

Chapter 8

Communicology, Cybernetics, and Chiasm: A Synergism of Logic, Linguistics, and Semiotics



Richard L. Lanigan

Abstract The analysis takes up the conjunction of semiotics and cybernetics as a problem in theory construction in the human sciences. From a philosophical perspective, this is also the ontological problem of communicology: the disciplinary study of human communication. My analysis suggests current conceptions of “semiotics” and “cybernetics” are misunderstood because “information” is assumed as synonymous with “communication” and that the axioms of “mathematics” are identical to those of “logics”. The evidence contained in the misunderstandings is a conflation of reductionist ecology ideas about the “environment” differentiation of (1) human beings [apperceptive organic life], (2) animals [perceptive organic life], and machines [inorganic and constructed mechanisms]. The communicological view argues that a correct understanding of these issues requires a competence in logics and linguistics to determine the metatheory criteria for choosing evidence among humans, animals, and machines. The domain thematic is the phenomenological synergism of human embodiment as expression and perception. In this context, my criterion for evidence is the structure or form of a pure concept of reason (choice making judgment) that is given a priori in consciousness, the *notion* demonstrated by Immanuel Kant: A notion is a rule that you know before you experience it as a result.

Keywords Culture · Jakobson · Language · Nature · Phenomenology · Positivism · Reductionism

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8.1 The Problematic: Choice of Context

Issues in philosophy and science are complex by their very definition. When we attempt to “introduce” such issues, the classical Greek method of problematic and thematic immediately recommends itself. What question do we ask, how do we answer? We seek to determine *what* is at issue for us and *how* we might approach an understanding of the issue as it applies to us. In short, it is things versus ideas. Our immediate issue is to understand “semio-cybernetics” proposed by Søren Brier (2008, 2009; Thellefsen et al. 2011). Obviously, this neologism is a conjunction of *semiotics* and *cybernetics* that invokes the problematic of metatheory: How do we approach the theoretical ground of two pre-existing theories? As human beings, we look for criteria of judgment that allow us to specify what we *perceive* as experience, how we *express* the meaning of our conscious awareness, along with where and when they join together as *evidence*. What is perceived constitutes the world of Nature (things) and how we express our experience is the world of Culture (ideas). If we take these two problematics (things and ideas) as suggestive of commonalities for us (being human), we discover possible thematics. Our favorite human thematics are (1) thing-ideas. i.e., conceptions of science as “objectivity”, and, (2) idea-things, i.e., conceptions of culture as “subjectivity”. The easiest methodology for applied work is to choose one thematic and ignore the other one (where and when we do this emerges later on in Fig. 8.16). Here is our issue. Semio-Cybernetics is the suggestion that two thematic methodologies (as “ideas”) be combined to find “things”. Such combinations are the very process and function of human communication.

While I think this Semio-Cybernetic combination is quite possible and has, in fact, been accomplished already as the discipline of Communicology, I also believe current conceptions of both “semiotics” and “cybernetics” are misunderstood by casual readers, many of whom assume “information” is synonymous with “communication” and that the axioms of “mathematics” are identical to those of “logics”. Further, the evidence contained in the misunderstandings is a conflation of reductionist ecology ideas about the “environment” differentiation of (1) human beings [apperceptive organic life], (2) *animals* [perceptive organic life], and machines [inorganic and constructed mechanisms]. The communicological view argues that a correct understanding of these issues requires a background competence in logic and linguistics to determine the metatheory criteria for choosing evidence among humans, animals, and machines (Lanigan 1988b). Further, these metatheory criteria are the domain of the human science of Communicology (Lanigan 2007, 2008, 2012, 2013, 2019; Riebar 1989; Wilden 1972, 1987). The domain thematic is the *phenomenological synergism* of human embodiment as perception and expression (Dreyfus 1972/1992, 2001). In this context, my criterion for evidence will be the technical definition of *notion* demonstrated by Immanuel Kant.

A notion is Kant’s category for the structure or form of a pure concept of reason (choice making judgment) that is given *a priori* in consciousness (Lanigan 2018a). Let me say it clearly: A notion is a *rule* that you know *before* you experience it as a

result. Contrary to modern views of scientism, a rule is not a cause and a result is not an effect. This to say, we cannot confuse conscious *expression* (Rule → Result) with experience *perception* (Cause → Effect). Edmund Husserl builds on Kant to established the founding logic of implication used by Roman Jakobson in this approach to human communication (Holenstein 1974/1976, pp. 25–47).

8.2 The Problematic: Communication as Context

Communicology as a domain of research analysis and synthesis constitutes an account of what and how human beings create *meaning* (usually named *reality* [an *idea* of things]), and, *function* among other persons in a shared world (normally called *actuality* [an *experience* of things]). The universal model for this account of semiosis at all levels of conception is Roman Jakobson’s description of science and the place of communication as the *transaction* of behavior/experience and comportment/idea (Holenstein 1974/1976). Figure 8.1 presents a visual context for perceiving the organization of hierarchical complexity of Culture and Nature—a metatheory model of Communicology.

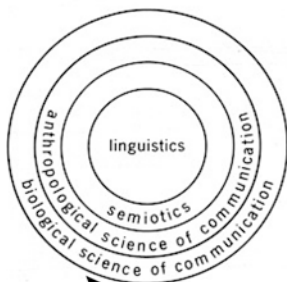
The human science model begins with Philosophy and Linguistics, the complex integration of culture and nature in the language medium of *human speech* (Bühler 1934/1982, 1958; Cobley 2010; Lanigan 2018b). The linguistic domain consists of two fundamental logic functions in human thinking: (1) *distinctive features* in sound production and perception wherein *spatial* differentiation creates historical temporality (embodiment) and (2) *redundancy features* similarly create the *temporal* differentiation of existential spatiality (apperception) (Durt et al. 2017; Fuchs 2018a, b). Distinctive Features function in metonymic order as *series* [e.g., A B C D] and Redundancy Features function in metaphoric order as *blanks* [e.g., , , , ,]. So, two “Realities” combine as one “Actuality” [e.g., A, B, C, D,] (Lanigan 2015c). In short, *verbal messages* (unique to human beings) are a *choice-of-context* that grounds [code/context] any further *context-of-choice* differentiation [message/contact] of the system in its complexity. Thus, the first circle in Fig. 8.1 is labeled *Linguistics*. In the second circle called *Semiotics*, Messages are contextualized by a controlling *code* that specifies the two conditions of any possible system (= Semiotics): (1) Things inside the system (series), and, (2) Things outside the system (blanks).

Thus, codes establish boundary conditions for specifying the system (space) and its function (time). When and where functions cross the boundary, we experience the “mirror effect” wherein the sign-system doubles itself (double-articulation; meta-physics). Such sign-systems become synergistically *reversible*, *reflexive*, and *reflective* and constitute the *Anthropological* level (Lanigan 1988a, 1992; see Fig. 8.3). A simple *gestalt* proof of this point is achieved by placing one mirror opposite another mirror (Bühler 1913, 1922). If you do the experiment, notice you are perceiving a *series* of mirrors (*objects*) that are separated from one another by a parallel series of *blanks* (*space* between objects). This rule is famously violated in René Magritte’s *reproduction interdite* (1937). Jakobson’s human science model

Jakobson's Human Science Model

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SOURCE: Elmar Holenstein, *Roman Jakobson's Approach to Language: Phenomenological Structuralism* (Bloomington, IN: Indiana University Press, 1976). Cross-references to Jakobson's *Selected Writings* (9 vols.).



DEFINITIONS: (Source Pages 154,187.)

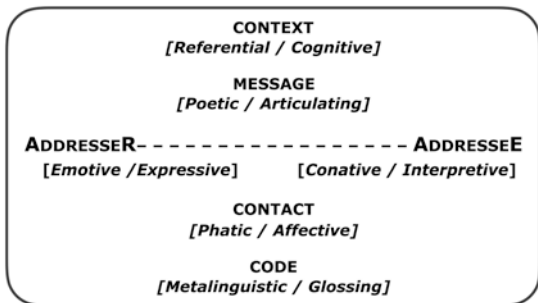
Linguistics = The communication of verbal messages.
 [Human Logic Systems:
 Redundancy & Distinctive Features in Discourse]

Semiotics = The communication of any messages.
 [Sign Systems: Trivium of Rhetoric, Grammar, Logic]

Anthropological Science = The communication in Social Anthropology and Economics; communication of messages implied.
 [Exchange Systems: Natural and Artificial]

Biological Science = The ways and forms of communication used by manifold living things.
 [Ecological Systems: Organism and Environment]

Jakobson's Communicology Model



ELEMENTS:	Functions:
ADDRESSER Embodiment	→ → Emotive or Expressive Function (Speaking Person: Grammatical 1 st Person)
ADDRESSEE	→ → Conative or Interpretive Function (Spoken to Person: Grammatical 2 nd Person)
CONTEXT Non-Verbal	→ → Referential or Denotative; Cognitive Function (Spoken of Person: Grammatical 3 rd Person)
CONTACT	→ → Phatic or Connotative; Affective Function (Physical and Psychological Engagement)
MESSAGE Verbal	→ → Poetic or Matrix Articulating Function ["Prague Prism"] (Paradigmatic - Syntagmatic Category Reversal)
CODE	→ → Metalinguistic or Glossing Function ["Translation"] (Double Articulation; Interpretation / Tone)
AR — — AE	→ → Intentionality Chiasm or Transformation of All Functions (Interaction wherein ALL Functions are: BOTH INTRApersonal AND INTERpersonAl AS ① Reversible ② Reflexive ③ Reflective) ["Semiotic Square"] [Source Pages 7, 39, 141-145]

Fig. 8.1 Roman Jakobson communicology metatheory model

records this anthropological exchange principle as the third circle in Fig. 8.1. The outer, fourth circle represents *Biological* communication systems that *embody* one, two, or three functions of the previous levels.

