Designing for Experience: Settings and Behaviors

Conference description of the topic: American philosopher John Dewey wrote in the 1930s that there are conditions that qualify "an experience" from other events in life. First, an experience must have a beginning and an end; we know when it starts and when it finishes. Dewey referred to this as "material running its course to fulfillment." He provided examples, "a piece of work finished in a satisfactory way" or "a situation…[such as] a conversation…that is so rounded out that its close is a consummation and not a cessation." In other words, we can bookend an experience in ways that we cannot demarcate other passages of time.

Second, an experience is composed of parts that are distinct but that flow from one to another without interruption. We can remember its moments, but we recall them within a continuous whole. Dewey described this as "the enduring whole …diversified by successive phases that are emphases of its varied colors." Third, says Dewey, an experience may be described in terms of a quality or unity by which we name it, and thus recall it long after it has happened. Finally, an experience has a pattern and a structure of alternating between doing and undergoing. Doing is the physical or sensory interaction with our environment that we associate with the experience, while undergoing is the mental reflection or emotion, necessary to interpret the doing; an action and a consequence linked in perception.

Dewey's reminders of what constitute an experience prompt reconsideration of how we teach interaction:

a How do students define design problems in comprehensive ways that include the intersection of social, cultural, and technological settings and that account for the cognitive and emotional aspects of human experience?
b How should studio instruction change to explore how a design system responds to human interaction and the kinds of behaviors it enables rather than privileging surface attributes? Has technology merely expanded the design variables to include sound and motion, or is there more to shaping relevant and meaningful interactions? If so, what does this mean for how we structure studio assignments and the criteria for evaluating student performance?
c In relinquishing some control for content production in a culture of participation, what role does the designer play in shaping the engagement and response to objects and experiences? What accountability comes with this role and how do we make students aware of this expanded set of responsibilities?

The following prospectuses were submitted for consideration and their authors were selected as co-authors for the October 2010 AIGA Educators Conference – New Contexts / New Practices – at North Carolina State University, Raleigh, NC.

Coauthors:	**Moderator**
Lisa Fontaine	Andrew Blauvelt
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Designing for Experience: Settings and Behaviors

Lisa Fontaine / Iowa State University

Experiential Learning through Interactive Exhibit Design

Designers from the architectural, interior and landscape disciplines are becoming increasingly aware of the role of clear information and expressive visual narrative in the experiential spaces they design. They often lack the skills to incorporate these features into their designs, however. This need offers tremendous potential for graphic designers to expand their role in the built environment.

This presentation demonstrates how this potential is being addressed through a multi-year focus on design for interactive museum exhibitions at Iowa State University, where graphic design students are asked to integrate their skills in experience design and information design to enhance visitor engagement with museum exhibits. This integration of visual communication and experience design is the foundation of Iowa State University's new Masters degree in Environmental Graphic Design, and is the focus of the Exhibition Design Studio - a course offered for both graduate and undergraduate students.

Interactive museum exhibitions, where an individual can directly encounter a phenomenon, are productive environments for experiential learning. Through personal contact, information that was once abstract can be translated into concrete realities. Yet the success of many exhibit interactions is dependent on the clarity of the information presented. Designers with a background in information design are ideally suited to solving experiential design problems that are intended to assist visitor comprehension.

Educational theorists have long understood the importance of experience in the learning process. Research in the area of experiential learning takes into account the differences in personal learning styles. They believe that knowledge is created through the transformation of experience. Through independent exploration, an individual creates a series of purely personal experiences, aiding comprehension and memorability. By allowing for human individuality, experiential learning encourages creativity and invention.

The author has developed a taxonomy of exhibit interaction types, which is presented to the students in the Exhibition Design course so they can learn to categorize and analyze visitor interactions. To assist students in development of the interactive experiences, an ideation matrix is employed using the interaction taxonomy. Students are also exposed to multiple intelligence theories, so these can be incorporated into the learning objectives of their exhibits.

Students are also introduced to visitor interaction theory through extensive visual documentation from museums across the US and Europe. Field trips are made to Chicago and Minneapolis museums, during which the students analyze and document the effectiveness of each of the interaction types, and study the mechanics of visitor engagement.

