Try to Understand Design and Design Process

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Introduction

It is difficult for designers to explain what they do. In addition, those unfamiliar with design do not understand the rigor and logic of design thinking and process. We can’t formulate a predefined model for design process because every design situation is unique and new situation. But I tried to formulate my own model for design process as common with inspirations from my supervisors/Lectures. I tried to describe what is design? And what is design process? In this paper. This personal position paper explores the personal improvement throughout the course work and what I learnt through out the course work.

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Inspiration

When I began to study "Design Theory & Practice", I felt little uncomfortable because I had no idea how can I use theory in order to have a good design practice. I thought design is more practical based approach which is heavily depend on the situations and the requirements. But gradually I understand Design theory is not exact model or set of rules that should follow in order to have good design outcome, but it will expand the imagination and give us broader idea about how to implement the best design practice. Weekly readings and seminar type meetings gave me an better understanding about forthcoming meeting and it motivates me to concentrate through out the meeting. We have received reading materials at beginning of course so we could read those resources from the beginning and there is no unnecessary time consume for finding correct resources or materials.

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Figure 1.0 - Interaction Design Circle

Why we need to understand design?

Most designers cannot articulate what they do (Lawson, 2006). They can describe methods and identify the steps they took along the design process. But try to get them to explain how they decided that the final solution was the right solution and see what happens. If we understand the nature of design, we will notice that the latter is a trick question. There are no right solutions in design, only ones that are more preferred. If we are new to design this may be
troubling. No right answer? How do we know if what we are doing is correct? This is one of the questions that troubled me almost time. To understand the why there is no right answer, it helps to understand the nature of design and design problems. Design problems are complex, malignant, tricky, and aggressive. Horst Rittel characterizes these as wicked problems, an idea stemming from a quest for an alternative to a linear, step-by-step model of the design process. Wicked problems cannot be clearly formulated, can have many explanations for the same problem, have no immediate or ultimate test, are essentially unique, and are symptoms of another problem. These problems are ill defined. “To find the problem is thus the same thing as finding the solution; the problem can’t be defined until the solution has been found.” (Rittel & Webber, 1973). Similarly, Schön (1983) says design problems must be “constructed from the materials of problematic situations which are puzzling, troubling, and uncertain.” (p. 40) Thus, design problems are complex and require a high tolerance for ambiguity. In addition to the inherent ambiguity of design problems, because designers have problems with communicating the logic of their practice, design is often viewed as mysterious, a black art, and irrational. These are all untrue, of course. Design has its own rigor, logic, and discipline. But designers do not understand it well enough to implement it. If designers cannot say what they do, how are others supposed to understand the nature of design and appreciate it fully?

As an interaction designer within a field that is still struggling to define itself, understanding the core of design seems relevant. People with different backgrounds, many of whom, like myself, do not have a traditional design background, are entering interaction design with a limited understanding of the nature of design, and perhaps are heavily influenced by previous experiences. Löwgren and Stolterman (2004) argue that a more thoughtful approach to design is required with respect to interaction design, as the challenges faced by interaction designers are becoming more complex.

What is design?

To understand the nature of design, it is first worth defining design. This is no small task and a topic that is complex enough to consume an entire book. For the purposes of this paper, I will mention the difficulty of defining design and offer insights from during Design theory and Practice course work that will support my exploration of the design thinking and process. There is no exact universal definition of design, which makes understanding what we do as a designer from a definitional standpoint problematic. The word design itself is problematic. John Heskett highlights the trouble of defining design, a word that can be used as both a noun and verb, by saying, “Design is to design a design to produce a design.” (Heskett) This is both correct and quite useless, but underscores the problem with trying to define design. Other definitions of design include:

- “Everyone designs who devises courses of action aimed at changing existing situations into preferred ones,” (Simon, 1996).
- “Design is the ability to imagine that which does not yet exist, to make it appear in concrete form as a new, purposeful addition to the real world,” (Nelson and Stolterman, 2003, p. 10).
- “Design is the human power of conceiving, planning, and making products that serve human beings in the accomplishment of their individual and collective purposes,” (Buchanan, 2001).

According to the above definitions design is the creation of what ought to be in the form of an artifact or a service, tangible or intangible. We can notice the kinds of artifacts or services produced are not mentioned in any of the above definitions. This suggests that no matter what kind of design practiced, such as industrial, communication, interaction, or fashion, there is commonality to design practice that is the same regardless of the methods used or the particular process. This is what we need to examine to understand the logic and rigor of design.

In The Design Way, Nelson and Stolterman (2003) suggest that design is neither art nor science, but its own discipline. With respect to the problems that Technical Rationality attempted to solve and failed at, design offers itself as a powerful approach to tackling these and other complex issues, from user interfaces to social problems. It is an approach that will not yield the answer, because there is no single answer to a design problem, but will produce many close appropriate solutions.

Rogers (2004) said that nearly all respondents in their study “used a range of design methods, including scenarios, storyboards, low tech and software prototyping, focus groups, interviews, field studies and questionnaires and use cases” (p. 123). On the other hand, almost no one used “predictive modeling methods like GOMS, and only a few used software engineering methods (8 percent), experiments (10 percent), contextual design (10 percent) or guidelines (5 percent)” (p. 124).

I agree with above statements. When we are doing design practice we usually used initial prototype rather than predictive modeling methods, but when we were doing our group assignment we used Activity Theory diagram. If we use predictive modeling methods we can see the
flows, mistakes, outcomes, new alternatives that we don't think.

