

An Essay On Meaning in Design Thinking

Jerry Diethelm – July 2012

Design Thinking

It shouldn't come as too big a surprise that human thinking can be directed in more than one way when there are different ends in mind. This essay is primarily about the path called design thinking, which is being distinguished from its more famous cousin scientific thinking because of its focus on creating the artifacts of an evolving culture. Scientific thinking's path leads toward the discovery of fundamental knowledge, a rigorous process of sifting experience into facts. Design thinking's job, as James Joyce modestly described it, is merely the creation of the "reality of experience."¹

It also shouldn't come as too big a surprise that these paths often cross or that design thinking draws deeply upon scientific thinking to achieve its ends. Scientific thinking, which is focused on understanding things better, is necessarily woven into design thinking's project of making better things. Design thinking depends on the reliable to pursue a preferred future that is desirable, possible, useful, and potentially wonderful.

The concept of design thinking, while gaining much attention, remains somewhat controversial. There is disagreement over what it includes and how such thinking works, but increasing evidence that the subject is important and highly effective.^{2,3} A number of major universities are now offering courses in design thinking.⁴ Typically, such courses focus on the literature available on how successful designers work with stakeholders and others in the intentional production of cultural products and services. This growing recognition in research universities of the efficacy of teaching design thinking in fields ranging from the arts to business to the design and policy professions is a welcome step toward increased understanding.

Design thinking, as it is being used here, is grounded in Nobel scientist Herbert Simon's formulation (and its many useful elaborations) that designing is about "changing existing situations into preferred ones," from his book, "*The Science of the Artificial*."⁵ To Simon, designing was about transforming *what is* into *what ought to be*. This conscious and purposeful channeling of our mental resources toward cultural production in transformative situations is essentially a normative, valuing process. Willing, wanting, needing, desiring, and feeling all figure prominently in the purposeful creation of meaningful artifacts and in the transformation of existing situations into desirable futures – from what people perceive that they have to what they would prefer.

Design thinking, then, weighs perceived situational differences and guides the transformation of needs, wants and desires into such intentional artifacts as designs, plans, policies, places, products, actions and services. Design thinking is also central to the processes of evaluation of those artifacts as they are experienced, assimilated and accommodated in culture.

Design thinking is probably derived from early situational thinking for survival. Fear rather than need or desire would have been the primary emotional driver. The ability to instantaneously conflate purposeful representation and evaluation, which made possible the immediate turning of mental acts into survival actions in dangerous situations, would have been critical. Plus, the ability to fund that evaluation and decision making with

knowledge from what had worked before under similar circumstances would have provided a distinct selective advantage.

Today, the culturally normative forces of desire, want and need replace the primacy of fear in driving design thinking. Purposeful, critical representation and projection in transformative situations is afforded a more leisurely evaluation of how to fill the gap between existing and preferred, have and want. And being on safer ground, the required action to be taken is able to shift from survival actions toward cultural expressions of life support and life enhancement.

It is also probable that culture making and knowledge making have co-evolved, that they have always co-existed like tension and compression. Ironically, while the former has given us cathedrals that took a century to build, the latter has struggled for centuries over the separation of church and fact, while still buttressing one another.

One of early Modernism's great goals was the unifying of thinking and feeling, where of course, rational, logical thought was primarily considered thinking. A century later the thinking about thinking is that its make up and workings are far more entangled and complex. We know now that not all of our thinking is consciously present or immediately available to the waking mind. We suspect now that even strict Behaviorists have them.

Interest in design thinking is a natural consequence of modernism's inward focus on the workings of human consciousness as it continues to be uncovered by scientific research and revealed through philosophy and the arts. We are told that human consciousness is fundamentally purposeful and emotional.⁶ There is ample historical evidence that human thinking is a morally complex cognitive, conative and affective cocktail capable of producing everything from cathedrals to quagmires and that enlightenment remains an incomplete project.

Meaning

Meaning is a catchall concept for how we evaluate our ongoing encounters and interactions with the world. In everyday experience its principal usage refers to understanding what someone has said or written. Typically, this is taken as being synonymous with the successful sending and receiving of information.

But it doesn't quite work that way, and this has important implications for meaning in design thinking. Information theory tells us that meaning isn't something that you get. It's something that you have to build. The reason that someone doesn't "get" a poem or painting is that nothing was sent. There is no decoding of a coding to be done. The communication metaphor of sending and receiving that is the built in bias of everyday language disguises the modern realization that all meaning is a human construction.⁷ This, of course, is the insight behind Susan Sontag's use of the famous Samuel Goldwyn response about not "getting" a work of art that, "Messages are for Western Union."

In linguistic communication, a successful construction of meaning requires a shared symbolism (common language, dictionary, thesaurus, OED) and an adequate overlapping repertoire of relevant experience with the producers of a text or speech to make the building of an understanding possible. But of course the life experience that is brought to a construction site can vary widely, and that is why, for example, that Magic Mountain, War

and *Peace and Ulysses* can be such different books at different stages in one's life. To the younger reader of *Ulysses*, Stephen Dedalus is heroic and Leopold Bloom pathetic. The older reader is far more likely to sympathize with Bloom.⁸

Unlike language, however, the artifacts of designing have no comparable, reliable, and stable symbolism to fall back on for their meaning.⁹ There is no general or official dictionary of design meanings to refer to. Polished stone doesn't always symbolize skin. Red isn't always madness or blood ("As [in] a madman shakes a dead geranium").¹⁰ Relationships, associations, settings and contexts all affect meaning construction.

