

Originally presented as a PowerPoint talk at the Institute of General Semantics (IGS) meeting in
Arlington, TX, Oct. 28, 2006.

Slide 1 of 20↓:

A NEGLECTED ASPECT OF TIME-BINDING:
REJECTING *TACIT IDENTITY*'

C. A. Hilgartner
Hilgartner & Associates
2413 North East Street
Kirksville, MO 63501
660-627-2519
cah5@hilgart.org

Notes:

*I would like a show of hands.

Who here has noticed that just about everything our world-wide mega-culture DOES ends up making Planet Earth less habitable? Well—that looks like a sizeable majority.

This awareness has commanded my attention for almost sixty years. I have found a way to account for the biodevastation and other perpetrations which “just appear” as “unexpected consequences” of our culture. To say it succinctly, I have uncovered – disclosed – an untenable assumption (a variant of *identity*) encoded in the generalized grammar common to the languages of the **western Indo-European** (WIE) family. To borrow a phrase from Korzybski, it looks to me like this untenable assumption has remained hidden for thousands of years – “totally unknown and unsuspected, unless uncovered after painful research.” (Korzybski, 1933, p. 506)

As I became better and better acquainted with it over the years, I came to see that this untenable assumption TEMPTS us to pretend to “absolute certainty” – to pretend to god-like powers. And when we succumb to this temptation, we make **survival-errors**.

By now, the accumulated bulk of our past, present and ongoing survival-errors have brought us to the edge of the abyss – we have created a **survival-crisis**, for ourselves and for the entire biosphere, and we have already induced numerous major extinctions.

It appears to me that, if we leave this untenable assumption in place – if we cannot or will not reject it and replace it with assumptions that (so far as we can tell) do not make that fundamental theoretical error – then our time-binding will continue to bind us to destroy ourselves and to annihilate the biosphere.

For as the old Chinese saying puts it, “Continue on your present course, and you will REACH your DESTINATION”.

* The text following each slide image contains the notes from which I spoke while showing that slide. I presented this talk at the 2006 International Conference on General Semantics in Arlington, Texas, 27-8. Oct., 2006.

Slide 2↓:_____

**My job here-now:
Two parts:**

To convince you

1. That the previously-hidden, untenable, lethal assumption which I have just mentioned forms the basis of what we currently call “Civilization”. Moreover that assumption underlies our principal disciplines, and so induces us to commit (produce) species suicide and to sterilize the biosphere; and
2. That at least one small group has already rejected and replaced that untenable assumption, and has worked out the foundations for alternative disciplines which appear capable of supporting humans to generate viable, sustainable, life-affirming ways for humans to live.

Notes:

The alternative disciplines:

- A revised “theory of Man”
- Revised human psycho-social sciences (theories of “behavior”)
- A revised logic and mathematics (including a “Lets Keep Track of What We Say” notation that replaces the WIE mathematical theory of sets)
- A revised physics
- A revised biology

The underlying foundations:

- The **non-aristotelian premises** set forth by Korzybski (1941).
- A grammar DERIVED from those premises.

To the best of my knowing, mankind has not previously had opportunities to work from a derived grammar.

That grammar, which I have published elsewhere, I do not have room to present here-now.

Slide 3↓:_____

Korzybski (1933) advises us to hold the logical construct of ‘*identity*’ as **invalid** – unable to survive scrutiny. Outrageously, he says, “Don’t rely on it.”

(However, he neither tells nor shows us how *not* to.)

Further, he suggests reserving the term ‘*identity*’ to discuss the topic of “a human making a mistake”.

PREMISES THAT I TRUST:

Korzybski framed his premises as three **undefined terms**, and three **postulates**. He wrote his undefined terms as noun-forms: **structure, order and relations**.

I don’t trust the assumptions encoded in the *noun-verb* distinction (see below), and prefer to express the undefined terms as verb-forms:

to structure, to order, and to relation.

That confers the advantage that it makes them *feel* a bit unfamiliar

LEAPFROG

Despite his not having told or showed us how *not* to rely on *identity*, Korzybski surmounted that difficulty in 1941, when he set forth his **non-aristotelian premises**.

In the early 1970's, I derived a 'grammar' from Korzybski's premises and, in collaboration with a linguist, the late Ronald V. Harrington, set out to generate a "Let's Keep Track of What We Say" notation on that derived 'grammar'. In the process, 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*.

