

May 22, 2013 – Jerry Diethelm

## A Metaphysical Sketch of Making: Designing, Knowing & Believing

### Of Mere Being

*The palm at the end of the mind,  
Beyond the last thought, rises  
In the bronze decor.*

*A gold-feathered bird  
Sings in the palm, without human meaning,  
Without human feeling, a foreign song.*

*You know then that it is not the reason  
That makes us happy or unhappy.  
The bird sings. Its feathers shine.*

*The palm stands on the edge of space.  
The wind moves slowly in the branches.  
The bird's fire-fangled feathers dangle down.*

~Wallace Stevens, 1954~

**W**hat follows is a metaphysical sketch in essay form. It is metaphysical because it must necessarily consider such concepts as mind, mental spaces, being, self and consciousness as they relate to design thinking. It is a sketch because that is the way designers often lay out their thinking, setting forth varied aspects of a problem they are working on so that the fragments of thought can be seen, related, overlaid and possibly blend together into something more. It is in essay form because essays are explorations, not reports. Essays explore a subject allowing it to unfold. And, like Columbus who expected a new route to Asia, they often end up in their own version of Jamaica.

Writing about designing and design thinking requires, whether one likes it or not, attending to human mental spaces, processes and actions. If designing is about consciously devising “courses of action that change existing situations into preferred ones,” or acting “to create a preferred future state by solving problems, meeting needs, improving situations, or creating something new or useful,” how is it possible to avoid the mental arena in which such preferential acts take place or the concepts and modes of thinking that make up the experience of designing?

I know some condemn such introspection as mentalism. They believe that self-conscious awareness, evaluations and preferencing are just neurological shadows of what has been processed and concluded elsewhere. Others go even farther and argue against free will altogether. Such hard determinism of course leaves no place for direct learning and choosing. It neuters the constructions of an active

imagination and deflowers possibility. It hushes the moral soliloquy of obligation and turns its back on duty. It avoids taking responsibility for being in the world. But most destructively, it delegitimizes the social communications and interactions that are the sine qua non of mutuality, discussion and shared decision-making.

Ironically, a hard determinism generates both the black hole of choice and the choice of not being drawn into it. I prefer to assume that designing and design thinking, which involve active self-conscious evaluation, preferencing and choice, need to be recognized as playing an even greater role than they do today in a quantum universe that is undecided and unfinished without us. I assume you have no choice if you assume you have no choice. I wonder how many will survive when the last raft of diehard determinists collapses under a probabilistic wave.

I choose here to try to build on the rich explorations into subjectivity, human experience, imagination and creativity that abound in twentieth-century philosophy, literature, psychology and art? Instead of abandoning the concept of self to neurophysiology, I choose to explore and expand it as it relates to designing and design thinking's central role in cultural becoming.

### **Limits to Awareness**

**E**xperience is a catchall term for all that takes place in human mental life. It takes place in our body-mind in many forms as an interweaving of intimate sensations, feelings, memories, stories, concepts, lessons, reflections, impressions, emotions, and passions that we attend to because we are self-aware. An important part of that awareness is the realization that what we consciously experience is only a partial awareness that is deeply connected to the unconscious brain-body activities of memory, dreams and stored bodily experience, the deep well of who we are. An equally important realization is that the continuous representation of our present situation and actions as they occur at any particular moment is a human artifact.

This mental construction that is right before our eyes is historically situated, culturally conditioned, and real within the evolutionary limits of human perception. There is an abundance of evidence that what we collectively call our thoughts purposefully cause alterations, adjustments and transformations to situations in the world. There is an equally sufficient body of evidence that environmental situations stimulate conscious mental activity requiring thoughtful evaluation and, when survival is at stake, instantaneous adjustment.

Acknowledging that there are boundaries to human awareness and much to learn about the workings of this environmental conversation is a necessary governor on the transformative processes of human thought – on designing and design thinking. There is a need to better understand, direct and control human making, but there is

an equal, if not more important need to be responsible for its impacts, which ripple into the world with a complexity that challenges the limits of human understanding.