Simply put, *human beings* embody all four levels: 4-Biologic (Organism/Physical), 3-Anthropologic (Environment/Physical), 2-Semiotic (Environment/Mental), and 1-Linguistic (Organism/Mental). In this context, *animals* embody levels 4, 3 and 2; whereas, *machines* “embody” only level 3 (Environment/Physical). On this foundation, my analysis proceeds to deconstruct the reductionist models that have progressed from bio-semiotics [levels 4-Biologic and 2-Semiotic], to socio-cybernetics [levels 3-Anthropologic and 2-Semiotic], and, to semio-cybernetics [levels 4-Biologic, 3-Anthropologic, and 2-Semiotic]. All of these approaches contain two negative *reductions*: (1) the *elimination* of level 1-Linguistic (Organism/Mental), and, (2) the *elimination* of the combinatory hierarchy Logic [level 2-Semiotic] inherent in human languages (and, their secondary modeling as artificial “languages” [computers], or tertiary modeling as artificial “intelligences”[robotics]).

Let us begin with a visual suggestion of how to discover the presence of such misleading reductionist thinking. In Fig. 8.2, we have an illustration of how bio-semiotics imagines (a proposed reality) the actual world of living people. Such a representational model is achieved by eliminating the core 1-Linguistic level of analysis. When you do *not* do the reduction, you are able to perceive an actuality model of all four level of analysis as in Fig. 8.3.

At this juncture, we need to review just what is contained in the Jakobson model at level 1-Linguistic. Remember that this meta-system is itself a double articulated system so that the Human Science Model in Fig. 8.1, can be illustrated with Fig. 8.4. In parallel fashion, the linguistic hierarchy is the four levels suggested by Fig. 8.5.

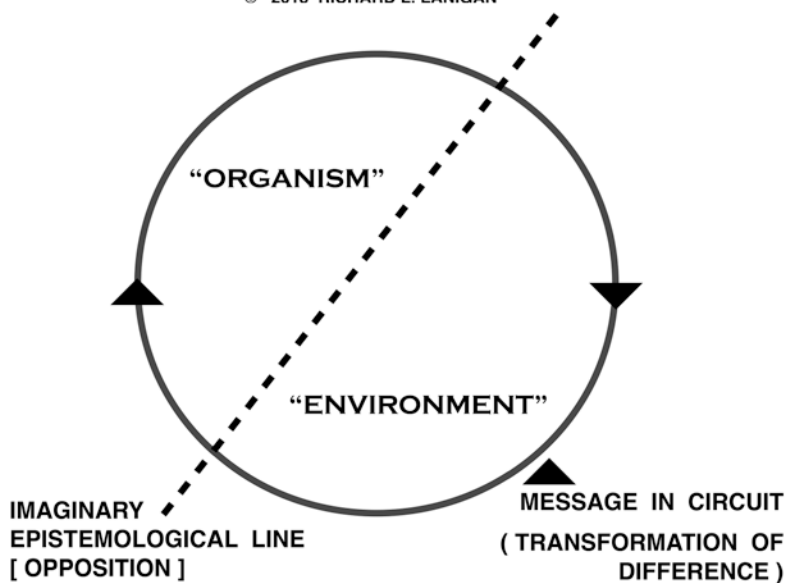
Norbert Wiener (1948a, b) summarizes for us: “The chief value of language is not that it enriches communication, though it certainly does so, but that it puts communication into a form which is transferable without the physical presence of the objects it concerns. This leads to writing, in which it is no longer necessary to confront the participants in communication” (p. 219). Thus, it becomes obvious why it is popular to engage a reductionist approach to complex living systems by eliminating high order complexity (linguistic systems) in favor of non-complexity (organic/inorganic objects). Getting rid of “language” allows the researcher to avoid *logic systems* that require problematic explication plus thematic explanation; an example is Maturana and Varela (1972/1980). Where *language is the foundational logic* used, the logic hierarchy in Fig. 8.5 thus constitutes a functional “control” function (decision matrix) over all four levels of derivative semiotic systems as suggested in Fig. 8.6; an example of this new perspective is Maturana and Varela (1987). This language criterion approach to analysis now requires that we revise the complexity level of our thinking and move by means of *abduction* from the simplicity of Fig. 8.3 (a linear reality model) to the complexity of Fig. 8.7 (a curvilinear actuality model).

The logic used to create the Fig. 8.7 illustration is summarized in Figs. 8.8 and 8.9 as traditional forms of causality (matter, form, agency, purpose). Figures 8.10, 8.11, 8.12, and 8.13 suggest the founding/constitutive *logic* that human *language*

The Imaginary Splitting of the Ecosystem

Anthony Wilden (2nd ed. 1980: 221)

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"The Cartesian error appears in many forms." (p. 217) * [*cogitamus ergo sumus*]

IMAGINARY OPPOSITIONS

(= POTENTIAL 'IDENTITIES OR UNITIES OF OPPOSITES')

"ORGANISM"	"ENVIRONMENT"
Society [Culture]	Nature [Life]
Self	Other
We	Them
Ego	Id
Man	Woman
Reason	Emotion
Mind	Body
White	Non-White
'Civilized'	'Primitive'
Capitol	Labor

"Since 'organisms' select 'environments' and vice versa, the terms 'organism' and 'environment' refers to an ecosystemic relationship, not to entities." (p. 356n.)

* [*liquor ergo sumus / we speak, therefore, we are*]

Fig. 8.2 Reductionist model of living systems (information theory)

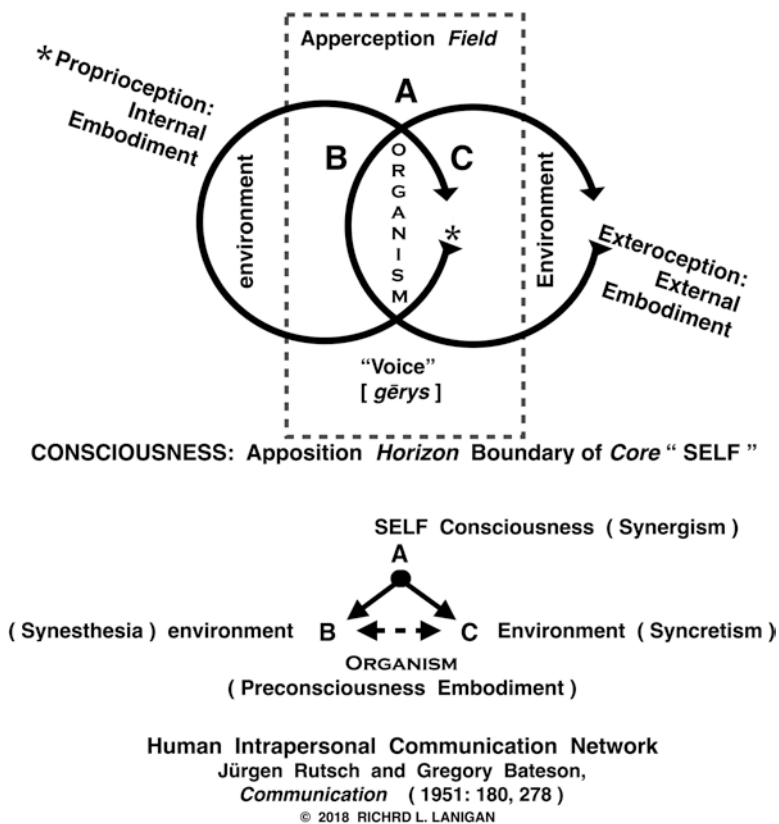


Fig. 8.3 Linguistic model of living systems (communication theory)

displays as a model of human *thought*. The figures constitute a metatheory specification of Roman Jakobson’s communicology model in Fig. 8.1. The *chiasm tropic logic* in Fig. 8.11 is the rhetorical modality of Aristotle’s syllogism of four terms in three proposition (the contemporary understanding of *triadic* relations as in C. S. Peirce and *quadratic* relations as in A. J. Greimas; discussed at length in Lanigan 2015b). A good example of the chiasm logic method (language based semiotics) is Maturana and Varela (1987: 26, 210) where their theoretical premise is the phenomenological combination of two chiasms: (1) “All doing is knowing, and all knowing is doing” and (2) “Everything said is said by someone”. Note the precise tropic structure at work:

- | | | | |
|---------------|--------------|--------------|------------|
| A: Doing-1 | B: Knowing-1 | b: Knowing-2 | a: Doing-2 |
| A: Everything | B: Said-1 | b: Said-2 | a: Someone |

Figures 8.8 and 8.9 suggest the axioms that can be constituted by this phenomenology-logic approach to research. “We operate in language when an observer sees that the objects of our linguistic distinctions are elements of our linguistic domain.

