A-Dualistic and Generative Semiotic

A Conceptual-Methodological Reconstruction Basic to Semiotic Ecology

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A-dualistic or non-dualistic is a negative qualification of what I present; generative a positive one. Generating or producing something, possibly new or a replicate, is a positive qualification. By a-dualistic, although it sounds deprivative, I also want to say something positive, namely beyond matter-mind-, Cartesian or related dualisms; not by solving their 2.5 millennia-old problems, rather by disregarding or dissolving them (since they lack evidence). This procedure appears also to proffer to realize something that does not need to presuppose that age-old and heavily loaden, but useless distinction. The methodology I present here to some limited extent is primarily conceptual, yet it includes many practical sequels and possibilities. Semiotic Ecology is a set of thinkings in process spanning basics to ethics.

Content

Note that I relate or expand many ideas, stated rather succinctly in the slides, deeper in the Comments at the end of each slide, often numbered, when specific to theses.

This slide lists the titles and numbers of slides I presented in Salzburg, July 2006. Alas, for time reasons I had to skip some of them, especially the integrative ones such as the emblem. This revised version after presentation contains a few further slides and comments that may improve understanding.

I shall present here a number of basic concepts in connection with a generic and generative conception of Evolution, its semiosic parts, in particular, some of them as well as their ensemble quite new. The focus here is on conceiving "Becoming" and the role of semiosis therein.

Note that I use Capitalization of terms that I use specifically to SemEco or Semiotic Ecology, the name I use for the present conceptual system; e.g. Structure, Semiosis or Meaning refer to my concepts; semiosis or meaning refer to the common usage.

Semiotic — OK? — I think not.

1. Today's Semioticians comprise a bunch of sect-like fractions existing as sad as hopeful on the fringe of their respective home disciplines.
2. Semioticians do not at all achieve to play the interdisciplinary integrative role they promise and rightly claim. I strongly regret.
3. **Meaning**, the key issue of interest of semioticians, is an essential feature of **life** (organisms including the dynamics of their parts and their active inter-course with their environment), **psyche** (the formation and exploitation of individual experience making and usage), and **culturality** (building and operating in and against the traditions in communicative groups and the exchanges among them). Meaning is too important an issue to be neglected; it cannot be treated by natural science and has been highly constrained by the here predominant humanities' (so-called geisteswissenschaftlicher) approach.
4. This state of affairs is so dissatisfactory because it is based on the idea of **interpretation** of a very narrow range of so-called **signs** or specific **mediators** instead of **everything in dynamic intercourse reaching beyond the immediately given** and it has almost completely neglected the **generative** for attempts to define the **interpretative** phase.

1 & 2. Sorry for stating things as candidly as simple. It's a discouraging situation since the Greek, Locke, Poinsot, Lambert, and others have certainly been greatly improved by Saussure and especially Peirce and their followers, but only in part substantially rectified, however you and I evaluate it; certainly without generally accepted enlightenment.
The attitude of neglect by the large majority of so-called natural scientists is simply a shame in view of the facts. But it's also heavily codetermined by semioticians themselves who are mostly resolved to live in that Ghetto. John Deely in his Helsinki paper 2000 also judged "the impact of semiotics upon philosophy" as "marginal" (http://www.helsinki.fi/science/commens/papers/greenbook.pdf). Deely opines rightly: "the action of signs exceeds the boundaries set by the human use of signs, and the human use of signs would not be even possible except in constant collaboration with and on the basis of an action of signs at many levels surrounding linguistic usage and rendering it successful whenever and to whatever extent it does succeed" (p.6) This corresponds nicely to what I here undertake however more radical my approach may be compared with Deely's. I would only add that the impact of semiotics on science is also near zero.

3. However whatever may be, factual is: All animals "know" and assess or disassess rightly their food, their friends and foes, their mates and rivals. Selecting or refuting something is not a physical or chemical process, it can be at best an extremely complex and dynamic composition or organization of physical processes. In plants, you can perhaps not say they "know", but an at least partial equivalent of that is: plants as well as animals are prepared for specific situations and behave accordingly, e.g. seasons, climates; and they have acquired the capability to make use of and attract suitable "partners" for moving pollen or dispersing seed etc., etc. Whether animals or plants do all this and what they do with their Umwelt by taxis, tropism, instinct, etc. or by individual experience or both, makes no difference for the effect. In this connection, I may advance my slightly mixed feelings re Biosemiotics: I think that, if Biosemioticians succeeded in semiotizing the whole of biology, it would not only be a great and desirable accomplishment, but at the same time also a kind of tragedy, if and because it might reduce semiotics to biosemiotics. Nevertheless semiotics should be capable of bridging, better dissolving the absurd separation between so-called natural sciences and the humanities, because it has no basic in facts; only in Western cultural habit.

I see bios, psyche, and culturality different, though the latter two base on the former and also play back on it, because the way variation or innovation and selection or evaluation operate in the tree domains differ in such a way that we should speak of the "Evolution of Evolution", an notion John Dewey used first in 1920. Bios, Psyche and Culturality grew out of three Proto- or Prebiotic Forms of Evolution, the chemical, the cosmic, and the mineral, which are all non-biotic, nevertheless triadically causative.
I'd place the great transition between what I a bit vaguely call "small" and "large" molecules. That means between those that arise and dissipate under suitable conditions according to basic chemical principles and those that base on some "history" i.e. that are composed according to some "program" originated earlier in some "chain" of existence". They are not simply modeled but constructed according to a set of "instructions" such as we know e.g. when protein molecules are made under suitable conditions according to "commands" derived from DNA molecules.
Information should not be confounded with Meaning. Information can describe the statistical distribution of certain properties of structures; this may have a valid use in dealing with certain artificial systems, but is far from reaching the potentials of Structures transacting.

4. intérpretative: There seems to exist some parallel between the notions of **sign** and of **messenger** substances in that both notions appear to catch an issue that in fact is much wider than these notions can carry. The problems arisen by defining such categories are serious and, I think, unresolvable; practically everything, in the domain of life and its sequels, can serve a **mediating** function. So, in effect, it may possible to distinguish some messengers more or less clearly. But it is better to pursue the consecutive and often branching phases in the chains of influence in which any mediator Structure or message is first produced and then received. The example of archeology makes clear that artefacts an archeologist uses to describe an antique form of living has not been put into messengers on purpose, but simply made in ordinary living. Also notions of **code** are in a similar difficulty except perhaps in cases where they explicitly designed for specific purposes.

Semiosis; Sign; Meaning

1. **Semiotics** often begins with a definition of the **sign**. Clever??? Think of Peirce writing more than 100 such definitions, which all dealt with semiosis, and always included sign, object, and interpretant, yet left him dissatisfied.
2. Does **Semiosis** not mediate with **Meaning**? – Semiosis relates "things" or has effects from one "thing" upon another "thing", **using** or **changing** one or **generating a third**, somehow indirectly instead of directly, yet by chemical or physical process or transformation; it utilizes, makes, and spreads Meaning.
3. **Meaning,** i.o.w. Semiotic, at the latest, I think, begins **with Bioevolution**.
4. It appears sufficient to assume that "**Meaning**" arises in Interaction of **Structures differentiated into surface and latent or hidden qualities** that can be distinguished, recognized, identified or "known" in the largest possible sense by other Structures from their surface qualities, yet **transact** by the **potentials** present in their latent qualities. I call semiosic Interaction "**Transaction**", because effects arise from some part of the past retained and reach beyond the immediately present into the future, i.e. are genuinely evolutive.

