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Digital Pseudo Communication in Architectural Design

Abstract

This paper focuses on a hermeneutic approach to digital architectural methodologies. Firstly, it is established that the digital design product can be examined as an object of interpretation. Secondly the digital design process itself is conceptualized as an interpretative process, through the utilization of the model of the hermeneutic circle. An attempt is then been made to establish a framework of two distinct approaches to the integration of the digital tools in design. This framework is finally examined in order to question the limitations of digital design tools regarding the design processes in which they are being integrated.

Keywords: digital design theory, architectural hermeneutics, hermeneutic circle of digital design

1. A Brief Introduction to Architectural Hermeneutics.

The integration of digital tools in design processes has affected the resulting design product (Kolarevic 2000). To what extent this affects the overarching methodology of architectural design remains however a matter of debate. Nevertheless, it is undeniable that the introduction of digital tools and the consequent changes in -digital- design products raise a series of questions, which contemporary digital architecture theory needs to tackle.

The first issue that must be addressed is one of definition. William Mitchell, in his

book “The Logic of Architecture” noted that the famous modernist motto “form follows function” is meaningless, if we cannot agree on what form, function, or for that matter, follows mean (Mitchell 1990). Mitchell, by noting this emphasizes the need to establish a common vocabulary before any meaningful discussion can be made on any given subject. Likewise, although digital architectures have been defined as “[referring]...to the computationally based processes of form origination and transformations” (Kolarevic 2000), the precise definition of these terms, and of the resulting consequences of such a development on the design process remain very much a matter of interpretation.

The art of interpretation is the subject of the field of hermeneutics, a discipline originating in the interpretation of texts, but having since expanded to cover a multitude of domains of knowledge. The origin of hermeneutics is placed in ancient Greece, and Aristotle's treatise “De Interpretatione”.Despite its philosophical roots, up until the 16th century, hermeneutics is closely related to religion, and its evolution in the western world can be traced to the period of the Reformation, where the true meaning of holy scripture became a matter of debate. Hermeneutics has since evolved, through the works of Schleiermacher, Dilthey, Heidegger, Gadamer and Habermas among others. Modern hermeneutics constitute today a field that covers both verbal and nonverbal communication as well as presuppositions, pre-understandings, and semiotics.

In his introductory lecture on hermeneutics at Yale University, professor Paul Fry notes that the significance of hermeneutics is most acutely felt when

- a. The meaning of a given subject becomes important
- b. The ascertainment of said meaning becomes difficult.

As noted above, the introduction of digital tools “... [is] challenging what we design but also how we design” (Kolarevic 2000). It can therefore be said that what is challenged is the way we understand, or interpret the design process and the design product. Given the undeniable changes brought about by the introduction of digital tools, the meaning of the -digital- design process becomes important, while the proliferation of self proclaimed -digital- design products, make the ascertainment of that meaning difficult. Thus, the use of hermeneutics to interpret the changes of the methodology of architectural design in the digital age seems to be justified, according to the criteria stated above.

As a final introductory note, it must be stressed that this paper is in no way a treatise in “philosophical hermeneutics”, architectural or otherwise. What is attempted is a

juxtaposition of the methodological tools of hermeneutics with certain challenges of digital architecture. Frederic Jameson described this type of juxtaposition as transcoding, “the invention of a set of terms, the strategic choice of a language, such that the same terminology can be used to analyze and articulate two quite distinct types of objects or “texts”, or two very different levels of structural reality” (Jameson 1981). The goal, is through a “molecular exchange” between the two preexisting systems, to link them in a way in which “each can express and indeed interpret the other.”(Jameson 1991)

2. The Perception of the Digital Design Product through Interpretation

There are two levels on which hermeneutics can be applied to architecture in general, and in our case, digital architecture. The first, and more apparent is on the level of the -digital- design product.