**Communicology Discourse Model
with Meaning Categories based on
Roman Jakobson's Human Science Model**
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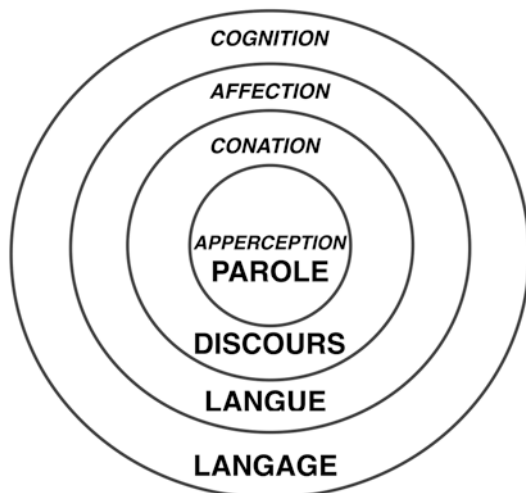


Fig. 8.4 Discourse model in communication theory

Language is an ongoing process that only exists as languaging [*sic* speaking], not as isolated items of behavior.” Please note that this phenomenological perspective is a complete *reversal* of their 1972 phenomenism wherein human communication was reduced to a closed system “autopoiesis machine” computer metaphor (Maturana and Varela 1974/1980: 78; my correction; see Nöth 2002, 2008; see Fig. 8.16).

Having positioned the hierarchy of combinatory, inclusion logic (Both/And) over the differential, exclusionary logic (Either/Or) [summarized in part 1 of Fig. 8.20], we are positioned to perceive the doubling of Jakobson’s communicology model (Fig. 8.1) as the combined interpersonal communication dynamic (Fig. 8.7) of expression (Fig. 8.12) and perception (Fig. 8.13). Figure 8.14 presents the dynamic curvilinear process in linear static terms, whereas Fig. 8.15 illustrates the chiasm logic form.

8.3 Thematic: Cybernetic Communication Contextualizes Bio-Socio-Semiotic Information

The longstanding comparison of Culture and Nature was first posed in the West by the pre-socratic philosopher Parmenides and advocated by his “Successor” Proclus Lycaeus, who asks “One, how many?”. This metaphysical question, a particular

DISCOURSE COMMUNICOLOGY MODEL
EMBEDDED HIERARCHY OF DISCOURSE MOVING FROM
DYNAMIC MEANING (LOGOS) UP TO STATIC SIGNIFICATION (LEXIS)
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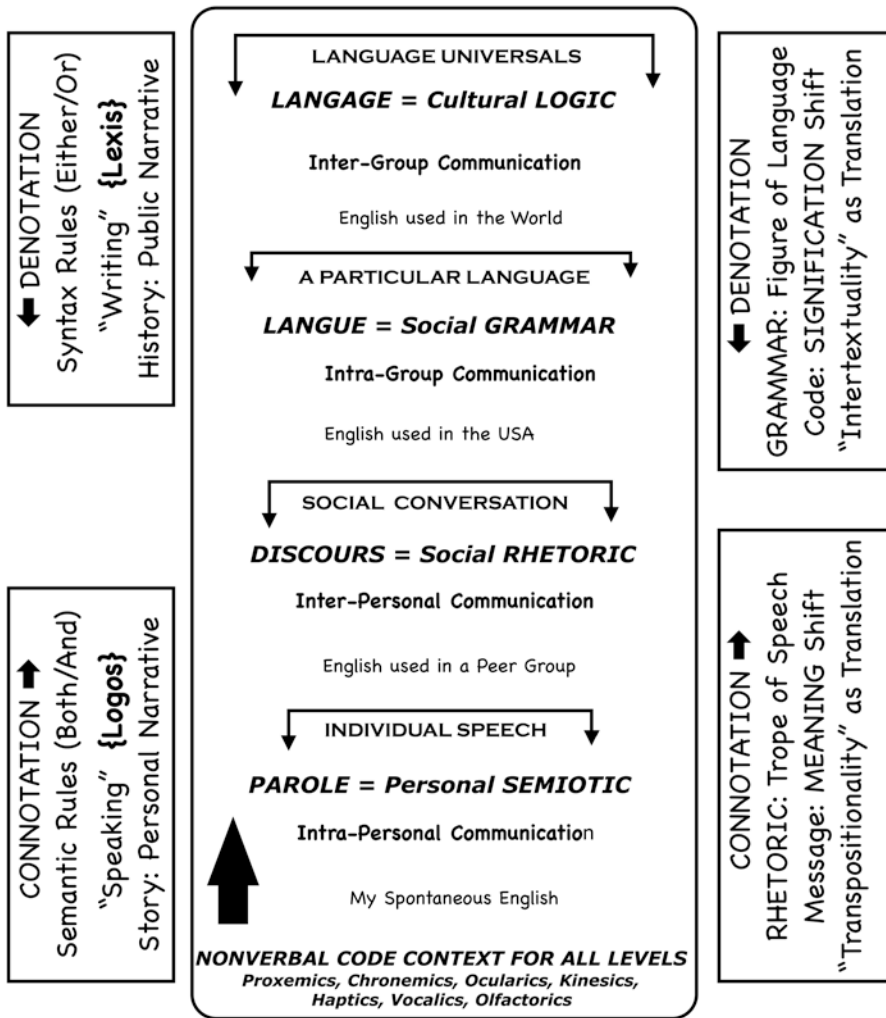


Fig. 8.5 Standard linguistic hierarchy for communicated language (speech)

lecture favorite of Charles Peirce and Gregory Bateson, creates a dialectic investigation procedure for how to do research which is named the *triás* method (triadic structure). The method investigates the relationship among three embodiment conditions: (1) the Unparticipated [*amethekton*] or what is *experienced*, (2) the Participated [*metechomenon*] or who is the *experiencer*, and (3) the Participating [*metechon*] or how the *experiencing* occurs (Lanigan 2017). We know this method

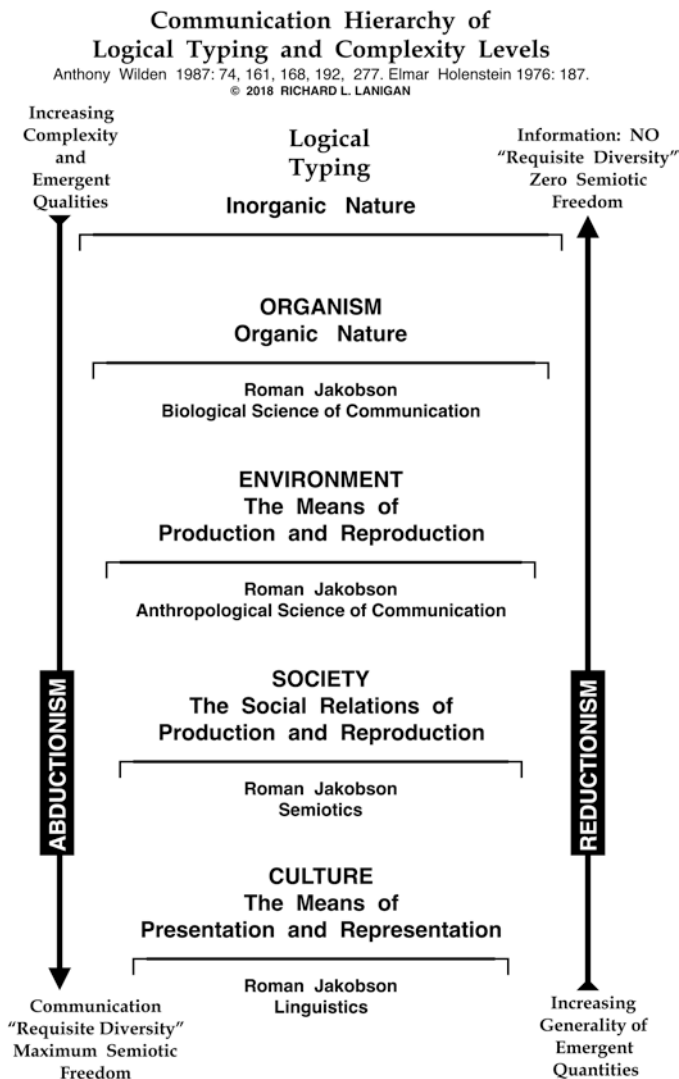


Fig. 8.6 Logical typing in human communication (compare Fig. 8.3)

primarily through the Scholastic Trivium as Logic, Grammar, and Rhetoric. Of course, Peirce scholars know this triadic structure well as Icon, Index, and Symbol. But remember the fourth element of the system, the *embodied human being* who thinks, speaks, and writes (Peirce’s Interpretant). Figure 8.16 illustrates the contemporary culture (phenomenology) versus nature (phenomenalism) comparison in methodological terms.

