

## Meaning Making, Open Systems and Pleasure

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*Editor's Précis:*

*In Gilligan's view, we follow developmental paths and live out culturally engrained stories that lead us to avoid relationships. By her account, we settle for sham relationships, all the while pretending that they are natural and real. We then dissociate, masking any sense of loss. Ed Tronick's "Still Face" research confronts us with the feelings behind the masks. As the figure at the left illustrates, in the presence of mothers who are still-faced and out of relationship, infants show signs of distress and retreat into self-comforting behaviors. Young children react in ways that are comparable given their levels of development, and adults asked to simulate the Still Face mother-infant scene experience and articulate the pain that both mother and child must experience.*

*Tronick offers open systems theory as a framework for understanding why the loss of relationship is stressful. And why weathering relationship brings vitality and pleasure.*



## Meaning Making, Open Systems and Pleasure

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Pleasure, creativity and development are related in ways that have to do with how individuals make meaning. The relationship is explained by principles that govern the operation of open biological systems, of which we humans are but one example. These principles teach us that, as open, complex systems, we connect with one another in order to maximize our organizational complexity, coherence, integration and flexibility. We thrive in the messiness of human connection. Without it, we wither.

To say the least, a systems perspective is distant from the myths and metaphors of Gilligan's Birth of Pleasure, but I hope to show that this distance is bridgeable. And ultimately I hope to show that Gilligan's Psyche acts in the most human of ways: as a seeker of both complexity and pleasure who understands that striving for and creating the new requires risking the old.

Linking system theory and pleasure requires finding concepts that relate principles governing the operations of *any* kind of biological system to the operation of *humans* as complex open systems. For me such a concept is provided in Jerome Bruner's (1990) beguilingly simple assertion that humans are *meaning makers*, a concept easily linked to dynamic systems' principles (Stengers & Prigogine, 1997). Humans, when thought of as meaning making open systems, utilize energy to create complexly organized, coherent, integrated and flexible states of consciousness. States of consciousness are psychobiological states that contain the private meanings individuals give to their places in the world. In the language of systems theory, states of consciousness are attractor states. These states are organized moment-by-moment by the individual and function to organize and anticipate the future based on the immediate present and updated

past; that is, to organize the whole individual's movement into the world. An individual's states of consciousness generate intentions and actions (Tronick, 2007).

Meanings, the elements of states of consciousness, may be in or, more likely, out of awareness. In fact, meaning may come into awareness only when it is violated. Few of us walk around with an awareness of our belief in the existence of things until we confront a magician who makes those things disappear. Indeed, though typically out of awareness, a state of consciousness always has an impelling certitude that the world *is* the way it is perceived and understood. An 8 month-old in one moment is absolutely certain that a hidden object is gone and in the next moment when the object is brought into view the infant is absolutely certain that it exists. The two certitudes do not fit together but in separate moments, each is impelling.

One of the first principles of open systems is that systems that successfully gain energy become more complex and integrated. By contrast, systems that fail to gain sufficient energy lose complexity and coherence, dissipate, and move toward chaos and death. Organisms, human or otherwise, are always engaged in a struggle against chaos, and this means that they are always engaged in a struggle to gain energy.

But the term "energy" is too generic for humans. All systems struggle, not for just any form of energy, but for the particular forms of energy that they can utilize to increase their complexity. The food prey eat to provide energy for growth is not an appropriate energy form for predators that eat them, though once it is formed in the body of the prey it can be utilized by predators for growth. The human struggle is for energy in many forms but, most critically, it is for energy in the form of meaning. States of consciousness are generated by the self- and social- meaning making processes of an embodied human mind as

individuals engage their own private meanings and the world of things and people.

One of the most robust ways of expanding the complexity of an individual's state of consciousness is to create what I call a dyadic state of consciousness. Like Vygotsky's zone of proximal development, these are social states. They are the joint creations of two or more embodied minds bringing elements from each of their separate states into a shared dyadic state. As participants in this dyadic state, individuals appropriate new elements into their own state of consciousness, and as a consequence the complexity of each individual's state of consciousness grows.