This presentation will demonstrate this emerging cross-disciplinary opportunity by focusing on three of ISU's most recent experience design initiatives:

A) In spring 2010, A comprehensive museum exhibit was devised, planned and designed by Kimberly Topp, as her thesis component for the MA degree in Environmental Graphic Design. This museum exhibit for the Children's Discovery Center intends to engage children in physical fitness activities, while using an adventure narrative. The exhibit includes 14 distinct interactive learning experiences, which encompass a wide range of aerobic and anaerobic activities as well as different learning styles.

B)In spring 2010, the Exhibition Design studio course also focused on interactive museum exhibitions. We were asked by the Field Museum in Chicago to design a series of interactive experiences for the museum's upcoming

Conservation exhibit. We worked with the museum staff's content outline, to cover its wide range of content areas. Museum staff reviewed 4 proposals from each student. These were in written form (no sketches allowed) and included learning objectives, how the idea responded to the museum's content goals, how the interaction would work, and what it would communicate. Museum staff selected 17 concepts to pursue. Completed exhibit designs were presented to the museum at semester's end. A total of 17 fully developed interactive museum exhibit designs were proposed to the Field Museum at the end of the semester.

C) In spring 2009, an interdisciplinary student team (GD, Arch, LA) proposed an experiential design for the Iowa Holocaust Memorial Design, which incorporates metaphor and narrative to reflect not only the story of the Holocaust, but that of the survivors who chose Iowa as their new home. The design is based on the metaphor of a family tree; a 'tree of life' at the center of the memorial represents both the resilience of the Jewish people and the regeneration of each family's tree. The design focuses on the paradoxical concepts of uprooting and transplanting, as these have been recurring themes throughout Jewish history. As the visitors walk along multiple pathways, they experience a sequential narrative journey from Holocaust to revival, reading survivors' stories as they move progressively inward toward the memorial's central plaza.

Designing for Experience: Settings and Behaviors

Jamie Gray / Kansas City Art Institute

HOTSPOT: Due to technological saturation and accessibility, the design practice has shifted towards more complex systems of integrated and multiple-media channels. Everything from the semantic web, participatory culture and mobile devices are transforming the way commerce and cultural institutions construct and deliver experiences.

Addressing this technology paradigm, AIGA's "Defining the designer of 2015" document identifies that as the scale and complexity of design problems expand, designers must operate at the systems-level. The document also lists core competencies including the ability to be flexible, nimble and dynamic in practice; meaning designers must conceive messages and facilitate experiences in 2D, 3D and 4D spaces. Design curriculum must prepare students for immediate practice as well as career longevity. Students, employers and the educational institution itself demand that graduates work laterally while also developing conceptual, formal and technical skills aligned with areas of interests. How can an undergraduate design education adapt?

With the popularization of screen-based devices and a media saturated generation it makes sense – from a marketing and administrative view – to divide curricula by easily understood media channels. New courses or majors in "web design", "interaction design", "new media", etc. are materializing alongside long-standing "graphic design" or "visual communication" degrees.

There are critical problems in segmenting education by media, for example: • they emphasize artifact design and prevent system-level problem solving. • the polarity of interaction design vs. graphic design unrealistically positions the "graphic design" major solely in the printed arena. This disservice hinders hire-ability and can limit ideas to single-channel communication programs. • while it is too early to criticize the still gestating and varied interaction majors; it is possible that they erroneously ignore concept, type and form in favor of perishable software savvy.

Rather, a curricular strategy structured by "communication need", not media silos, defines design problems primarily by information organization (cognitive) or persuasive appeal (emotional). It focuses on modes of thinking about design's role and relevance in literature, science, social responsibility, government, commerce, education, etc.
A media agnostic approach to curriculum is:

- responsive to the problem rather than predetermined by media fluency.
- prioritizes human experience over artifact traits.
- scalable, holistic projects with fluid cross-platform integration – from print to screen applications and mobile to environment solutions.