### **Self-conscious Making**

Albert Einstein said that the in-ness and sense of separation that we experience was an “optical delusion of consciousness,” and that we should strive to overcome the belief that our thinking was separate from the world. Following this advice I’ve set out to sketch a general model of designing and design thinking that is built on the concept of an active “self” whose thinking is in the world.

Others have followed this path. Art philosopher, Susan K. Langer, describes a similar concept in her three-volume essay, *Mind: An Essay in Human Feeling*. Like Einstein, she conceives her continuum of the mental acts that mature into actions as all equally real, causally connected and in the world. Plato argued from the reverse. He believed that ideas, he called them the forms, were the real, and that things made from the forms were only imitations. Things fell apart, but the forms were forever. This was, however, despite the emphasis on the primacy of the forms, a bringing of ideas into a continuum of the real.

I don’t expect everyone to completely forget such hoary and encrusted concepts as inside-outside with respect to consciousness, but believing that path to be a dead end, I ask for a willing suspension of disbelief or, at a minimum, a graphic *sour rature*. Self-consciousness thought being real and active in a world of becoming, I also suggest donating dualism to modern-day musketeers.

### **The Expansion of the Conscious Self**

The model I am sketching, is being constructed out of, first, an expansion of the concept of the conscious self, and second, a blending of that model with a modern unpacking of the concept of making.

To imagine the expansion, draw three concentric circles on your mental blackboard. The center ring is the *me* of what one hopes is a healthy, stable and maturing identity, and even better, one whose imagination has benefited from the enrichments one receives from a design education. The second ring is the *we* of family, friends, neighbors, colleagues, clients and distant others in association, space and time. The third ring, the *all*, reaches imaginatively outward toward a locus of even greater inclusion. This is cognitively a radial model, but also one that considers self as developmental and imaginatively plural.

We can find imaginative projections of self embodied in environmental philosophy, literature and poetry once we are prepared to see it. In literature it appears in the form of what we call first, second and third person narrative. First person is the *me*,

the personal narrative of, "Call me Ishmael," in Melville's *Moby Dick* or the storyteller, Pi, in *The Life of Pi*.

Second person is the social interchange that is everywhere in the *we* of dialogue, community, quartet and chorus. Third is the all-seeing eye of the detached observer, the role played by the camera in film, and the objective stance in science.

In poetry the imaginative self soars, as for example in stanza III of Wallace Steven's, "Six Significant Landscapes":

III  
 I measure myself  
 Against a tall tree.  
 I find that I am much taller,  
 For I reach right up to the sun,  
 With my eye;  
 And I reach to the shore of the sea  
 With my ear.

Real mystics, like William Blake, who saw the world in a grain of sand and eternity in an hour would no doubt call our attention to even more outward and universal rings.

Human evolution according to E.O. Wilson is an entwined natural selection of the individual (*me*) and the group (*we*). In his, *A Sand County Almanac*, Aldo Leopold wrote that an expansion of self that transcended the *me-we* human boundary and conceived self as a citizen of the *me-we-all* biotic community was a "social possibility and an ecological necessity."

*"The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land...[A] land ethic changes the role of Homo sapiens from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such."*

And Albert Einstein on widening the circle of compassion:

*"A human being is part of the whole called by us universe , a part limited in time and space. We experience ourselves, our thoughts and feelings as something separate from the rest. A kind of optical delusion of consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. **Our task must be to free ourselves from the prison by widening our circle of compassion to embrace all living creatures and the whole of nature in***

*its beauty...We shall require a substantially new manner of thinking if mankind is to survive."* (my emphasis)

Compassionate design thinking?

Self in this sketch model is to be understood as identity acting ethically. Adding the compassionate, ecological *all* self with its land community ethic to the *me-we* self is a next logical step. The model is admittedly developmentally optimistic with regard to human potential, even though the last century leaves plenty of evidence that the potential can go both ways.

