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Towards a Common Framework to Operate with: Mediating Experience Design and Architecture

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Abstract

This paper is concerned with one of the oldest design disciplines i.e. architecture, and one of the newest ones i.e. experience design. It is based on the assumption that as an emerging discipline, experience design may learn much from architecture, while architecture could make itself a new way out with the help of an experience design's intensive research agenda. It argues that, to mediate both disciplines, a common conceptual and theoretical framework is required. Towards this ultimate aim, first it reviews the essentials of the so-called experience design and related issues of architecture, with a special emphasis on their common epistemological roots, and then it goes on to give a rough sketch of a theoretical and conceptual framework.

Keywords: Architectural Design; Experience Design; Design Epistemology; Theory of Architecture

1. Introduction

The main concern of the present paper is one of the oldest of design disciplines: architecture, and one of the newest: Experience design. It is based on the assumption that as an emerging discipline, and with all that overlapping issues we will be discussing, Experience design may learn much from Architecture, while Architecture, still stuck with all discussions about meaning, form-function

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duality, could make itself a new way out with the help of a 'experience design' intensive research or approach agenda.

By nature, architecture seems to be a potential ally for Experience design. That is to say, it might provide that body of knowledge and experience; a foundation to depart with which the new field deserves: it would be an excellent opportunity for an emerging discipline to make use of that wisdom. And this might even lead that new discipline to its deserved articulation of its position and even to its autonomy. On the other hand, apparently seeking ways and opportunities to expand and extend its function-meaning-symbolism focused agenda towards new platforms; architecture might find hopefully more compatible, comprehensive, inclusive new tracks to follow with the help of Experience design owing to its specialized framework.

Even just by reference to the definitions, one who seeks for a corporation may easily identify the common genes both disciplines carry. However, as any such attempt gets deeper, one can also see that this is not a simple task; and before attempting such an undertaking, one would need a common conceptual and theoretical framework to operate with. This paper could be evaluated as a first step towards this ultimate aim; it first reviews the essentials of the so-called experience design and related issues of architecture, with a special emphasis on their common epistemological roots, then it goes on to give a rough sketch of a theoretical and conceptual framework to serve for the stated aim.

2. Methodology

Methodological and epistemological roots of the approach employed in the present paper are part of a certain line of inquiry belonging to an era starting from the dawn of the twentieth century onwards[†]. The study mainly follows the idea that search for cinematographic features outside cinema, for this particular case in architecture, might help us to see the long been repressed experiential layer from a different/unfamiliar perspective and contributes to the progression of understanding of the discipline in this realm.

The study also argues that type of critical inquiry at stake here would serve as a base for entirely new genre of design called "experience design". Such a framework enables one to see both architecture and experience design afresh to set up new relations, and to give way to new readings and interpretations.

The article seeks to set the stage for such an inquiry by analyzing experiential patterns of peripatetic[‡] montage in the works of Sergei Eisenstein (a film director), and Le Corbusier (an architect).

3. What is Experience/Design?

In 2001 Shedroff said that

The design of experiences isn't any newer than the recognition of experiences. As a discipline though, is still somewhat in its infancy. Simultaneously, by having no history (since it is a

[†]The line of study mentioned here can be examined especially through the works of Choisy (*Historie de L'Architecture*, 1899) Le Corbusier (*Towards a New Architecture*, 1923) and Eisenstein (writings between 1937 and 1940). For a detailed discussion on the issue also see: (Malevich, 1925), (Klee, 1925), (Moholy-Nagy, 1947) (Eisenstein, 1978), (Agrest, 1981), (Bois and Shepley, 1984), (Cutting, 1986), (Tafuri, 1987), (Colomina, 1987), (Foster, 1988), (Eisenstein, 1989), (Holl, 2000), (Bruno, 2002), (Holl, et al, 2007).

^{*} According to Merriam-Webster Dictionary word "peripatetic" is defined as "of, relating to, or given to walking" and "moving or travelling from place to place."

discipline so newly defined) experience design has become newly recognized and named. However, it is really the combination of many precious disciplines; but never before have these disciplines been so interrelated, nor have the possibilities for integrating them into whole solutions been so great.