I designate the "pieces" of my version of *axiomatic system* as: *setting*, *undefined terms*, and *postulates*. At this point, I mention but do not discuss: the 'grammar' I derived from Korzybski's premises; the 'rules for inferring'; various vocabularies of 'specified termings'; 'inferrings'; etc., etc.

Slide 4↓:

PREMISES (CONT.)

His three postulates he expresses in two wordings, the first of which uses the '*map*'-'*territory*' analogy:

1. The map *is not* the territory.
2. the map represents *not all* the territory.
3. The map is *self-reflexive*.

He then offered an alternate list, using *word-referent* or *language-referent* terms:

1. A word is not the fact, feeling, situation, etc.
 2. A word covers *not all* the characteristics of an object, fact, feeling, etc.
 3. Language is also self-reflexive, in the sense that in language we can speak about language.
-

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 language does. As Whorf 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)

I use the term *setting* to designate the second of these ways—the highly language-specific, entirely non-verbal **search-pattern** by which a language "break[s] down nature" to secure (non-verbal) '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, Korzybski appears to 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 an undefined term serves to bridge between two adjacent, but distinct, “logical levels”, e.g. between the *non-verbal* and the *verbal*.

Slide 5↓:

E-Prime Version of the Postulates

- **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.

I summarize these postulates by declaring any **abstracting**, or any **product of abstracting**,

- 1) **inaccurate**,
- 2) **incomplete**, and
- 3) **self-referential**.

I frame my own version of the non-aristotelian postulates in the E-Prime dialect of English proposed by Bourland (1965/1966), in the process re-naming them (as *verb*-forms).

Also, I follow the convention of using the undefined terms to express the postulates.

Slide 6↓:

KORZYBSKI'S INITIAL BREAKTHROUGH: TIME-BINDING

Korzybski posits that humans accumulate a **HERITAGE**

-- composed of “human knowledge”.

(I prefer to say “composed of **tested guesses**”.)

- Each person inherits it freely; each assimilates a unique portion of the-heritage-at-that-date.
- Each contributes to the heritage.
- Each passes the enhanced heritage on to peers, progeny and to the generations yet un-born.

This verbal doctrine **IMPLIES** the ‘territory’ – including the **NICHE** in the universe which humans occupy.

(DOCTRINE₂)

Notes:

Most of you know the story.

As a youth: Korzybski asked himself, “How do we tell the humans from the brutes?”

In his early 40’s: In passing, his insight answered that question:

Thus, Korzybski specifies the NICHE in the universe which humans inhabit.

Our niche:

With one exception, Planet Earth’s living organisms, from viruses, bacteria and other one-celled organisms, through higher plants and animals, **abstract only non-verbally**.

Humans occupy at least one “dimension” more than do any of our fellow-organisms: we humans **abstract both non-verbally and verbally**.

We need not construe this observable difference as implying relations of ‘superiority’ or ‘inferiority’ amongst Earth’s organisms. BUT TO IGNORE THIS DIFFERENCE—to eliminate it from consideration—looks to me like an invitation to catastrophe.

As I shall show, today—in year 2006 CE—we LIVE on the cusp of that catastrophe.

Slide 7↓: _____

THE OTHER HALF OF TIME-BINDING: REJECTING TACIT IDENTITY

TO ‘UNDERSTAND’ AN INNOVATION: ONE MUST DEEPLY ‘UNDERSTAND’ JUST WHAT IT *REVISES* OR *REPLACES*

**The “Received Wisdom” – received non-verbal expectations concerning
“human nature” – which Korzybski proposed to replace:**

- (a) “Man ‘is’ an animal [+ something supernatural]” or
- (b) “Man ‘is’ somehow DEFECTIVE.” (Quinn, 1991)

(DOCTRINE₁)

Notes:

“**Tacit ‘identity’**: Sometimes, we humans non-verbally and mainly unawarely TREAT two non-verbal “doings” or “happenings” (which someone else might regard as *readily distinguishable*) as **freely interchangeable** – in other words, as ‘absolutely the same in all respects’. I label (point to) this kind of human error as *a usage of tacit identity*.

