of organization' which is shown in the striking and apparently 'goal-directed' or 'purposive' manner in which their activities are 'adapted', 'regulated' or 'integrated, and 'serve the maintenance' of the individual or species. For the purposes of a scientific theory of life concepts such as those contained in this description are too vague and too dangerously anthropomorphic; and this has led to an impasse in biological theory. The author therefore sets out to expose and analyse the exact relations in space and time to which these concepts refer, and to show how, with the aid of the mathematical concept of 'directive orrelation', each one of them may be paraphrased in precise and strictly scientific terms. In the second part of the book his results are used for clarifying ideas about instinct, learning and memory; the general nature of life and the rationale of self-maintenance; social organization; the abstract differences between 'higher ' and 'lower' forms of life, and the nature of biological progress. (Sommerhoff, 1950, dust jacket)

Elsewhere, to serve my purposes, I had to translate Sommerhoff's WIE mathematical construct into my non-standard notation. (Hilgartner, 1984) That converts a sentence from WIE set theory containing some 19 characters (including punctuation marks) occupying one line, into a passage, written in my non-standard notation, consisting of some 108 characters, occupying five distinct lines. Furthermore, I re-named it as a *verb*-form, **directively correlated**.

7) "… and the organism can, in some sense or other, judge the starting-guess(es) against the outcome, on a scale of *disconfirmed…not-disconfirmed*."

As I see it, an outcome which conclusively disconfirms our organism's survival-oriented guesses probably would leave him dead on the spot. An outcome that leaves our organism fatally injured seems to me almost as unfavorable. When an outcome leaves our organism more or less damaged, the process of recovering his health and strength will require, at the very least, his energies, a relatively safe location, and a fraction of his lifespan. An outcomes in which our organism fails to obtain what he most needed, but does not get injured, leaves him hungry, uncomfortable, and to some degree in pain. Where this last pattern occurs over and over—becomes chronic—I call it bare survival. An outcome in which our organism's starting-guesses appear almost entirely not-disconfirmed leaves him replete, sated.

8) The dialect of **E-Prime**, proposed by D. David Bourland, Jr. (1928-2000), consists of standard English with the exclusion of every inflectional form of **to be**. (Bourland, 1965/66) In everything I have written since 1968, I have used the E-Prime dialect. It does

not solve the *noun-verb* problem, but proves useful in other, lesser ways.

9) Several of Moonhawk's colleagues have collected many of his writings at: http://www.enformy.com/alford.htm

10) Languagers who use WIE tongues cannot avoid elaborating a **WIE World-View**, in which, willy-nilly, they project the *noun-verb* distinction onto the Cosmos. That means that they posit that the Cosmos consists of two parts—a 'fixed' part (e.g., static-and-unchanging 'matter', identical with *nouns*, and obviously 'non-living')—and an 'evanescent' part (e.g., 'mind' or 'soul' or 'spirit', etc., expressed by *verbs* and the other "parts of speech"), which remains sepatrated from 'matter' by an 'unbridgeable gap'. Then, to account for 'Life' (or 'living organisms'), they find that they must BREAK THE RULES they have set up—they must posit 'magic', or 'intervention of a god', something that enables 'spirit' to cross the 'unbridgeable gap' so as to 'animate' the non-living 'matter' of the organism's 'body', for a while. They explain 'Death' by positing that "the 'spirit' departs".

No later than the era of Aristotle, Western philosophers (and then, the philosophers' academic successors) found this doctrine unpalatable, and began concealing it—papering it over—under a flood of noun-forms. Today, virtually no one will claim this doctrine as her/his 'conscious belief'. In particular, most scientists claim that their predecessors over the past half-millennium succeeded in exorcizing the 'demons' or 'spirits' from scientific theories. But as long as workers continue relying on the *noun-verb* distinction, and using the various vocabularies that express the WIE dualism, they still tacitly base what they DO on this ancient dualistic doctrine. Please remember that WIE physicists study 'matter', and WIE psychologists or theologians study 'mind' or 'spirit'.

11) *The Harper Dictionary of Modern Thought* describes the construct of **dualism** as "Any theory which holds that there is, either in the universe at large or in some significant part of it, an ultimate and irreducible distinction of nature between two different kinds of thing." (Bullock & Stallybrass, 1977 p. 183a)

12) Claude Bernard (1813-1878), a French physiologist, proposed the construct of **internal environment** (French, *milieu intérieur*) and so partitioned the construct of 'environment' according to the distinction between 'exterior' and 'interior'. (Bernard, 1865)

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