Paradoxically, though systems principles suggest that organisms strive to maximize the coherence of their sense of the world, the dynamic social states that human beings seek to nourish their existence are always unpredictable and messy, and may be contradictory and incoherent. This messiness is inherent to the process of meaning making because of the many kinds of meaning to be integrated, limitations in the capacity of meaning making systems, and the many kinds of meaning making processes (including affective, cognitive, memorial, linguistic, and bodily processes and psychodynamic meaning making processes such as a dynamic unconscious, projective identification and transference). Nonetheless, the messiness of meanings is the ooze from which new meanings are created. Were states of consciousness fixed, nothing new could be created and complexity could not be increased. An implication is that humans are more attracted to making meaning with each other, as opposed to things or events, because the meanings made between people are always messier. Dyadic states of consciousness are joint creations and, as such, bring together the messy, unpredictable and inchoate features of each individual's state of consciousness. By contrast, most events in the world are predictable and simple, such that while

new meanings may be created, the process is one of diminishing returns. Thus making meaning with others presents a greater possibility of the emergence of new meanings.

The effects of a failure to make meaning on the utilization of other forms of energy are seen in the chronic “deprivation” or “failure to thrive” of infants in orphanages described by Spitz (Spitz & Cobliner, 1965). These infants were in an extremely pathological state in which there was a reduction of their attempts to act on and make sense of the world. Such a failure is a failure to fulfill the basic system principle. The resemblance of these deprived infants to the infant monkeys raised on surrogates has often been noted. It is easy to think how compromising food intake would lead to “malnourished” behavior, body, and brain. But in many cases we know that the nutrition and other ‘necessities’ were adequate. The general consensus is that the absent “necessity” for these children was social stimulation. But stimulation is too dispassionate and too general a term. Stimulation could be anything of the physical or social world. So what were they deprived of?

I believe these children were deprived of meaning making. They were unable to form dyadic states of consciousness with others. The Spitzian infants were open human systems that, deprived of meaning making, could neither increase the complexity of their states of consciousness nor maintain their existing complexity. They were failed open systems. When these Spitzian systems are viewed as the little experiencing humans they in fact were, we can see that they have lost their capacity to engage with others, or even the world of things, to make meaning. Their self-organizing and dyadic capacities were so stunted that they could not make coherent sense of their place in the world. Perhaps more accurately, and even more insidiously, their impelling certitude was that they had no place in the world.

To further explore meaning making I have created an experiment to disrupt meaning making in infants, children and adults: the face-to-face Still-Face Paradigm. The Still-Face precludes a dyadic state of consciousness. As a result, individuals confronted with a Still Face suffer a lack of energy and complexity such that their state of consciousness dissipates. (Adamson & Frick, in press; Tronick, Als, Adamson, Wise, & Brazelton, 1978) With young infants, we ask the mother to 'freeze while *en face* with her infant — to hold a Still-Face and refrain from talking or gesturing. The (in)action of the Still-Faced mother precludes the formation of a dyadic state of consciousness, because there is no exchange of meaningful affect and action with the infant — no creation of meaning. The infants are forced to make meaning with their own self-organizing abilities, and though they can do it for a while, their self-organizing abilities are limited and quickly fail. Initially, in response to the Still-Face, infants act to re-instate their exchange of meaning by smiling at and gesturing to their mothers. But with the mother's continued lack of response the infants disengage, look away, become sad and engage in self-organized regulatory behaviors such as thumb sucking to maintain their coherence and complexity and to avoid dissipation of the complexity of their state of consciousness.