However, he did not provide us a clear definition but rather give us a rough sketch of the emerging discipline. He argued,

Experience design as a discipline is also so new that its very definition is in flux. Many see it only as a field for digital media, while others view it in broad-brush terms that encompass traditional, established, and other such diverse disciplines as theater, graphic design, storytelling, exhibit design, theme-park design, online design, game design, interior design, architecture, and so forth. The list is long enough that the space it describes has not been formally defined (Shedroff 2001).

Experience design, for him was an approach to creating successful experiences for people in any medium. This approach includes consideration and design in all 3 spatial dimensions, over time, all 5 common senses, and interactivity, as well as customer value, personal meaning, and emotional context. Experience design is not merely the design of Web pages or other interactive media or onscreen digital content. Designed experiences can be in any medium, including spatial/environmental installations, print products, hard products, services, broadcast images and sounds, live performances and events, digital and online media, etc.

A different (more specific) definition was given by Aarts, Emile, and Stefano Marzano (2003) as 'the practice of designing products, processes, services, events, and environments with a focus placed on the quality of the user experience and culturally relevant solutions.' On the other hand, a related approach 'user experience design,' emphasizes quite different aspects: '[user experience design] is the process of enhancing customer satisfaction and loyalty by improving the usability, ease of use, and pleasure provided in the interaction between the customer and the product,' where the special emphasis is put on the notion of 'customer' and the 'use.' However, Don Norman, strongly objects the use of terms such as 'customers, consumers and users,' instead of 'people' which for him prevents designers to do 'good' designs. Here the emphasis is on the goodness of design, which seems to be an important aspect in the definition of the term. All these differing definitions show us that there might be many definitions of 'experience design,' each seeming to put emphasis on different aspects of the terms 'Experience' and 'Design,' and taking these terms in their varying connotations.

For the present purposes, before proceeding giving our understanding of 'Experience design' would be beneficial for the understanding and evaluation of the present paper.

Experience is defined by the Merriam Webster Dictionary as 'direct observation of or participation in events as a basis of knowledge,' 'the fact or state of having been affected by or gained knowledge through direct observation or participation,' 'Practical knowledge, skill, or practice derived from direct observation of or participation in events or in a particular activity.' The key common to all definitions is the term knowledge, and of course the observation. Design, on the other hand is taken as 'to plan and make decisions about (something that is being built or created),' 'to create the plans, drawings, etc., that show how (something) will be made,' and 'to plan and make (something) for a specific use or purpose,' or as it was given by the Oxford Dictionary, 'a

[§] For a more detailed discussion see (Benz, 2014) (Fisken and Olsen, 2008) (Kujala, et al., 2011) (Sanders, 2002)

plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is made.'

After giving the essential definitions, at this point we can easily detect the conflict between the term Experience and Design. As for the experience, the problem is that actually it is almost impossible to design the experience itself, since it occurs between the observer (with all that horizon of expectations** brought about by her/him) and the artifact (with all of its potentialities and intentions actually to a great degree free of control of its original creator). So we must say that there is an indirect link between the act of designing and the (intended) experience itself. The artifact itself provides that link, which is generally vague and slippery. Therefore, we can easily define experience design as design of an artifact (virtual, real or otherwise) that has potential to give target user a planned experience. This could be done by any means, through any medium, in any design discipline, and contrary to the expectations (or if we prefer definitions), the experience itself does not need to be philanthropic. This definition makes experience design a special type of discipline running within a domain across disciplines, operating thorough a set of experience focused/intensive layers within the specificities of the concerned discipline or disciplines.

4. What Does Experience (Design) Mean for Architecture?

By definition, experience design requires a multi-disciplinary approach. It might be in the form of cooperation with other research areas or fields such as perceptual psychology, cognitive science, or it may operate within major design fields such as service design, interaction design or of course architecture which apparently relies upon '...multi-sensory experiences unfolding over time...'