4

1. Would not the egress from a sign definition bring in a much too great influence of the researcher or agent of understanding upon everything consecutive and dependent upon that definition? And how could the perceptual system distinguish a sign from a non-sign Structure meeting the item for the first time without knowledge about that item? So I better start with Semiosis. And how could the relation between S & O be the same as S & I, when I is a to be a mental event and O an lastly external world thing or event?

2. Semiosis as a mediator implies at least three entities that must be independent Structures that enter a triadic Relation: two starting or conditional Structures and one resulting Structure. I come back to that. What I denote here as "things" is a subset of Structures below, I use more "technically" or abstractly. Meaning is a too important notion that we can afford to let it unclear. Below in (4) I introduce an astonishingly simple understanding based on organization of Structures.

3a. Perhaps with large molecules (DNA strings "programming" proteins), certainly at the latest with cells (receptors differentiating or selecting molecules in +/- useables, yet not by chemical criteria). The receptors appear to mediate between inside and outside, selectively bridging the membrane. I express here my skeptical attitude against the reduction of meaning to any sort of code. In the long run, I think, any Structure originating in genuine Evolutions (biotic, psychic, cultural) can take on that sign character that makes a difference in comparison to things interaction directly.
3b. Meaning has traditionally been reserved to humans: obviously animals "know" their food, poisons, enemies, mates and their states etc. So they handle Meaning. Because the Meaning of a poisonous or tasty plant or friendly or mate-able animal is not obvious in general. Also it is often Meaning for or to somebody, and sometimes different to others. Traditional dualistic epistemology obviously cannot handle meaning by separating signs into material sign carrier and "spiritual" meaning. Meaning can vary for different animals; even temporarily for one in different states: think of a bee visiting one type of blossoms or an predator hungry or satiated. So Meaning is not in an object, but arises in the Relation. In animals, and also in humans, some Meaning processing devices (tropes, taxes, instincts) are inborn, some are learnt habits. Habits to same extent can overform instincts. So the animal etc. contributes on at least two levels to Meaning.

4a. This simple yet realistic and consequential thesis, in my opinion, is founded in the differentiation of Structures into surface (+/-)attractors and latent potentials has proven of remarkable fruitfulness in its simplicity. It may be just a manner of speaking, yet presupposes a process of factual transaction that we are far from bringing in the open.
4a. Thus I do not need to invoke anything like Geist or spirit, soul, or mind. And thus no assumption of a dual world is required; nor is this in any traditional sense materialistic; it simply depends upon the organization of matter and energy of the differentiated Structure. There is no unorganized matter, except perhaps original Plasma, which is too hot to be organized. My differentiation notion is obviously a key basis of my new understanding of semiosis and semiotic.
4b. The Transaction can result in an expression of the latent qualities of either, the Ref's or the Int's potential or of both.
4c. What I call here "knowledge" is based on affinities due to co-evolution and/or individual experience may contribute in settings originally genomically fixed, without requiring bioevolution by learning and so not retained in the next generation, e.g. in overformed instincts.
4d. In contrast, Structures with powerful qualities at their surface such as ions or other strong forces or strong energetic qualities interact physico-chemically rather than semiosically. Naturally, also the semiosic Transactions base on physico-chemical processes.

[5]Causal i.g. & Semiosic Relations i.p. are better conceived triadically

1. Should we not better **replace** our common notion of causation: "whenever A, then necessarily B", when we must introduce exceptions?
2. Evoked by Peirce, I prefer a notion: "whenever A and B encounter, C comes into being": this is a **triadic** and **dynamic Relation**.
3. A dyadic Relation like in (1) can never explain Evolution; therefore the introduction of chance was necessitated which in fact is a magic word.
4. Triadic Relation can at the same time cover both divergence and convergence, **branching** and **merging**. Higher order Relations can at least analytically be reduced to sets of triads; but not to sets of dyads (Peirce).
5. A welcome consequence of thinking triadically lies in the observation that **no different process logic** is required for Interaction of Structures in the physico-chemical world (Proto-Evos) and Transaction in the Semiosic world or world of Meaning (genuine Evos), simple or complex.
6. Another simplification of understanding emerges from the possibility of explaining **regularity and irregularities** with the same principles.

1. From the Greek philosophers of the 5th century before our date scale to today, science is founded on the belief in universal law. Rightly? Evolutionary Biologists felt forced to supplement the idea of law by a very contradiction to lawfulness: chance; they did it without considering the requirement of arbitration between law and chance. Evidently, chance events are determined events, too; thus it is no explanation to call some events" "determined by chance". Also, modern state's constitutions and criminal law had to counter universal lawfulness of nature by freedom of human choice. How could we otherwise institute criminal law based on responsibility or explain facts like that humans have recently acquired the capability of destroying themselves and basic life conditions in general? This is anyway an odd implication of universal lawfulness; so nobody expresses this or similar ideas or grounds for reasons why it should be like chance and exception of the law. I take the universal law notion for a form of wishful thinking and another version of the almighty creator God belief.

2. & 3. It seems to me that only basing our understanding upon encounters between largely independent Structures can account for Evolution, in part or in whole. Nothing evolves from itself; but rather from exchange with something else; from some general kind of dialog. Both in the Variation and the Selection phase of the evolutive process. Lawfulness, to approach the essentials metaphorically, has adopted an astronomical metaphor, encounter bases triadic thinking upon a chemical one. In all Evolutions determination must be local. Regular phenomena including energy transformations can easily be explained by Interaction of stable Structures, atoms and their parts and simple composites, for example. The more complex the Structures encountering, the less predictable what result from that encounter. Yet it is determined by the encountering Structures.

4. & 6. For if any one Structure interacts with several different Structures, ever new Structures arise; but if any one Structure interacts with one and the same or very duplicate or highly similar other Structures, the same or almost the same resultant Structure is replicated. So the same type of triadic process can at the same time account for both diverging innovation as well as stabilizing repetition of the same or near replication. We can look at this as Evolution that leads to both upon the same type of event to divergent innovation of the world but also to convergent regularity, simply because of the relationship of the Structures transacting. This is a beautiful effect of thinking triadic rather than in the traditional attempts to explain regularity by law and innovation by chance. There is both a random component and grounds for regularity in any triadic interactive Relation. The random component depends on some amount of "autonomy" or proper action of all Structures; the order component is highly furthered by the simple fact that many Structures are related or similar due to their nearness in Evolution as well as to the fact that interaction probability of spatially near Structures is higher than among any Structures that can interact.

5. Is it not a quite fundamental break of accepted scientific method, to attempt to explain regularities and irregularities in the world by two different principles, regularity by law, irregularity by chance? At the least it's a break of parsimony rules. Here a related dualism is in effect that is evoked by attempting to explain some phenomena by material/energetic
Principle, others by some unclear opposite thereof, that has never been cleared in itself but only in opposition to matter/energy, whatever names are used to denote that unknown.

Of course, there is no reason, why the logical design of Semiosis should fundamentally differ from any other kind of causal Relation. For it is a causal Relation. Despite possible diversities, we need to understand causation also generically. It may have additional specifications; I propose a simple variant thereof here. Naturally, as for any Relation, there may be different descriptions. In any Semiosis there must be implied a physical form of causation. But its complexity, e.g. processes in a neural system, can be so great that there is no hope to specify it. So we need another language which should be as precise and realistic as the one we use to describe the physico-chemical process itself; and the two must be compatible with each other.