Made explicit by Aristotle, the *triás question* is the metaphysical status of Objectivity as *answered* by the rhetoric argument of Universality (Substance, Whole) contested by the dialectic argument of Particularity (Attribute, Part)

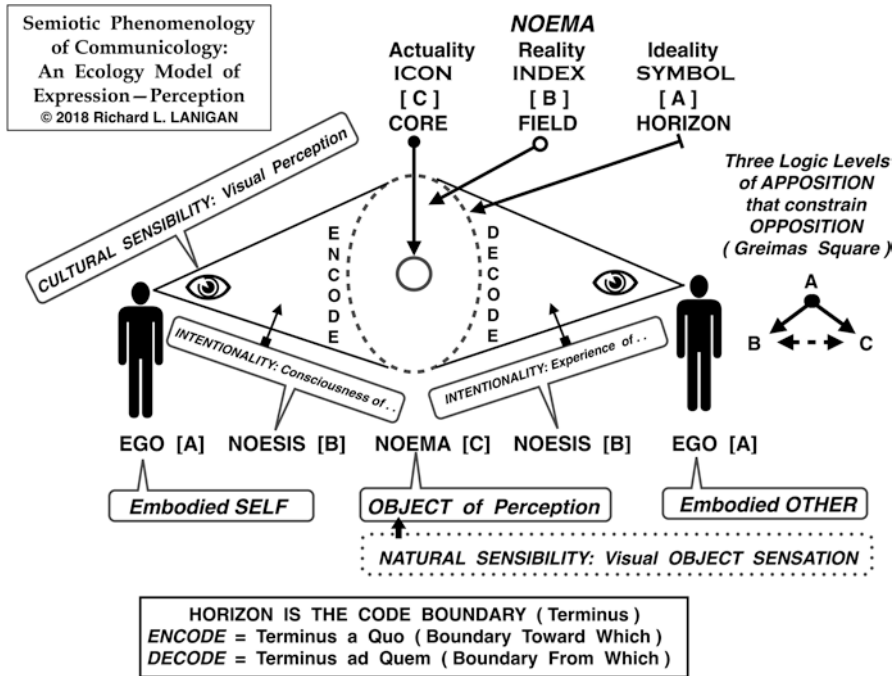


Fig. 8.7 Communication model of living systems (semiotic phenomenology theory)

(McKeon 1998, p. 153). The argument is refined by Immanuel Kant (Lanigan 2018a) and then confronted in the modern technological era by Ernst Cassirer with the human science concern for the idea of technology. For Cassirer (Lanigan 2018b), the question of Science (Objectivity) is the phenomenological contest between (1) the Perception of Objects (Appearances) and (2) the Perception of Expressions (Signs).

What has been lost among many contemporary semioticians is the classical distinction between (1) *sēmeion* [fallible sign as perceived = “real” to consciousness as “appearance”] and (2) *tekmérion* [infallible sign as expressed = “actual” to consciousness “object”]. The more familiar version of this distinction comes via grammar and its literature legacy (Shapiro 1988). This is to say, all “fallible sign” examples are “intransitive verb sentences”, whereas all “infallible sign” examples are “transitive verb sentences”. The very important point is that all *applied semiotics* (bio-semiotics, socio-semiotics, semio-cybernetics) assumes the description of Nature is self-referential [infallible sign] when in fact the description is other-referential [fallible sign]. Culture, description by language, constitutes the other-referential.

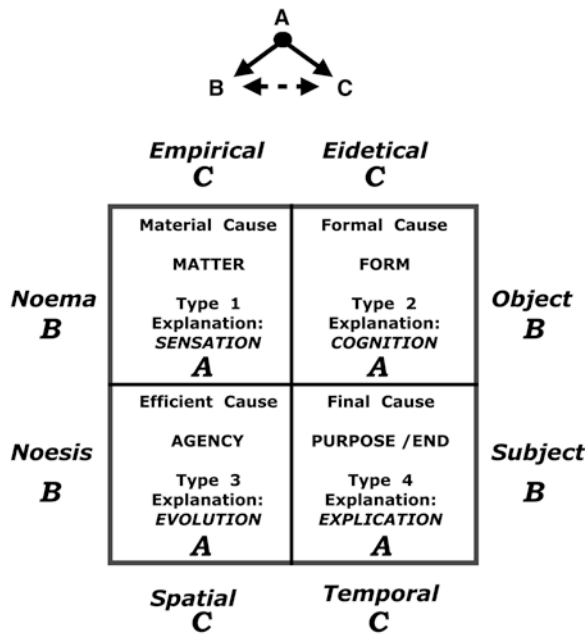
Thus, for human beings the condition of Culture for analysis is quite simply Charles S. Peirce’s doctrines of *fallibilism* [contingency, knowledge is never absolute], *tychism* [chance, choice is never absolute], and *synechism* [continuity, the tendency to see *Gestalt* series] (Lanigan 2014). Culture as level 1-Linguistics

Apposition [A] of Binary Opposition Analogues [B and C]			
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REGULATIVE RULE [<i>PREDICATION</i>] Un-Marked Term = Apposition Analogy by Conjunction		CONSTITUTIVE RULE [<i>CAUSALITY</i>] Marked Terms = Opposition Analogy by Disjunction	
APPOSITION of Opposition	A ● → B ← - - → C		
POSITION	IDEAL	REAL	ACTUAL
Triadic Sign-System	SYMBOL	INDEX	ICON
Matter [Type 1] (MATERIAL CAUSE)	Sensation EMBODIED <i>PERCEPTION</i>	Noema CONCEPT OF <i>SENSE</i> " Rock "	Empirical SENSE OF <i>CONCEPT</i> " Hard Place "
Form [Type 2] (FORMAL CAUSE)	Cognition EMBODIED <i>CONSCIOUSNESS</i>	Object AWARENESS OF <i>SENSE</i> " Gestalt "	Eidetical SENSE OF <i>AWARENESS</i> " déjà vu "
Agency [Type 3] (EFFICIENT CAUSE)	Evolution EMBODIED <i>EXPRESSION</i>	Noesis CONCEPT OF <i>AWARENESS</i> " Ordinal: 1st, 2nd, 3rd "	Spatial AWARENESS OF <i>CONCEPT</i> " Cardinal: 1, 2, 3 "
Purpose / Consequence [Type 4] (FINAL CAUSE)	Explication EMBODIED <i>EXPERIENCE</i>	Subject PRESENTATION OF REPRESENTATION	Temporal REPRESENTATION OF PRESENTATION
Symbolic Form [Nomination]	" I "	" ME "	" YOU "
Symbolic Form [Predication]	" MYSELF "	" THEE "	" THOU "

Fig. 8.8 Apposition logic in terms of classical Aristotelian causality

precedes Nature as level 2-Semiotics. Figure 8.17 specifies the Culture to Nature hierarchy which then becomes the foundation for *adductive* logic. The result is a clear distinction between human open systems and machine closed systems. Furthermore in Fig. 8.18, we can see that the cybernetic *abduction* wherein *choice is a control factor* allows us to distinguish *goal-intended comportment* (open system; time function) from *goal-directed behavior* (closed system; space function). Our human ability to “sense” another person (apperception) and not confuse them

Apposition [A] of Binary Opposition Analogues [B and C]



Four Types of Causality and Explanations
The Triadic Synthesis of Quadratic Analysis

Fig. 8.9 Triadic semiotic relations illustrated as a semiotic square

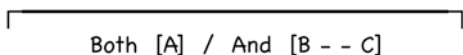
(perception) with a robot (machine) is an everyday confirming experience (Dreyfus 1972/1992, 2001; Dreyfus and Dreyfus 1986; Lanigan 2018d). This fact is dramatically true when we think of our experience of speaking with another person versus our experience of a machine trying to communicate with us. We never confuse embodied speech (face-to-face; transaction) with its mechanical disembodied sound/ sight simulation (mobile phone; interaction). We should also note, as a matter of interest, that we humans never mistake perceived human action with either animal action or machine action during bodily movement.

Science cannot proceed on the basis of a “first and second order cybernetics” hypostatization and aporia where “language” is dismissed as *not part of* “observed description” [unparticipated]. The aporia, of course, is that even the biologist uses a human language and *that* available language *structure* gives the *logical* conception of description [participated] as embedded in a *rhetorical* expression of *meaning* [participating]. In short, definitive “subjective” judgment guides the “objective” description and account of “causality” [grammatical transitivity], long ago noted as a problematic for all of science by Otto Neurath (1944, p. 2). Even Norbert Wiener (1915, p. 570), echoing Peirce, famously says, “The life of every branch of mathematics lies in a habit.”

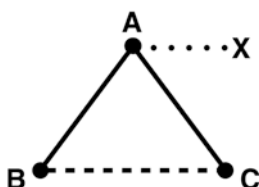
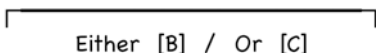
Hierarchy of Logical Typing in Communication

Anthony Wilden 1980: 496, 500; 1987: 161, 168. © 2018 RICHARD L. LANIGAN

Analogue (Difference by Degree)



Digital (Distinction by Kind)



- X = Relationship to an *environment* / *Environment*
- A = Locus of the **Code** (Mediation) = *Organism (Medium)*
- B, C = Goalseeking Sender—Receivers Mediated by the Code
- B--C = Locus of the **Message** (Message Channels)
- A—B, A—C = Coding Channels

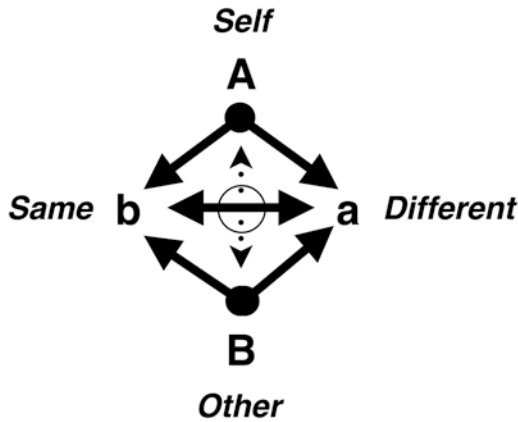
Fig. 8.10 The logic hierarchy of code and message as a chiasm ratio

As we need to note, semiotics as pseudo-science doctrine (bio-semiotics, socio-semiotics) proceeds by just such an “objectivist” hypostatization and aporia: “Is the biosemiotic approach reductionist? The answers of course yes—if one narrowly defines the words *signs* or *meaning* in terms of human phenomena such as linguistic symbols” (Hoffmeyer 2005/2008, p. 6; see Velmezova and Crowley 2015). A clever escape from the aporia is to assert that the thematic for judgment should not be “language”, but “life”. As Nöth (2015) summarizes Thomas A. Sebeok’s biological (non-linguistic) approach to sign-systems:

Sebeok’s biosemiotics is not directed towards affirming the uniqueness of the human language faculty. In the debate between the essentialists and the evolutionists, in which we find biolinguistics generally taking the essentialist side, biosemioticians are usually found on the evolutionist side. The former argue that language is essentially “different from other forms of communication and that language separates humans from other species”, whereas the latter postulate continuity in the growth of sign processes and systems. Furthermore, whereas biolinguistic research begins with the origin of language, the biosemiotic research program begins with the origin of life.