Attempts to fill this referential gap, as for example through semiotics, ultimately must fail because the signs and symbolic expressions associated with cultural production vary too widely in their designations, compositions and contexts to ever constitute a language-like system.

On what basis then is artifactual meaning constructed? If the meanings of a building, film, play, painting, policy, or garden... - of cultural products generally - are constructed on the less than certain ground of interpretations and opinions, what guides the meaning-making of such experience?

Meanings off the rack, that is, meaning constructed out of the cultural expectations and traditions of everyday, funded experience is the most direct and common source. And these are shaped and guided by the bespoke responses of professional critics, whose greater knowledge of an area or type of work allows them to articulate, contextualize and influence such evaluations through the well-established practice of criticism.

Criticism is a central, generative source of artifactual meaning. Its job is to cultivate meanings through explication and evaluation, not overt condemnation, as the term tends to misleadingly imply.

One meaning of culture is the best of the best produced, and it is the task of criticism to weigh and measure a product's overall achievement. Typically this is done through comparison, comparison with like others within a type or genre, as well as comparison within a single producer's body of work in order to establish its relative contribution and significance. Information about a producer's intent may or may not shape the critic's construction of meaning. Architects philosophizing about their work, to the *New York Times*'s architecture critic Ada Louise Huxtable, was like "listening to cowboys debating Aristotle."¹¹

Criticism typically will include an insightful qualitative appreciation of a work: how and how well something is presented or expressed, whether it pleases or displeases, whether it is prized or disprized, elegant or ordinary. Included in the measure of overall success is the central roll that human felt-experience, which ranges "from raw emotion to intellectual delight,¹²" plays in meaning. *What* something means and *how* it fits into a culture is a rich composite of everyday response, professional evaluation and historical reevaluation not adequately left up to the limited insights of cults, accountants or technicians.

The territory covered by criticism is vast but its underlying model is quite predictable and clear. Criticism constructs meaning by establishing *that* something means, *how* it means and *what* it means. *That* something means is the base case for establishing relative

significance. An appreciation and appraisal of *how* something means determines relative satisfaction. *What* something means is an accumulation related to its overall success. And overall success, the historical significance and satisfaction of an artifact in culture, its meaningfulness, takes time.

Criticism's underlying model of the *that, how, and what* of meaning construction begs the question of where the model comes from. The most likely answer is that it reflects back on the kinds and dimensions of thinking that brings artifacts into being. If meaning is constructed out of the experience of its everyday and professional users, then the basis for that construction must be traceable back to the meaning-making thinking of its makers. On this view we might smile and, turning toward language's more expressive side, suggest that criticism is design thinking spelled backwards.

How then does meaning relate to the conative, affective and cognitive processes of design thinking? Like meaning in criticism, the presence of meaning in design thinking must function as an evaluator of that thinking's multiple and intermixed dimensions. And once we are prepared to see it, the *that, how and what* of design thinking becomes apparent.

Meaning in transformative situations is at first an acknowledgement that a situation is *significant, that it matters*. And *mattering* is meaning in action.

Transformative situations are evaluated for an *adequate awareness of difference* between have and want, a meaningful difference, a "*difference that makes a difference*,"¹³ enough of a difference to drive transformative action. Design attention is aroused, focused and kept in transformative situations that are meaningful, that *matter* enough. And once the elephant has appeared it is easy to see a manifestation of meaning's presence in design thinking at every stage of the making process.

Dissatisfaction with perceived difference is one *how* (and *how much*) a situation matters. *Confidence* in the betterment of transformation is another - the lure of the possible that appears achievable and is better than the devil you know. A satisfactory articulation of the desires, needs, and wants driving a transformative situation *matters*. These forces of purpose from affective life provide the inspiration, motivation, and pressure for change. Important *hows* of their expression in design thinking include a shared *conviction* in the value of the desired change and the *willful commitment, dedication, participation, cooperation* and *leadership* of stakeholders in the transformative process.

What a transformative situation means is a composition and expression of what it is about, its "what-abouts," and aboutness matters. Aboutness covers what are perceived to be the critical interests and concerns of a situation, which is not a list of things but a model of expressed differences, some of which are always more important than others.

Aboutness is both quantitative and qualitative and implies intent.¹⁴ Aboutness covers both moral and aesthetic meaning and all other relevant human values that matter. The vocabulary of concepts used to express aboutness also matters deeply, because it carries the root meanings, the building blocks, of a conversation. When it goes unnoticed that the root meanings of a conversation have exceeded their shelf life, they become fundamental impediments to design thinking and distortions of desirable change.