On the other hand, 'Experience' is essential to architecture. For example, although written at the mid of the last century, Steen Eiler Rasmussen's seminal book Experiencing Architecture is still an honorable member of our architecture textbooks which we make our students read at the very beginning of their education. However, no matter how central to architecture, designing experiences or experience design has been almost non-existent in architectural agenda officially. Typically, beside the design of forms, we communicated meaning, symbolism, monumentality. Function was an issue, and use was important; even user was there, but we almost never mentioned about design of experiences.

A portrait of immediate history of architecture would be beneficial for the present purposes:

The main concern was functionalism (i.e. form follows function) at the beginning of the last century. Modern architects believed that there is (and should be) a direct link between the intended function and the final form of a piece of architecture. But more important they believed that through built environment, they can change the way people live, behave, and act. Supposedly, there was some type of a determinist relation between the 'designed' artifact and the 'designed' function. In this equation, preferences, memories, cultural background, even difference of the people were simply being categorically rejected. Behind this type of mental orientation lied a strong positivism. Towards the second half, the focus changed to meaning and memory, and architectural tradition, an entity that was once believed to be a 'cultural baggage' to be disposed of, now gained a strong position. Based on the criticism of Modern Architecture, architects started to believe that every

^{** &}quot;Horizon" is an important concept for understanding the accumulation of knowledge in phenomenology. As explained by Husserl, "horizon" constitutes the unity of flow of experience (Husserl 1964). According to Gadamer, everything that is given as existent is given in terms of a world brings the world horizon with it. As such, "Every experience has implicit horizons of before and after, and finally fuses with the continuum of the experiences present in the before and after to form a unified flow of experience" (Truth and Method 2004, 237-238)

piece of architecture have to communicate with people, and to do this we have to refer to an already existing body of forms and patterns that already existed within the tradition. It was the eve of post-positivism starting to influence architecture, which about the end of the century suddenly turned the agenda into something else. Tradition was started to be seen not as a body of forms and attached meanings to be replicated but rather a body of knowledge and wisdom to be interpreted, criticized, and replaced. Existing works were like texts, full of meaning and knowledge to be read, understood and reinterpreted and reused. This was also the case for prejudice structures once believed to be a 'bad' thing that affect and influence our perception and understanding and that prevent us to know the world in its essence. We saw that such structures were essential for human thinking; there is no perception, no experience and no understanding without a prejudice structure; without the horizon of expectations brought about by the observer.

So what could be distilled from our short history and the piecemeal approaches we have mentioned that could be beneficial for the present purposes? First was already stated: we learned that architects can only design form and hope for function. This could be expanded; ...hope for meaning ...hope for communication and finally ...hope for a certain experience. Experience is primarily related with the potentialities of the designed artifact, after its conception it was all about the intention of the object and the intention of the user or receiver (if you prefer the one who experiences it) coming with all that horizon of expectations and prejudice structures that directly shape the experience itself. Second, we saw that, design, at least architectural design does not go well with a certain epistemology. Architecture suffered long with an incompatible epistemology, and corresponding beliefs of determinism, total design, and so on. Post-positivism, at least certain versions (one remembers Karl Popper, Jacques Derrida, Hans-Georg Gadamer), and also phenomenology (one still remembers Gadamer, and also of course Maurice Merleau-Ponty) was a cure, that changed much of our understanding of architectural design, and related issues such as tradition, understanding, knowledge, but most important the experience. However, the major epistemologies applied to architecture although many of them were primarily concerned with the experience and experiencing, have never been primarily used to discuss, and (re)conceptualize design of experiences within the field^{††}.