“Structure”

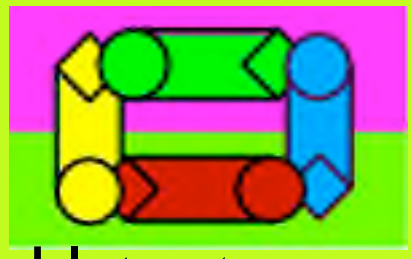
1. I use the term “Structure” as a very basic concept to denote **every-thing, we can discern, infer, or invent and recognize.** Reals and Symbols. Brain states, neuronal and humoral, are a kind of Symbols.
2. Structures can be less or more complex, the former being mixtures (germ. Gemenge) of Structures of usually little complexity. Structures may primitively be gathered in **Formations** that are not themselves Structures, because there is no inherent organization of the part Structures. Dynamics come from outside. Examples are clouds, earth, …
3. Simple or complex **Structures** can only combine provided their parts meet or arise in space; many can also be moved or move by inertia and they may **interact** with suitable other Structures. More complex Structures may move “autonomously”; their part Structures do also interact or **transact** among themselves and with the environs and as wholes they may also transact with their environs or Umwelt by suitable substructures, the substructures thus are often more complexly and dynamically organized, they usually move together and are somehow dependent on each other.

1. Examples for Structures from all types of Evolution are: quarks etc., protons etc., atoms, small molecules; stellar bodies of all sorts, electro-magnetic and gravity fields; ordered mineral clusters, crystals; organs and organisms of all kinds, their nutri- and excrements, their positions and postures, movements, expressions, instincts; habits, memories, states, expressions; language, symbols, works, communicative systems, purpose, … Interestingly enough, this concept of Structure is easily applicable through all Evolutions. It is always implies matter and static or dynamic energy and includes also structures Processes that are replicated. In effect, it is an abstraction, but lets intact its inherent qualities that may contribute to recognizability, rather than abstracting from them when something in what is called a “substance”. Structures can be static or dynamic. A river is a Structure in that the form of its bed an flow speed and order constitute a particular form of flow, even when it may change over time and conditions. Real is to me, what has or can have effects. Symbols, of course do not have direct effects like many reals; only via mediators who know the Symbols; but they can be effective like reals. Structures in the brain are a kind of Symbols, evolved in a particular history, in that they are realized in a certain way that could as well be different yet have the same end effects. Yet Structures of the brain involving millions or billions of neurons and scores of transmitters can influence other brain or motor Structures directly and very intimately, i.e. down to tha last detail. That is why I prefer to denote transacting Structures a another name: Semions.

2. Formations are not Structures, because they have no inherent design (?), can change continuously or occur in very different forms; yet you can recognize only the type of thing, so you cannot deal in general with Formations as concrete things. Their parts must be Structures, too. Weather in sum it is a Formation, while we are able today to discern nearly repeating Structures or constellations as similar.

3. Obviously Symbols of any kind and other signs that mediate between one and another Structure must also be Structures and can have real effects, too, yet only by mediation of humans and/or their symbolic machines. Brain/Mind states or neuronal and humoral Systems are or imply also Structures; and they are actually Symbols in the strict sense that they could as well be realized differently; yet we are not able to change how they are structured nor to know their Meaning. Except our own to some extent. These psychic Symbols are usually rather transient and are often not exactly replicable. So they have both advantages and disadvantages compared to other kinds of Symbols. They are utterly complex yet are both extremely dynamic and can nervertheless be replicated quite well. We will certainly not be able for long to detail these Structures on the physico-chemical level, yet can recognize them in some of their precedent and sequel events.

The Semion



1. I call Structures that are differentiated into surface and latent content or **Potential** can so enter Semiosis: **Semions**; to have an adjective for that potentiality, I use **semionic**.
2. I could write it like: "Sem-Ion" and "sem-ionic", indicating that it is a Structure prone to co-generate **Meaning (sem)** with special bonding inclination or **"valence" (ion)**, so to say, a Meaning searcher or -maker.
3. Semions **emerge** from mineral Structures which do not have this differentiation. My supposition is: with **early "large" molecules**, e.g. perhaps with these precursors that could fulfill the functions of both the DNA and some proteins.
4. In my imagination, **Semions are plenty** in the domains of life and its evolutive successors psyche and culture. Almost every Structure in this range can possess that differentiation and thus capability to transact and so enter Relations that impart Meaning.

1. cf. Semeion in greek pronunciation as a unit of meaning and as original influence from chemistry bridging the gap towards meaning.

2. I am not specialized enough to consider that as task of mine. I only suggest.

3. As far as I understand, there are essential requisites for the emergence of life: (a) **reduplication** with occasional "error" that is perpetuated, (b) **production with program**, for want of a specific word; the main example should make it clear: DNA serving as program (not model) to manufacture proteins.

Ad (a) There exists a rather reasonable, however undemonstrated, possibility that crystal formations in clay minerals reproduce random "errors" or alterations when they brake along one layer or dimension (Cairns-Smith, 1986, Clay minerals and the origin of life. Cambridge Univ. Press).
Cairns-Smith claims, that 4 critical conditions for life are present in clay minerals: order for replicative fidelity; disorder providing information capacity; growth in the form of duplication; cleavage for initiation of replication.

Ad (b) Something more than duplication is necessary: the capacity to not only duplicate a structure, but use one structure (e.g. DNA) to produce a completely different structure whose qualities are foreseen oder programmed in the first structure (this or that protein) is to my knowledge completely undisclosed so far.

Interaction, Transaction

1. My world view thus can be characterized by a chemical **metaphor** rather than the astronomical that underlies physics, …
2. I claim that **causative explanations** of the **dyadic** type: whenever A, then necessarily B, cannot cover Evolution, sometimes randomly disturbed. Evolution requires **triadic** causative Relations at least: when A encounters B, then C. Peirce has claimed rightly that higher order relations can be reduced to triads, not to dyads. Encounters are both **contingent and orderly**, in that equal Structures generate equal results. The more complex Structures are, the higher chances that **Inter-/Transactions** produce Singularities.
3. Whenever encounters involve "surface / latent potential differentiated" Structures, the Interaction is semiosic and thus called a **Transaction among Semions**, because the Transaction's conditions and effects reach beyond the obvious or "mechanical" and at least one of the Structures involved is a Semion.

1. This metaphor is illustrative, not explanatory.

2. It is mostly the following Peirce quote that probably incited me on the background of his triadic thinking to conceive Semiosis in ways deviating from his own. Over the years of pursuing and perusing the generative conception, I have found it ever more pertinent and astonishingly simple.

"No sign can function as such except so far as it is interpreted in another sign (for example, in a "thought," whatever that may be). Consequently it is absolutely essential to a sign that it should *affect* another sign. In using this causal word, 'affect,' I do not refer to invariable accompaniment or sequence, merely, or necessarily. What I mean is that when there is a sign there will be an interpretation in another sign. The essence of the relation is in the conditional futurity; but it is not essential that there should be absolutely no exception. If, for example, in the 'long run' […] there would be as many cases of interpreted signs as of signs, I should say that this 'would be' constitutes a causal relation, even though there were, as there might be, an infinite number of exceptions. […] I should say that this 'would be' constitutes a causal relation, even though there were, as there might be, an infinite number of exceptions)." (Peirce, 1904, CP 8.225n10, Draft of a letter to Paul Carus; AL's underlinings)

3. Especially this idea of surface qualities / latent Potentials differentiation of Semionic Structures proved so simple, realistic, and consequential I had never expected in the beginning. I had for long searched for ways of instituting an a-dualistic world view. That the "ghost" sits in this differentiation and can be so simple, is wonderful. Note that the latent Potentials must eventually function by physico-chemical processes; but considering e.g the perhaps billions of neurons and a thousand times more synapses and dozens of transmitters are involved in simple acts my be involved make the view on explanations on mechanical basis hopeless.