The figure at the beginning of this chapter shows an infant during the Still-Face who literally loses postural control, turns away, has a sad facial expression and is self-comforting with his hands in his mouth. What we are seeing is a failed attempt to make meaning and a collapse of a whole set of systems including motor systems,, attention systems and self-regulatory maintenance systems. Though we cannot directly know the impelling certitudes of which an infant is capable in the face of the Still-Faced mother, it must be something like, "This is threatening," or perhaps "I no longer exist." As the Still-Face continues, the infant's state of consciousness is likely to change to

something like, "I must try to hold myself together." If one doubts these or similar interpretations, simply consider that the infant could apprehend the Still-Face mother in other ways — as boring, playful, or novel — all of which would result in different forms of organized infant behaviors, behaviors which are *not* seen during the Still-Face. For the infant in the Still-Face there is meaning and certitude made, by and expressed in his or her posture, actions and affects, but the meaning is one that precludes gaining complexity

More recent work with young children and adults makes it even clearer that what we are seeing with the Still-Face is a failure to co-create meanings and form dyadic states of consciousness. In my laboratory we have developed a procedure for using the Still-Face with children 18 to 54 months of age.

(Weinberg, Beeghly, Olson, & Tronick, 2002) In the first episode of this procedure the child and the adult are seated on the floor and play with toys. This episode is followed by a Still-Face episode in which the mother 'freezes' and does not respond to the infant. In the third episode the mother resumes her normal play. The findings are as striking as our original Still-Face findings with infants. Young children respond to the maternal Still-Face with heightened negative affect and expressions of confusion and demands for change. Toddlers ask, "Why don't you talk to me?" or command, "Talk to me!", while simultaneously soliciting the mother's interactive behavior (e.g., pointing at her eyes, tapping or *almost* hitting the mother, making repeated louder and louder demands). In the end they may distance themselves from her and even appear to be in an internally focused engagement with their own thoughts about what to make of what is going on.

Importantly and in keeping with their greater meaning making capacities compared to infants, toddlers attribute states of mind to the mother (e.g., "Are you sleeping? Wake up!" or "Don't be afraid of the [toy] alligator!"). There is meaning in their words, in their affect and their actions that reflect their

capacities for pretend play, cognition, language, mentalization (Fonagy & Target, 1998), and complex affects — capacities not available to infants. Their impelling certitude is one of fearfulness and confusion at the break in connection. But the need for making sense of the world is so great that when play is resumed some of the toddlers ask questions that attempt to make coherent sense of what happened with the mother (e.g., “Why didn’t you talk to me?”) even though it brings back the painfulness of the experience.

Extending the Still-Face research to adults, one of my research assistants, Lisa Bohne (unpublished), interviewed college students after they participated in an experimental role-play. In this procedure, one student role played an unresponsive mother and the other simulated being “in the mind of an infant.” The “infant-persons” reported feeling anxious and vulnerable, angry, frustrated, sad, afraid, confused, even “panicky.” The Still-Faced, “mother-person”, reported feeling guilty, distressed, anxious, depressed, shamed, vulnerable, and confused. One reported, “It felt terrible to be so closed off from the infant. It made me feel depressed and I’m sure the “infant” did too after our interaction.” Preventing an exchange of meanings and the formation of a dyadic state of consciousness disorganized each adult’s own state of consciousness and generated a fearful, confused and a less coherent sense of the world. Importantly, these adults did not try to step away from their negative experience, but in more sophisticated ways than the toddlers, continued after the procedure to try to make coherent sense of what they had experienced was terminated. They talked with each other about their experience, and some of them apologized for what they had done.

The Still-Face experiments serve as a contrast to what happens during normal social engagement when meaning making is successful. The contrast is needed because, like water of which the fish is unaware, meaning making is for

us an on-going and continuous process of self- or co-creation. Self-organized meaning making can be observed in the smile of the infant grabbing hold of an object that had been out of reach, or the exuberance of the newly walking toddler moving upright into the world, or the announcement, "I did it!" by the 5 year-old putting the last puzzle piece in place. There are also the "I did its" that continue throughout life when finally the sense of something is made. The *co*-creation of meaning is seen in the mutual smiling and cooing of mother and infant in face-to-face interactions. Their exchange is an example of a dyadic state of consciousness in which there is a mutual creation of new meanings. Another example is the pretend play of the toddler with another person and the all night conversations of adolescents. Social referencing (i.e., looking at other's reactions to an event to understand one's own reaction) by infants, children and adults is a way of gaining meaning that leads to new and impelling certitude. (Campos & Lucariello, 2000)