^{††} Beginning with the post-positivist turn, we have seen an emerging sensibility towards experience at the background of architectural works and discourses. With such a framework, in studying experience, architects (often implicitly) follow two paths: empirical and phenomenological. Empiricist tradition, which is mostly represented by the pragmatist vein today, has evolved and diversified through various philosophers such as Locke, Hume, Peirce, James, and Dewey. It regards the experimental and the sensible as the foundation of knowledge. As opposed to the abstract, absolute and the dogmatical, empiricists argue that knowledge is derived from experiences. From the point of view of such framework, we do indeed perceive objects, but this does not mean that experience is sense-perception. For the most part 'experience' is more particularly applied to an event, which cannot accurately be perceived (Peirce 1958-1966: 335-337). As such, experience comes with the perception of "events" that indicates connectedness of events as well as changes of perception. Since all the connections among ideas in the mind is interpreted as various combinations of sense-data, hence "the order of experience" is "an indisputably vera causa of our forms of though" (James, The Principles of Psychology 1950, 620). Such description, which points out the exact opposite of the passive understanding of the term, frames experience powerfully as our "educator, sovereign helper and friend" (James, The Principles of Psychology 1950, 620). On the other hand, without doubt, as counter frameworks against the Cartesian worldview, approaches such as phenomenology and hermeneutics put a special emphasis on "experience" and place the term at the core of their discourse. As the study of phenomena, appearances of things, phenomenology is launched by Edmund Husserl in Germany before World War I. It is a philosophical effort to "bring the phenomena to expression" (Gadamer, Philosophical Hermeneutics 1976, 131), that is, to go back "to the things themselves" and "gain access to the pre-reflective givenness of things in a way that would not be distorted by theories or anticipatory ideas of any kind and especially not by the pervasive objectivism that had dominated European thought since Galileo and Descartes" (Linge 1976, xlii). Like phenomenology, hermeneutics is concerned with human experience. As an interpretive process that seeks to achieve a sense of understanding through meaning, hermeneutics is to do "with bridging the gap between the familiar world in which we stand and the strange

5. Learning from Architecture

Traditionally, while the question of how and in what sense architecture is experienced has been one of the important issues in architectural discussions, designing experiences or experience design has never been a primary concern. But, yet from another point, designing experiences were actually an important issue for many of modern architects; implicitly. For example, Villa Savoye, an important keystone of Architectural Modernism, was often referred to as an epitome of Corbusier's five points (principles) none of which was related to experiences but rather formal aspects (Fig 1).

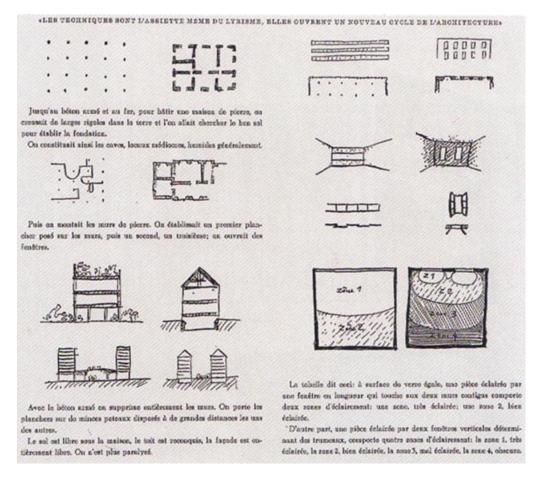


Fig 1 Corbusier's sketches, five points 1928, 29 (Corbusier and Jeanneret 1937, 129)

On the other hand, if one examines the building closely, she or he can easily see that there is another powerful element in operation, that is the organization of spaces as the dominant. In the design spaces are so arranged that they could flow into each other (both vertically and horizontally) that create a type of cinematic and three dimensional experience. About this, Corbusier stated that [building is such designed that] its articulation could only be experienced by walking; a linear experience which ends at the roof terrace. Here we see that, in the conception of the building, 'experience' (i.e. not use or function) was one of the focuses of design. Apart from its morphological aspects which we architects are very much fond of, it seems that the building was a

meaning that resists assimilation into the horizons of our world." It "encompasses both the alien that we strive to understand and the familiar world that we already understand." (Linge 1976, xii).

result of design intentions those directly address a specific experience which could easily be interpreted as some type of experience design. One of the sources of Corbusier's thinking was the film, a 'new art' about to define its boundaries at that time, that was in a strong relationship with architecture. Actually, architecture was one of the references of the newly developing art, which in turn, film itself was influential on architecture in the sense that it helped architects like Corbusier to discover and emphasize once unknown potentialities of architecture. For example, in his famous article titled 'Montage and Architecture,' ** Sergei Eisenstein distinguished between two 'paths' through which experience comes into being: in the cinematic experience 'the path followed by the mind across a multiplicity of phenomena, far apart in time and space, gathered in a certain sequence into single meaningful concept; these diverse impressions pass in front of a immobile spectator,' while in architectural, 'the spectator moved between [a series of] carefully disposed phenomena that he absorbed sequentially with his visual sense.' Acropolis was given as an example that actually encompasses a certain montage-like cinematic experience (Fig 2).