Structure–Process–Alteration

1. Any Structure, Semion or not, is at any given time either involved in Interaction with another Structure or in a rest or steady state: in the state latter it is without influence on its environment and functions simply as a generic "**memory**".
2. This **alteration of two phases** is absolutely essential for any evolutive process in that the interactive phase generates new Structures on the basis of the interacting Structures.
3. **New** can mean replication of Structures that have been generated before.
4. **New** can also mean similar but different or totally new Structures that have never been generated before or elsewhere.
5. I think, at least analytically, any interaction can be reduced to **strings of triples**. So we can think of two Structure **transacting** and thereby generating a third Structure mediated by what we call Meaning.
6. This scheme can account for both, **regularity and innovation**. If the preceding Structures exist in multiple replicates, obviously the same third will emerge, whenever they interact; whenever one or both predecessor Structures are changed, new Structures are generated.

Evidently in complexly differentiated Structures such as complex organism, many such Transactions can occur simultaneously. Most of them can be coordinated more or less hierarchically in neural organizations and/or can be driven oder modulated in largely parallel manner by humoral organization.

“Autonomy” of Structures

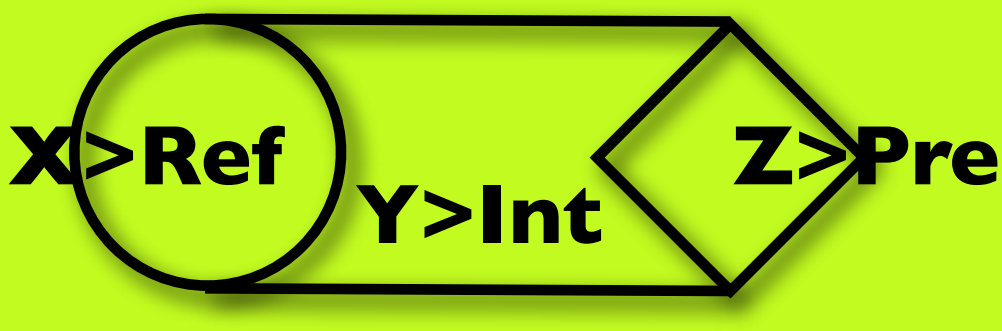
1. A prerequisite of encounters is what I call their relative “autonomy”, i.e. the Structures really inter-/transacting must be so independent that their chances of entering suitable Interactions are entirely “intact”.
2. Structures exist that have given up their independence for becoming parts of superstructures, their own fate inexorably connected with all Sub- and Super-Structures involved, often to some advantage for all. As longs as they can communicate with each other in both directions as in living organisms (in plants and animals or their societies) advantages for any one giving up its independence may be greater than when staying alone, since they can perhaps influence the whole.
3. Part of these advantages come from the whole, other parts often from having forever the same familiar neighbors. These principles should be considered in human societes in comparison with the present competition ideology strongly enforced by social Darwinism.

I can give here only one most basic impression of possible consequences ov my view that go right into the field of ethics etc..

Semiosis as Mediation

1. Earlier I have asked, whether what we call a sign, did not mediate between Structures, did relate things: an origin Structure with a result Structure, both real. Let me denote them **Referent** and **Presentant**, respectively.
2. This is not a metaphysic or spiritual process. It involves a third real Structure and an often quite complex physico-chemical process involving matter and energy transformation, let me call it **mediating Interpretant**, insofar it interprets the surface of the Referent into the Presentant under influence from the Referent's and its own latent qualities.
3. Note that the process does **not** result in a **Re**presentant; the **Pre** presents something of both **Ref** and **Int** to another **Int**.

1. I use this graph to present the **generative mediating Semiosis:**



1./2. "real" Structures: by "real" I simply mean: has or can have effects which we can observe or infer; this must be true also of symbols in any sense; for they do not exist or be real apart from some real Structure, whether in things, on paper, in heads, in computers, or in some other form or Structure incorporated in matter and energy. Only their Transactions often presuppose mediating individuals.

3. I think it a great error of Western thinking to assume it possible, that some thing or state of affairs could be truly represented in a concept, in turn represented by some term in such a fashion that operations done with the terms could lead to something that would again represent some possible reality. This is why I avoid the term representation; yet most to anything can by somebody or some other suitable instance be presented to somebody in such a way that the presentation "contains" both, something from the original subject matter and something from the presenter. The two aspects may in some cases be distinguished to some extent and security; yet in other cases this might be almost impossible.

New Meaning of meaning

1. Meaning is **not** in the things, objects, Structures.
2. Meaning is **not** something given; rather it is something made in Semiosis. It may be retained by (nearly) replicating a Semiosis with equal or similar precursor Semions.
3. So Meaning is an **aspect of the Relation between Structures transacting,** often, but not necessarily being aware in very complex Structure (organisms). It is retained when some Presentant can be replicated, it changes when interpreted by another Structure.
4. Both **Refs** and **Ints** can contribute and constitute Meaning in varying proportions. These two semiosic precursor roles can loose their difference.

1. Not in Refs nor Ints, nor Pres.

2. Meaning originates in the Encounters. Different Ints with the same Ref make different Meanings, or vice versa, different Refs with same Int.

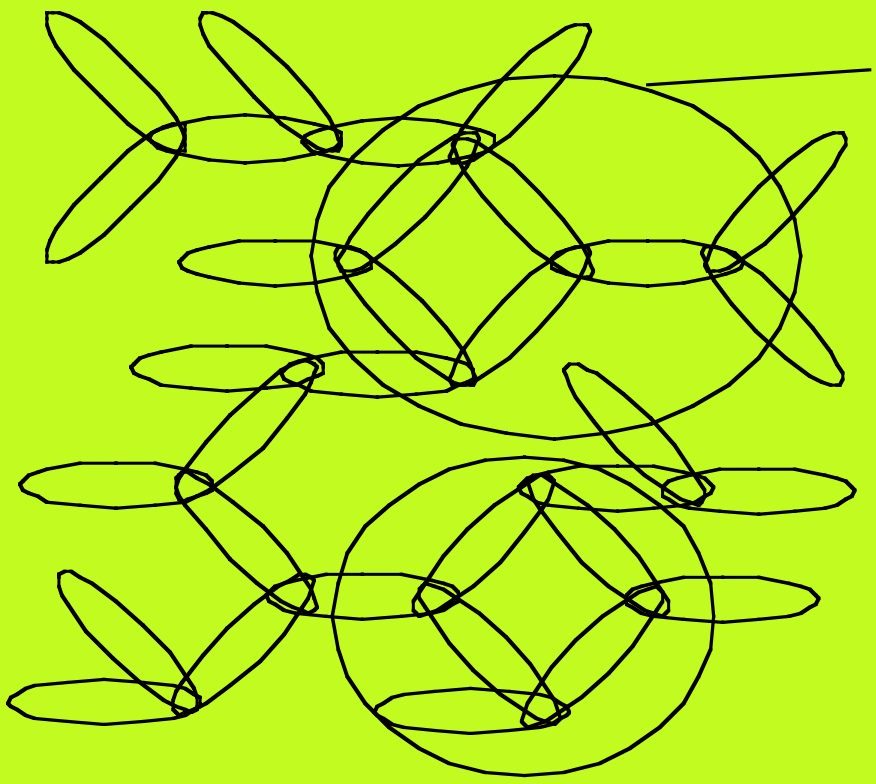
3. Substantification of the “meaning” of mental symbols is something like the original sin of scientists, both natural scientists and humanists.

