

## Conclusion

### BETWEEN ART, DESIGN, AND ARCHAEOLOGY

In the physical sense, boundaries point to in-between territories of intense activity, spaces of transition where everything is in constant flux: Identity, economy, and sovereignty, for example, are up for negotiation at the boundary between two states. Boundaries can operate at the individual and personal, as well as at the collective and social level. At the level of individual physical boundaries, the reach and extent of the body is implied. Boundaries can also be those defined by periods of time. In this manner they frame states of being, such as the significant moments of time in the individual's life-cycle. Thus, "being at the boundary" is accompanied by the presence of ritual and other *rites de passage*. At the collective and social levels, boundaries come into sharp relief during times of upheaval and change. For example, in the case of the realm of knowledge production, intense scrutiny might reveal the occurrence of deep paradigmatic shifts.

The work presented in this monograph deals in many instances with the issue of the boundaries between disciplines and the subsequent effect on collaborative endeavors. The emergence of the Information Society is a phenomenon in which the boundaries of space, time, and knowledge have been contested. In this volatile landscape the new disciplines that have arisen from the intersection of traditional forms of knowledge are examples of the impact of new instruments, such as the computer, for information production, and communication in areas related to the production of knowledge. In the words of Herbert Simon:

Those of us who have lived close to the development of the modern computer... have noticed the growing communications among intellectual disciplines that takes place around a computer. We have welcomed it because it has brought us into contact with new worlds of knowledge—helped us combat our own multiple cultures of isolation. This breakdown of old disciplinary boundaries has been much commented upon, and its connection with computers and information sciences often noted.[1]

It is plausible to argue that this breakdown of boundaries, and the emergence of these new disciplines, stems from a need to fill in gaps of knowledge deemed necessary to further develop the Information Society's infrastructure. For in the drive to create innovative products and ever-more complex systems, the search for new ideas and explanations concerning how both humans and computers can interact better, becomes a priority. As new disciplines and areas of knowledge come into being, they also generate needs for new conceptual tools and models. These tools may be created anew, or they may be borrowed through what has been called methodological

opportunism.[2] At the same time, traditional forms of knowledge, seeking to maintain their relevance, evolve: they also aspire to use new tools being created for other disciplines. So they look beyond for examples, for guidance—whether in the form of methods, role models, or simply for basic instruction. In doing so, they are transformed.

From these collaborations emerge areas of intersection between disciplines such as art, design, and archaeology that are not traditionally seen as relevant, but which during periods of upheaval rise to prominence. It may be that the existence of networked information environments, such as the Internet, has facilitated cross-fertilization and multidisciplinary collaborations. The myriad of projects in archaeology, the humanities and social sciences in general, that utilize new media technology originally developed for art and design production are examples of these collaborations. In these in-between territories, artists and designers work together with scholars, such as archaeologists, to create coherent and effective information and communication artifacts.

The artifacts resulting from these collaborations have laid out the initial foundation. However, they provide but a narrow view from which to view a vast universe, still to be discovered and surveyed. The pace of change unleashed by the forces of technological advancement will not abate. Still the necessity for a systematic assessment of the roles of the different participants in collaborative work remains. What happens in-between art, design, and archaeology? This is, indeed, an inquiry that can supply those involved with valuable information: new heuristic devices that can help us gain a better comprehension of complex spaces of interaction. Carving new meanings, engendering new dialogues, revealing the essence of the subject matter and content, are as much a part of the task of the artist and the designer, as of those involved with the humanities and the sciences.

The development of digital media and information technology is altering the very fabric of many professions including art, design and archaeology. The disciplines in the humanities and social sciences have always made use of images in their research. In the opinion of this author, what is now at stake is what the role of the artist and the designer will be in the new configurations that arise. Within the newly emerging edifices of the virtual how will the artist and the designer evolve into the “new breed of artisan/professional, using both skill and intellect.”[3]

As we have attempted to demonstrate, the role of art and design need not be limited to the creation of objects. Artists and designers can be powerful agents of innovation, who work on the creation of new processes, activities, communities, and tools. As John Dewey noted, the artist thinks and engages in intellectual inquiry in such a manner that the thinking occurs in “the very qualitative media he works in, and the terms lie so close to the object that he is producing that

they merge directly into it.”[4] By studying the way in which artists work, we gain insight into the dynamics of creativity and how these extend into the realm of the cognitive.

The instrumentality that is part of design can, in turn, be applied in conceiving new activities and processes from the interaction of already existing communities working with the new digital tools. These new activities can generate new objects to support already existing communities, as well as further engendering new ones.