Each level of this self model links self-consciousness and a self-regulating conscience.

- As the personal self matures, by developing a sense of responsibility and a capacity for empathy, compassion and cooperation beyond itself, it widens into its *we self*.
  - *"If I am not for myself, who will be for me? But if I am only for myself, who am I? If not now, when?"* (Hillel, *Ethics of the Fathers*, 1:14)
- When the *we-now* self imaginatively cares for and considers its neighbors in time, it widens into the *we-in-time self*.
- And when the *we-in-time self* widens into the *all* circle of who and what deserves moral consideration, it transcends its anthropocentrism.

Ideally we want our professional designers, those who play leading roles in transformative situations, to bring imaginatively mature selves to the representations, evaluations and choices of designing. Aspiring young architects, for example, often begin at the Howard Roark, self-involved and uncompromising *me* level, but most manage to mature into good citizens and professional change agents in their *we* communities. Ayn Randian Objectivism, which views compassion and altruism as morally wrong, is clearly an imaginatively deficient and retarded view of self, and a serious impediment to any community or ecocentric aspirations.

The failure to engage and solve such problems as world climate change, from this point of view, is primarily a failure of self-imagination. The artifacts of human designing are qualitative functions of the who and the what of consideration. A designer's work reflects who and what they care about. A mature self-identity in this model means being aware of and striving to function appropriately on each and all three levels. Much, it would seem, is riding today on the development of professional designers capable of maturing into active change agents with more imaginative, comprehensive, compassionate and ethical *selves*.

### ***Remodeling the Continuum of Making***

In the Symposium, Plato tells us that, “All creation or passage of non-being into being is poetry or making...,” and that making is an eternal essence that comes out of the world of flux. Whether from the world of flux, the gods and goddesses or quantum foam, consciousness creates a reality of experience, a making continuum of imaginative thought and action that self-consciously imprints its influence on an evolving world. According to Buckminster Fuller, it is the human influence of “environment-altering artifacts” from a developed capacity for conscious designing that transforms world evolution from an evolution 1 into a consciousness accommodating evolution 2.

It may well have been the gods and goddesses who gave us the purposeful planning and designing of making in order to have something to laugh at. Perhaps they added knowledge to leverage that making, knowing that the best plans like the best comedy take time and timing, and then added a mirror to force reflection on our follies. If folly were food, we’d all be fat. Whatever the source, the big bang of becoming self-aware ushered in purposeful making toward human ends that mattered.

The ancients’ acknowledged this purposeful consciousness in their two primary categories of making and knowing. We still honor these divisions today but in significantly diminished and sequestered form as art and science. Because of the success of scientific thinking, without question the dominant method of our time, art as τέχνη, (techne) has devolved into something that it is not, viz. not-science, instead of what it is. And science has itself been narrowed toward not-sophia, not-praxis, and not-phronesis and become predominantly *épistémè* or scientia. (Aristotle: the speculative and intellectual virtues). Design, designing and design thinking lay hidden behind this categorical overshadowing, narrowing bias.

The ancients in creating their divisions of being didn’t have our advantage of evolutionary thinking, let alone an evolutionary thinking that included self-consciousness. But they were keen observers of mind and left us with serious and thoughtful models that serve to remind us that modeling itself is a quality of a constructive, conscious mind. It is cheeky, I realize, to suggest slicing making differently than Aristotle, but after two plus millennia and the insight of an evolution 2 it is time for a new thought experiment.

We know that knowledge, as scientific truth, can’t by itself determine what is significant to a people or tell them what to do. Knowing how to do something doesn’t mean that something should be done. Ethically, ought may imply can, but can doesn’t imply ought. An evolving social science that recognizes the need to acknowledge the role of human valuing in policy-making is a step in the right direction but can’t quite jump the gap into the new territory that is designing.