For Sebeok, the semiotic threshold between the non-semiotic and semiotic world is the threshold between life and lifeless things. For him, that is a threshold between information and semiosis. In evolution before the origin of life we only find information (the ongoing increase in entropy), whereas semiosis begins with the origin of life (p. 159).

Chiasm Logic: $A : B :: b : a$



Legend:

A, B = Subjectivity (Agency: Noetic & Spatial)

Terminus a quo [toward which]; subject knowing.
 [Embodied Person (s), Expression, Perception,
 Sensation, Cognition, Affection, Conation]

A / B = Intersubjectivity (Intentionality: Purposeful & Temporal)

Terminus ante quem [before which]; limit of knowing.
 [Perspective, Awareness, Consciousness of, Experience of,
 Apperception, Position / Transposition, Action / Interaction,
 Mind / Body, Intra-Personal / Inter-Personal]

a = Objectivity (Material & Spatial)

Terminus a quod [to which]; object known
 [Shape, Size, Texture, Type / Token]

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b = Objectivity (Formal & Noematical)

Terminus ad quem [from which]; subject known.
 [Color, Shade, Token / Tone]

● → = **Apposition / Apperception (REFLECTIVITY)**
 (3 PART / WHOLE: A – b – a ; “Mirror” B – b – a)
Real: A Thing Is = SUBSTANCE / ATTRIBUTE
{Analogue Scale: More–Less }

← → = **Opposition / Perception (REFLEXIVITY)**
 (2 PART / WHOLE: b – a)
Imaginary: A Thing Can Be Another Thing = SUBSTANCE / ATTRIBUTE
{Analogue Scale: More–Less }

◀ ⋯ ▶ = **Transposition / Expression / Translation (REVERSIBILITY)**
 (1 PART / WHOLE: both A and B)
Symbolic: A Thing Both Is And Is Not A Thing = SUBSTANCE / ATTRIBUTE

○ = **Interstices; chora** [space of origin]; *mesotēs* [mean]; *terminus* [boundary]

Fig. 8.11 Chiasm logic model (le même et l’autre)

Fig. 8.12 Encoding in human communication (communication theory)

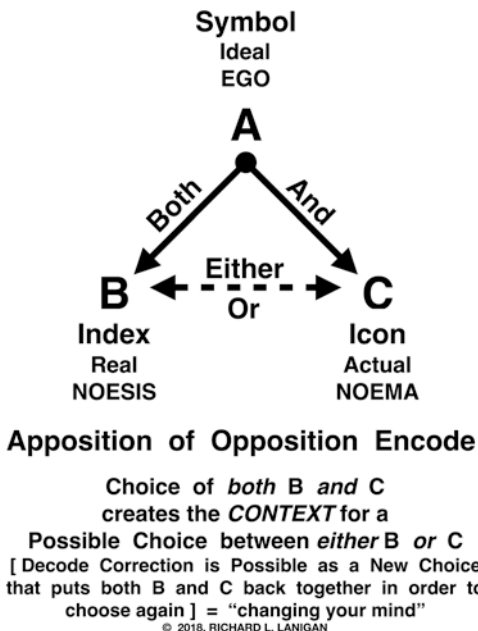
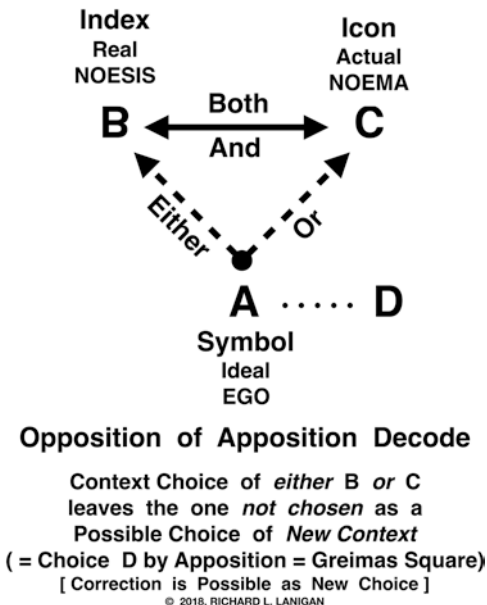


Fig. 8.13 Decoding in human communication (information theory)



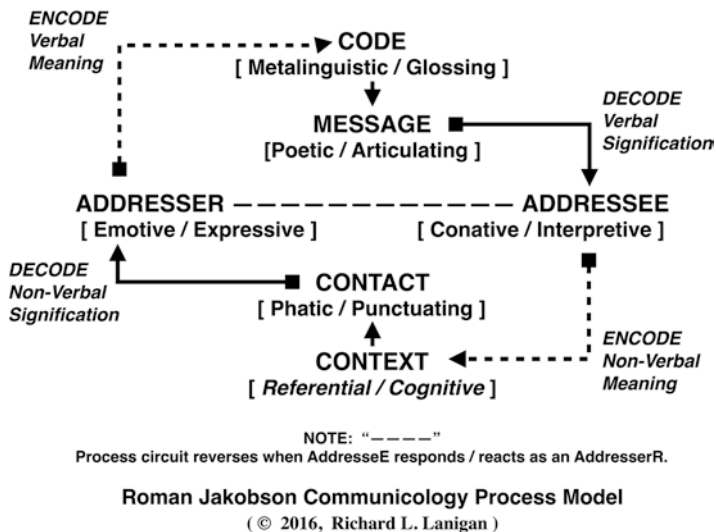


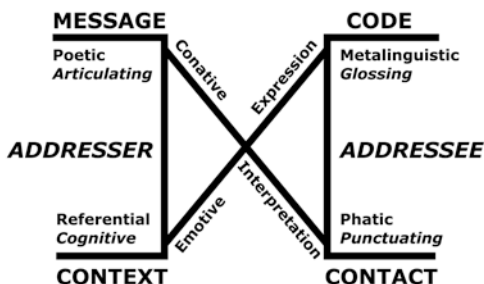
Fig. 8.14 The Jakobson process model of communication

Most of my analysis so far has been devoted to unpacking this “threshold” as an extraordinary example of the logical fallacy of “causality”—“after this, therefore because of this” [*post hoc ergo propter hoc*]. This is to say, the reported analysis *conflates* and confuses (1) the problematic (where we seek to locate the *present* source of “context”, not *absent* “origin”, (2) the thematic (where we seek to locate the *present* criterion of “choice”, not the *absent* “not choice” of “information”. Given Sebeok’s *post hoc* thesis as described by Nöth, it is easy to understand why there is a proposal of a “semio-cybernetics”. This proposal models on Information Theory (Informatics = semiotic syntax, no semantics nor pragmatics) and simply assumes that (1) a closed system “originates” [life is born = environment makes organism; neg-entropy], that (2) a closed system consumes, exhausts “energy” [life is dead = organism makes environment; entropy]; see Fig. 8.2. This point is a continuing issue in the discussion of the *Umwelt* model as proposed by von Uexküll (1937/2001; see Brentari 2011; Wheeler 2006) because the “origin of life” he suggests ends up making a theological claim for causality, unlike Darwin whose experiential claim is for adaptive rules (Kozintsev 2018).

Given the long tradition of Bateson and Wiener where cybernetics is integrated with the human sciences, we make more progress if we adopt the approach of Communication Theory (Third Order Cybernetics) and join the dialogue with Søren Brier (2008, 2009; Thellefsen et al. 2011). This synergistic approach alternatively assumes that (1) human beings make systems [life is process = Context: organism is environment; neg-entropy], that (2) an open system creates “energy” [life is apperception = Choice: environment is organism; entropy]. Heidegger’s synoptic version is *Sein-zum-Tode* [being-toward-death]. His phenomenological model of semiotic choice of context [*Dasein*] is based on the Greek teleological concept of individual human existence [*tóde ti*] (Lanigan 2015d, 2016).