4. Does a semen or pollen interpret an egg or pistil or vice versa? Yet often something is taken up (a Ref) and changed a bit (Pre) by an Int.

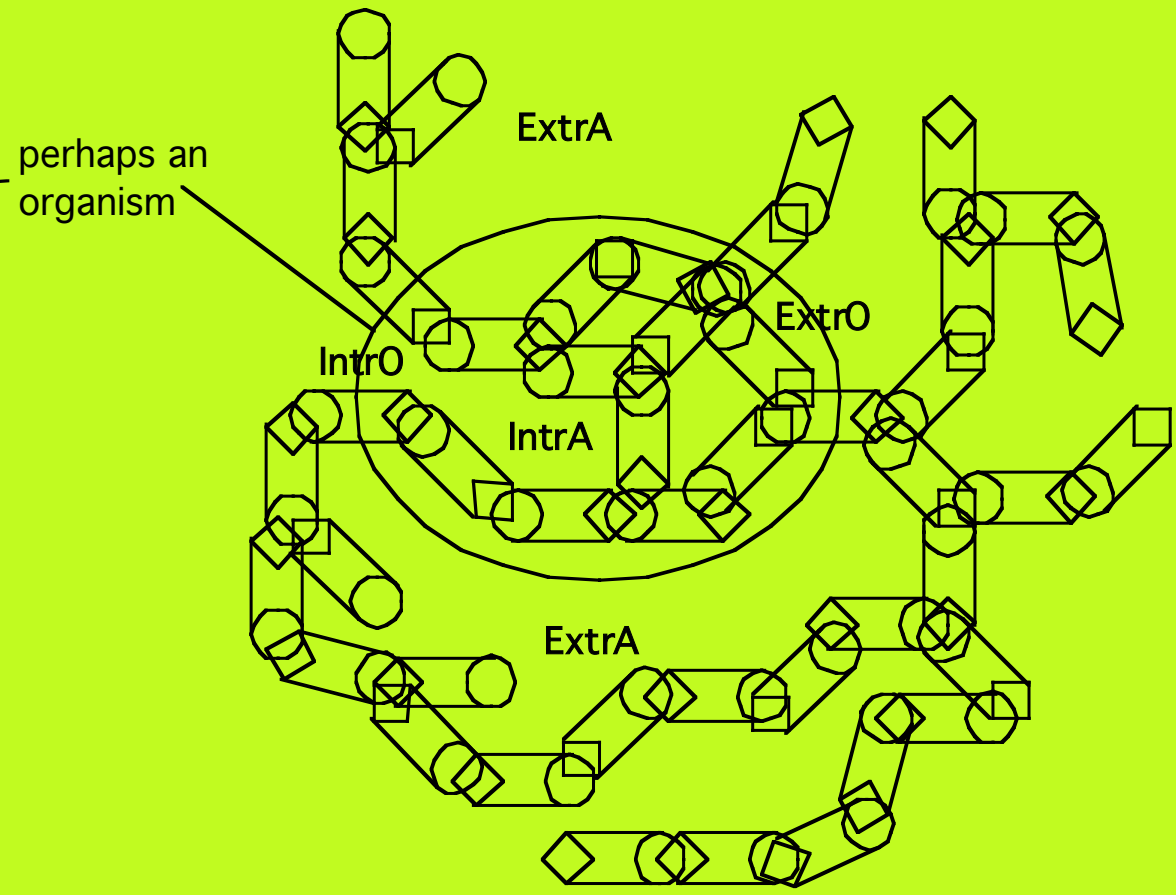
Chains or Nets of Semioses

1. Triadic Generative Semioses can build **chains or nets**.

Emphasizing Structures generated and generating in triadic Interaction or Transaction



Emphasizing Processes in an Ecosystem building both, the organism and its Umwelt



These are structural illustrations at a given point in time. Here of course extremely simplified. My main point: Structures in any part of the world are mostly related by relations of origin. Some or these Relations can be activated repeatedly; but generative Relations can result in new or modified overall Structures. The Y-shaped triad contains a huge potential for both innovation

Triadicity

1. You remember probably Peirce's "obsession" with Triads and his thesis/"proof" that all higher order Relations can (analytically) be reduced to Triads, but not to Dyads.
2. Evolution demands (at least) its basic Process to be of triadic nature: **when A and B encounter, then C.**
3. A world operating on Dyads (when A, then necessarily B) must be **finite** or repeating sooner or later. Chance exceptions is a pseudo-explanation.
4. It is interesting to see that generative Triads can account **for both** diversity increase (divergence) and diversity reduction (diversity containment) of the Evolutive Process.
5. **Equal** Refs and Ints produce **equal** Pres, varying precursors produce Innovations. (So originates the factual in universalistic so-called natural law.)
6. **Affinities** and **stabilities** greatly reduce the effects of contingency.

2. and perhaps 3. I think this is basically an insight of Peirce's. I regret that he did not transfer it to his conception of semiosis, but instead restricted himself to the IntrO-phase of Interpretation of signs. But he also did not take the Idea of evolution seriously when he thought the general course of the universe to metaphysically go from Firstness to Thirdness and eventually end in Secondness.

4. This contrasts well with the unsolved problem that a supposedly necessarily lawful universe is subject to occasional chance events; and no arbiter principle reigning above the two. Science seems occasionally to break its holy principles.

5. Perhaps my namings come from a time when I was busy with perception and IntrO. My criterium now is more in the idea, that often one of the precursors Semions is more active than the other more passive, but also often they are indistinct in this respect.

More important is here the idea than very stable structures that barely evolve any further, such as most atoms and small molecules may well and do encounter readily such as in atmo- and hydrospheres, these ubiquitous events may well account for what we think are the basics laws in physics and simple chemistry: the basic transformation processes involving matter and energy

6. This is in my opinion a great advance over simple chance principles. Indeed, the Evolutions automatically provide for stronger and lighter relatedness or affinities of all Structures. When some can only deal in many respect with affine others such as plants or animals and have the means to seek them out, chance is no longer chance.

Proto-evolutive Encounters

1. This idea of chained and netted Triads leads to the idea that Evolution generically is nothing but **Structure Formation from Structures already present**.
2. Proto-Evolutions generate (a) in the cooling the **chemical Evo** Formation of energy a small number of **quite stable particles** (say: atoms, binding energy in the form of strong and weak nuclear forces) and some simple combinations thereof (small molecules) in the chemical Evo; (b) in the **cosmic Evo** such particle spread, thus generating space and time, and conglomerate to **stellar bodies and galaxies**, also producing heavier atoms and more molecules; (c) on planets like Earth further cooling and and movements lead to agglomerations of **minerals in hydro-, litho-, and atmosphere**. Of course, these are not Semioses. Only encounters of Structures resulting in Structures and Formations that can also to some extent suitably attract or avoid each other depending on their electric charges or due to gravitational force.

