

# MIRRORS MIRRORED: IS THAT ALL THERE IS?

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## ABSTRACT

Recursive-hierarchical systems are multi-level systems that constitute their systemic closure through recursion. Their unique systemic nature has been ignored for years, causing confusion about their activity. In semiotics, for example, the logic of signification has fallen prey to the post-modernists' "hall of mirrors," which fails to grasp the logic of in-between that underlies recursive-hierarchical systems. My aim in this paper is to illustrate the logic of in-between by "deconstructing" the post-modernists' hall of mirrors and the phenomenon of mirroring.

## 1. WEAVER'S BLIND SPOT

In 1948, Warren Weaver, one of the proud fathers of information theory, drew a typological distinction between two kinds of systems, which he discussed in terms of problems (Weaver 1948). Weaver differentiated between problems of *organized simplicity* and *disorganized complexity*. Systems with organized simplicity consist of few elements, the behavior of which is determined by simple mathematical rules. That is, the value of a particular variable is usually a function of one or two other variables. Newton's laws are the best example of this kind of system. Problems of disorganized complexity involve systems with a large number of components that behave individually in a disorganized, erratic fashion. As a whole, however, the system possesses certain orderly and analyzable average properties. The behavior of gas particles as studied by statistical mechanics falls under the rubric of "disorganized complexity." These two types of systems have been studied with great success. Weaver, however, also identified a third kind of system, which he regarded as the promise of the future. These systems of "organized complexity" involve a moderate number of components "which are interrelated into an organic whole" and work in a bottom-up fashion to create macro-level order. The human body as a multicellular organism is

considered to be the best example of organized complexity. Systems of organized complexity are discussed today under the rubric of “complexity” or “self-organizing systems.”

Although Weaver’s typology seems to cover all the systems known at that time and envisions a third type, it ignores a fourth kind of system that, due to the gulf between the “two cultures,” was beyond his scientific horizons. In this paper, following the work of Bateson, I call this a *recursive-hierarchical system*. It is a system that exists on several distinct but complementary levels of analysis (hence hierarchical) and works through feedback loops (hence recursive). The units of the system constitute the whole and the whole constitutes the units in a recursive process. These systems have usually been discussed in the humanities in the context of the “hermeneutic circle” and the problem of achieving knowledge in a system of interpretation of which one is a part. For example, to understand the meaning of a sign, one has to understand the broader text of which this particular sign is a part. However, in order to understand the whole text one has to understand the meaning of its constitutive components/signs! This seemingly vicious circle is also evident in our interactions with other kinds of wholes. This unique and dynamic structure of recursive-hierarchical systems does not necessarily lead to the post-modernist “hall of mirrors,” in which a signifier is subject to signification by a new signifier ad infinitum (Rosen 2003). The work of Bateson (2000), Harries-Jones (1999), Neuman (2002), and Rosen (1994) points out the logic of recursive-hierarchical systems without falling prey to the post-modernist hall of mirrors. According to these authors’ suggestions, the logic of recursive-hierarchical systems is the logic of *in-between* levels of analysis, and as such it is distinct from the logic that characterizes other systems. My own studies (e.g., Neuman 2002, 2003, in press-a, in press-b) have explored the dynamics of recursive-hierarchical systems. In this paper, I would like to illustrate the logic of in-between by studying the phenomenon of mirroring. In other words, instead of accepting the post-modernist hall of mirrors, I “deconstruct” the phenomenon of mirroring by pointing out its own logic of in-between.

## **2. HOW TO APPROACH RECURSIVE HIERARCHICAL SYSTEMS?**

Weaver’s reason for refraining from discussing recursive-hierarchical systems was probably that these systems resist the formalization that lies at the heart of modern science. Indeed, any attempt to understand a system of re-entering dynamics through formal representation appears to be prone to vicious regression rather than to a coherent and explanatory representational system. From a broader metaphysical perspective, Weaver’s failure to discuss these systems represents the blind spot of modern science: avoidance of any discussion of the metaphysical sources of its

own ultimate foundations. If knowledge is always contextual, then trying to detect its ultimate foundations may open a Pandora's Box—but in this case, one with no hope at the bottom.