In an interesting manner, acropolis was one of the cases also taken and investigated by Le Corbusier in his Vers une Architecture where he suppresses the word 'circulation' and replaces it with 'promenade architecturale,' a new term, clearly showing a shift in emphasis from conventional notions of function or use to a new one: experience. In his use of Acropolis as a case Corbusier point to the way architecture was experienced. His drawings are like new readings or interpretations of the Acropolis, in Gadamerian sense a type of hermeneutics, which itself might be interpreted as a creative act itself (Fig 3). Yet another point of view, these sketches also show us how architecture was about designing experiences, how architecture (space and morphology) provide us certain experiences and that architecture was not merely related with designing function or use but it was also about creating forms and spaces to give us certain experiences (if we prefer how to design of the experience itself). The evidence that lead us to this conclusion is the fact that there is almost no difference between Le Corbusier's drawings (interpretations or readings) of the existing world, and his own conceptions yet to be erected; he drew the way he experienced architecture, he also designed in the same way, first sketching the experience (not the building) itself as an initial concept to depart from; a type of reversal. Today, from these drawings we can easily say that Corbusier's view of the world in designing his works, and the mental orientation behind it might be a departure point for a framework for design of experiences in architecture.

^{‡‡} Although published in 1989, "Montage and Architecture" is part of a book-length collected work entitled Montage written by Eisenstein between 1937 and 1940.

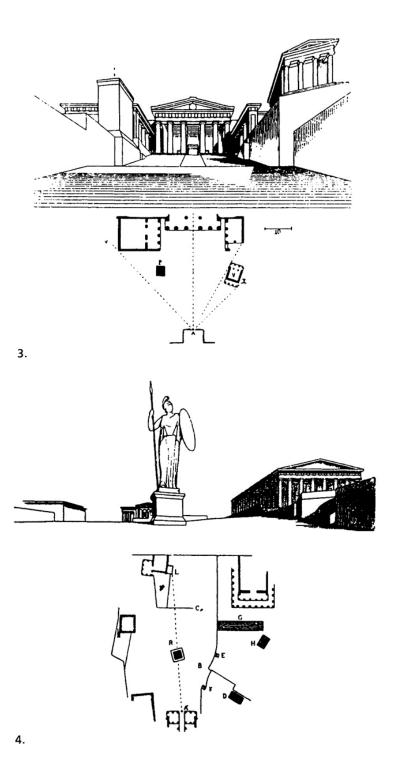


Fig 2 Acropolis as referred by Eisenstein, figures are from (Choisy 1899, 414-415)

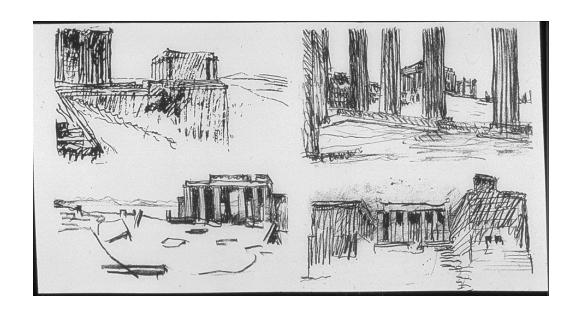


Fig 3 Corbusier's sketches, Parthenon, Acropolis, from his Journey to the East, 1911, Foundation Le Corbusier



Fig 4 Corbusier's sketch, Villa Savoye at Poissy 1929_31 (Corbusier and Jeanneret 1937, 187)

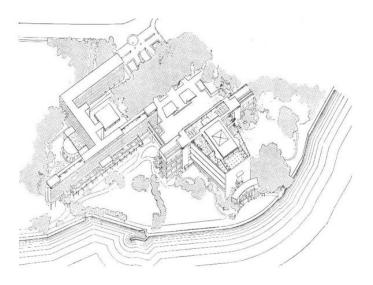


Fig 5 Palais des Nation a Geneve 1927_28 (Source: Corbusier and Jeanneret 1937, 163)