**Roman Jakobson
Chiasm Matrix Model of
Embodied Intentionality**

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NOTE on Symbols: Mathematic symbol for Chiasm exchange is \bowtie and the Logic symbol is \otimes

Because of the nature of Category Series, we usually think of a “window” matrix \boxplus where any one Quadrant [category] defines the other three quadrants [= Triad]. This function is better conceived on the diagonal with this symbol \boxtimes Thus, when you double over the triad (as in Peirce or Greimas semiotics), you get \otimes

which is the format used by Michel Foucault (the equivalent in Peirce is the first 9 sign types [3 levels of 3 categories]). For Merleau-Ponty, the Chiasm is his System of Four Terms [Quadratic] as Reversible, Reflexive, and Reflective [Triadic]. Another common quadratic symbol [tetrahedron] is a base triangle pyramid that has three triangle sides like this:



Fig. 8.15 Chiasm communicology matrix model

The challenge of our thematic comparison today centers on the *Gestalt* of *synergism* (phenomenology) and *antagonism* (positivism) of the Human and the Machine, that is, Communication Theory (where choice is *contingency*) and Information Theory (where choice is *uncertainty*). Of course, the “machine” is now a dead metaphor for the Nineteenth Century conception of “animal”. This is to say bluntly, humans make machines, but machines cannot make a human being. Figure 8.20 provides a summary of the current status of our understanding of Communicology as the linguistic modeled sign-system that explains human comportment as a higher order system than those systems created by humans, i.e., machines with artificial languages and functions (Lanigan 1997, 2007, 2008, 2013, 2019; Ruesch and Bateson 1951; Ruesch and Kees 1972; Ruesch 1972, 1975). Figures 8.19 and 8.20 summarizes the key features of Communicology, defined by the method of semiotic phenomenology, that constitute a “third order” cybernetic model of human communication systems (speech/language) and all thought systems that derive from them (logic/mathematic) in concrete forms (Ashby 1956; Bateson 1972, 1979, 1991, 2005; Dreyfus 1972/1992, 2001; Dreyfus and Dreyfus 1986; Heims 1993; Wiener 1915, 1948a, b, 1950, 1953).

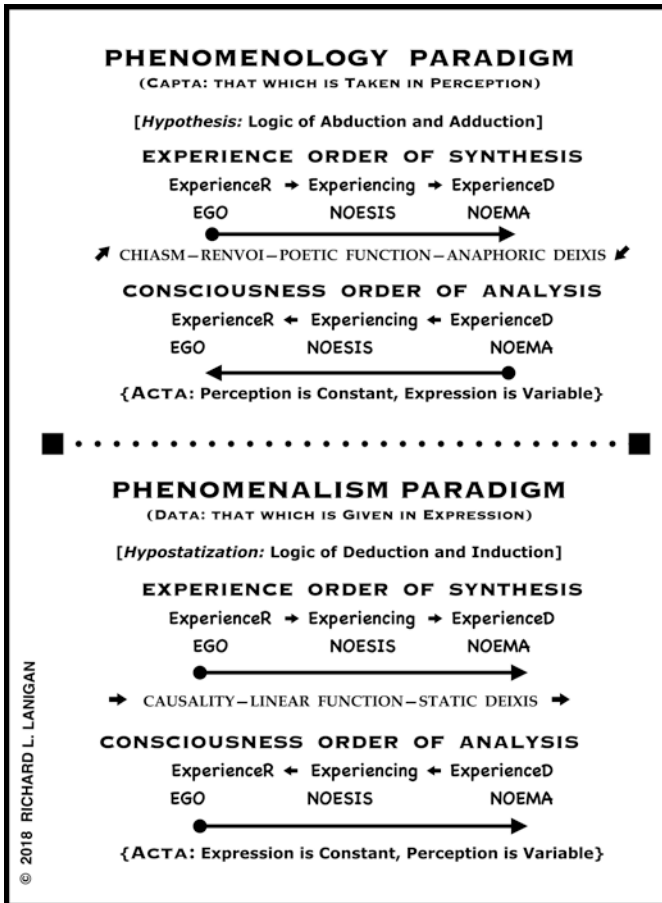


Fig. 8.16 Culture and nature methodology paradigms

8.4 Thematic: Semiotic Phenomenology Contextualizes Cybernetic Communication

My analysis suggests that Semiotic Phenomenology (contingency Choice-of-Context) already constitutes what is frequently named “Third Order Cybernetics”. Here, logic and semiotic are *normative systems* of conscious human experience (regulative rules in logic systems; rules/results). By comparison, the domain of “First Order Cybernetics” (machine systems) and “Second Order Cybernetics” (bio-social systems) is a reductive (Context-of-Choice uncertainty) of physical instrumentality (constitutive rules in logic systems; causes/effects). Here, logic and semiotic are *hypostatized systems* of “artificial intelligence” and “biological determinism” where observed action is a mere *analogy* for the cognitive *capacity* (Peirce’s sense) for choosing.

CYBERNETIC HYPOSTATIZATIONS	
Culture	Nature
Dynamic Process <i>APPERCEPTION</i> (Bateson: Proprioception)	Static Structure <i>PERCEPTION</i> (Bateson: Exteroception)
Open System	Closed System
Choice of Context (Analogue)	Context of Choice (Digital)
CODE <i>Regulates</i> Message Logic: Deduction	MESSAGE <i>Constitutes</i> Code Logic: Induction
CODE is CONJUNCTIVE Binary Logic: Both / And	MESSAGE is DISJUNCTIVE Binary Logic: Either / Or
Bio-Entropy	Physical-Entropy
Subjective / Inter-Subjective Gregory Bateson's <i>Creatura</i> : <i>Communication & Organization</i> HUMAN SCIENCE	Objective / Inter-Objective Gregory Bateson's <i>Pleroma</i> : <i>Information & Structuration</i> PHYSICAL SCIENCE
ORGANISM Embodies Environment	ENVIRONMENT Embodies Organism
Human Comportment { <i>Hexis</i> }	Human Behavior { <i>Habitus</i> }
Consciousness Function { <i>CAPTA</i> } (Times Makes Space) TERRITORY MAKES MAPS Ernst Cassirer's "Perception of Expression"	Brain Function { <i>DATA</i> } (Space Makes Time) MAP MAKES TERRITORIES Ernst Cassirer's "Perception of Objects"
CYBERNETIC ABDUCTIONS	
Richard L. Lanigan's <i>Communicology Theorem</i> Edmund Husserl's <i>Intentionality Theorem</i> Gregory Bateson's <i>Creatura Theorem</i>	
Communication Theory {Human} Open Binary Analogue: Both (Both / And) And (Either /Or)	
<i>BOTH</i>	• <i>AND</i>
-----	-----
<i>BOTH / AND</i>	• <i>EITHER / OR</i>
Information Theory {Machine} Closed Digital Binary: Either (Both / And) Or (Either /Or)	
<i>EITHER</i>	• <i>OR</i>
-----	-----
<i>BOTH / AND</i>	• <i>EITHER / OR</i>
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Fig. 8.17 Cybernetic hypostatizations (second order) and abductions (third order)

In line with this analysis (Fig. 8.8), I further suggest that semiotic and logic are primarily synergistic (curvilinear conjunction), rather than antagonistic (linear disjunction). This is to say, the dynamic structure of human thinking is a *synergism* that begins with the usual triadic semiotic $A > C > B$ which is the series apposition of A





Communicology: Binary Logics in Semiotic Phenomenology	
Communication Theory	Information Theory
TELEOLOGY	TELEONOMY
Goal Intended "Open System" "Living" ⊗ Binary Analogue Logic BOTH / AND CONJUNCTION	Goal Directed "Closed System" "Dying" ⊗ Binary Digital Logic EITHER / OR DISJUNCTION
In - Determinate Transformation, Structure, Element, Disposition, Intention	Over - Determinate Formation, Form, Function Operation, Purpose
Pre - Conscious  COGNITION Consciousness of - - - Comportment, Conviction (Kant), Purpose / Intentional, Subjects / Ideas Desires, <i>EXPLICATIONS</i>	Un - Conscious  SENSATION Experience of - - - Behavior, Persuasion (Kant) Decision / Unintentional, Objects / Things Powers, <i>EXPLANATIONS</i>
Aware of Change "Negative Entropy" "Living Ecology"	Un-Aware of Change "Positive Entropy" "Dying Ecology"
Regulative Rule "Rules Are NO Game"	Constitutive Rule "Rules Are A Game"
Necessary Condition	Sufficient Condition
Transcendent { Sign } (In Absentia)	Immanent { Symbol } (In Presentia)
Choice Of Context "Open System"  <i>RHETORIC TROPE & SEMIOTIC SQUARE</i>	Context Of Choice "Closed System"  <i>GRAMMAR FIGURE & LOGIC SQUARE</i>
METAPHOR { SIMILE } "Transformations and Formations" QUALITY (Logical Extensions)	METONYMY { SYNECDOCHE } "Parts and Wholes" QUANTITY (Logical Intensions)
Distinction "Identification"	Difference "Differentiation"
Terminus A Quo "Toward the Boundary" (Subject Knowing) → > ○	Terminus Ad Quem "From the Boundary" (Subject Known) → ⊙
Paradigm Example: <i>Road Vehicle</i> RULES: 1 - Enter, 2 - Drive, 3 - Exit Alternative Form: "Driver chooses number of Vehicle Axels" [Pays Variable Tax]	Paradigm Example: <i>Building Elevator</i> RULES: 1 - Enter, 2 - Ride, 3 - Exit Alternative Form: "Self-Driving Vehicle" [Pays Fixed Tax]

Fig. 8.18 Communication control: teleology and teleonomy

[Peircian Thirdness] to the binary pair **C** [Peircian Firstness] and **B** [Peircian Secondness]. These relations are illustrated in Figs. 8.11, 8.12 and 8.13 and discussed in Peircian rhetorical terms by Shapiro (1988).