It is tempting to deal with wholes by using the powerful language of set theory. According to this possible path of inquiry, wholes should be treated in terms of sets or classes. However, this approach is wrong. The first axiom of set theory, the axiom of extension, suggests that a set is fully determined by its members. In this sense, two sets are identical if they have the same members, i.e., if the objects denoted by the two sets are the same. This axiom has been used specifically introduced in order to avoid the problem of *reflexivity* resulting from the alternative of defining the set from “above” (Fraenkel, Bar-Hillel, and Levi 1973). However, wholes are determined by their stability relative to their constitutive elements rather than by their elements themselves. The human body as a whole is a differentiated system because on the macro level (i.e., as a whole) it possesses a stable structure, unlike its rapidly changing micro-level elements, the cells. The same is evident in texts. The whole text exists as a meaningful system only if its constitutive signs may change their meaning and renew the totality from which they are nurtured. When this does not occur, the text becomes a dead corpus or a mere aggregate of linguistic signs. In this sense, wholes cannot be fully or partially determined by their members in a bottom-up fashion, and therefore the language of set theory is of no relevance to us. In recursive-hierarchical systems, reflexivity is a constitutive principle rather than a major shortcoming of our language.

The inevitable question is whether there is a different kind of formalism that may help us to inquire into recursive-hierarchical systems. Fortunately, as I will argue in a minute, the answer is no, and the reason for this is embedded in the nature of the mind. By definition, an expression is formal if it is context-independent in the sense that the objects signified by its components may vary without changing the meaning of the whole expression. For example, the formal expression “ $1 + 1 = 2$ ” is meaningful to the mathematician since it makes no difference whether the numbers signify apples, drops of water or cats. Being context-independent, a formal expression has the magical powers of abstraction, rigor and communication, powers that give it a sacred position above time and space. However, the power of formalism and abstraction is also its Achilles heel. As illustrated by Oliver Sacks in one of his beautiful clinical case studies (Sacks 1985), the abstract mind is not an adaptive mind. Our minds do not approach the world as a totally decontextualized, abstract expression. They approach the world by creating a context of interpretation. This property is closely associated with our limited number of signs and the polysemy of language. Our ability to use a limited number of signs to mediate a huge number of events is supported by a context that gives a sign its concrete meaning. Therefore, the fact that, unlike computers, the human mind has not evolved as a formal device allows us to respond flexibly to the dynamics of the concrete world with a limited number of signs, which take their meaning from

the context. This unique property is evident in natural language, which allows us to escape the closure of formal systems and to reflect on its own work by forever expanding its own context of interpretation. Attempts to formalize natural language completely are always responded to with an emerging context of interpretation, which is expressed in terms of natural language less formal than its formal representation. In this sense, language escapes formality like a wrestler who slips out of his opponent's grasp just to grab him from above.

The argument presented thus far points at the expected failure of any attempt to formalize language completely by representing it through an arbitrary set of symbols and abstract relationships among them. Language can be represented only by itself, and the result is a closed group that confronts any formalism with paradoxes (Neuman, in press-b). This state of affairs should not prevent us from studying the logic of recursive-hierarchical systems as long as we recognize the unique logic that characterizes them and respect the fount of metaphors offered by the language for understanding re-entering forms. Moreover, it points to the *dynamics* of language, rather than its stable structure, as the object of our interest. Therefore, our ability to deal with recursive-hierarchical systems depends on our ability to explore the unique dynamics of these systems. The next section presents the search for the logic of in-between by inquiring into the phenomenon of mirroring.