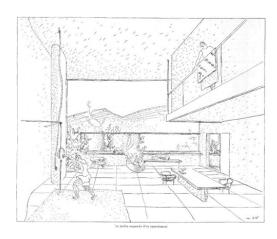


Fig 6 Corbusier's sketch, Wanner, Geneve 1928 29 (Corbusier and Jeanneret 1937, 182)



Fig 7 Corbusier's sketch, Wanner, Geneve 1928_29 (Corbusier and Jeanneret 1937, 183)

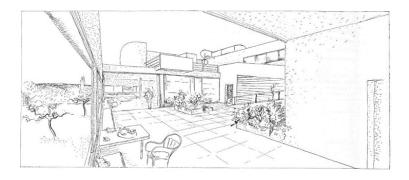


Fig 8 Corbusier's sketch, Villa Savoye at Poissy 1929_31 (Corbusier and Jeanneret 1937, 188)

Actually, sketches were age-old means of conceptualization for artists, designers and architects. They are devices for solidification and externalization of innate ideas, so that they could become objective contents of thought that can be criticized, developed, sometimes disregarded when unsuccessful, and sometimes finalized to be realized. For ages, artists and designers made sketches of to-be realized artifacts. So, what makes Le Corbusier's concerned drawings so important? The point is, in these specific drawings, main focus is not the artifact itself but the precise experience

that was designed. When it becomes the sketch of the experience rather than the artifact itself, it suddenly becomes another story.

6. Towards a Common Framework: Final Remarks

- 1. It is true that although still premature, passively, architectural discussion is extending and expanding (if we prefer evolving) towards a more 'experience' focused agenda with the influence of state-of-the art approaches such as Universal Design, Design for All, Inclusive Design. The first set has its own research agenda with a specific emphasis on philanthropic aspects of architecture, which in a sense could be regarded as the descendant of Modern Architecture, owing its belief that better human life could be universally possible through architecture. In this sense, such studies partially overlap with a certain definition of Experience design. Examining this line of research might be a great contribution primarily to architecture, and such an undertaking might provide a fruitful cooperation. On the other hand, it would only help experience design to expand its domain of operation.
- 2. As we have shortly introduced, post-positivist climate dominating the field highly changed the way we see architecture and almost all related issues. By definition, experience and thus experience design is essentially concerned with issues of observation, perception, and containing all, about epistemology. Therefore it would be logical to seek that common framework, or even utilize a certain epistemology to view and mediate architecture and experience design. This is not that post-positivist framework is not known to both fields; it is that they have never been primarily utilized to question how and in what sense experiences might be designed. Doing so would be beneficial in manifold manner: first, as we have already mentioned, neither post positivist epistemologies, nor phenomenology have been utilized to view, understand, and (re)conceptualize design of experiences in the field of architecture. Second, such an undertaking would both mean an expansion of the discipline itself towards a more experience design inclusive agenda, and also it would be a first step towards mediating architecture and experience design. In turn, experience design on the one hand might profit from a post-positivist understanding of experience design in architecture, on the other, of course it may redefine itself upon such an epistemology.
- 3. Architecture seems to be stuck with its conventional dualities such as form/function, tradition/innovation, form/meaning and also its function-meaning-symbolism focused agenda. It is seeking ways and opportunities to expand and extend towards new platforms. There are initiated but still unbeaten paths such as the one we have discussed in Le Corbusier's works. What about further questioning and hopefully advancing those paths? Experience design seems to be providing such an opportunity. We need foregrounding and re-reading of such works with a special emphasis on the design of experiences, with the help of the specialized framework provided by experience design.
- 4. Although it is still at an early stage of development, experience design offers a model for architectural theory and design. Experience design framework seems to meet the demand for an expanded and diversified architectural design approach, which covers the long been neglected/blinded qualitative values and sensitivities in the field. It seems to meet the demand of a radical new form in response to overcome the conservatism of understanding and practicing architectural design. It opens the path of inquiry and questions familiar/already-known structures (form, function, user etc.) as well as their known correlations in the field.

