



Traversing the Edge and Center: A Spatial Approach to Design Research

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A story:

I sit at my computer but compose first on paper with furtive scribbles, marking and re-marking words until they lay flat and still as if they were meant to be there—here—in this exact location. The page darkens and fills with unexpected arrows and numbers and lists as I try to say this connects to that to this. Soon I am lost. The computer beckons, but I resist its organizational charms. I cannot find the ideas when I have to concentrate on the keys, hunting for single letters when I am thinking in complete thoughts. I return to my notebook and realize that its structure is inadequate for the shaping of my thoughts—the regularity of the lines patterns in predictable ways, yet my mind wanders another, more dimensional path. This dilemma has been with me for years, and, with deference to my childhood, I have taken up a method of research and composition akin to pin the tail on the donkey. I tear apart my notebook and begin to notate on small scraps of paper, soon taped together along the wall beside me. White, yellow, and brown papers help me to distinguish between ideas. Lists become constellations, numbers neighboring galaxies. Soon layers appear, and string is added to facilitate connection. It is a thing of beauty.

But beauty is not my objective, and I move to the computer to try and bring order to my precious model of words and string. The cursor blinks patiently at first, but I detect a hidden urgency in its intermittent posture. At times I believe it is watching me, daring me to enter its dark field to trace an alphabet of stars that will illuminate distant readers. But my words resist the uniformity of the typewritten lines as well, and soon the string is back, taped from screen to wall, a tiny tightrope my thoughts navigate freely and without fear. I traverse the potential intersections at a fiendish pace, editing with Scotch tape and mind alike, order growing among the apparent chaos. I note its likeness to a model of entropy moving toward a condition of rest.

While few would argue that this method of composition is appropriate for all writers, I would like to suggest that, as an idea, it offers a valuable model for design research occurring during the latter stage of the design process. At this juncture, the literal search for information has concluded and the race to shape the mass of data into some semblance of a coherent argument begins. Upon reflection, the student/designer may raise the question, What does it take to define and defend an idea? Certainly, the answer is variable and dependent upon the specifics of the design problem. But a general strategy of

problem assessment, definition, and argument can be facilitated by a spatial approach to research that is rooted in a metaphor of travel, dwelling, and interaction.

In one sense, research (or a quest for knowledge) begins at the level of experience, the given, or data, of any problem. The Latin *experientia* speaks of a voyage across knowledge or a venturing out to the boundaries. Its Greek counterpart connotes a similar venture to the outer bounds but also implies a return home. Homer's *Odyssey* offers an appropriate metaphor for this spatial conceptualization of research as a search for knowledge that marks both profound and articulate connections between concepts traversing edge and center.

To extend this philosophical thread, we can examine Aristotle's classification of knowledge into three general categories—*theoria*, *praxis*, and *poesis*—as a way of linking visual and verbal spatial research strategies. *Theoria* is defined as an abstract or cognitive knowing, while *praxis* is a practical knowledge that comes from doing, from activity or the development of a manual skill. *Poesis*, on the other hand, is defined as knowledge that is involved in making, producing, or creating something. With *poesis*, research is the creative act.

With this said, what, then, are the implications of Aristotle's *poesis* to the model of design research that I am proposing? If we are to conceive of research as moving beyond a method of collection into the realm of connection and creative endeavor, then the act of designing becomes primarily an act of research—of travel defined as exploration and transforming encounter. Knowledge gained, manifest in terms of the clarity of the communication, is directly attributable to the process of making—a process involving all three of Aristotle's delineations.

Further, such a concept of design as research, and research as travel, evokes an architecture of joinery and kinetics situating sites of encounter within an evolving information structure. These sites, conceived as places of collection and juxtaposition, assist both problem assessment and problem definition, two integral aspects of the design process. Through this model, students are led to ask, How do concepts negotiate themselves in external relationships, how is one concept a site of travel for another? Instead of focusing on ideas as separate and integral, an approach to design that functions at the component/product level, this spatial conceptualization of research provides a structure for problem solving at the systems/community level. Research is transformed from a simple connect-the-dot activity to a strategy of multilinear systems analysis.

While many students understand that research can be categorized by intent—historical, analytical, descriptive, or experimental—few conceive of research as anything beyond mere data collection. Despite the rhetoric of the so-called MTV generation, it is the rare student that actively thinks laterally or is able to make connections between what they are learning in the classroom and what they are experiencing outside of it. As a result, the concept of design as the sum total of the varied experiences (cultural, political, technological) they confront each day must be brought into their design process. Alternative methodologies that link visual and verbal research strategies in the act of making work can facilitate these connections. Such methodologies look at the relationship between multiple

experiences and points of view as well as propose critical perspectives that encourage the designer to spatially conceptualize both historical and cultural contexts in ways that allow for the development of effective communication strategies. The idea of a "wunderground" between here and there marked by an insistence on multiple, external connections further allows for the inclusion of a discussion of the cultural, technological, and visual contexts in which the research is occurring. Numerous concepts provide sites for the departures, arrivals, and transits that take place during any research program—identifying their value at the systems level is critical to an understanding of the design process as a mechanism for organizing essential experiences.

Yet, an emphasis on design process can produce a challenging dilemma: travel to the edge of anything and the path becomes much more seductive than the noted destination. The process adapts itself to the pleasures of the path—to the pureness of discovery—and the process of journey extends into oblivion. A delineation of the boundaries of the design question at hand is both necessary and critical for establishing, and maintaining, focus. Assessment and problem definition involve identifying a set of parameters within which the work will be made and evaluated. Once these parameters have been defined, the important question then becomes, What does it mean to be articulate within those parameters? Articulation requires strategy—clarity is no simple task.

What, then, are strategies for making work that explores process as an extension of experience? First, two questions must be posed: Is the work of value? and To whom? Establishing the significance of the work will help to situate communication objectives within meaningful contexts. Second, consume in a radical way. Read, see, and experience everything through the lens of the design question at hand. When design is reconsidered as a negotiation and exchange of experiences, the process of making work becomes a notation on connections across, among, and between. Third, come to an understanding of what compels and what persists. Treat the work like a memory that cannot be shaken. Uncover the ache of the question and soothe it by giving it form. Begin with the smallest piece of the equation and allow it to grow unencumbered by the weight of the whole. Take small steps, fumble if necessary, but return and try again. Persist. Compel. Consume.

Last, nurture an appreciation of the mundane. Forego singular visions of the sublime—at least in the beginning. Sometimes it is simply the making that is the required strategy—momentum must begin somewhere. Make and measure, and do not be surprised if the poetic emerges from deep within the bowels of the ordinary.

Design as research. Research as travel. Travel as experience. Experience as design and a return to the beginning where words and string continue their movement toward a condition of rest.

NOTES

1. Meredith Davis, "What's So Important about Research?" *Statements*, American Center for Design (ACD), vol. 6, no. 1 (fall 1990). Davis, in a recent ACD article, argues for four distinct kinds of research:

- *Historical research*, which seeks to reveal meaning in events of the past. Historical researchers interpret the significance of time and place in ways that inform contemporary decision making or put current practices into perspective.
- *Descriptive research* observes and describes phenomena.
- *Analytical research* generates quantitative data that requires statistical assistance to extract meaning. Analytical research requires testing and estimation and is particularly concerned with relationships and correlations in an attempt to predict outcomes.
- *Experimental research* attempts to account for the influence of a factor in a given situation. Experimental research defines relationships of cause and effect by changing the factor to be studied in a controlled situation.