### 3. MIRRORS

Some of us may remember ourselves as infants, searching behind a mirror for the person we see, only to find, to our surprise, that there is no one behind the mirror and that it is our own face that is reflected by the surface of the looking glass. Adults sometimes take this opportunity to show off their greater intelligence to the child by pointing out the correct interpretation of the event: "See, it's YOU!" This interpretation of mirroring is a common mistake that relies on an orthodox concept of meaning (usually attributed to Frege) as the correspondence between a sign and an extra-linguistic reality—in our case, the truth value of mirroring as the correspondence between the extra-semiotic object, the "I" (which ontologically precedes any act of signification), and its reflection in the looking glass. However, this reading of mirroring is as naive as the young child's conception of mirroring, since it is not I (whatever that may be) that is reflected in the mirror, but my outer image as conceived by the cognitive mind. Radical conceptions of the mind may even suggest that it is not the "I" that precedes its signification by the looking glass but the other way around. The "I" is a semiotic event that comes into being only through the mirror and other cultural "artifactuals" (Neuman 2001) that fix the flux of being, or what Peirce describes as the "dynamic object," into a specific template that we call the "I" or the "self" (Neuman 2001). This radical conception was given its ultimate expression in the philosophy of Bakhtin. As Hol-

quist poetically commented on the notion of the “I” according to Bakhtin: “Much as Peter Pan’s shadow is sewn to his body, the ‘I’ is the [semiotic-Y.N.] needle that stitches the abstraction of language [the linguistic “I” and other artifactuals such the “I-image” in the mirror-Y.N.] to the particularity of the lived experience” (1990: 28).

As adults, we are familiar with the idea of children looking for an object behind the surface of the mirror. However, we rarely understand its lesson: that meaning is sometimes at the surface and not deep-“in-between” the dynamic object and its sign. Unfortunately, simple spatial metaphors and a dominant Platonic heritage have misled us into looking for meaning at the top (of mountains, like Moses/Zarathustra) or at the bottom (e.g., the foundations of things), outside (the Platonic cave, our minds, a datum, etc.) or inside (e.g., our inner self)-but never at the surface. As always, there is an alternative. This lesser-known alternative is to examine meaning as a surface event, as a boundary phenomenon (Neuman, 2003), as an instance of in-between through which meaning emerges. At the surface there is nothing to hide, all is visible, and the Platonic dichotomy between a world of appearances and a world of ideas collapses in favor of a dynamic from which phenomena evolve. This conception has its roots in Heraclitean epistemology (Kahn 1991), which maintains that meaning should be looked for not in transcendental forms (e.g., Plato’s ideas or Kant’s transcendental self) but in the emergence of patterns from the surface, as well as in Spinoza’s philosophy, which rejects transcendental explanations of the world in favor of pure immanence.

If mirroring is to be approached through the surface, then it is clearly an *event* rather than a representation of a given essence (the “I”). Therefore, mirroring should be addressed from a semiotic perspective since, like the signification process (at least as portrayed by Peirce, Bakhtin, and Volosinov), mirroring is a *signifying event* rather than a display of the subject itself or the represented object.

Beyond the realm of child psychology and perception, mirroring is a central concept in social science, specifically in the context of psychoanalytic theory. Freud, for instance, said, “The doctor should be opaque to his patient and, like a mirror, should show them nothing but what is shown to him” (Freud 1918: 118). In a similar vein, Heinz Kohut saw mirroring as a primary tool in establishing the healthy self. Surprisingly, both classical modernist and post-modernist conceptions of mirroring (as evident in post-modernist narrative therapy) have exhausted mainly one possible sense of mirroring that adheres to the signifying power of mirroring as corresponding to some object (self?), whether real or constructed. In this short paper, I intend to present and explore a different, overlooked meaning of mirroring: *mirroring as a surface event, a semiotic occurrence of “in-between.”*