Additionally, interaction design principles are critical learning objectives for all problems (whether 2D, 3D or 4D). These include understanding similarities and unique affordances of screen or print based experiences (e.g. user participation, wayfinding, linear or non-linear narrative and authorship) as well as design processes (e.g. concept mapping, scenario building, hierarchy and rapid prototyping). To demystify the digital sphere, instruction should not be reserved for capstone or special topic classes and must be simultaneously employed across all courses.

At the Kansas City Art Institute (KCAI), the proposed Fall 2011 undergraduate curriculum has students select from concentrations – clearly delineated by communication need – within the Graphic Design department. We currently classify these as Identity Systems and Information Systems. In addition to the core curriculum, these dedicated courses culminate in a degree project.

Before declaring a specialization, the first half of the three-year program allots time for students to develop laterally. All students receive a common foundation for approaching design problems – at the social, cultural, technical intersection – explored via both identity and information communication needs.

IDENTITY SYSTEMS focuses on graphic design through the lens of visual identity and experiences that connect people with brands or ideas in meaningful ways. Critically, the communication need is emotional or persuasive. Expansive and relevant identities (whether commercial, political or entertainment) that adapt fluidly to societal demands and technological advances are researched, developed and implemented across media and spaces.

Design problems might include branding systems, environmental & interior graphics, packaging, on and offline corporate communications, advertising, and motion graphics. Technical, aesthetic, conceptual and professional instruction might include audience research, brand differentiation, guidelines, unique visual languages, storytelling, viral & social marketing techniques, and emergent trends in branding systems.

INFORMATION SYSTEMS focuses on the visualization of information as well as customization and interaction with data through time and space. The communication need is analytical or instructive. Through research, planning and management of complex information systems (whether educational, scientific or cultural) students investigate engaging human experiences – from the pragmatic to the poetic – that elucidate and visualize content.

Design problems might include virtual and physical spaces such as information graphics, publication design, mobile applications, signage systems, digital product development, and exhibit design. Key instruction in these areas might include information architecture, user experience, organization methods, content management, process visualization, online interaction, interface patterns, and spatial & temporal affordances.

While the curriculum is not yet implemented at KCAI, the graphic design faculty has been integrating these strategies in various core studios over the past few years, and with positive results. This discussion and concrete examples could prove a model for change in other institutions.

Designing for Experience: Settings and Behaviors

Youngbok Hong / Herron School of Art and Design

The concept of "Designing for Experience" has been widely adopted by many professional disciplines that provide human-experience related services. Holistic care in nursing and the "Imagineering" of Walt Disney are examples of experience design occurring beyond the traditional design discipline. How different is the design practice from that of other disciplines in this area of designing for experience?

Within the broad range of practices that embrace human-experience design, design as a discipline has been inherently engaged in this area by mediating between human experiences and artifacts. Design conferences in recent decades indicate a constant dialogue on human experience. In 1975, the theme of the International Design Conference in Aspen, Colorado, was "Dimensions of Experience: Ways to Understand and Measure Human Experience in the Designed World." The conference chairman was from the industrial design firm of Henry Dreyfuss Associates. In 2000, The American Center for Design held the conference with the theme "The Landscape of Experience," co-chaired by interaction design firms Scient and MetaDesign. Within different contexts, both conferences sought to understand human experience for design purposes, and therefore took an interdisciplinary approach by inviting people from diverse knowledge domains, including engineering, anthropology, psychology and literature. What does the concept of "designing for experience" mean in 2010? Is it still an emerging trend or a fundamental attribute now defining the discipline?

In examining the concept of "Designing for Experience" horizontally (scope of the practice beyond the traditional discipline) and vertically (history of the practice within the discipline), it seems that defining the current disciplinary perspective on "experience" and its context is critical in framing the discussion about the topic.

What do we mean by "experience" in design? Numerous definitions exist for the word "experience." To explore the disciplinary perspective, I seek its meaning through its positioning in the practice rather than by introducing a general definition of an experience itself.