Then there is also the question of how to create the future networked virtual environments that offer valuable and meaningful content. The fulfillment of this vision rests on the enabling of successful collaborative efforts. This is because the degree of complexity inherent in information artifacts requires these to be conceived and realized within rich, complex, networks of multiple disciplines. These networks can only be actualized through collaborative endeavors that feature actors from diverse knowledge fields who share a common objective. This is why the author decided to make this work one that would elaborate and ponder on conceptual items such as artifacts, boundaries, and collaboration. In this author’s opinion, a lot of lip service is paid to collaborative approaches, however, there is little actual data from projects that have involved participants from diverse disciplines working together to solve a problem:

It may be relatively easy to assemble a multi-disciplinary team, but to ask the participants to work constructively and efficiently together over a period of time demands an interdisciplinary attitude. This suggests integrating approaches from other disciplines, allowing for ‘multiple sightings.’ It further suggests designing a system that allows for all to design, with some addressing meta-design issues, while others address the details.[5]

The project “Illuminating History: Through the Eyes of Media” is an example of an actual project that did involve multidisciplinary participants working towards a common goal.

Collaboration is an important component in the design and production of complex information artifacts. It is important, however, to realize that these are conceptual structures operating at the metaphorical level through language. They can be useful to the process of design in that they can enable us to create the multivalent information artifacts and tools we desire. It can also help us in creating better products, more efficiently. Consider the situation of the programmer and the designer working in the creation of a Web site. The programmer may not know much about aspects of visual composition. The graphic designer may not be aware of the existence of techniques for creating dynamic applications. By collaborating, they can pool their skills together

and create a much better product than if working apart. But desire is not enough. It must be complemented with a will to act.

Throughout this work an approach to collaborative design that makes use of the notions of the artifact and of the activity has been proposed. Artifact is a conceptual structure that can be used in understanding how the different aspects of knowledge come together in the creation, or design, of a new object. This understanding can promote and facilitate the design process. In Figure 51 below, there is a sample of different items from the current study. These have been organized along the lines of Marx Wartofsky’s three-tiered hierarchy. The knowledge of the archaeologist is implicit in the Primary artifact, namely the unearthed fragment, the newly discovered mark. As the fragment is restored, and reconstructions are made of it by archaeologists, artists, and designers, the fragment is transformed into a Secondary artifact. In this state, the fragment is brought into the narrative and discourses of our present. It may be used as an example, to illustrate life in an ancient society. It is made a part of history. When the present and history are brought side by side to coincide, it may be that a Tertiary item is created. An archaeology exhibition, or a digital archive, that inspires and promotes new forms of knowledge, new artifacts, is a Tertiary artifact.

	Material domain	Immaterial domain
Primary artifact	Fragment of disk loom	Marks on disk loom
Secondary artifact	Restored disk loom	Digital reconstruction of disk loom
Tertiary artifact	An archaeology exhibition	A digital archive of archaeological materials

Figure 51: Wartofsky’s three-tiered hierarchy as applied to items from the current study.

There is a need to continue developing models and explicit working knowledge of how to institute multidisciplinary collaborations.[6] We need to understand how and where disciplines intersect, as well as the areas of divergence that are integral to their essence. We need to know where one actor’s work ends and where another begins. We also need to understand the different perspectives of each discipline such as, Who are the different actors? What is the nature of their

role? Are they overt, active participants? Or is their role an implicit one, of restraint? What tools do they use to produce knowledge? How do they use them? What are the overall mechanics involved in the creation of knowledge? How do the knowledge objects produced by each discipline differ? What discursive formations exert pressure and shape the final outcome or objects of the activity?

The matrix presented in Figure 52 below, represents an initial approach to outline aspects of activity. It illustrates areas of commonality between art, design and archaeology, as well as distinctions. The structure has been adapted from Kari Kuutti's formulation of a classification of an activity using Activity Theory. The six-element structure of the activity system as outlined by Kuutti has been maintained with slight modifications of the terminology.[7] The elements depicted in the three columns represent a different point of view, or attitude, towards the six concepts represented in the rows. The manner in which these are organized allows us to observe the points of divergence, as well as the instances where they may share a common ground.

	<i>The Artist</i>	<i>The Designer</i>	<i>The Archaeologist</i>
<b>Instruments</b>	Recording tools and media Representation tools Conceptual tools and methods	Representation tools Recording tools and media Conceptual tools and methods	Incription tools Measuring tools Excavation tools Recording tools and media Conceptual tools and methods Representation tools
<b>Actor</b>	Creating Expressing Communicating Representing	Understanding Interpreting Representing Communicating	Observing Documenting Communicating Interpreting
<b>Object of activity</b>	Art objects Art activities	Artefacts • Products • Processes • Concepts	Archaeological record • Facts • Typologies • Narratives • Visual materials
<b>Rules/ Discourses</b>	Art object as distinct from regular artefacts.	Defining what is the discipline of design.	Instrumental use of archaeological knowledge.
<b>Community</b>	Art world: • Critics • Patrons • Institutions • Audience	Market User Target audience General audience	Academia Museums Collectors The State
<b>Organization of labour</b>	Independent, co-ordinated group action.	Independent, co-ordinated group action, hierarchical group action.	Co-ordinated group action, hierarchical group action.

Figure 52: Different aspects in the activity of art, design, and archaeology.