I just want to convey that similar triadic Relations may reign in the pre-biotic domains, yet non-semiotic, i.e. bases on surface Relations of Structures such as push impulses of atoms or molecules in hydro-, atmospheres, valencies of atoms or ions, or gravitation and inertia motion among stellar bodies, binding forces among molecules in crystal in the lithospheres, etc.

Semiosic Encounters

1. In the **Genuine Evolutions** (Bios, Psyche, Culturality) we find **surface qualities** and/or inherited or acquired "knowledge" of **latent Potentials** of Structures that play a role in **attracting or repelling** each other (one- or both-sided) and subsequent Interaction or Transaction based on potentials of one or both Structures that go beyond.
2. The reason for that "knowledge" or **preparedness for —** can lie in **affinities due to co-evolution**. Affinities also include "devices" allowing attractive or avoidance capacities. Contingency is, so to say, chance reduced to spatio-temporal encountering. But such is far below simple chance level because of selective attraction and avoidance. In humans in particular and some animals at least the aimed or otherwise attained preparation of suitable conditions moves encounters even far more beyond chance.

1. It seems to me essential to think in terms of Semiosis and its variations being also evolutive emergences. Our situation in in this respect compares to the situation in the later third of the 18th century, when people thought that human language was a gift of God and Herder for one proposed the notion that it may be humans themselves that invented most of it.

Memory

1. It is obvious that **genuine Evolution** in all three forms is essentially **Memory** (in a very wide sense) **formation** and conservation at one time, **and later use** of it.

2. What emerges in the **Proto-Evolutions** is more primitive; it sure co-determines what can emerge later. But it does **not branch** into new varieties but rather produces more of the same.

3. In **all genuine Evolutions** the Structures emerged have chances to enter encounters that can **branch into entirely new and often infinite variation trees**.

4. In **Bio-Evolution** two emergencies are crucial at start: (a) Structures can **replicate** "random" Structures or singularities such as in crystal layers breaking and growing with that primary singularity retained; (b) One kind of Structure can **co-determine** in detail **an entirely different** Structure such as in the Protein "by" DNA "manufacturing".

I think it a very essential insight that Evolution operates as memory building and use by necessarily successive Interaction and Transaction and so constitutes **time** and presupposes a relative independence or "autonomy" of all Structures and their motions and so constitutes **space.** This is achieved already in the Proto-Evolution and carried on in the genuine Evos.

Yet in the Proto-Evos memory is primitive and mostly quite stable, no longer evolutive or very slow in many parts of the universe, especially on our planet. Which is essential for the genuine Evolutions which can build upon a quite stable basis.

Memory in Bio-Evolution

1. The biotic Memory and thus the Bio-Evolutive variation is almost exclusively built in the Genome and its parts.
2. The **Genome Memory** is instrumental or essential in building the organism with relatively little variation added in this process.
3. All organisms together in some specific selection together with climatic specifics that come from the mineral Evo are essential in constituting the selection or evaluation of the organisms type proliferation. Life Evo is not only of organism, but includes Umwelt.
4. The biotic Memory formation does not only include anatomy and physiology of the organisms, but also the tropisms, taxes, and instincts enabling the organisms to thrive or fail in a given biotope.
5. Note that the variation and selection functions are realized in two different but heavily related Structures: genome and organism.

1. and 2. Epigenetic contributions, of course, take their place, especially in early development; yet do little if at all in bridging generations.

3. I have the impression that the **Evolution of the Environment**, formed in large part by organisms of great variety, is often neglected in our understanding by concentration on the origin of species.

5. I can here give only a few hints at the possibilities of understanding commonalities and differences among the different Evolutions such a overall conception of Evolution opens. Variation and Selection processes are common to all genuine Evos,

Memory in Individual Evos

1. In most **experience-making and -using individual organisms** (some monocygotes have been demonstrated to "learn) the biogenetic genome is still important (e.g. in instincts), yet its effects on states and behavior are transformed or over-formed by individual experience. Thus **a second form of Memory** is built that does modify rather rebuild the biogentic Memory or is realized in other forms.
2. The obvious **drawbacks** of the individual memory are these: it must be acquired by every individual in a lifelong permanent process of Encounters with aspects and parts of the Environment. However intensive this happens in early years, **everything is lost at the end** of the life of every individual. Obviously this is observable in animals and humans. But humans "invented" culturality.

Note that I put Individual and Cultural Evolutions in plural. What is often called individual development is in fact an Evolution in each singular Psyche because it is based on Millions of specific Encounters of the given individual with instances and aspects of an Environment, in fact that Individual's Umwelt constituted by all: the Proto- and Bio-Evolutions, the other Individuals' Evolutions, the cultural Setting including an important component of the Individual in focus of itself; everybody not only selects from and is in many forms selected by that Environment but also contributes heavily to its own making.

1. By emphasizing the nature-nurture opposition psychology has largely disregarded that fact individual acquirings are often derivatives or modifications or variations of instinct forms.

2. It was Johann Gottfried Herder who roughly one century before Darwin has invented the principles of Evolution on the level of the transition from individual to cultural Evolutions. He had intuitions about biotic Evolution; but this could not be openly discussed at his times. He had a rather clear idea of the principles of Innovation (variation) and Evaluation (selection).

Note that in Individual Evos, variation and "selection", i.e. here absorption and proper is is probably within the same system and often at the same time or almost the same time.

Memory in Cultural Evos

1. Some rather complex animals such as the great apes, sea mammals, mice, rats, cats, dogs, etc. have added an emergence that supplements and enriches individual acquirements, in that adults, especially mothers, can actively train their young, so that the **adult's experience is to some extent also available to the younger** generation.

2. Now humans in particular have greatly evolved this rudimentary capacity to transfer their individually acquired habits to their kind, especially the young, with the support of advanced communicative "devices" such as language, tool- other artifact-making, writing, etc. to extents beyond anything seen in animals. This we call **Culturality**. It enhances greatly what one individual could learn by himself in that the experience from many generations can "live on" in the **Traditions in communicative social systems** and can be exchanged among them.

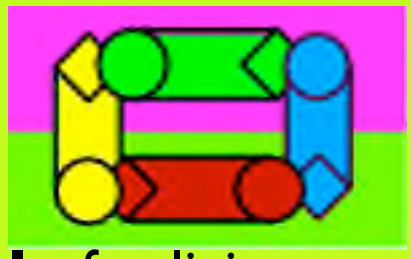
1. Remember that Christianity in particular has promoted an image of humans that is based on a huge gap to animals that has only recently begun to be diminished by unprejudiced observation and theorizing.

2. I prefer the abstract term **Culturality** to Culture, because the latter term treats these traditional emergences almost as objects to the disadvantage of the process and its potentials. Culturality points to various living forms that humans have socially acquired and transfer in smaller or larger groups. The point is that modern scientific achievements have not at all adequately treated Culturality due to lack of understanding and honoring the process. It is a great deficiency that the scientific community has not learnt little to understand culturality as the specifically human emergence.

Note that depending on level of differentiation you can easily identify some 6-8000 cultural groups, as indicated by the number of languages spoken. There may towards 100'000 or more different forms of living together, if you consider more details.