Physiologists, psychiatrists, behaviorists, social scientists and anthropologists are all working to define human experience. Their goal is to attain knowledge for its own sake. The theoretical understandings of human experience they pursue are rational and quantifiable. It is what Dewey calls "formal or scientific inquiry" (Logic, 1964).
In contrast, common sense inquiry (or practical inquiry) explores situational, not theoretical, experiences for human problem-solving. Design, a typical form of practical inquiry, investigates human experience as a subject of understanding for problem-solving, not for building knowledge of it. This subject position of "experience" in design states that design problem frames the focus and boundary of understanding human experience. The design problem presented at that 1975 conference in Aspen was ergonomic issues, such as how to design a comfortable chair, and that problem provided a framework with which to synthesize other areas of knowledge. Now, what kind of design problems are we dealing with in the current context and what specific human experiences are we engaged in?

What do we design by understanding human experience? The increased complexity and uncertainty of human problems has shifted design focus from how to solve the problems to how to "frame" problems. Sanders identified that "we are moving from the design of categories of product to designing for people's purposes" (CoDesign, 2008). I argue that "people's purposes" is an advanced concept in the area of design problem, therefore reflecting the disciplinary evolution from producing action-driven artifacts to designing discourse of action. Designing for people's purposes requires designers to investigate values and meanings of experiences beyond functional need-based experiences. The newly emerging design disciplines in this sense are: value sensitive design, participatory design and sustainability design.

How to prepare students for the new practice? Summarizing the trend analysis into three statements, I identify the questions responding to each statement.

Understanding human experience in design is contextual. What are the essential ingredients of human experience learning in design? Which learning model would be appropriate: learning through content (liberal arts model), learning through context (situated learning model, experiential learning model) or integrating both models according to the identified core competencies? Could human experience learning be approached from institutional perspective beyond the discipline-based curriculum? If so, what could be a desirable institutional setting and an effective instructional strategy?

Designing for experience (people's purposes). As abstract qualities in design problems have increased, the ability to think is necessary for designers. Design is a form of action as well as a form of inquiry. Do we teach how to think as a designer? What is design reasoning? Can design processes be reframed as a form of thinking rather than as steps of action?

Designers have always played a role of intervening between human experience and product. Can we develop a better articulation of the concept of "mediator," which is in contrast with the concepts of producer or author in the past?

Designing for Experience: Settings and Behaviors

Yasmin Kahn and Randy Nakamura / Otis College of Art and Design

Design in the Subjunctive

Graphic design is at a strange impasse that has generated a movement among designers to seek out new ways of engaging an audience. The technological shifts that allowed designers a certain efficiency and ease of production have so thoroughly democratized design that designers' skills are elided and equated with a specific software program. Mere stylistic innovation and traditional service-based client/audience relationships are insufficient to engage designers to extend and challenge their practices.

These conditions call for not only an interrogation of graphic design practice, but design education as well. The idea of a "critical practice" in graphic design seems always relevant as a kind of continual self-reflection and questioning of practice and its place in the larger scheme of culture and society. Andrew Blauvelt has proposed that this is an era of "relational design" where form has been depreciated, while context specific, generative, and interactive elements of design become more prominent. Blauvelt's notion of "relational design" can be extended to include more speculative practices, perhaps less in the realm of "pragmatics" than in the "subjunctive"—a mood in grammar that is used to "express a wish, emotion, possibility, judgment, opinion, necessity, or action that has not yet occurred."

Archigram and Superstudio, among the scions of theoretical architecture of the 1960s and 70s, represent two examples of a historical trajectory of the subjunctive that pointed towards the rise of conceptual strategy as process and as an end in itself—and would eventually signal the emergence of today's "relational design". As David Greene commented in Archigram Paper One: A new generation of architecture must arise with forms and spaces which seems to reject the precepts of 'Modern' yet in fact retains those precepts. We have chosen to by pass the decaying Bauhaus image which is an insult to functionalism. (1)

The Archigram partners in particular harnessed pop culture strategies (collage, photomontage, and comics) and vernacular visual references housed in graphic design objects (broadsheets, magazines) to present modular cities of the future that engaged with emerging issues such as consumer culture and an interest in personalization.

Despite being the language of expression for other disciplines' conceptual practices, graphic design as an autonomous conceptual practice remains in its infancy. However, there are contemporary practices that represent a continuation of this subjunctive trajectory that is concerned less with solving clients' communication problems, and more interested in posing fundamental questions about the practice.