The chart was created with the objective of better understanding how the different elements of the activity system of the multiple actors differ, yet also resemble each other. The implicit assumption was that such an understanding might lead to recognizing points of convergence. As extensions of ourselves, we use tools to change the world. They in turn shape the way we are. The history of our practices, or our history as beings in action, is embedded in the instruments that we use.

The rules of the activity can be open and explicit, or they can be of an implicit discursive nature. The designer can facilitate collaboration by mediating between the rules and the different communities involved in activity. But in order to do this, s/he must understand how rules influence a community and how this in turn is reflected in the object produced. S/he must also be able to discern when the rules are explicit and openly accepted. In addition, s/he has to be able to recognize, because they are implicit and discursive, when rules have become naturalized, transparent, or invisible to those who are members of the community.

How a community is defined and who gets to be a member varies from discipline to discipline. Understanding these variations is important for the designer who wants to engage in collaborative work. Some of these variations can be observed by looking at how the organization of labor influences the relationship of each member of the community with regard to the object of the activity. Who gets to work with the object, when and how are important aspects that define the nature of the work performed by the different members of the community.

Further research might reveal that there exist points of intersection that offer opportunities for fruitful collaboration. Collaboration can subsequently provide one with new ways to look at his/her discipline. However, many of the opportunities for collaboration exist in spaces residing in-between disciplines. In-between is the space of the heterogeneous. It is the point in the landscape from which the different entities can be examined, in an almost simultaneous manner. As a form of learning, collaboration can expand one's horizon: One gets to visit other disciplines, learn other languages.[8]

But in-between is also the condition of being neither here, nor there. It exemplifies the epitome of uncertainty. Uncertainty is related to the speed of change in our rapidly shifting technological base. Uncertainty is also present in the notion of design as the discipline concerned not with how things *are*, but how they *should* be. Uncertainty is that which we face when we take a leap of faith beyond monolithic discourses and into the realm of the dialogic, of the relative. Uncertainty is one of the reasons behind the search for new research paradigms, new ways of looking at the world, not only in art and design, but in the sciences as well. Uncertainty is related to treading the new ground, the unfamiliar landscape of fluctuating boundaries. That moment of disclosure, where the new emerges, may very well be lodged there, in between.

As a discipline concerned with the invention and the creation of material culture, design is an area of knowledge that can enrich our lives. It can also assist in finding solutions to some of the problems engendered by the complexity of contemporary society. This is especially true in the

case of work that requires collaboration between disciplines. In this type of endeavor, design can provide frameworks for research and development that are inclusive. This was the case with this project. It included the activities of art, archaeology, and of design itself.

A review of the activity of archaeology provided insight into the community and areas of negotiation that the designer entered when s/he agreed to work in this project. A review of the activity of art revealed a historical connection between the tools of the designer, and those of the artist. This historical connection allowed the designer to describe the contribution of art to the project. This is important, since this is an area that is usually marginalized into the category of nonverbal, or tacit knowledge. Also, it leads directly into contemporary discussions regarding the nature and agency of the practice of design itself.

It is possible that, in the future, design can make use of methods such as Activity Theory. However, a lot of work remains to be done before a truly productive relationship can be established. New instruments and models must be created that facilitate its application within design. New discursive foundations in design that allow us to better articulate the space for collaboration and the space between the diverse areas of knowledge are also necessary. There is an urgent need for new frameworks of knowledge that enable us, not only to investigate, but also, to *create*.

#### **Notes to chapter ten:**

1. H. A. Simon, The Sciences of the Artificial, 3<sup>rd</sup> edition (Cambridge, Mass.: The MIT Press, 1996), 138.

2. A. Findeli, “Will Design Ever Become a Science? Epistemological and Methodological Issues in Design Research, Followed by a Proposition,” in No Guru, No Method: Conference Proceedings, P. Strandman, ed. (Helsinki: University of Art and Design Helsinki/UIAH, 1998), 67: in the context of urban planning researchers, Findeli discusses how “...they imitate, borrow and mimic the methods and models used elsewhere, with more or less success.”

3. M. McCullough, Abstracting Craft: The Practiced Digital Hand (Cambridge, Mass.: The MIT Press, 1996), 256.

4. J. Dewey, Art as Experience (New York: Perigee Books, 1980), 16.

5. K. Krippendorff, ed., “New Design Principles,” Design in the Age of Information: A Report to the National Science Foundation (NFS), Design Research Laboratory, North Carolina State University, 1997, 35.

6. Ibid., 44. See also: S. Kim, “Interdisciplinary Collaboration,” in The Art of Human-Computer Interface Design, B. Laurel, ed. (Reading, Mass.: Addison-Wesley Publishing Company, Inc., 1990), 39.

7. K. Kuuti, “Identifying potential CSCW applications by means of activity theory concepts: a case example,” in Proceedings of the Conference on Computer-Supported Cooperative Work (CSCW) (New York: ACM Press, 1992).

8. Kim, 39.