NORBERT WIENER, GREGORY BATESON & ROMAN JAKOBSON ON COMMUNICOLOGY					
CYBERNETIC ORDER	SYSTEM STATE	METONYMIC ORDER (Series)	METAPHORIC ORDER (Blanks)	REDUNDANT FEATURE	DISTINCTIVE FEATURE
① INFORMATION THEORY	LINEAR (CLOSED)	Summativity of Parts (Entropy) [Dis-Order]	SUBTRACTIVE REDUCTION -1 Choice = Context REDUCTION	PHENOMENAL (DESCRIPTION) SIGNIFICATION = Code Unit (Message Sense)	ABSENCE—ABSENCE (Opposition) [Digital Polar]
② COMMUNICOLOGY THEORY	CURVI—LINEAR (OPEN)	NON—Summativity of Parts (Neg-Entropy) [Order]	ADDATIVE SYNCRETISM +1 Choice = Context EXPANSION	SEMIO—LOGICAL (EVALUATION) MEANING = System-Code (Message Reference)	PRESENCE—ABSENCE (Apposition) [Binary Analogue]
③ COMMUNICOLOGY THEORY <small>© 2019, RICHARD L. LANIGAN</small>	GEOMETRIC (BOUNDARY) SYNERGISTIC GESTALT	GREATER THAN Summativity of Parts (Genesis) [CHORA]	CHIASM RATIO SYNERGISM A : B :: a : b	PHENOMENO—LOGICAL (INTERPRETATION) HUMAN COMMUNICATION = Embodiment-Code RUESCH & BATESON FOUR LEVELS MODEL INTRA-Person : INTER-Person :: INTRA-Group : INTER-Group	CHIASM PRESENT—ABSENCE  ABSENT—PRESENCE (Transposition) [Trinary Quadratic Analogue]

Fig. 8.19 System summary for communication and information theories

When embodied in a living system *Gestalt*, the Semiotic Triad moves in *time* as well as space, producing a logic known as a *Helix* or binary analogue logic by *conjunction*. As such, the logic progresses in *space*, a Quadratic Logic $A > C > C > B$ is produced as a *disjunction* (Hampden-Turner 1981: 148–151). In Roman Jakobson’s model of communication theory there is both eidetic and empirical evidence that the Triadic Semiotic (Fig. 8.11) produces part of the synergism as *Distinctive Features*, while the Quadratic Logic (Fig. 8.21) produces part of the synergism as *Redundancy Features*. With Jakobson, the binary analogue of contingency (change; metaphor) precedes the digital binary of uncertainty reduction (entropy; metonymy). Figure 8.22 provides a summary of the types of application that communicology theory and method has in contemporary systems domains.

Jakobson’s communicology model emerges clearly and consistently from the tradition of French Philosophy and Human Science as the synergism of the Triadic and Quadratic models. It is historically known as rhetorical or tropic logic [*Rhétorique générale*], but is currently best recognized by Maurice Merleau-Ponty’s designation as *Chiasm*, usually symbolized as the ratio $A : B : b : a$, that is, a rhetorical model of the logic model call a syllogism: $A > C > C > B$. The key point here is that a *double articulation* at three levels [reflective, reflexive, reversible] is produced by the synergism such that *apposition* A (*Code*) generates a second *apposition* a (*Meta-Code*) in *time* and space that neither an animal nor a machine can produce (Lanigan 2018c). The simplest example of the human synergism is the use

LOGIC: Communicology vs. Informatics

HandChart © 2018, Richard L. Lanigan — International Communicology Institute

1 Communicology Aspects of Communication and Information Theories

Communicology Theorem: Communication Theory Entails {is prior to} **Information Theory**
Plato: Collection [*synagigē*] must precede a Division [*dialresis*]. **Edmund Husserl**: *Noesis* precedes *Noema*.
 Symbology > *Communication Theory Rule*: {Both [Both/And] And [Either/Or]}
 Informatics > *Information Theory Rule*: {Either [Both/And] Or [Either/Or]}
Communication Logic Rule: Abduction (Particular; *a posteriori*) {Rule + Result = Case}
Information Logic Rule: Deduction (Universal; *a priori*) {Rule + Result = Case}
Information Logic Rule: Induction {Rule + Case = Result}
Information Logic Rule: Induction {Case + Result = Rule}

2 Communication (Symbol) Theory → → Information (Signal) Theory

<p>1. Def: Constitution of Intentionality Intentionality as present: "subjective" = Perception of Expression (<i>Noesis</i>; <i>Sign</i>)</p> <p>CYBERNETICS: [<i>kybernētēs</i>: steersman, governor; To Guide Human Comportment]</p> <p>THIRD ORDER ("Human Choice") [<i>Organism</i> Structure > Behavior > Development] (<i>Semiotic Phenomenology</i>) (<i>Phenomenological Semiotics</i>)</p> <p>2. Consciousness-of-Experience (<i>Medium and Meaning</i> <i>Code</i>): understanding judgment/comportment) { Logic Step One: Rule ↓ }</p> <p>3. [counterpoint: construction of certainty]</p> <p>4. Choice of Context (Metaphor/Simile) { Eidetic: Jakobson's "Distinctive Feature" }</p> <p>5. Analogue Logic (Both/And) { <i>Apposition</i> > <i>Triadic Analogue</i> > <i>Add</i> }</p> <p>6. Necessary Condition as Hypothesis [Motivation]</p> <p>7. Judgment by Theory Definition [Genus → <i>Differentia</i>] (tropic logic = rhetoric) { Logic Step Two: + Result ↓ }</p> <p>8. Linguistic Theory [Hjelmslev's "Structure"]</p> <p>9. Key Concept: CODE [<i>codex</i>: to choose] { Logic Step Three: = Case }</p> <p>10. Theory Paradigm: <i>Contingency of Choice</i> { <i>Addition</i> }</p> <p><i>Primary Dynamic Logic:</i> John von Neuman (1944) Norbert Wiener (1948, 1950)</p> <p><i>Secondary Cultural Application:</i> Jürgen Ruesch & Gregory Bateson (1951) Ernst Cassirer (1923; 1953) Roman Jakobson (1958, 1960) Hubert G. Alexander (1967) Hubert L. Dreyfus (1972; 1992) Anthony Wilden (1972; 1987) Richard L. Lanigan (1988; 1992) Irl Carter (2011)</p>	<p>1. [counterpoint: re-constitution of intentionality as absent: "objective"] = Perception of Object (<i>Noema</i>; <i>Symbol</i>)</p> <p>FIRST ORDER ("Machine Regulation") [<i>System</i> Co-ordination > Regulation > Control] (<i>Command and Control Systems Theory</i>)</p> <p>SECOND ORDER ("Social Organization") [<i>System</i> Integration > Learning > Evolution] (<i>Socio-Cybernetics</i>; <i>Bio-Semiotics</i>) (<i>Semio-Cybernetics</i>)</p> <p>2. Experience-of-Consciousness (<i>Channel and Signification</i> <i>Message</i>): explaining decision/behavior) { Rule ↓ }</p> <p>3. Def: Reduction of Uncertainty</p> <p>4. Context of Choice (Metonymy/Synecdoche) { Empirical: Jakobson's "Redundancy Feature" }</p> <p>5. Digital Logic (Either/Or) { <i>Opposition</i> > <i>Binary Digital</i> > <i>Delete</i> }</p> <p>6. Sufficient Condition as Hypostatization [Causality]</p> <p>7. Judgment by Method Rule [Genus → <i>Definiendum</i>] (figurative logic = grammar) { + Case ↓ }</p> <p>8. Mathematical Theory [Hjelmslev's "Form"]</p> <p>9. Key Concept: MESSAGE [<i>mittere</i>: to send] { = Result }</p> <p>10. Theory Paradigm: <i>Confinement of Context</i> { <i>Subtraction</i> }</p> <p><i>Primary Static Logic:</i> Claude E. Shannon (1948) Warren Weaver (1949)</p> <p><i>Secondary Social Application:</i> W. Ross Ashby (1956) B. F. Skinner (1957) P. Watzlawick, Beavin, Jackson (1967) Niklas Luhmann (1970) Ralph E. Anderson & Irl Carter (1974) Heinz von Foerster (1949; 2002); Klaus Krippendorff (1979; 2009)</p>
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Fig. 8.20 Communicology (semiotic phenomenology) as third order cybernetics