#### 4. THE LOGIC OF IN-BETWEEN

In *The Logic of Sense*, Deleuze (1990) differentiates among four dimensions of a proposition. Those dimensions can easily be applied beyond the realm of language to any form of signification. The first dimension, *denotation* or *indication*, considers the relation of the proposition to an external state of affairs (datum). In this context, we judge the proposition in terms of truth value based on its correspondence with the datum. Some people, including those classical psychoanalysts who consider mirroring a tool for the projection of self, embrace the denotative power of mirroring as a working assumption. *Manifestation* is the second dimension. It describes the relation of the proposition to the speaker, i.e., to the “self,” “I,” or “ego” of the proposition generator. When we turn from denotation to manifestation, the criterion for judging the proposition also changes from true versus false to reality versus illusion. The fact that the Cartesian philosophy epitomizes this focus is not arbitrary, since “It is only in modernity from the sixteenth and seventeenth centuries on, that comprehension becomes equivalent with cognition” (Vladimir Bibler, in Alexandrov and Struchkov 1993: 354). *Signification* is the third dimension. It considers the relation of the words to universal or general concepts of reasoning. Signification does not deal with truth versus falsehood but with truth versus the absurd, with logic versus nonsense. Signification is the realm in which paradoxes are judged and penalized for violating the sacred and timeless rule of classical logic: a proposition is either true or false. *Sense* is the fourth dimension of a proposition: “the expressed of the proposition” is an incorporeal, complex and irreducible entity, at the surface of things, a pure event which inheres or subsists in the proposition” (Deleuze 1990: 19). Unlike denotation, it has nothing to do with the datum or with the relation between the proposition and the datum. “Sense does not exist outside the proposition” (Deleuze 1990: 21). “It is exactly the boundary between proposition and things” (Deleuze 1990: 23). It is the logic of in-between that cannot be grasped through traditional logic. And what is the pure event? Events are “incorporeal transformations, which are expressed in statements and attributed to bodies” (Patton 1996: 13). The power of this term-*event*-is that it enables us to describe the relations between signs and the world not in terms of representation but in terms of action, mapping and transformation.

According to this suggestion, the sense of a statement such as “I love you” cannot be seen as a denotation of something (it means nothing, as it points to some kind of external datum referred to as “I” or even to an internal state named “love”), a manifestation of the self (the idea of illusion never bothers the lovers who transcend their selves), or an act of signification (is there a universal logic of love?). The statement “I love you” makes sense as long as we consider it to be the event (never a fixed entity, rule, or truth value) between the lovers that is constituted through the act of communication and materializes in the above statement. It is the event of being in love.

## 5. THE NOSE AND THE FINGER

Recently I noticed my two-year-old daughter picking her nose. My wife demanded an immediate educational intervention to prevent a recurrence of this shameful activity. As usual, her mistake was asking me to do this job. Instead of trying to convince the young toddler of the importance of this cultural norm, I challenged her older siblings with a “Batesonian” (and, frankly, a misleading) question. “Hi,” I said to them. “When Tamar picks her nose, what enjoys this activity? The nose or the finger?” My six-year-old daughter, the first to reply, pointed to the nose as the source of the libidinal pleasure. Her eight-year-old brother, who is always happy to refute his sister's arguments, assumed the role of the anti-logos and argued that it is definitely the finger that enjoys the activity. “Both of you are wrong!” I declared in an authoritative manner. “The pleasure exists *in between*.” My wife was shocked, the kids were amused, and my little daughter continued picking her nose. Indeed, in a culture in which mental states are attributes of bodies, it is easier to explain pleasure in terms of objects (e.g., the nose or the finger) and their properties than in terms of patterns of interaction. Bateson was one of the main figures who struggled to constitute an interactionist language of inquiry. In this section I use his methodology, together with Deleuze's terminology, in order to better understand the phenomenon of mirroring.