“**Unawarely**” means that s/he keeps her/his assuming of ‘identity’ out of ‘awareness’ – as Korzybski puts it, keeps it “totally unknown and unsuspected, unless uncovered after painful research.” (AK, 1933, p. 506)

In 1921, Korzybski explicitly rejected those traditional non-verbal expectations concerning “human nature” – and in so doing, tacitly rejected that unacknowledged usage of *tacit identity*.

This tacit rejecting (1921) may have provided the **unspoken insight** or experiential basis that empowered Korzybski (1933) explicitly to reject explicit *identity*.

Slide 8↓: _____

THE KEY POINT ABOUT THIS “RECEIVED WISDOM”:

Those who have “received” that “doctrine₁ concerning human nature” **HOLD** it as **NOT A SUPPOSITION** – as not a theory – as **in no way tentative**.

- For them, it expresses “**The way things really ‘are’.**”- - or “An Absolute Certainty” or even a “self-evident truth”.
In other words, it expresses what I sometimes call “a ‘map’-‘territory’ *identity*”.

Notes:

In my opinion, the phrases negating the notions of *supposition*, *theory*, and *tentative* share a basic ‘meaning’: They say, in effect, that those who ‘receive’ the “received wisdom” (doctrine) made up of non-verbal expectations concerning “human nature” **ACT AS IF** those expectations ‘map’ human “doings” or “happenings” **PERFECTLY** (100% accurately, 100% completely, and 100% ‘objectively’ – operationally speaking, in a manner 100% free of self-reference).

These two opposing doctrines – *time-binding* (Slide 6, Doctrine₂) vs. *animal+/-* (Slide 7, Doctrine₁) -- both **PURPORT** to describe the ‘territory’ of interest here: the **niche** in the Universe which humans occupy.

From my vantage-point, these two doctrines appear **incompatible**.

Slide 9↓: _____

AT THE LEVEL OF ‘MAP’:

Within any culture, the local language ‘maps’, and creates, the shared ‘World-View’ of that culture.

CRITERION for a ‘MAP’ ‘SIMILAR IN STRUCTURING’ to the ‘TERRITORY’:

Accurately to represent the ‘territory’ posited by *time-binding*, each local language **WOULD HAVE** to make a **key distinction**: between **NON-VERBAL** and **VERBAL** abstracting.

Notes:

So far as I know, none of Korzybski’s predecessors, over the millennia, “saw” this niche.

● Since 1921 – except for some of Korzybski’s ‘students’ – **NONE** of Korzybski’s contemporaries or successors has “seen” this niche.

● **What makes our niche so hard to “see”?**

To understand this difficulty, we need to glance at how children learn to language, and at what happens when a language **LACKS** the key distinction mentioned above.

Slide 10↓:

HOW CHILDREN LEARN TO LANGUAGE

- By assuming that the funny noises their elders make ‘MEAN’ something, and figuring out WHAT.
- Children end up learning to make the **distinctions (non-identities)** that their caretakers make.
- We find these distinctions encoded in the grammar of the language spoken by the caretakers
EXAMPLES:

Notes:

I so strongly want to emphasize what this slide says that I find it difficult not to read it out loud.
Let’s take a look at some examples:

Count-nouns: 1, 2, 3 cats; **Mass nouns:** a drop, a glass of water.

Grammatical number: Plurals (usually indicated by suffixes or infixes)

Cat, cats

Man, men

Goose, geese

Demonstrative adjectives:

A,

The

ETC.!

DISTINCTIONS! (Non-identities!)

Slide 11↓:

What happens when a language LACKS a key distinction?

The children don’t just “not-learn to make” that distinction – they grow up LEARNING TO NOT-MAKE IT!

So: here, in learning to NOT-MAKE a non-identity discrimination, children tacitly, unawaresly, BLINDLY GENERATE a TACIT usage of ‘identity’ – one which has the effect of ELIMINATING THAT DISESTEEMED DISTINCTION FROM CONSIDERATION.

Notes:

“**Key distinction**”: The ‘territory’ includes a feature which has at least two alternatives, which have SURVIVAL-CONSEQUENCES. Lacking this, the ‘map’ (language) has no MANDATORY distinction that makes it possible for (or requires) the speaker to indicate, each time s/he uses a pointer-term, which of these alternatives s/he intends the term to point at.