Collectively, design thinking shapes aboutness into a socially constructed narrative for change. That socially constructed narrative, however, is not a description in the factual sense, but a description of differences that are in service to evaluation – that are meaningful. *The meaning of a narrative, the transformative story, of an “existing situation” is found in the what and how of its whole, relational structure and parts. Its success depends on achieving a convincing clarity of purpose and destination, and an adequate elegance of expression, sufficient to move stakeholders and project forward.*

The transformation from one state to another, the intentional and formative heuristic processes of designing, is meaningful work. The many *hows* of goal setting, envisioning, abducting, and modeling all contribute to the successful embodiment and expression of meaning in a cultural product.

A meaningful transformation grows out of the dedicated work of skillful stakeholders and their agents turning a successful narrative, useful diagrams, convincing images, good goals and goal arrays, and visions of desired destinations into the materiality of a preferred other. Again, there is no firm guide for the embodiment and expression of intent. A successful and satisfying material expression of each desire, each need, each part, and each key relationship must be uncovered, discovered, represented and recomposed into a successful and satisfying meaning of the whole.

There is meaning in transformative situations and their processing, meaning in the goal setting, envisioning and the heuristic recycling of projected prototypes and possibilities, meaning in the composing of elements and their materiality, meaning in the emphasis given some elements over others, as well as meaning in the production and presentation of products to their intended users. Meaning created out of the making experience is gifted to its users, who must then create their own meaning out of the reality of their experience.

Meaning in design thinking is like the elephant in the room that it is hidden in plain sight. Once seen, meaning is everywhere manifest as a kind of shadow thinking of *that, how* and *what* evaluation, which is always present. And like the model of criticism, it is constantly in the process of applying such evaluative measures as significance, satisfaction and success in all design thinking dimensions. Human consciousness is perhaps better understood as being purposeful, emotional *and meaningful*.

Whose Meaning?

A designed work must naturally reflect what it believes to be significant. A richer aboutness complicates the process of embodiment, expression and composition but expands the potential for significance. Intended meaning is fine-tuned in composition by emphasizing some elements of expression over others in the same way that an actor will rehearse a line ten ways to find the one best suited to the character and moment of the play.

It follows that those closest to the creation of an artifact’s meanings are best able to evaluate its correspondence with their intent. Their evaluation of its significance, satisfactions and success will depend on the product’s affordance with their projections and specifications. How useful and emotionally pleasing and/or intellectually delightful they find its overall expression depends on their taste and judgment.

The meanings constructed by those at a greater social distance from the original intent will depend less and less on their knowledge of the generative situation and more and more on the repertoire of who they are that they bring to the experience. They may have no intimate knowledge of intent. But where there is enough of a correspondence between the experience of meaning in the production of a work and the users own experience, the production and construction of meaning, even if never exact, can culturally connect.

In constructing a meaning of artifacts from deep cultural time, such as the cave paintings of Altamira and Lascaux or ancient petroglyphs, the connection becomes progressively more tenuous and even more apparent that it is *our* meaning that is being made. The best we can do under such circumstances is to draw upon what it is that we are able to bring to the experience - an understanding of our common humanity – an historical sense of who we humans are, how we think, what we care about and do.

The shadow of evaluation that is meaning is itself a kind of thinking that follows, evaluates and reflects back on design thinking along its path wherever it goes. The over all critical evaluation of a work's meaning is constructed out of the same design thinking processes that created it. But constructed meaning takes on its own life and affordance. Once let loose, the locus of its affordance is limitless. It has the potential to go viral and ripple around the world.

Footnotes

1. Joyce, James (1916). *A portrait of the artist as a young man*. New York: B.W. Huebsch.
2. Kimbell, L. (2011). "Rethinking design thinking." *Design & Culture*, 3(3): 285-306.
3. Kimbell, L (2012). "Rethinking design thinking: part 2." *Design & Culture*, 4(2)
4. Design Thinking course syllabi from The Open University (UK); Simon Fraser University (BC); University of Minnesota (US); and Swinburne University (Aus)
5. Simon, H. A. (1986). *The sciences of the artificial* (Third ed.). Cambridge, Mass, and London: The MIT Press.
6. Dennett, D. C. (1991). *Consciousness explained*. Boston. Toronto. London: Little, Brown and Company and London: The University of Chicago Press.
7. Reddy, M. J. (1993). "The toolmaker's paradigm and the conduit metaphor." In A. Ortony (Ed.), *Metaphor and thought* (2nd ed.). Cambridge: Cambridge University Press.
8. Chabon, Michael (July 12, 2012). "What to make of Finnegans Wake?" *The New York Review of Books*.
9. Langer, S. K. (1967,1972). *Mind: An essay on human feeling vol.I, & vol.II*. Baltimore and London: The John Hopkins University Press.
10. Eliot, T.S. (1920). From: "Rhapsody of a windy night"
11. Huxtable, Ada Louise (Dec. 8, 1983). "After modern architecture." *The New York Review of Books*.
12. Tuan, Yi-fu (Mar. 1978). "Landscape's affective domain: raw emotion to intellectual delight." *Landscape Architecture*, 132-134.
13. Bateson, G. (1979). *Mind and nature*. New York: E.P.Dutton.

14. Rorty, R. (1995). *Truth and progress*. Cambridge and New York: Cambridge University Press.