

# Experience in Interaction Design: Five Propositions

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## ABSTRACT

This paper discusses five propositions based on Dewey's philosophical pragmatism for considering experience in interaction design. The role of inquiry and inquirer in pragmatism makes central the inseparability of the designer from the experience of interaction design, and that interaction design is a means of knowledge making.

## Keywords

Pragmatism, inquiry, experience, design

## INTRODUCTION

Pragmatism, in particular John Dewey's pragmatism, deeply informs the notion of experience in interaction design. A pragmatist view places experience at the center of any form of knowing including design. Unlike the current ideas of experience design, pragmatism sees experience as all-inclusive and as such cannot be separated as an entity on its own. Further, experience emerges through interaction with the world around us and interaction in turn is motivated by inquiry. In pragmatist terms we may experience the outcomes of interaction design within a process of inquiry, however this should not be confused with what is commonly referred to as user experience. Part of the reason for this is that an understanding of experience in design begins with the designer rather than an experience of the design outcome. For example, Dewey commented that traditional philosophy was akin to "a spectator viewing a finished painting rather than [as in pragmatism] after that of the artist producing a painting" [1]. Key pragmatist concepts of experience (inquiry and experimentalism), judgment and interpretation serve as building blocks for a notion of interaction design that addresses design's grounding in practice, and practice as a viable means of knowledge making.

Central to pragmatism is the role of the inquirer. Experience, in its concreteness and multiplicity, presents itself to and is shaped by an inquirer. For interaction design, the importance of the formulation of the inquirer is that it makes clear that the designer is inseparable from the experience of design. It is for this reason alone that interaction design can be said to be designer-centric. The concept of the designer cannot be left unarticulated as a mystery, nor can the characteristics of a scientist be appropriated in its place, nor is a designer a mere "operator" of predefined implementation methods. In respect to HCI, interaction design is best viewed as designer-centric not out of an opposition to the concept of

user rather because of the inescapable role a designer plays in creating knowledge through inquiry.

Many past theories support a pragmatist view of design. McCarthy and Wright see in pragmatism a revisionary approach to HCI in arguing for the need to understand technology through experience [8]. Richard Coyne saw pragmatism as having a supporting role in adopting postmodern theories in information technology design [3]. In addition, the design theorist Richard Buchanan has discussed Dewey as a touchstone in his view of design as a liberal art [2]. Henrik Gedenryd relied on pragmatism in design as a basis for an interactive cognition view of design thinking [7]. Pelle Ehn's participatory design via Heidegger and Wittgenstein held a pragmatist position [6] and Donald Schön's reflective practice is deeply indebted to pragmatism [9].

In the early twentieth century, pragmatism reexamined foundational questions about how we know and the representations we make of the world through science and knowledge. The aim of pragmatism was to look to science and philosophy for the opportunities they afforded individuals to find meaning in their everyday lives. Dewey committed to the non-metaphysical notion that human knowledge is provisional, incomplete, and probabilistic. This disavowal of metaphysics left no room for absolutes and certainties. Such a commitment was neither a reason for despair nor false comfort but a practical matter of philosophically engaging with human experience as fully as possible without recourse to underlying absolutes or transcendental truths.

This paper provides the briefest of outlines of a pragmatist understanding of experience in interaction design through five propositions.

## FIVE PROPOSITIONS

The first proposition is that an epistemological home for interaction design lies in pragmatism. In pragmatists' terms design is lived, in that it is bound up in ongoing interactions with its environment, and best comprehended as an experience in which the fullness of its lived conditions must be described and as such there is an inseparable continuity between means and ends.

This approach provides an explicitly pragmatic explanation and description of design and a framing that substantiates knowledge creation inside and outside of the field.

Pragmatism is concerned with the *here and now*, yet it continually asks what is the value of an understanding in terms of action and what future multiple possibilities does it uncover? Stating the obvious but often overlooked, the future experience is irreducible which leaves little room for absolute knowing. In terms of design, the multiple possible outcomes must be constantly negotiated and interpreted.