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**Design Process**

While there is a framework for the design process that designers can follow, it is not a prescriptive how-to guide. One reason I felt a disconnect between actual design work and the process I had learned was that the design activity did not proceed as linearly as a cursory look at the process suggests. In fact, the design process is “too complex and diverse to fully describe in any universal or general way,” (Löwgren and Stolterman, 2004, p. 15). However, designers need some plan, description, or model of the design process to organize and evaluate their work. To use any theory or model of the design process, designers need to be critical, rather than adopting it completely. I tried examining the design process and activity to show that while nonlinear, the design process has order. Understanding the nature of design process will help designers in understanding the nature of design and their relationship, or role, in regards to the process. Further, it seems like designers and nondesigners can be led through the design process with good results. However, Intensive design is more effective way to follow design process.

My early experiences as web designer confirms this, as I did not understand the nature of design but did grasp the framework and methods enough to be successful. However, a better understanding of the process sheds light on the nature of design itself. This knowledge can help to improve the ability of the designer and enhance the potential of delivering good design solutions. Again, I believe that the more designers understand the nature of design, the better they understand how to increase design ability, understand what they do, and communicate that to others.

**Conclusion**

Like design itself, design thinking is complex. Any simple definition leaves a lot to be explained. Design thinking is a desire for a particular outcome, a philosophic viewpoint, a conversation, imagination, reason, judgment, wisdom, and a skill. It is thought around an approach to solving highly complex and ambiguous problems that have no absolute answer. In looking at the unforeseen views of the design process, none is absolutely correct. But neither are wrong. The dynamic nature of the design process, the uniqueness of every process, means there is no singular way to model it. The designer creates it each time. Löwgren and Stolterman (2004) introduce the idea that as part of any design process designers need to design the process itself. Designers shape it, decide what to do, and how to carry out the process. They suggest that good designers know “almost nothing is given or true when it comes to what and how to design,” (Löwgren and Stolterman, 2004, p. 41). On the one hand, therefore, I have noted that designers need to remain critical of models and theories of the design process. On the other, designers should look at the design process as part of the design task. This perspective aids in understanding the role of the designer in the design process, may provide some comfort with the complexity and ambiguity of the design process, and acknowledge a value of the designer that does not receive much attention. I learnt more new concepts throughout the course work, wicked problems, messy situations, interaction, Design Research Triangle, intensive design, how theory realted to design process and practices.

The exploration into the nature of design, what designers actually do, how they think, and whether the process is rigorous and logical began with my personal struggles as a designer. It was almost impossible for me to begin answering the questions I had about the thinking the behind the methods.

As a designer, I believe it essential to understand the nature of design to become a better designer and to communicate what I do to others (being in service). While the journey I took and the journey of every designer is personal, there are aspects of design that are common to all designers, regardless of in what field of design is practiced. Though I call myself an interaction designer, the thinking and the process outlined this final report related to design in general. I assume every designer will be able to connect with the material. I am interested in acknowledging the common situations—the nature of design common to all designers—not just to understand what designers do but also to contribute to the unification of the discipline in order to make it better understood, better practiced, and ultimately stronger both within the design community and outside of it as well. One of the key practices are that both provides the rigor of design thinking and means to improving individual design practice is that of reflection. Schön’s reflection—in-action was acknowledged by the other authors cited, which shows the impact of the idea on those designers who consider the nature of design seriously. However, it seems we still do not have a good or simple way to explain the rigor and logic of design. Perhaps design is too complex an endeavor for this ever to be the case.

Still, I believe as designers, we must remain critical of our own thoughts on design and continue to question and attempt to define what it is that we do, when design is appropriate as an approach to solving problems, and what value we provide. My idea is that there is a rigor and logic to design. But this rigor and logic is different from the more familiar scientific or analytic approach. There is no one correct solution to a design situation, and design solutions.
cannot be proven empirical laws. The thinking that occurs during the process is nonlinear, going back and forth as necessarily between the different phases. We can view this as a conversation with the problem, where actions taken by the designer yield consequences and new information to be reflected upon. The new insight may cause changes in how the designer views the problem or the solution being generated.

The process is not magical, but does require a bit of complex through to get to the desired outcome. The muddling through is purposeful, however, and not mistake or reckless. It is also not a matter of waiting around for a spark of inspiration. Design is hard work. It requires commitment and determination in the face of ambiguity and being comfortable with a process where parallel lines of thought and several alternatives are held together until the desired outcome is produced. This process may appear mysterious and uncomfortable to those who work better with a clearly defined problem and an empirically proven solution.

Finally, without implementing, design can be neither truly learnt nor understood. Reading about design never makes one a designer. This personal position paper, and any writing about design, should accompany actual design practice. As stated earlier, remain critical of all process diagrams and writings about design and reflect on how they relate to the thinking, doing, and making of your practice. It is my hope that sharing my views and the insights of this paper, our design practice will be further augmented by thinking and reflection as we design ourself. I like designers to balance practical approach with theory, and action with reflection. Design ourself as a designer. Develop our understanding of design—our personal design philosophy—to improve our design ability and enable us to communicate more confidently what it is that we and other designers actually do. Think of ourself as a design process. This is not prescriptive, but a way to help us to think about improving our design ability and contributing to the development of design as a discipline. Finally I would try to summarize Design Circle Figure 2.0

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REFERENCES