What then is the link between open systems theory, meaning making and pleasure? After all, other species make meaning in the world and are also governed by first principles of systems theory. But what do humans exclusively do, or at least do more of compared to other species that makes pleasure a consequence of their meaning making as open systems. Humans, like other biologic systems, strive to utilize energy to expand the complexity of their states of consciousness. However, I believe that humans always implicitly and sometimes explicitly have an *experience* of the extent to which their meaning making fulfills systems principles. When humans are seen as *experiencing* meaning making systems, the systems phenomenon of the dissipation or of the increase of complexity of their systems has powerful *experiential* consequences.

Dissipation, the losing of complexity, is a quality of systems. In humans it is a failure to make meaning that reduces the complexity of the individual's state

of consciousness, and it has experiential consequences. When it occurs, the individual experiences shrinkage, anxiety, a loss of self and a fear of annihilation. One's sense of self in the world begins to come apart. Spitz's infants were chronically deprived of the possibility of making meaning, and every level of their systems failed to grow and expand. Their experience was one of apathy, fearfulness and sadness. This experiential state further amplifies their failure to make meaning. Infants, children and adults, when confronted with a non-meaning making partner in the Still-Face initially experience disappointment and confusion but eventually experience anger, sadness and withdrawal. They also feel helpless and panicky in the face of the threat they experience to their ongoing self-organization. I think it is noteworthy that in the adult Still-Face study these experiential effects occurred in *role playing* adults who knew that the situation was set-up and unreal. Nonetheless, the effects were powerful, because the experiment taps into a basic primordial experience of failing to make a connection and experiencing a dissipation of self-organization. In these situations pleasure is not possible.

An increase in the complexity of a system also has experiential consequences for humans. When new meanings are self-created or co-created the individual experiences an expansion of her own state of consciousness, a feeling of being bigger and a connectedness to the action, idea or person on which or with whom the new meaning was made. When creating new meanings, individuals — infants, children, adults — grow in every possible way and experience joy, interest, curiosity and exuberance. Ultimately I believe there is an embodied primordial experience of fulfilling a basic life governing principle: the success of making sense of one's place in the world and becoming more complexly organized. Often this feeling of wholeness, completeness, safety and exuberance is out of awareness. Occasionally it is in awareness, and when it is it

is special indeed. But whether in or out of awareness it is the experience of a deep, abiding pleasure.

Humans as meaning makers have no option but to strive to increase the complexity of their states of consciousness. Were we to stop we would dissipate and experience the terror of annihilation. Successfully creating new meanings increases our complexity and brings pleasure. However, it is not as simple as either success or failure, because striving to create something new requires taking apart something old. Taking apart the old organization to create something new reduces complexity in the short run, and the reduction is experienced as anxiety. This anxiety is increased because of the knowledge that there is no guarantee of ultimate success in the creation of new meaning. An apparent way to prevent the anxiety is to remain fixed and not to change, but of course such fixedness precludes the pleasure of expanding and the fulfillment of systems principles. Thus the dilemma of striving to be a system that grows in complexity while risking dissolution is to either experience pleasure tinged with terror or to not strive to grow and never experience pleasure. Healthy humans choose pleasure and terror. Psyche has all the pleasure one could imagine yet chooses to look at Cupid because she *must* strive for the deep pleasure of expanding her knowing of him and her relation to him, even at the risk of dissolution of the complexity she has already achieved. It is something she must do to be human. Her greatest pleasure comes when she dissolves the old and expands her state of consciousness. Thus the myth captures the momentous and the everyday nature of meaning making, the experience of pleasure and, yes, even embeds systems principles. To create the new is to risk the old for the possibility of a greater pleasure, but not to create the new is surely to perish.

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