The second proposition is that interaction design draws on unique intellectual histories distinct from HCI. Arguments grounding interaction design in cognitive science and systems thinking have concealed the contribution of interaction design to interaction research and education. A clear formulation of interaction design can begin with grounding it in the intellectual histories of design, namely reflective practice, participatory design, design ethnography, and criticism.

It is truly surprising that few if any approaches locate interaction design in the traditions of design thinking. There is substantial value in this tack; above all it balances the intellectual attention on *interaction* with complementary focus on *design*. As a result, fuller accounts of interactive systems and artefacts will be generated. The traditions of reflective practice, participatory design, design ethnography and criticism link to form a rich set of antecedents that help describe what interaction design is and might become. For example, Ehn's [6] understanding of participatory design shares with Donald Schön's [9] reflective practice an inherently pragmatic view of design, inquiring at the level of descriptive action, a strong disavowal of abstraction, and a *dialogical* view of design. To paraphrase Schön, design is an explicit conversation between materials, end-users, and designers. The pragmatic inquiries of Ehn, and especially Schön draw on Dewey's notion of *immediate empiricism* in which claims hold value or afford possibilities over time in the everyday and lived world [5]. As such, criticism and design ethnography hold the potential to carry out the evaluation and shaping of the design claim, especially in understanding the ongoing and everyday existence of interactive artefacts and systems. The implications of this proposition are explored in the remaining propositions, which represent the instrumental aspects of pragmatism and interaction design.

The third proposition is that experience is at the center of design and design is inquiry. In pragmatist terms of experience, the designer is an embodied inquirer who among other forms of knowing relies on experimentalism.

Dewey advocated inquiry as a hands-on interaction with the world in which an inquirer shapes, tests, and explores an experience while simultaneously constructing the experience. In design and in most other human experiences, clear separations or borders between thinking and doing are

non-existent. The embodied and present inquirer simultaneously acts and reflects with the situation as a way of knowing. While Dewey was critical of philosophy aping science in a reductionism of things known, he lauded the acts of knowing in science, namely experimentation. Dewey directly contrasted "experimentalism" with "empiricism," seeing the latter as an outdated and insufficient method of knowing. At the heart is an experimentalism that rests on embodiment, imagination, and future possibilities. Dewey's experimentalism is premised on the embodiment and presence of the experimenter. He argued against the distant observer and the precepts of the disembodied mind or objectivity.

A designer is a pragmatic inquirer. First and foremost this establishes the active and participatory presence of the designer in the creation of design and knowledge. The disavowal of the observant spectator and claims of objectivity in knowledge creation puts particular emphasis on the first-hand accounts of experience. Returning to an earlier point, interaction design can be said to be designer-centric for the experience of design rests on the embodied inquiring presence of a designer. Pragmatism sees design as inquiry based on experimentalism, embodiment, and multiplicity.

The fourth proposition is that judgment and interpretation forms the basis for decisions and validation in interaction design.

The interpretive loop within interaction design does not disavow externalizations or the need to concretely communicate and validate outcomes in the process of design or research. Within a pragmatist view of interaction design we can describe designing as an *experience* [4]. We can see how an interaction designer's understanding of the *experience* of designing in the present is deeply informed by her own lived history with design. In addition, much of the skill in design is embodied and is made aware through reflection; Schön referred to this as *surprise* on the part of designers whose prehension of change becomes reflection on an embodied difference in action [9]. We can see that past experience, embodied reflection, and overall understanding of the *experience* of designing form an interaction designer's judgment. Professionally, judgment takes the form of a warrant on behalf of the designer, design team, or firm in relation to quality of the designing and design outcomes. In short, it *is* important *who* is designing. The importance lies in the designer's capacity to make future design decisions and the ability to in reflection make past judgments evident, communicable, and valid.

However, judgment does not act alone. Rather it is subject to ongoing social interpretation and feedback that helps negotiate the limits of that judgment. Participation is at the center of an interactional model for interaction design and it engages designer judgment – shaping, challenging, augmenting and supporting it. Stakeholders exchange their

own skills and knowledge within a mutual interaction with designers, whether it is in the form of *design games*, participant observation or other participatory techniques. Assessments are typically qualitative and hinge upon interpretation and negotiation. Additionally, an ethnographic orientation provides a critical model for accounting for actions, judgments, and participation.