In his seminal work *Mind and Nature*, Bateson makes an important distinction among three terms: *description*, *tautology*, and *explanation*. A pure description concerns the facts “immanent in the phenomena to be described” (Bateson 1979: 81). A description contains information but no logic or explanation. In other words, it is a term that concerns the analytic list of components inherent in the phenomenon but without reference to the logical relationship among the components. A purely analytic mind may find the nose, the lips, the eyes, and the ears to be the components of a certain phenomenon. Nevertheless, without synthesis this list would never integrate into a whole—the face. In Deleuze's theory of meaning, a description would correspond to denotation, to the relation between the datum and the proposition. In contrast, *tautology* offers connections between propositions and contains no information. It is the logical infrastructure of the proposition and therefore corresponds to what we previously described as *signification*. Putting Mr. Potato Head's eye underneath his lips may turn the face into a monstrous “non-sense” image, one that in terms of data corresponds to a real face but lacks the internal logic that should organize it. *Explanation* is defined by Bateson as the mapping of description onto tautology; it clearly corresponds to the sense dimension of the proposition. Explanation is the mental activity of mapping the micro-level elements onto an abstract macro structure, thereby giving the phenomenon meaning. Explanation is the logic of in-between that glues the basic mode of being, which Peirce calls “firstness,” to the second mode of being (“secondness”) in order to “make sense” through

“synthetic consciousness,” which Peirce refers to as the third mode of being (Peirce; cf. Sebeok 1986).

Bateson goes on to suggest that a process of inquiry is a "zigzag ladder of dialectic between form and process" (Bateson 1979: 191) and draws an analogy between form-tautology (i.e., signification) and process-description (i.e., denotation). As an illustration of this methodology he draws on his anthropological work in which he moved from a description of actions (a process) to a typology of sexes (a form), to interactions that determine typology (a process), to types of themes of interaction (a form), to interaction between themes (a process). In this context, the phenomenon of mirroring may be described in terms of dialectic between form-signification and process-denotation. It is interplay between the abstract logic that organizes the fragmented experience of what we describe at a higher level of analysis as the “self” and the fragmented experience in itself. This dialectic is constituted through the sense dimension that maps the description onto the tautology. Following this line of reasoning, mirroring cannot be a correspondence between the self and the mirror that exists on the same logical level of analysis. Mirroring exists in between levels of analysis and as interplay between denotation and signification at different levels of abstraction and through the mediation of sense/explanation. As Peirce and Bateson recognized, meaning demands a triadic relationship rather a simple correspondence or a semiotic labyrinth as suggested by the post-modernists' hall of mirrors. Recognizing this unique form of logic may help us in approaching a variety of phenomena, from immune recognition (Neuman in press-a) to entropy in living systems (Neuman 2003b), using a methodology that combines poetic imagination with scientific rigor.

## 6. AB-SENSE

If we consider mirroring to be a surface event, several insights that contradict common conceptions of mirroring come to mind. In one of his early and lesser-known philosophical essays, Bakhtin (1990) points to one such possible insight:

A very special case of seeing my exterior is looking at myself in a mirror. It would appear that in this case we see ourselves directly. But this is not so. We remain within ourselves and we see only our own reflection, which is not able of becoming an immediate moment in our seeing and experiencing of the world. We see the *reflection* of our exterior, but not *ourselves* in terms of our exterior. . . . I am in front of the mirror and not in it. The mirror can do no more than provide the material for self-objectification, and even that not in its pure form. (Bakhtin 1990: 32)

In this excerpt, Bakhtin points out the mirror's false denotative power. The mirror does not reflect *me* but my exteriority, my reflection. Bakhtin also suggests that mirroring is misleading in



its denotative power because it *objectifies* the event we signify as the “I.” In other words, the event we name the “I” is dynamics that resists any form of representation and cannot be grasped in non-dynamic terms. Mirroring in its denotative sense clearly violates this conception. However, if we consider mirroring as dialectic between form and process we can critically reflect on the phenomenon of mirroring. In this context, and somewhat like Dilthey and the idea of *Erlebnis*, Bakhtin emphasizes the nature of being as flux and the illusory power of the mirror to fix and objectify this flux. If what we really see in the mirror is our reflection rather than ourselves, this may explain why mirroring results in a frozen and alienated image:

Indeed, our position before a mirror is always somewhat spurious, for since we lack any approach to ourselves from outside, in this case, as in the other, we project ourselves into a peculiarly indeterminate possible other, with whose help we then try to find an axiological position in relation to ourselves, in this case, too, we try to vivify ourselves and give form to ourselves-out of the other. (Bakhtin 1990: 32-33)

Therefore the unavoidable consequence of our attempt to approach ourselves from the outside and at the same time to believe that we approach the thing-in-itself is an unbridgeable gap.