In contemporary design both Metahaven and Daniel Eatock present interesting paths for both relational and speculative practices. Eatock and Metahaven can be seen as flip-sides of the same coin. Metahaven, with their multipurpose studio where they function as think tank, researchers, designers and editors for a myriad of projects, use a speculative practice as a way of inventing new spaces for design. The subjunctive approach. Metahaven states it succinctly:

We are interested to generate, with our work, an 'unbuilt' condition in graphic design, where normally the 'proposal' is a scarcely recognized if nonexistent phenomenon. Unbuilt projects, or unsolicited proposals, have the capacity to speak for a future. (2)

Daniel Eatock's projects inhabit a more open-ended, tool-based or as Eatock himself has named it a "tinkerer/inventor" approach. The web application Indexhibit, Eatock's collaboration with Jeffery Vaska, epitomizes a kind of relational approach to design: using technology to create a framework and system that others can customize with their own content.

What has remained unexplored is how these practices and emerging interests affect design education, especially given the changing profile of the graphic design graduate student. In order to prepare students to work in this dynamic context while maintaining a structured, rigorous curriculum and teaching specific graphic design skills, a new set of “relational” values must be articulated within graphic design education. These values of the subjunctive favor participation and directly engaging an audience.

The challenges for design educations are multiple and intertwined:

1. How do these new values in making and practice affect an educator’s approach to graphic design curricula at the graduate level? Is it a place from which to rethink models for practice? Ways of developing a more participatory or inclusive practice? Ways of rethinking what graphic designers make?
2. How do you assess craft and formal skills in a studio environment where projects maybe be open-ended or require a specific context for their function? Do craft and form have to be fundamentally reexamined?
3. Can a conceptual/critical practice be an end in itself? Or is it necessarily an intermediate space—perhaps an incubator designed to advance the formal and conceptual palette of a design

References:

1. Usborne, David; Cook, Peter; and Greene, David. Archigram Paper One, London: Archigram, 1961. Print. 2. Metahaven. “Secret Practices: Markus Miessen in conversation with Metahaven, Vinca Kruk and Daniel van der Velden.” Forms of Inquiry, the Architecture of Critical Graphic Design, Eds. Zak Kyes and Mark Owens. London: Architectural Association, 2007. Print.

Designing for Experience: Settings and Behaviors

Samantha Lawrie / Auburn University

DILEMMA: When John Dewey writes about "an experience" he is writing about "an aesthetic experience." And, according to Dewey, the "uniquely distinguishing feature of esthetic experience is exactly the fact that no ... distinction of self and object exists in it, since it is esthetic to the degree which organism and environment cooperate to institute an experience in which the two are so fully integrated that each disappears" (Dewey, 259). The distinction between self and the things of the world is the root of all other dualisms: mind/body, subject/object, theory/practice, form/function, to list but a few. In fact, the notion of "aesthetic" suffers from just such dualistic isolation when it is polarized with the notion of "cognitive". Within this context the aesthetic is concerned exclusively with subjective, felt responses to sensuous surface qualities, whereas the cognitive is concerned with the rational, reflective grasp of objective reality. When such dualisms are considered from an either/or position, privileging first one then the other, the possibility of achieving an aesthetic experience is effectively blocked. Experience dis-integrates.

A dualistic point of view characterizes our culture's stance toward the world. It fosters habits and patterns of behavior that psychologically disconnect us from the things in our everyday environment (Granger, 2006). When we privilege intellectual, generalized, objective responses to the things of our world we tend to dismiss as subjective — if we notice them at all — our own emotional, felt responses to specific things in specific situations. Such habitual detachment diminishes our capacity for aesthetic experience. Our interactions with things become at best, intellectual exercises, and at worst, rote and meaningless.