Something is missing between knowing, and composing, preferring and choosing. And as John Fowles writes in the novel, *Daniel Martin*, “You create out of what you lack, not out of what you have.” What is lacking, hidden behind the bedazzling success of uncovering how things are and how they work, is an understanding of the kind of thinking needed to drive and direct knowing’s cart. Missing is the design thinking behind knowing that organizes the preferencing, choosing and production of artifacts in human culture. Missing too is an understanding of both the differences and the necessary symbiosis between designing and knowing in making.

### **Three Primary Paths With A Purpose**

In this modern sketch-model, I reach back to Plato and conceive of making as the way that human consciousness is in and influences a becoming world. I then divide making conceptually into three self-conscious, purposeful and intertwined continua: designing, knowing, and believing, each with its own distinctive point-of-view, mental path and target in cultural transformation. The three continua cover the essential what, how and the why of doing. The use of process terminology is deliberate to represent all three continua as unfolding and becoming.

Cognitive science reminds us that such categories are not objective but purpose and culture bound, as for example the Dyirbal category that includes, “women, fire and dangerous things.” A main purpose of this model is to conceptually locate designing within the mother path of making, restoring it to a prominence it had at the dawn of being. My modest aim is to restore the centrality of designing and design thinking as making’s guiding process, *primus inter pares*. A secondary goal is to forge a stronger partnership between designing and knowing and acknowledge the transformative influence of believing.

### **Applying the Source-Path-Goal Structure**

Designing, knowing and believing all collapse out of the constancy of being into the specificity of cultural time, place, and intent when they are cognitively captured in the pre-linguistic, image schema structure of source-path-goal. Applying this structure grounds and situates the three processes in the making model and formalizes their different focal motivations, methods and targets.

#### **Designing:**

- **Source:** The source of the continuum of designing is the needing, wanting, and desiring of human valuing. Valuing is a spectrum of interests, motivations and purposes, and the process use of the concept expresses valuing’s motivational force. Valuing is an intentional, emotional, meaningful, transitive pressure: needing something; wanting something;

desiring something from the full spectrum of human needs, wants and desires.

- **Path:** The path that design thinking intentionally attends to, organizes, commits, projects and operates human mental processes toward the realization of meaningful artifacts and their cultural accommodation. Chuck Burnette, in his *A Theory of Design Thinking*, insightfully illuminates this territory.
- **Goal:** The goal of designing is the survival, support, enhancement and sustainability of the “valuing animal’s” (Nietzsche) cultural life. Targets include human artifacts that reach from policies and plans to all manner of products and productions.

### **Knowing:**

- **Source:** The source of the continuum of knowing is also human valuing but from a narrowed and specific focus on needing, wanting and desiring to know “how things are and how they work.”
- **Path:** Its path is the familiar and well-understood path of scientific thinking.
- **Goal:** The end product of its empirical research is the modern prize we call knowledge.

### **Believing:**

- **Source:** The third division is believing. Its source is the human need to contemplate being itself and to question who we are and why we are in the world.
- **Path:** Its path is the struggle for existential resolution: e.g. Jacob wrestling with the angel: “I will not let you go unless you bless me;” eudaimonia; empathy and compassion; the Middle Way; the struggle against desire.
- **Goal:** Believing’s goal is faith, grace and/or some manner of existential reconciliation. Believing is sacred valuing, out of which has come everything from masterpieces of high culture, to frameworks for human morality, such as the golden rule and *primum non nocere* – in both medicine and education - to inquisitions and fanatical terrorism.

Conceiving of designing and knowing as a symbiosis of the what and how of making makes sense from an evolutionary perspective. Working together they have given our species an unmistakable selective advantage. Conceiving of making without the dimension of believing is to dismiss vast regions of cultural motivation, action, aspiration and expression.



### Three Meanings of Truth

One of the advantages of this sketch model is that it uncovers three distinct meanings of truth.

- The truth of knowing that is the reliability of fact and theory.
- The truth of believing that is the struggle for existential resolution and the acceptance or rejection of faith.
- The truth of designing that is the truth of valuing, its intentions, formative expressions and societal accommodations.