In Culturality, variation and selection, here more aptly called innovation and evaluation, are again in separate context, in that usually an individual or sometimes a smaller group innovates something, presenting it to others who do or do not adopt it and often change it in the course of time to often better, sometimes worse.

Let me add, that cultural evolutions are most important for all groups of humans and for their individual members. Imagine how meagre the "content" of our heads and how scare our skills and faculties would be, if there were no culturality. I contemplate ideas like: a non-en-cultured human is in fact an animal, only enculturated s/he becomes a human. I do not understand that human self definition has gotten heavily biological; even much of our law does little to give culturality its proper place.



Short explanation of the:

1. My emblematic Diagram presents the **Semiotic Function Cycle** for living beings in their Umwelt, humans in their Culture in particular.
2. The three-part arrows graph the **semiosic unit**: one Structure (rhomboid square) combines with another Structure (elongated rectangle) and so a third Structure (round disk); all three Structure are Semions: **Ref**erence, **Int**erpretant, and **Pre**sentant respectively. This the unit process in all genuine Evolutions.
3. The four consecutive Semioses together form one cycle of the Function Cycle; the purple square presents the organism, the green square its Umwelt, i.e. all parts or aspects of the Environment, for which the respective organism has organs either to sense or to act upon.
4. The cycle repeats as long as the organism is alive in spirals though time. In all IntrO-Semioses (yellow) the Umwelt can leave an impression upon the organism, transient or permanent; in IntrA-Semioses (green) the bio-genetically given potential can be overformed as a dynamic individual memory; in ExtrO-Semioses (blue) the individual can act upon the Environment, eventually change it; in ExtrA-Processes, semiosic or not, the Environment is changed by Interaction (physical etc.) and Transaction (semiosic) among its relatively independent parts.
5. In the genuine Evolutions infinite trees of Semiosis are branching in restrained diversification.

1. This emblem presents the Semiotic Function Cycle and is a summary of my transfer of Generative Semiotic into the worlds of the 3 genuine Evolutions: of living beings and their Environments (bioevolution), of individual organisms in their Umwelt (individual or psychic Evolutions), and of communicative groups in the cultural traditions (the cultural Evolutions or culturality for short).

2. see slide #11 or #22

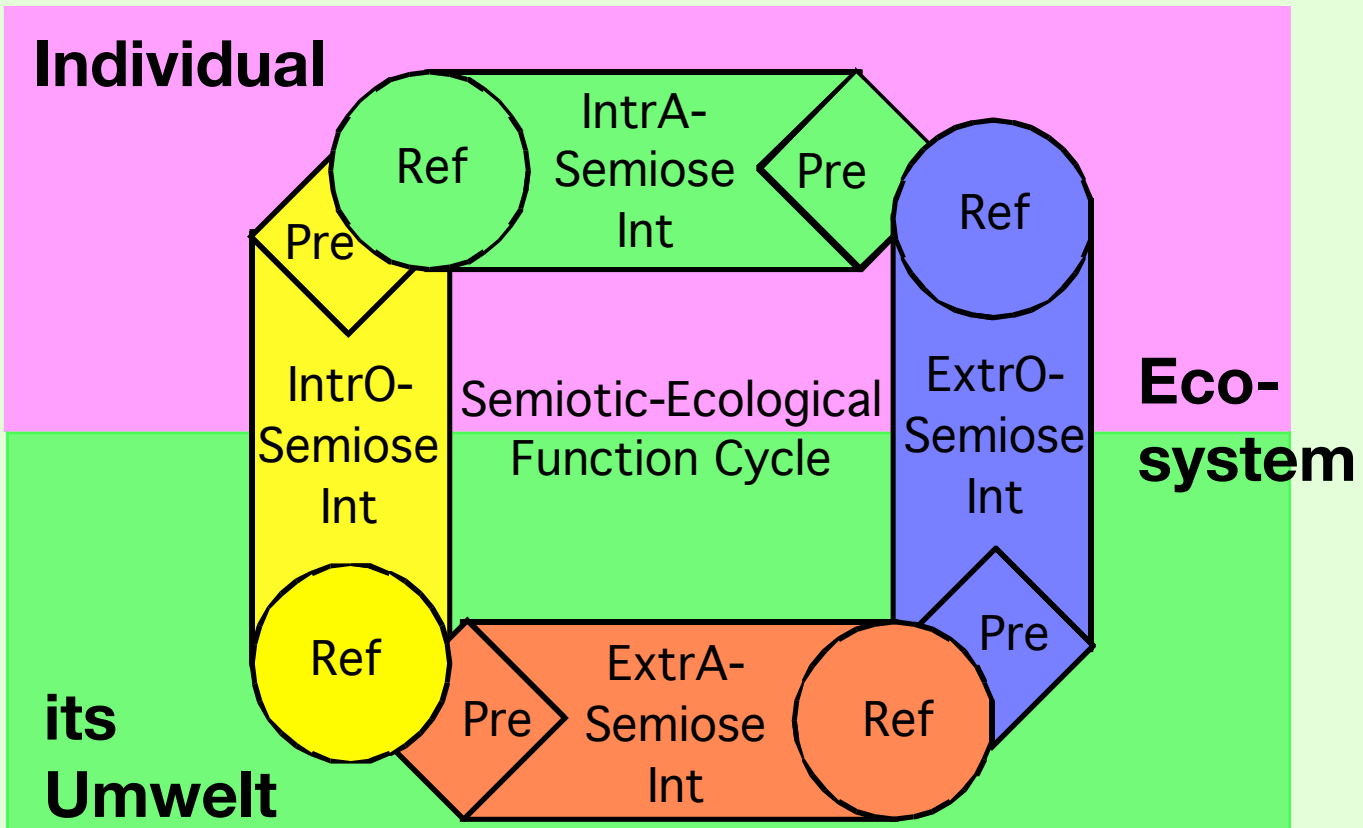
3. One substantial gain of Generative Semiotic lies in the fact that one simple conception can be applied to four phenomenologically entirely different phases of being and becoming in the world of organisms, viz. perception, hidden mental including emotional processes in the mind brain including memory understood dynamically,

4. The verb “to spiral” or the gerund “spiraling” may be for you an neologism; but picturing the sequence of Semioses that alternatingly got through the organisms and its Environment, once into either and once within either, and leaving eventually lasting changes in both, so that the Environment embracing many Umwelten of the formers inhabitants, and as well as any individual organism are making each other by these infinite numbers of Semioses form or build or change and maintain each other, is an excellent illustration of what happens in the form of life.

5. These two qualifications of Evolution, diversity increase and restriction, happen together inseparably and based on one and the same causation are responsible at the same time for both manifold innovation not too far away from what already is and stabilization or order of or in the universe.

The Four-Phased Generative **SemEco Function Cycle**,

Spiraling through the Individual and its Umwelt lifelong and leaving Memory Traces of all experience and activity or individualized Potentials in both.



Semiosis conjoins the **Semions Ref**erent and **Int**erpretant generating their **Pre**sentant. The four phases IntrO, IntrA, ExtrO & ExtrA forming a cycle.

22

The SemEco Function Cycle is the Core Concept of the operation of Generative Semiosis in the Genuine Evolutions (Bios, Psyche, Culturality).