It is noteworthy that, as designers, we talk about information, content, and message. We talk about function and communication. We desire to facilitate aesthetic, or meaningful, experiences. Yet we seldom, if ever, talk about meaning. Why? Is it because we cannot talk about meaning from our accustomed position of psychological distance? Is it because meaning cannot be broken into a dualistic frame of reference? Does our habitual separation of the aesthetic from the cognitive, feelings from ideas, render any discussion of "meaning" meaningless? Dewey, as well as other contemporary thinkers such as Mark Johnson and David Granger, insist that "emotion and feeling lie at the heart of our capacity to experience meaning" (Johnson, 53). Contrary to a dualistic view that opposes aesthetic response to cognitive response, our personal, felt responses to things actually underlie and shape our reflective, conceptual responses. Increased attentiveness to our own felt responses to things of the world can bring us closer to integrated, meaningful experience. Furthermore, Dewey, Johnson and Granger agree that our tendency to treat things — and people — as wholly separate from ourselves leads to the mistaken assumption that forms — words, images, colors, sounds, motion, systems, etc. — are meaningful in-and-of-themselves. Yet, as Johnson writes, this is not the case: "The [forms] help carry it forward, and make it present. But the meaning is in what you think and feel and do, and it lies in recurring qualities, patterns, and structures of experience that are, for the most part unconsciously ... shaping how you understand, how you choose, and how you express yourself. You have meaning, or you are caught up in meaning, before you actually experience meaning reflectively" (Johnson, 79). Forms accrue meaning through embodied, situational experience. To create meaningful form, to shape an aesthetic experience we must understand the meanings already experienced by those with whom we wish to communicate. As designers, educators, and students we need to understand how people make and experience meaning.

Given the issues outlined above, points of discussion may include the following:

- How do we re-frame relationships among designers, artifacts, communication and audience, and develop our students' awareness of meaning in terms of shared experience?
- How do we foster our students' attentiveness to their own felt responses to things/people/situations?
- How do we expand the scope and flexibility of our students' habits of interpreting and making sense of the world?
- How do we evaluate student work in terms of the participatory experience it is able to foster?
- How do we promote the importance and worth of such efforts within an academic/cultural environment that privileges standardization, rational values, and measurable utility?

While the concerns expressed here may seem hopelessly fuzzy to those seeking a well defined procedural approach to design education, the goal of meaningful experience through design will remain illusive to the degree we maintain our dualistic, disconnected stance toward the world. However, a discussion of design education in terms of “meaning” could move us closer to the goal of meaningful interactions, and make way for a foundational shift in the practice of graphic design.

Dewey, J. (2005). Art as experience. NewYork: Penguin Group.
Granger, D. (2006). John Dewey, Robert Pirsig and the art of living: revisioning aesthetic education. New York: Palgrave MacMillan.
Johnson, M. (2007). The meaning of the body: aesthetics of human understanding. Chicago: The University of Chicago Press.

Designing for Experience: Settings and Behaviors

Kathleen Meaney / North Carolina State University

HOTSPOT: The museum experience is, arguably, a growing source for education and entertainment. The museum is a designer's realm yet few design graduates take on leadership positions in the field. Given this, how should we retune curricula to produce designers that are better suited for experience design?

Our program is already making strides in this area. It graduates designers who are adept at strategic thinking, who are well-rounded, who are learning to be better researchers, and who work well in collaboration. Where we lack, or where there is opportunity for growth, I shall address here in three points:

1. Educating on how to educate (designing for the "undergoing")

Understanding how people learn, presenting information to stimulate thought, and designing so that others can make logical connections, are teachable tactics. This facet of education is usually found at the master's level but I believe undergraduates are prime for instruction (and perhaps would become better learners themselves by doing so). We need to also recognize that the museum itself is becoming a supplemental form of (K12) education so this action is rooted in practicality.

2. Serendipity (designing to expect the unexpected)

If experimentation leads to discovery, which advances a field, and today's work ethic doesn't allow for the "waste" of time, then how will we ever progress? Malcolm Gladwell writes in a New Yorker article on drug discoveries, "[mass screening] provided a chance of stumbling across something by accident -- something so novel and unexpected that no scientist would have dreamed it up. It provided for serendipity..." So how do we create an academic environment to promote experimentation and allow for serendipity in order to stumble upon new discoveries and advance the field?