“**Tacitly, unawaresly**” – means that the speakers keep their assuming of ‘identity’ out of ‘awareness’ – keep it “totally unknown and unsuspected, unless uncovered after painful research.” (AK, 1933, p. 506)

Slide 12↓: _____

THE WIE ‘MAP’:

The generalized grammar which underlies languages of the **western Indo-European (WIE) family provides no means, no grammatical MARKERS, by which to distinguish AT THE LEVEL OF GRAMMAR between non-verbal and verbal.**
Instead, the grammar uses a *tacit ‘identity’* covertly to mis-direct languagers into NOT-MAKING this distinction.

Notes:

That means that most non-students of Korzybski UNAWARELY GENERATE AN ‘IDENTITY’ to eliminate the distinction *non-verbal vs. verbal* from consideration. Tacit ‘identity’ HIDES that distinction, at least in part by requiring us to use “the same label”—namely noun—to point to the *non-verbal* as to the *verbal*.

In the rest of this paper, I’ll spell out some of the mischief this ‘identity’ produces.

Slide 13↓: _____

That usage of *tacit identity* makes our NICHE in the universe “un-seeable!” In other words, until 2006, the “received” assumptions embedded in the WIE grammar have BLOCKED understanding and disseminating *time-binding*.

As I see it, Korzybski’s students, most of us have failed, or refused, fully to adopt the construct of *time-binding*. We have fallen short of rejecting the traditional non-verbal expectations concerning “human nature”, and the usage of *tacit identity* which those expectations encode.

For observably, we have not revised the rest of our personal and professional assumptions, for which that usage of *tacit identity* serves as keystone.

Notes:

Korzybski, and his students up until now, did not attend to the logical character of the “doctrine” which Korzybski’s innovation, the construct of *time-binding*, sets out to reject and replace. In a sense, Korzybski predicted that his successors would FIND “utterly unknown and unsuspected” errors, but he did not explicitly mention the WIE grammar as a locale for them. In my opinion, the usage which I call *tacit ‘identity’* forms the KEYSTONE of the WIE frame of reference (or ‘World-View’). As such, it forms the core of the fundamental theoretical error(s) which our mega-culture has remained committed to since its beginnings some 11,000 years ago. The act of disclosing that error and showing how to reject and replace it opens up a new realm of opportunities. It enables us to stop practicing ARISTOTELIAN general semantics, and may well pave the way to spreading the kind of sanity that Korzybski advocated, and that all of us have striven to practice.

I shall return to the topic of just how the non-aristotelian premises, the construct of time-binding, etc., have led me and my collaborators to revise our personal and professional assumptions.

INTRO: (before changing slide): Never mind arguing from AUTHORITY – “I reject ‘identity’ because Korzybski told me to.”

Slide 14↓: _____

Do we find anything wrong with letting ourselves
rely on the logical construct of ‘identity’?

Let’s test it out:

ASSUME: My picture of YOU qualifies as PERFECT – I can expect to get away with treating my ‘map’ of YOU as *identical with* the ‘territory’ YOU.

Notes:

When we look for ourselves – WHAT DO WE FIND?

Any ‘map’ would do – let me use the most offensive kind of example:

- [[ASSUME: My picture of YOU qualifies as PERFECT]] – remains in an exhaustively complete, entirely accurate 1-to-1 relation with YOU.
- That means that I find myself possessed of “absolute certainty” with respect to YOU.

Operationally:

- I ‘know’ everything that exists to know about the STATIC ‘thing’ we call YOU.
- In so doing I do not become known.
- Anything I want to do with, for or to you, I ‘know’ how to do.
- Moreover, the results I obtain by such “doings” exactly match what I expected and intended—no more and no less. In so doing I do not become altered in any way.

In other words, I find myself possessed of what a theologian might call OMNISCIENCE and OMNIPOTENCE with respect to YOU. Unknown knower and unmoved mover.

-- The most serious error yet imagined for humans to make: PRETENDING TO GOD-LIKE POWERS with respect to YOU.

So this demonstration makes ‘identity’ look like a supposition no one can rely on with impunity.

Slide 15↓:

Mischief₂

What difference does it make when we assume that ANY human can generate a 'map' *identical with* the 'territory' it refers to?

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 too find yourself possessed of "absolute certainty")

— **THEN**

Therefore: Your 'map' = My 'map'.

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

Notes:

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".

Slide 16 ↓: _____

Mischief₂
(cont'd)

In the list which follows, I only imply the “THREAT”,
but name the “RESPONSE”.