The fifth proposition is that interaction design is distinct but shares complementary constraints and external overlaps with HCI. For example mental models and causal analysis when matched with holistic accounts of a system experience provide fuller (and necessary) discoveries of a system. External interdisciplinary relationships such as industrial design prototyping and or social theories are shared but understood through distinct lenses.

In the full sense of multiplicity, the pragmatist adherence to pluralism is key to understanding interaction design's relationship to other disciplines like HCI. The assertion of the epistemological difference between HCI and interaction design opens up a view of ongoing methodological interactions between the fields rather than shutting them down. Methods can be shared as complementary. For example, interaction design sees value in the quantitative results of a controlled study of an interactive system as bound in an "HCI study" since it augments the overall view of the system. Methods can also be shared yet uniquely interpreted. For example, an ethnographic study may be employed in a limited sense as a method for gathering system requirements in HCI and the same study approached to support design decisions in interaction design.

## DISCUSSION

From our discussion so far on inquiry and experience in interaction design, we can draw the following:

- Dewey's formulation of experience directly informs and illuminates interaction design;
- The interactive nexus of the inquirer, subject-matters, and actions, place the designer as the active agent in the knowing and comprehensibility of interaction design. It reveals how a designer is integrally bound up in the experience as one who shapes and resolves experience through design inquiry;
- Several departure points in past design thinking exist to mobilize pragmatism in interaction design including ethnography, participatory design, and reflective practice;

Experimentalism is a critical means of inquiry in interaction design and incorporates the following:

- Design inquiry requires embodied participation of the designer with matters that are social, material, and procedural;

- Design inquiry involves multiple constructions and representations of present and futures possibilities motivated by imagination and experimentation;
- Design inquiry is a first-hand experience that for inquiry and valid accounting requires ethnographic commitments to adequately relate the concreteness and multiplicity of the design experience.

Judgment and inquiry engage the designer and others in the responsibilities and determination of value in design in ways that are reflective and participatory:

- A commitment to judgment, participation and interpretation accounts for the integrity and quality of the interaction design process;
- We can see that past experience, embodied reflection, and overall understanding of the *experience* of designing form an interaction designer's judgment. It is important *who* is designing;
- Judgment is subject to ongoing social interpretation and feedback that helps negotiate the limits of that judgment. Participation engages designer judgment – shaping, challenging, augmenting and supporting it.

## CONCLUSION

The pragmatist concepts of experience, judgment and interpretation serve as building blocks for a notion of interaction design that addresses design's grounding in practice, and practice as a viable means of knowledge making. Central to pragmatism is the role of the inquirer. For interaction design, the importance of the formulation of the inquirer is that it makes clear that the designer is inseparable from the experience of design.

## REFERENCES

1. Boisvert, R.D. John Dewey : rethinking our time. State University of New York Press, Albany, 1998.
2. Buchanan, R. Wicked Problems in Design Thinking. in Margolin, V.B., R. ed. The Idea of Design; A Design Issues Reader, MIT Press, Cambridge, 1995, 3-20.
3. Coyne, R. Designing information technology in the postmodern age : from method to metaphor. MIT Press, Cambridge, Mass., 1995.
4. Dewey, J. Art as experience. Minton Balch & company, New York, 1934.
5. Dewey, J. Experience and nature. Open Court Pub. Co., La Salle, Ill., 1958.
6. Ehn, P. Work-oriented design of computer artifacts. Arbetslivscentrum, Stockholm, 1989.
7. Gedenryd, H. How Designers Work Cognitive Studies, Lund University, Lund, 1998, 226.
8. McCarthy, J. and Wright, P. Technology as experience. MIT Press, Cambridge, Mass., 2004.
9. Schön, D.A. The reflective practitioner: how professionals think in action. Basic Books, New York, 1983.