3. Challenging conventions by learning new processes and new technology (designing for the "doing")

In my opinion, there is a certain predictability to how exhibits are currently being designed (intro wall with big paragraph leading to work explained by exhibit labels with the occasional projection in a dark room, guided by a hand-held auditory device, etc.). Yet, museums differ, content differs, audiences differ, technology differs. Thus, shouldn't all museum experiences be vastly different? What is keeping them formulaic? Is it tradition? Is it convention? Is it the infrastructure? Students need to be taught to be agile in this ever-changing, dynamic environment. The best way to impart this tactic is to keep them trying new media and new methods of making.

New outcomes naturally arise which often challenge convention. Students will no longer think, "How can I design to fit an already established system." Rather, they'll ask, "How can I change the perfunctory design so that the system or experience works better?"

Designing for Experience: Settings and Behaviors

Matthew Monk / Rhode Island School of Design

While designers of experiences (from filmmakers to book designers to retail environment designers) most likely prefer the idea of their wares being experienced by people luxuriating in focused attention, this is seldom the reality. In our culture, we rarely have isolated experiences. Instead, experiences happen simultaneously with other experiences, for example: the experience of texting during the experience of a family meal; or the experience of having a conversation during the experience of a TV show. While the condition of having multiple experiences at once is not new, the relatively recent ubiquity of personal electronics has made most of us eminently aware of the multiple-experience phenomenon and its drawbacks. Just as the 1990s produced "multi-taskers," our current culture seems to be producing "multi-experiencers." There is a tremendous need for designers to address the potential for the multiple experience, and the responsibility for this lies in design education and research.

The isolated experience is seen as a luxury to many, and as a bore to others; focused, uninterrupted attention is potentially rewarded by a deep sense of experience, and by a deep sense of value for the experience (such as a sense of understanding, pleasure, entertainment, etc.). Yet, the value of the isolated experience comes at the expense of all the other experiences that have been neglected in order to facilitate the isolated experience.

On the other hand, multi-experiencing is seen as an efficient method of operation for many who embrace this mode, and as a nearly-unmanageable necessity by many others; an ability to "do" or "undergo," to use Dewey's terms, many experiences simultaneously is rewarded by a sense of accomplishment and efficiency. The value of the multi-experience comes at the expense of a deep sense of understanding and a deep sense of connection to the experience.

Researchers almost unanimously agree that multi-tasking does not work, as it has been shown to be neither productive nor time-saving. In the same way, multi-experiencing appears to have many of the shortcomings of multi-tasking, as well as other drawbacks of its own. The danger of talking on a phone while driving is rooted in our inability to successfully undergo both experiences simultaneously.

Consider two contexts where designers go to great lengths in an attempt to isolate experience: museums and movie theaters. Museums often isolate art by surrounding it with luxuriant space. Further, cell phones are prohibited and face-to-face conversation is kept to a hushed, reverent minimum. Similarly, movie theaters surround us in climate-controlled darkness, with near-deafening soundscapes, in ultra-comfortable stadium seats where conversation is discouraged. While these measures can be effective in fostering isolated attention and focus, they are costly, unnatural, and exclusive. Museums and theaters are not everyday settings for most of us and the experiences they generate have a sense of increasing rarity.

One way that experience designers have long made positive use of multiple experiences is in creating experiences that are designed to enhance, not compete with, other specific experiences. For example, the experience of following directions from a GPS navigation system often enhances the experience of traveling. Of course, some experiences intended to enhance an experience can become hindrances. Take for example pre-recorded audio guides for museum exhibitions. Presumably the experience of listening is intended to enhance the experience of seeing. For me the experience of listening (or more precisely, the experience of being told what to look at and what to think) overpowers the experience of seeing.

It is interesting to note that no experience can ever be totally isolated. Consider the experience of reading a book. If a reader finds an isolating setting for this intellectual and sometimes emotional experience, there is also the bodily experience (feeling cold or hot, fatigue, eye strain, etc.) Although it is something we may long for, the purely isolated experience is an ideal that does not exist.

Most of us probably desire more isolated experiences, even as we anticipate fewer. This predicament of increasing multiple experiences and decreasing isolated experiences seems inexorable. Designers of experiences must take this reality into account.