Philosopher Richard Rorty says that truth of this third kind “is the stating of a goal.” This seems right as far as it goes, but I prefer: *the maturing and social accommodation of an intention*.

This is to acknowledge that we don’t always know fully what we intend, that interests, goals and possibilities evolve and transform in designing through social interaction and testing, and that any product of intentional work is always an active subject in the social life of meaning.

Beyond the stating of a goal, there is the intentional dimension of commitment to a course of action and seeing it through as expressed in this quote from the *Personal Memoirs of U.S. Grant*:

“One of my superstitions had always been when I started to go anywhere, or to do anything, not to turn back or stop until the thing intended was accomplished.”

And then there is the meaning that others make of an intentional product as it is tossed around in time. Artifacts bounce off meaning’s mirror: the meaning embodied and expressed by a maker is not necessarily the meaning constructed by a user or the meaning accommodated in a culture over time.

### Selves and Situations

The world in situational focus is a gestalt constructed through our embodied valuing selves. Each self in situations sees that focal world from personal, socialized and decentered points of view. Groups of selves bring overlapping and conflicting perspectives to situations and must resolve, “what needs doing” out of their competing interests and concerns. Such phenomenal constructions are what we call “existing situations.” When we discuss designing as transforming existing situations into preferred, the habitual inference is that *existing* carries the truth of

knowing. The meaning of *existing* includes knowing, but the coordinating perspective is from the valuing truth of designing.

Since Kant it has been clear that the phenomenal world of self is our primary mental model. The world of situated experience is a mental construction dependent on the capacities of our senses and the interplay of such evolutionary gifts in human mental space as memories, imagination, interests, language, concepts, passions, feelings and beliefs. Selves and situations occupy time. Selves persist as situations unfold. As philosopher, William Egginton explained recently in the New York Times,

“Kant’s insight was that, in order for the knowledge we get from our senses at any given moment in time to mean anything, our minds *must already be distinguishing it and combining it* with the information we get in prior and subsequent moments in time. Thus *there is no such thing as a pure impression in time* — no absolute, frozen moment in which we know the sun is rising now without being able to infer anything from it — because such a pure moment without a before or after would be nothing at all.” He also points to an old Talmudic proverb that anticipated Kant, which says, “We don’t see things as they are, we see them as we are.”

Kant labeled this persistence of self, the transcendental self. I suggest the need to expand Kant’s concept of a persistent mental presence to include developmental, social, ecological and ethical dimensions of self that are active in designing.

Situations then are focal occasions for reflective, projective, comparative and imaginative evaluations through the repertoire of who we are. Like U.S. Grant, one can’t help but bring that construct of the self, the world that self sees, the values and beliefs it holds, and such personal qualities like Grant’s grit to situations. All subjects have their human filters, imaginations and limitations.

"They said, 'You have a blue guitar, / You do not play things as they are.' /  
The man replied, 'Things as they are / Are changed upon the blue guitar.'"

Wallace Stevens, “The Man with the Blue Guitar”

As Lincoln said of General Fighting Joe Hooker, who lost to Robert E. Lee at the battle of Chancellorsville, and who reported to the president from his elevated headquarters on horseback, the Union Army leader often had his headquarters in his hindquarters.

Logically, the long conceptual arc of this sketch reaches from self-consciousness making in the world arising out of mere being - to *me, we, all* becoming selves acting in transformative situations of designing, knowing and believing - to valuing selves in situations designing transformative artifacts through imagination, cunning, talent, character, courage, knowledge, experience, commitment and (sometimes mistaken but always human) judgment.

Cognitive science today, however, would have us understand this structure in reverse. It is through the experiential structures of the embodied mind that we are able to reach up to and construct such higher-level abstractions as designing, knowing and believing.