Experience design focuses on designing of an artifact that has potential to give target user a planned (knowable and reproducible) experience and highlights the importance of understanding architectural design through perceptions and experiential conceptualizations.

Even though it is early to make a clear definition yet, there can be identified several points that might guide examining and establishing a future definition of experiential architecture:

According to this, experience design studies in architecture should explore the issue as part of an interdisciplinary problem area; describe clearly means of the problem of "experience design" for the field; re-examine the post-positivist frameworks from this perspective; develop pedagogical frameworks of the subject and especially focus on hands-on approaches to study experiential design problems; concentrate on accumulation of designer knowledge obtained from experiences; and finally be open to explore the field to make unfamiliar readings.

References

Aarts, E., & Marzano, S. (2003). *The New Everyday: Views on Ambient Intelligence*. Rotterdam: 010 Publishers.

Agrest, D. I. (September, 1981). Notes on Film and Architecture, Skyline.

Benz, P. (2014). Experience design: Concepts & Case Studies. London: Bloomsbury Publishing.

Bois, Y. A. & Shepley, J. (1984). A Picturesque Stroll around "Clara-Clara". October, 29, 32-62.

Bruno, G. (2002). A Geography of the Moving Image. In *Atlas of Emotions: Journeys in Art, Architecture, and Film*. New York. Verso.

Choisy, A. (1899). *Historie de L'Architecture*. Gauthier-Villars.

Colomina, B. (1987). Le Corbusier and Photography. Assemblage, (4), 7-23.

Corbusier, L. (1970). Towards a New Architecture. New York, Washington: Praeger Publishers.

Cutting, J. E. (1986). *Perception with an Eye for Motion* (Vol. 1). Cambridge, Massachusetts. MIT Press.

Eisenstein, S. (1989). Montage and Architecture. Assemblage, (10), 111-131.

Foster, H. (1988). Vision and Visuality. Edited by Hal Foster. Seattle. Bay Press.

Fisken, A. M., & Olsen, T. D. (2008). Food, Architecture and Experience design. *Nordic Journal of Architectural Research*, 20(1).

Gadamer, H. G. (1976). Philosophical Hermeneutics. University of California Press.

Gadamer, H. G. (2004). Truth and Method. London, New York: Continuum, 42.

Kujala, S., Roto, V., Väänänen, K., Karapanos, E., & Arto, S. (2011). UX Curve: A method for evaluating long-term user experience. *Interacting With Computers*, 23(5), 473–483.

James, W. (1950). The Principles of Psychology. 1. New York: Dover Publication.

Linge, D. E. (1976). Editor's Introduction. *Philosophical Hermeneutics*, by Hans Georg Gadamer. University of California Press.

Moholy-Nagy, L. (1947). Vision in Motion. Chicago, Institute of Design.

Norman, D. A. (2002). The Design of Everyday Things. Basic Books.

Norman, D. A. (2004). *Emotional Design: Why We Love (or Hate) Everyday Things*. New York. Basic Civitas Books.

Norman, D. A. (2006). Words Matter. Talk About People: Not Customers, Not Consumers, Not Users. *Interactions*, 13(5), 49-63.

Peirce, C. S. (1958-1966). *Collected Writings*. Edited by Charles Hartstorne and Paul Weiss. 8 vols. Cambridge: Harvard University Press.

Rasmussen, S. E. (1965). Experiencing Architecture (Vol. 2). MIT Press.

Sanders, E. B. N. (2002). From User-Centered to Parcipatory Design Approaches. In *Design and the Social Sciences* (18-25). CRC Press.

Shedrof, N. Creating Meaningful Experiences. *Nathan Shedroff's World*. n.d. http://www.nathan.com/ (accessed August 2014).

Shedroff, N. (2001). Experience design 1. New Riders Publishing.

Whyte, W. (2006). How do Buildings Mean? Some Issues of Interpretation of History of Architecture 1. *History and Theory*, 45(2), 153-177.