- 1. Non-verbal and/or 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”

Notes:

In short, anyone who tacitly and/or explicitly accepts identity as valid—who 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—from the violence of non-verbal put-downs on—as evidence of a survival-error based on relying on the logical construct of *identity*, and so, succumbing to the temptation to play God .

Slide 17 ↓: _____

MISCHIEF₃:

How we build our sentences

“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, 240) CAH version

To show how, I offer a generalization, and ask a “simple” key question.

Notes:

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*.

TEST-SENTENCES:

<i>The cat grinned.</i>	(Intransitive example)
<i>The cat wagged his tail.</i>	(Transitive example)
~ C	(Not-C) (Formal analog of intransitive)
C subset of D	(Formal analog of transitive)

Slide 18↓:

MISCHIEF₃:

My key question:

OPERATIONALLY SPEAKING:

How do we distinguish the *nouns* from the *verbs*?

Notes:

THE KEY QUESTION:

Forget what the grammarians, logicians, philosophers or other “experts” 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 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—and do not notice that we don’t say or write:

* *Grinned is grinned.*

* *Wagged his tail is wagged his tail.*

* *Is is is.*

* *[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.

Slide 19↓: _____

In any WIE locution or WFF --

The EXTENT of the error we make:

- It appears that, whenever we build our sentences or **well-formed formulae (WFF's)** on the patterns encoded in the generalized WIE grammar (including the *noun-verb* distinction), we rely, at least tacitly, on the logical construct of '*identity*'.
- But, above, I just showed that construct as invalid, unable to survive scrutiny.
- Either generate your own grammar (free of this error).
- Or find someone else who has.
Or extend the one that comes out of this work.

Notes:

Nothing that uses the WIE grammar survives this judgment: DISCONFIRMED!

AK (1951, p. 697) quote. From Whorf:

Our Indian languages show that with a suitable grammar we may have intelligent sentences that cannot be broken into subjects and predicates. (Whorf, 1956, p. 242)

Either generate your own grammar (free of this error). Or find someone who has.

Or extend the one that comes out of this work.

Where do we go from here?

Tell what we know about NOT committing species suicide and annihilating the biosphere!

Slide 20↓: _____

WHAT H&A HAS REVISED AND REPLACED TO DATE:

1. WIE theories of Man
2. WIE theories of 'behavior'
3. The generalized WIE grammar (replaced by a DERIVED notational 'grammar')
4. The foundations of WIE logic & mathematics
5. The foundations of modern WIE physics
6. WIE biology

Notes:

These innovations stem from known premises which do not-rely on the now-disclosed untenable assumptions and the fundamental errors that follow from it—and lead members of the dominant culture to make survival errors. As such, we have grounds to regard these innovations as STEPS TAKEN *away from* the abyss—baby steps that we may feel confident lead toward mitigating the survival crisis which the dominant culture has created and continues to exacerbate.

REFERENCES (Indexed to numbered items on Slide 20):

- Papers relevant to Item 1:
1963; 1965; 1969a,b,c,d; 1978a; 1991; 1997; 2002b; 2002c; 2003a; 2003b; 2006
- Papers relevant to Item 2:
1963; 1965; 1969a,b,c,d; 1978a; 1991; 1995; 1997; 2002b; 2002c; 2003a; 2003b; 2006
- Papers relevant to Item 3:
1977/78; 1978a; 1978b; 1991; 1997; 2002a;
- Papers relevant to Item 4:
1977/78; 1978a; 1978b; 1991; 1997; 2002a;
- Papers relevant to Item 5:
1984; 1989; 1995; 1997
- Papers relevant to Item 6:
1997; 1998; 2004

REFERENCES (1)