### **Different Kinds of Problems in Situations**

Self-consciousness in situations perceives difference and attends to “differences that make a difference.” Perceptions of differences that make a difference focus on valuing priorities of interest and concern. Significant differences that call for resolutions are cognized as problems. Stepping back from the sketch, I observe that it presently exhibits problems of three different kinds:

- The first is the difference between my belief in the significance of designing and design thinking and its second-class status with respect to knowing. This is a problem of believing. I believe that this differential is a critical misconception but can’t prove it. I am aware that there are many others who share the belief that drives this essay. Or so I believe.
- A second critical difference is the absence of an adequate conceptual map showing how designing and design thinking relates to self, knowing and believing. There is a need to create a theoretical model of designing and its relation to self-consciousness in order to shore up and test my belief. This theoretical difference is a problem of knowing.
- The difference of transforming the above existing situation into one I would prefer is a problem of designing. It requires the sharing and evaluation of the present situation, the setting of goals and the devising of courses of action aimed at getting from what I hope to meaningfully uncover as a better there.

In a previous essay I identified problems of knowing as Class 1 problems because they focused on the production of knowledge and required an objective stance. I called problems of designing Class 2 problems, not because they were second-class, but because everyone in this scientific age already knew about Class 1 problems and the historic struggle to separate knowledge from extraneous influences, interests and beliefs.

Problems grounded in a valuing stance and that dealt with the production of cultural artifacts stood out as a distinctly different kind. Added to that was the hint of a possible consonance between the 2 in Fuller’s evolution 2 and Class 2 problems. The three-part division of making suggests the further distinction of a third class of problems related to believing.

What stands out is the interplay between the different modes of thinking. There would have been no 16<sup>th</sup> century voyage of discovery without the prevailing set of beliefs and desires and the sea-faring knowledge that allowed three sailing ships to cross the Atlantic after the golden bird of Asia. There would have been no carnage or need for expert marshalling or ceremonial surrender at Appomattox without a belief in the sanctity of the Union. Nevertheless, it becomes clearer that the searches for such ends as gold, trade routes, notoriety, national union, insanely great products and the theoretical acknowledgment of designing's prominence in making are all essentially Class 2 problems, preferences and choices in a valuing wind.

### **The Way Home**

It's remains a problem that design thinking is so common to everyday life and so taken for granted that it has sunken beneath awareness. It takes a more complex creative and transformational task, such as designing a new home, a business strategy, a Mid-East policy or next-new-thing product, something that requires advanced design thinking skills and professional experience, to resurface any serious awareness of the general process.

It makes a difference that the artifacts of cultural production are so varied that it is easy to miss the realization that their making must belong to a more general process. Absent a concept for a collective framework, it is a common mistake to identify some signature activity or historic skill for the missing whole. Sketching an aggregative concept of designing is an attempt to fill a pregnant absence that is present.

Yet another difficulty is the organizational complexity of designing in an industrial society where many people make important contributions at different levels to a collectively produced action, policy or product. When design thinking is more adequately understood as a social activity, the task of explaining it widens out to include meta-designing and the complexities of managing and communicating designing over many associated designer spaces and cycles. And this includes the politics of designing, the power politics of preferencing and deciding, and the distributed responsibility for longer-term, multi-staged and often highly technical projects.

There are many more problems of course: the fall from grace of progressive education; the sequestering of design education in professional, polytechnical, art and craft schools; the almost total lack of design thinking education in such educational fashions as the STEM movement; and the lack of understanding in research universities that policy generation is its own special thinking process that uses social science instead of being one.

In this beginning sketch, I envision a more expansive self-conscious interplay of the three great tributaries of making: designing, knowing and believing, each with its own truth and signature class of problems. The emphasis is on designing as a guiding central process that is explicitly centered in an active, purposeful design thinking and the intentional wholeness of social preferences, their embodied actions, formative expressions and meanings.

I like to believe that the purpose of designing is to enhance and sustain *my, our, all* being in the world, and to dwell with grace and dutiful responsibility in a world we continue to create through a more thoughtful integration of designing, knowing and believing.

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