Semiotic Phenomenology Logic			
Edmund Husserl — Charles S. Peirce — Roman Jakobson — Gregory Bateson			
Noesis <i>Consciousness of - - -</i> [Transcendent] { Present Absence }		Noema <i>Experience of - - -</i> [Immanent] { Absent Presence }	
Transformation →	Formation →	Transformation →	Formation
Rule (<i>ABduction</i>)	Result (<i>DEduction</i>)	Case (<i>INduction</i>)	Rule (<i>ADduction</i>)
Chiasm A [<i>Synchronic</i>]	Chiasm B [<i>Diachronic</i>]	Chiasm b [<i>Syntagmatic</i>]	Chiasm a [<i>Paradigmatic</i>]
Expression [<i>Ausdruck</i>]	Presentation [<i>Vorstellung</i>]	Perception [<i>Wahrnehmung</i>]	Representation [<i>Darstellung</i>]
Encode [<i>Signifying</i>] (<u>FRAME</u>)	Code [<i>Signified</i>] (<u>PRAGUE PRISM</u>)	Decode [<i>Signifying</i>] (<u>CROSS-HAIRS</u>)	Message [<i>Signified</i>] (<u>DOMAIN</u>)
Realism [Synthetic Order of Consciousness →]			
Representamen → [<i>Metaphor</i>]	Icon →	Index →	Symbol ↓ [<i>Distinctive Feature</i>]
↑ Idealism [← Analytic Order of Experience] ↓			
↑ Interpretant [<i>Metonymy</i>]	← Icon	← Index	← Symbol [<i>Redundancy Feature</i>]
Gregory Bateson and Roman Jakobson Cybernetic Modeling			
Proto-Learning (Level I Dynamic) [Change in Context] { Level 0 = Stasis }	Deutero-Learning (Level II Dynamic) [Change in Binary Choice] (<u>DESCRIPTION</u>)	Trito-Learning (Level III Dynamic) [Change in Digital Context] (<u>TAUTOLOGY</u>)	Tetrato-Learning (Level IV Dynamic) [Change in Binary Analogue Choice] (<u>EXPLANATION</u>)
Causal Formation of System Type 4 Explanation (<u>EXPLICATION</u>) FOUNDEDNESS [<i>Fundierung</i>] SYNERGISTIC OUTCOMES	Mechanical Linkage Elements in Systems Type 1 Explanation (<u>DIRECT PERSPECTIVE</u>) ISOMETRIC <i>Equal Outcomes</i>	Isomorphism of Systems Type 2 Explanation (<u>META- PERSPECTIVE</u>) ISOMORPHIC <i>Similar Outcomes;</i> <i>Convergence of Different Outcomes</i>	Transformation of Systems Type 3 Explanation (<u>META-META- PERSPECTIVE</u>) NEOMORPHIC <i>New and Different Outcomes</i>
PHENOMENO-LOGICAL LOGIC	PHENOMENAL LOGIC	TROPIC LOGIC	SEMIOTIC LOGIC
Peirce Logic Definitions of Formation [Semiotic Models of Transformation = <i>Synergism</i>] :			
1. ABduction : Rule + Result = Case [Analytic, Particular, <i>a posteriori</i> , Centripetal]			
2. ADduction : Rule + Result = Case [Synthetic, Universal, <i>a priori</i> , Centrifugal]			
3. INduction : Case + Result = Rule [Probability Measure = Contingency]			
4. DEduction : Rule + Case = Result [Possibility Measure = Certainty]			
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Fig. 8.21 Summary of semiotic phenomenology logic

COMMUNICOLOGY: THEORY AND METHODOLOGY			
Methodology Experience Order of <i>Synthesis</i> 1 → 2 → 3 Conscious Order of <i>Analysis</i> 3 ← 2 ← 1	1 DESCRIPTION	2 REDUCTION	3 INTERPRETATION
Perspective	DIRECT	META—	META—META—
Phenomenology	Reflexivity	Reversibility	Reflectivity
Semiotic	Signification	Meaning	Understanding
Peirce's Logic Abduction /Adduction (Deduction) { Induction }	RULE (Rule) { Case }	RESULT (Case) { Result }	CASE (Result) { Rule }
Typology Change	First Order	Second Order	Third Order
Typology Modelling	Primary Modelling	Secondary Modelling	Tertiary Modelling
Ecology Explanatory System (Ecocommunication)	Type 1 Two Linked Elements as One System [Closed System]	Type 2 Isomorphism of Two Systems [Open System]	Type 3 [4] Transformation of Two Systems [as One Formation] [One Open System governing Two Closed Systems]
Game Theory [Abherent Formation]	Rules Inside the System ["The Rules Are No Game" = Nip / Bite Paradox]	Rules Outside the System ["Player Choice Win Rule" = Termination]	Rules Combine Inside and Outside Systems ["Unlimited Semiosis"]
Exchange Theory (Axiom Rule)	Information Theory (Either / Or Choice-in-Context) { Message Selection }	Communication Theory (Both / And Choice-of-Context) { Code Selection }	Communicology Theory [Both (Both / And) And (Either / Or)] { Choice of Context for Choosing } (Double Articulation of Code / Message)

Fig. 8.22 Applied systems analysis in communicology

Human Science of Communicology			
<i>Phenomenological Method</i>	<i>Description</i>	<i>Reduction</i>	<i>Interpretation</i>
Evidence	Data [Given]	Capta [Taken]	Acta [Action]
Theory Construction	Theory [Paradigm]	Research [Model]	Application [Prototype]
Small Group Culture	Content-Ordered	Task-Ordered	Group-Ordered
Cultural Semiotics	Diffusion of Code [<i>Iconicity</i>]	Infusion of Code [<i>Indexicality</i>]	Communication of Code [<i>Symbology</i>]
Cybernetic Typologies Machine & Social Systems Theory	Isometric TYPE 1 Explanation Mechanical Linkage of Elements Equal Outcomes	Isomorphic TYPE 2 Explanation Element Convergence in Systems Similar Outcomes; Convergence of Different Outcomes	Neomorphic TYPE 3 Explanation Transformation of Systems New and Different Outcomes; Synergisms (Type 4)
Charles S. Peirce SIGNS	OBJECT ----- ICON	GROUND ----- INDEX	INTERPRETANT ----- SYMBOL
SEMIOTIC SYSTEM (Three Levels of Normative Typology Abstraction) Logic Complexity → Level	Saussure [OPPOSITION] Sr ----- Sd	Hjelmslev [APPOSITION] Sr [Sr] ---- Sd ----- Sr [Sd] ---- Sd	Greimas [TRANSPPOSITION] Sr ↔ Sd ↑ × ↓ Sr ↔ Sd
Phenomenological Logic © 2017 R. L. LANIGAN	Reflexivity [Sensation] {Ground}	Reversibility [Perception] {Representamen}	Reflectivity [Expression] {Interpretant}

Fig. 8.23 Semiotic domains of the human science of phenomenology

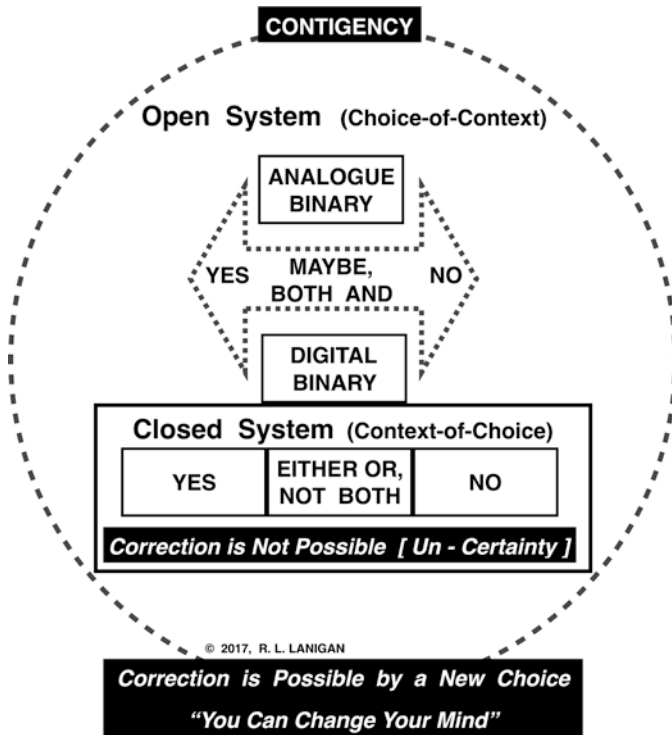


Fig. 8.24 The semiotic phenomenology of human choice and context as contingency

of *nonce signs*, which I have called *blanks* up to this point (following Husserl and Peirce). A blank or nonce-sign (Direct Perspective) is used to *present* (Meta-Perspective) the *absence* of an object (Meta-Meta-Perspective); we rhetorically short-hand the logic process of Description, Reduction, and Interpretation (Fig. 8.23) by saying “I have an *idea*”. Umberto Eco makes the same analysis by defining semiotics as the “capacity to lie”, which is to say to create a category *blank* to establish a relational *series* (Lanigan 1992, 2015b). Side comment example here, because reading [third level modeling] is so difficult with *blanks*, we invent fillers like *com-mas*, etc. to keep the harmony of the *series*. So, a “lie” is just shorthand for the conjunction of *series* and *blanks* that are an analogue logic [plus/minus; more/less = metaphor] that *constrains* a digital logic [zero/one; first/second = metonymy] (Nielson 2015; Pattee and Rączaszek-Leonardi 2012; Venancio 2017a, b). Finally, I should note that a fundamental part of Immanuel Kant’s, Edmund Husserl’s, and Charles S. Peirce’s *phenomenology* is grounded in the nature of logic *series* and *blanks* and their *time/place* [“dash”] in human apperception (Comay and Ruda 2018). As depicted in Fig. 8.24, these philosophers came to see the chiasm that “phenomenology is the logic of embodied phenomena”—what has been appropriately called the abduction of “self-reference and re-entry” that we experience in human communication (Kaufman 2001, p. 102).

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