Structure Formation both within and around the individual organism occurs in four phases of the Function Cycle spiraling through the Ecosystem, the individual and its Umwelt. Each phase is a Semiosis comprising a Referent, an Interpretant, and a Presentant. IntrO- and ExtrO-Semioses build Structures within and around the organism, respectively. They are the basis of what is phenomenally known as Perception or Reception and Behavior or Action. Already for the most primal organism, ExtrA-Processes, whether of semiosic kind or not, are important; the organism have to remain fit for the respective Umwelt and may adjust genetically if the environment changes beyond their capabilities. For more complex organisms gaining and using individual experience, Intro-Processes, mostly of semiosic kind, become increasingly important and supplement or substitute some of their genetically emerged capabilities such as instincts.

The diagram points to the crucial SemEco insight that all four phases of the cycle are of the same kind, namely Triadic and Semiosic Structure Formation and Change. This allows overcoming phenomenological constriction resulting in separate treatment of domains like perception and action, thinking, emotion and motivation, etc. In cultural beings, especially, the ExtrA-Processes are also largely of the semiosic kind and are provided by other individuals, actual or earlier in time, present or elsewhere in space.

Horizons

1. If you want to detail a Semiosis and its Semions, you see that not all Semions are observable. You have to infer time and again.
2. Most of the Semions you can observe are parts of ExtrA-, IntrO-, and ExtrO-Semioses, almost nothing or highly inadequate is observable from IntrA-Semioses. But you may infer this and that.
3. A great help for inferring about unobservables are Horizons: most Semioses are either compositions of Semioses to a Semiosis on a super-ordinate level or Horizon or analyzable into Subsemioses
4. I use a methodical rule of thumb: wherever I research, I aim at a **target Horizon** that presents best, what I want to inquire; this **obliges** me to do supplementary research **also on the two adjacent Horizons**: one **above** and one **below** of my target Horizon.
5. Without despising exact details I find lastly "Stimmigkeit" more important: the more details, we can know, fit together with no contradiction, form a good understanding.

1. You can relatively easy observe Semions outside an organism; especially those Refs eliciting a perception and so starting an IntrO-Semiosis; and those Pres resulting from an action or ExtrO. So you can observe little from IntrOs, ExtrOs and nothing from IntrAs, if you want not really relying on immediate experience reports or your own.

2. It's a fact that our observational possibilities are limited. Simple positivism make blind and deaf.

3. I venture some loose hierarchy of level of complexity of Structures in which you might go up and down. A preferred way of making that clear is that very low level semioses happen almost instantly, e.g. neuronal processes or perception or well learnt activities; the higher you go the larger time span the processes cover, e.g. something to learn or to understand thoroughly,

4. Pure analysis leads to nowhere. Supplement it by synthesis so that some target result find double ground.

5. Cultivating details or connection is a matter or taste or habit. We cannot forgo either.

Summary & Evaluation

S I have advanced a new conception of Semiosis inspired by Peirce and a few of the sequels for a simpler world view and conception of humans in their heavily self-made world.

! 1. It goes ***beyond*** *interpretation* or input into a mind.
2. It accounts for Semion ("sign characters" generically) ***production*** *as well.*
3. Being truly *triadic* it can *cover* ***generic*** *Evolution*.
4. It is based on *contingent* ***encounter*** and *affinity* rather than necessity.
5. *One* principle accounts for ***both*** *diversity increase and containment.*
6. *Meaning* can ***emerge*** from Proto-Evolutive causation.
7. It can **cover** semiosic IntrO-, IntrA-, ExtrO-, and Extra-Processes.
8. It **relates** material/energetic aspects intimately with Meaning. ……

? It's not my task to criticize SemEco, I improve it, continually, the 16 years since I have invented its basics when first reading Peirce. I originally only wanted to introduce culturality combined with methodical rigor into human sciences. It has grown much larger into questioning and furthering a long history of thinking, the dualistic understanding or our world and ourselves, forwarding me to drafting a **new conceptuality** that is simpler and more coherent.
There "must be" shortcomings apart from fundamentally breaking thinking habits: Please, show me the faults of or in this conception!

I seriously doubt that universalistic natural law is valid in an evolutive world. An **evolutive world must be determined locally**. Where should the laws "sit" and how should they be able to determine anytime and everywhere most to everything?

Abstract for Salzburg

1. Abstract. The contribution presents **a new basic conception of Semiosis**, that is generic an can cover all known processes of the genuine evolutions in biotic, psychic, and cultural systems as well as the Evolution of Evolution; pre-organic or proto-evolutive Processes work in related manner which enables the genuine Evolutions to emerge from chemical, cosmic, and mineral Structurazations. It is a-dualistic and generative and can cover both input and output branches as well as organism-internal and -external processes of memory formation and use on chromosomal, cerebral and cultural levels. In essence, genuine Evolution is conceived as memory formation and later usage. I think it may not have been a good idea to base semiotics upon some "definition of a sign". Peirce has written around 100 of them, obviously never satisfying himself completely. If signs of any kind are to be "interpreted", whatever that may eventually mean, they have to be “produced" or generated before. A related misconception appears to underlie the notion that a sign should represent something and could vicariously replace it. Rather than start with a definition of the "sign" and rely upon some rather arbitrary notion of "interpretation", I'd prefer to follow chains of effects of anything that does or can have effects of innovation and maintenance upon something else; and whenever physical or chemical explanations are wanting, I may look for a kind of connection that can be called semiotic. Any structure observable or inferable in the above fields of life and what is built thereupon may then preferably be thought of as a semion presenting something to be taken up by another semion which encounter is generating a third structure, and the same is done again and again, all semions becoming part of the chains of being.

2. Zusammenfassung. Hier zeige ich eine Konzeption von Semiose, welche so allgemein ist, dass sie all bekannten Evolutionsprozesse und aktuelles Geschehen intra- und interorganismisch wie auch zwischen Lebewesen und ihrer Umwelt im biotischen, psychisch-individuellen und sozial-kulturellen Bereich sowie deren Hervorgehen aus vororganismischen Proto-Eolutionen beschreiben kann. Sie ist a-dualistisch (keine ontologische Trennung von Stoff und Geist oder Tatsachen und Werten etc.) und generativ und kann die Eingangs- und die Ausgangsprozesse ebenso wie organismus-interne Prozesse und Gedächtnisbildung auf chromosomaler, cere-braler ebenso wie kultureller Ebene begreifen. I halte es für keine gute Idee, die Semiotik auf einer Definition des “Zeichens” aufzubauen. Peirce hat rund 100 solche Definitionen geschrieben; offensichtlich haben sie ihn nie befriedigt. Wenn “Zeichen” erst dann Zeichen sind, wenn sie “interpretiert werden – was immer das heisst – so müssen sie doch zuerst “produziert” oder generiert werden. Eine verwandte Fehlkonzeption scheint der Idee zugrundezuliegen, dass Zeichen etwas repräsentieren und stellvertretend ersetzen können sollen. Anstatt mit einer “Zeichendefinition” zu beginnen und auf eine willkürliche Bedeutung von “Interpretation” abzustellen, bevorzuge ich, den Wirkungsketten von Semiosen zu folgen, durch welche innovative und stabilisierende Relationen gebildet worden sind und fortwährend werden, in welchen unsere Welt geworden ist und die durch physische oder chemische Funktionen allein nicht geklärt werden können. Im besonderen achte ich auf Wirkungsketten, die man semiosisch nennt. Jede beobachtbare, erschliessbare oder erfindbare Struktur muss aus Vorläufern entstanden sein und hat ihrerseits das Potenzial, mit begegnenden Strukturen zusammen immer wieder weitere, replizierte