Lewis Mumford stated that architecture constitutes at its essence an embodiment of the values and ideals of a society. “..the dome and the spire, the open avenue and the closed court, tell the story, not merely of different physical accommodations but of essentially different conceptions of man's destiny” (Mumford 1938). These conceptions, are communicated through interpretation, that is to say design products are interpreted by the viewers to stand for certain values or ideals. Given the fact that, as shall be analyzed later, interpretation relies on the preconceptions of the subject, this also accounts for the different significance attributed to the same design product by different cultures and in different times.

This interpretative aspect of the design product is a common theme in architectural discourse. Juan Pablo Bonta remarks “when an architect discusses his work, he is behaving as an interpreter, not a designer” (Bonta 1979), while Beatriz Colomina defines architecture as “an interpretative, critical act” (Colomina 1979), and notes that “A building is interpreted when its rhetorical mechanism and principles are revealed”(Colomina 1979).

On the other hand, digital architecture theory, as established by pioneers of the field such as George Stiny, James Gips and William Mitchell, describes a model of digital design process that “...can be described, codified and explained in terms of an algorithmic logic model derived from language theory” (Coyne 1991). It is useful at this point to recall the influence of Noam Chomsky's syntactic structures, on the shape grammars developed by Stiny and Gips, as well as William Mitchell's definition of “the relationship of criticism to design may be understood as a matter of truth-functional

semantics of a critical language in a design world” (Mitchell 1990). Both examples indicate the strong influence the instrumental way of thinking had on early digital design theory. What is important to note here is that this approach, which remains dominant in current digital architectures, excludes the hermeneutic aspect described above. This can be traced to the ascendancy, through digital tools of the natural science mode of thinking vis a vis the human science's methodology expressed by hermeneutics. Thus, the essence of the digital design product, as described by Mumford, seems to remain beyond the scope of digital architectures. The danger of such an omission is the reduction of “all that is worth knowing about architecture to transparent, productive knowledge” (Vesely 2004) This means that a large body of meaning of architecture, that is untranslatable in quantifiable terms is marginalized in the digital design processes,

Therefore it can be said that although the digital design product, remains a valid object of interpretation, current digital design methodologies fail to adequately address the subject, concentrating mostly on, as Mark Goulthorpe eloquently put it “floundering across its limitless horizontality”(Goulthorpe 2003), more concerned in describing the methods of form production involved in the any “conception of man's destiny” it might carry.

On a final note, lack of the hermeneutic aspect of the digital design product can be related to what Reinhold Martin described as “..an assault on something called 'the critical' or 'critical architecture'” (Martin 2005). Although the scope of the current paper does not allow an in depth analysis of Martin's critique on this “assault” it can be noted that one of the examples invoked is the World Trade Center project by Greg Lynn, Martin pointedly remarks “Total war had been waged in the aesthetic training camp called Ground Zero, only to be projected back outward, in near perfect symmetry” (Martin 2005). The chilling conclusion is that lacking a critical approach to the digital design product -as a result of the omission of its hermeneutic aspect- other agendas find a blank slate on which to project visions of society's values and ideals. In other words, by concentrating on the quantifiable elements of architecture, digital design processes run the risk of “outsourcing” the unquantifiable elements - which can be argued include the meaning of architecture- of the design object.

3. Digital Design Process as Hermeneutics

Beyond the interpretation of the digital design product and the inevitable sociopolitical aspects that entails, the second level on which hermeneutics can be

applied to architecture is in the viewing of the design processes as acts of interpretation.

In his study of design processes, Donald Schon defines design as “a reflective conversation with the situation” (Schon 1987). He describes the process of design as a series of cycles, in which projections are made of the design product and then informed through the feedback provided viewing them.”the principle is that you work simultaneously from the unit and from the total and then go in cycles” (Schon 1987). This holds true both in the design process in and of itself, as well as in the case of design education, where the teacher and the student engage in a cyclic dialogue regarding the design product.