Mirroring as an in-between event that exists at the boundary of the artifactual/sign (the mirror or the mirroring utterance) and the flux of being (ourselves) may not only result in an artificial and fixed image, but may also be an event that sheds light on the concept of self through a *negative* perspective. The “negative” sense of mirroring is the recognition that mirroring exists in between (1) levels of analysis and (2) dimensions of meaning (i.e., denotation and signification). By observing mirroring as a sense, as a no-thing, as dynamics of in-between, we may become aware to the absence (of self) that constitutes the phenomenon of mirroring. In other words, from the ab-sense we may learn about the sense of mirroring. Let me explain this idea by means of a concrete case. The art scholar Rossholm-Lagerlof describes a unique experience she once had in a history museum. The museum exhibited a reconstruction of an ordinary Swedish flat from the mid-1940s, at which time she was a small child. The room looked like a detailed reconstruction (in fact, a deconstruction) of her room. Rossholm-Lagerlof, however, felt that this image, rather than mirroring (or re-presenting) actual life, expressed *absence*:

The effect of this setting was ‘absence’, not ‘presence’. The people supposed to live among the utensils were absent as were the living conditions, the expectations, the presumptions. The plaster cake did not fill the place of the real cake, made by the house-wife of the forties, it did not even represent it, *it rather emphasized its empty space*, the place where it had been and where it could never be again. (Rossholm-Lagerlof 2000: 55; emphasis mine)

Trying to learn from this experience about the power of images in general and mirroring in particular, we come to realize that the reflected image (whether reflected by a looking glass or by a therapist) may create an effect similar to Rossholm-Lagerlof's empty space: *the unavoidable tension between the dimensions of mirroring results in an empty space through which we may experience being as a dynamic event*. By that I mean that the two dimensions of mirroring-denotation and signification-are by definition orthogonal vectors that can never intersect or converge. When we try to reconcile the two dimensions with their orthogonal nature, we may experience the "empty space" that exists between those dimensions, the same empty space experienced by Rossholm-Lagerlof or the empty space faced by the materialists when they are asked to explain what matter their "materialistic explanations" are made of. This empty space, this point of discontinuity, is a crucial aspect of recursive-hierarchical systems of signification (Neuman, in press-b, Rosen, this volume).

It should be kept in mind that Dilthey uses the term *Erlebnis* ("lived experience") to indicate "an immediate and pre-reflective experience of something, an experience in which there is virtual identity between the conscious person and that of which he is conscious" (translator's introduction in Dilthey 1988: 23). This is what Morris Berman (1984) describes as a "participating consciousness." Mirroring, as an act of reflection that produces a representation, an image of the self, is a differentiating act that cannot grasp the event of being in its pure state. It cannot be identified with the thing-in-itself or represent the dynamic flux that we a posteriori describe as the "self". It is only through the metaphysics of denotation that representation in general and mirroring in particular mistakenly achieved their celebrated status as gates to reality. When we confront this status with the logic of in-between, we can no longer regard mirroring as reflecting or constructing a real self. What else can we do with mirroring?

Deleuze presents the idea that philosophy is the creation of concepts that provide knowledge of events. Mirroring is a concept that may provide us with knowledge about the event of being, but in a negative sense. As Kauffman and Weiss (2001) insightfully suggest, albeit in a totally different context, we can graphically represent the act of negating a proposition by turning it into a new dimension, perpendicular to the old one that we sought to negate. Negating the denotative power of mirroring does not mean dismissing its value, but turning to a new dimension of mirroring as sense and as an event.

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