- Hilgartner, C. A. (1963); *General Semantics, Psychotherapy, and the Logic of Science*; (unpublished). Truncated version (1967), ETC.: *A Review of General Semantics*, Vol. 25, pp. 315-324 (1968). Complete (1967) version available as item #005 at www.hilgart.org/research.html.
- Hilgartner, C. A. (1965); *Feelings, Orientation, and Survival: The Psychological Dimension of the Current Human Crisis*; presented at the Ninth International Conference on General Semantics, San Francisco State College. Available as item # 006 at www.hilgart.org/research.html.
- Hilgartner, C. A. & John F. Randolph (1969a, b, c, d); *Psycho-Logics: An Axiomatic System Describing Human Behavior*, a. A Logical Calculus of Behavior; *Journal of Theoretical Biology*, Vol. 23 (285-338); b. The Structure of 'Unimpaired' Human Behavior; *Journal of Theoretical Biology*, Vol. 23 (pp. 347-374); c. The Structure of Empathy; *Journal of Theoretical Biology*, Vol. 24 (pp. 1-29); d. The Structure of 'Impaired' Human Behavior; (unpublished)
- Hilgartner, C. A. (1977/78); *Some Traditional Assumings Underlying Western Indo-European Languages: Unstated, Unexamined, and Untenable*; *General Semantics Bulletin* Nos. 44/45 (pp. 132-154). Also available as item # 028 at www.hilgart.org/research.html.
- Hilgartner, C. A. (1978a); *The Method in the Madness of Western Man*; *Communication*, Vol. 3:143-242.
- Hilgartner (1978b); "International" or 'One-World' Languages: "You Can't Get There from Here"; *ECO-LOGOS: A Magazine of ONE-WORLD Environmental Concepts*, Vol. 24, No. 90. See especially Appendix V.
- Hilgartner, Harrington & Bartter (1984); *A Notational Physics with Physicists In It*; unpublished ms. Available as item #060 at www.hilgart.org/research.html
- Hilgartner, C. A., Ronald V. Harrington, & Martha A. Bartter (1989); *Anomalies Generated by Contemporary Physics*; *Bulletin of Science, Technology & Society*, Vol. 9 (pp. 129-43) Available as item # 061 at www.hilgart.org/research.html.
- Hilgartner, C. A., R. V. Harrington, & Martha Bartter (1991); *The Conventions for Symbolizing; Etc.: A Review of General Semantics* 48(2): 172-97 Also available as item # 078 at www.hilgart.org/research.html.
- Hilgartner, C. A. & Joseph Di Rienzi (1995); *A Non-aristotelian View of Quantum Theory*; *Physics Essays*, Vol. 8, No. 4 (pp. 472-505)

- Hilgartner, C. A. (1997); E-Prime and Linguistic Revision; D. David Bourland, Jr., & Paul Dennithorne Johnson, eds., *E-Prime III! A Third Anthology*. Concord, CA: International Society for General Semantics (1997), pp. 129-148.
- Hilgartner, C. A. (1998); How General Semantics Can Rescue Biology From Itself: A Biology With Biologists In It; *Developing Sanity in Human Affairs* (ed. S. P. Kodish & R. P. Holston), Greenwood (pp. 96-136) Also available as item # 088 at www.hilgart.org/research.html.

REFERENCES (2)

- Hilgartner, C. A. (2002a) A Strictly Dynamic Notational Language For Science. *International Journal of Computing Anticipatory Systems* 11:43-58.
- Hilgartner, C. A., Weld S. Carter, Jr., & Martha A. Bartter (2002b). *Languaging for Survival*. *Advances in Sociocybernetics and Human Development* 10:21-34.
- Hilgartner, C. A., Weld S. Carter, Jr., & Martha A. Bartter (2002c). *Languaging for Survival* (Presentation version). Invited Keynote Address, presented at the 14th International Conference on Systems Research, Informatics & Cybernetics, Baden-Baden, Germany, 29 July-3 August 2002. (Available as magnetic copy, on request from senior author.)
- Hilgartner, C. A. (2003a) *Time-Binding Tutorial 2*. Available at www.hilgart.org/timebinding2.html
- Hilgartner, C. A. (2003b). *Replacing Our Pattern of Universal Discord*. Invited Keynote Address, presented at the 15th International Conference on Systems Research, Informatics & Cybernetics, Baden-Baden, Germany, 28 July-2 August 2003. *Sociocybernetics and Human Development* 11:53-66.
- Hilgartner, C. A., Weld S. Carter, Jr., & Martha A. Bartter (2004). *What Biologists Should Know, But Don't*. Presented at the 16th International Conference on Systems Research, Informatics & Cybernetics, Baden-Baden, Germany, 3 August 2004. In press, *Advances in Sociocybernetics and Human Development*.
- Hilgartner, C. A. (2006) *A Lethal Fundamental Error: How To Recognize, Reject & Replace It*. Presented at the meeting of the International Society for the Systems Sciences, Sonoma State University, 2006. (In press.)