This model of design process, according to Richard Coyne, closely mirrors the workings of the hermeneutic cycle. “What Schon describes here is a clear and straightforward account of the working of the hermeneutic cycle... Designers proceed by way of a continuing inter-referencing of a projected whole and the particulars that make up the design situation; they project the meaning of the whole and work out the implications of this projection by referring it back to the individual parts, which are then reinterpreted. Understanding arises by a process of constant revisions” (Coyne 1997)

In broad terms, the hermeneutic circle, a theoretical construct developed by the German philosopher Martin Heidegger, attempts to demonstrate how knowledge, is inextricably linked to the preconceptions, or prejudices of the individual, and as a consequence there is in reality no such thing as objective truth. The concept was further developed by Heidegger's student, Hans Georg Gadamer, best known for his magnum opus, *Truth and Method*, which consists of a scathing critique towards the Enlightenment, and its futile -in Gadamer's opinion - quest for indisputable, or objective truth.

How the hermeneutic circle operates is best understood through an example, as cited by Richard Coyne, based on Gadamer's own description of its workings. If we consider a body of text, and how we understand, or interpret it, we are faced with a curious conundrum. On the one hand, it is impossible to assign meaning to each word as we read, since as semiotics tell us, the meaning of words is dictated by their context. On the other hand, it is obvious that we do not wait to complete the entire body of text in order to retroactively understand what it is talking about. What comes into play in this example is the hermeneutic circle, that is “... circular relation of the whole and its parts in any event of interpretation”(Coyne 1997). As soon as some meaning emerges from a part of the text, we proceed to form an idea about the entire text, by projecting the meaning of the part unto the whole. As more of the text is uncovered,

our projection regarding its meaning is modified and so forth. Gadamer himself defines the process as follows “A person who is trying to understand a text is always performing an act of projecting. He projects before himself a meaning for the text as a whole as soon as some initial meaning emerges in the text. Again, the latter emerges only because he is reading the text with particular expectations in regard to a certain meaning. The working of this fore-project, which is constantly revised in terms of what emerges as he penetrates into the meaning, is understanding what is there”(Gadamer 1960).

What is crucial to note for the purposes of this paper, is the role prejudices, or preconceptions play in in the workings of the hermeneutic circle outlined above. The inevitable conclusion of Gadamer's line of thought is that since interpretation is based on our preconceptions on the meaning of the text, as expressed through our projections, an “objective” interpretation is impossible, thus knowledge, as achieved through hermeneutics, is always “subjective” and dependent on the preconception or prejudices of the interpreter.

Therefore, accepting that -digital- design processes can indeed be seen as variants of the hermeneutic cycle, we conclude that they are to a certain extent dependent on our prejudices, and therefore subjective. On the other hand, as already noted, the bulk of digital architecture theory revolves around a deterministic approach to digital design processes. “as computations in design world with the objective of satisfying predicates of form and function stated in a critical language” (Mitchell 1990). What is then brought into question is how the subjective nature design processes, as described by the hermeneutic cycle, interacts with the deterministic nature inherent in digital tools.

4. The Hermeneutic Circle of Digital Design

Thus far it has been established that both the design product and the design process can be approached via hermeneutics. This approach utilizes a variation on the hermeneutic cycle, which can be termed as a hermeneutic circle of design.

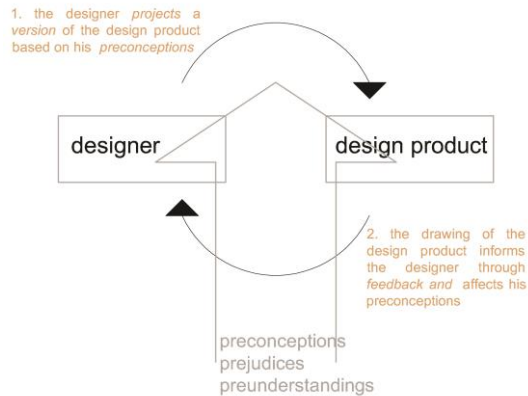


FIG 1 – The hermeneutic circle of design

The question that has already been breached, and which forms the central issue of this paper, is how do digital tools fit in such a conceptualization of -digital- design process. To attempt to answer this we will first return to Branko Kolarevic's remark that digital tools challenge "...what we design but also how we design" (Kolarevic 2000). In other words, digital tools challenge our preconceptions regarding the -digital- design process. In terms of a hermeneutic circle of digital design, this means that digital tools form can be categorized as part of the prejudices that affect the design cycles.