This leads to several questions that we as design educators must address: • Isolated experiences are costly, rare, and in decline; multi-experiences are cheap, everyday, and on the rise. How can we encourage students to explore this situation? • If multi-experiencing is inevitable, can we find ways to facilitate better (more productive, more economical, more enjoyable) experiences? • How can we facilitate experiences that provide the benefits of both modes (productive, economical, valuable, rich, enjoyable, rewarding) without surrendering to the drawbacks of either (cheap, unfocused, superficial, costly, unnatural, unrewarding)? • Can we encourage students to look for new ways to design experiences that enhance--not compete with--other experiences?

Designing for Experience: Settings and Behaviors

Matthew Peterson / North Carolina State University

While new technologies have made explicit the need to address experience within design curricula, design programs can do better than to reserve space for instruction on experience design. Experience design principles can benefit all areas of the curriculum while productively unifying instruction across commonly segregated subjects.

Any experience, any result from interaction, ultimately resides in the reader's (or user's) mind. All design products -- everything from interface design to print design -- produce probabilistic experiential structures. The work of designers can best be understood in terms of its cognitive function. While many design projects might appropriately be tackled through stylistic considerations alone, there are areas of practice where manipulation of style clearly isn't good enough:

- Election ballots, where democracy is at stake;
- Critical instructions, such as those for prescriptions and industrial safety;
- K-12 educational materials, which supplement our teachers.

In these and other high-stakes applications there has to be a measure of how different design decisions actually work. The requisite knowledge lies in design as experience, specifically in cognitive terms. There is much information available in the literature of other fields such as psychology and education, which will help frame design work in performative terms -- how design products act upon or influence readers, effectively as instructional technology. The understanding of graphic design products begins in extant literature that designers might hope to learn from and contribute to:

- Working memory research probes into the cognitive mechanisms we have at our disposal for learning and comprehension. Designers should be especially interested in the separate but complementary resources for dealing-with linguistic and imaginal information.
- Cognitive load theory studies the effects of the very limited resources of working memory, and usually focuses on reader performance with media.
- Image and text processing literature addresses the cognitive implications of representational format.
- Other more idiosyncratic areas of study hold promise for specific issues. For instance, the medieval manuscript, its corresponding reading strategy, and the monastic practice of mnemonics serve to illuminate the connections-between surface design, reader strategy, and information processing.

These areas of available literature all contribute to an understanding of experience that is rooted in human limitations and capabilities. Increasing research in design will serve to authenticate psychological studies that might suffer without a designer's instincts and holistic understanding. Ultimately, design research can facilitate a complete model of cognitive function in all design products.

Though it is inappropriate and counter-productive to deluge undergraduate students with abstract theory, existing and developing research can, with care, serve to enrich and make more coherent their coursework. A distinct focus of the structure of reader experience -- as cognitive function -- has many implications for design pedagogy:

- While curricula may otherwise emerge from disjointed technical subdivisions, a holistic and unifying model of cognitive function can prove generative, promoting coursework of interrelationships.
- It also has generative implications for evaluation methods (critique). For instance, when the focus is on cognitive outcomes a student's declaration of what he or she meant to "say" or claims the project does, or what is "interesting", becomes suspect in terms of reliability. A classmate's description of his or her own experience with the project, on the other hand, becomes more meaningful, as well as more useful to the designer.
- It explicitly focuses the student on reader (or user) interpretation -- the student is designing for an audience rather than because of an audience.

- It discourage the student's damaging self-conceptualization of designer as sole auteur. • It encourages perception of some unity among media. If students comfortably experience print design in typography courses and much later must address web design, a unifying terminology and means of assessment can improve transfer, as the two endeavors seem complementary.

In the end, this prospectus suggests that incorporating interactivity into some corner of the curriculum is too weak a goal. As of 2010, we have access to far too much useful information on how humans construct meaning with words, images and their relationships to be satisfied with discussing experience only in explicitly interactive media. From the cognitive perspective, all media is interactive. An experiential model has greatest potential not within the curriculum, but as the curriculum.

The question becomes: What are the implications for a general curriculum developed out of a model of cognitive function?