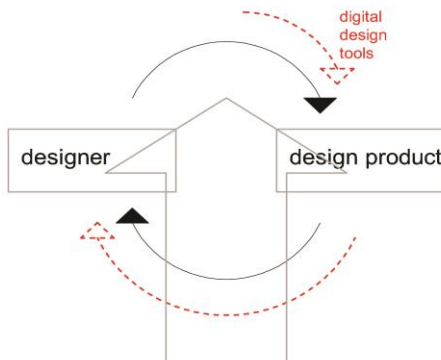


FIG 2 – Digital tools as preconceptions

Secondly, it has been widely supported that digital tools can be conceptualized as an active collaborator in the design process (Negreponte 1970). In terms of the hermeneutic circle of design this means that digital tools take on the role of the interlocutor. It can further be supported that in this case, it is the -digital- design product that is relegated to a digital preconception.

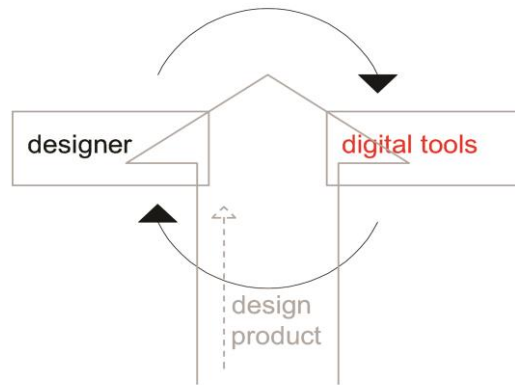


FIG 3 – Digital tools as interlocutor

These approaches it can be said encapsulate the two extremes of the spectrum regarding the debate of the introduction of digital tools in design processes. On the one hand, the definition of digital tools as a factor that influences the hermeneutic cycle of digital design i.e. a preconception, (figure 2) has much in common with the current trend of integrating digital tools in design projects. In this case, it is the design product that is of primary importance. On the other hand, digital processes that focus on varying digital tools are -it can be argued examples of the second approach (figure 3), one in which the digital tool itself is the central focus, and the design product itself is of secondary importance, that is to say, in keeping with the model of the hermeneutic circle- defined as a preconception.

Although it must be admitted that such a conceptualization is by necessity simplified, and it escapes the scope of this paper to attempt some kind of general comparison, it can be said that such a model can offer a common ground by which both approaches can be judged, utilizing the common code of hermeneutics, as applied to design processes. The question that is raised, and that will be addressed in the final section of this paper is what are the consequences of the relegation of either

the digital design tools or the digital design product to the realm of preconceptions.

5. Digital Design Pseudo Communication

As has already been established the concept of prejudice, or preconception plays a crucial role in Gadamerian hermeneutics utilized here. Their importance can be understood in the context of what Gadamer's termed Enlightenment's "prejudice against prejudice". According to Gadamer, prejudices, or pre-judgments only acquired the negative connotation known today in a specific moment in time -the Enlightenment- where it was supposed by the historicist tradition that a text can be approached, i.e. interpreted in an entirely neutral way. Gadamer argued that such an approach is impossible, because it implies that the interpreter must be situated outside the "life-world" of the text. Although the specifics of Gadamer's argument cannot be adequately elaborated in the framework of this paper, suffice to say that he considers that there is no such thing as pre-suppositionless knowledge, given the fact that all knowledge is achieved through interpretation, that is colored by the interpreter's preconceptions, as described in the hermeneutic cycle. As a final note, this is not to say that Gadamer advocates some kind of biased approach towards knowledge, what he emphasizes is the importance "...[of being] aware of one's own bias, so that the text can present itself in all its otherness and thus assert its own truth against one's own fore-meanings" (Gadamer 1960). Gadamer places the origin of said preconceptions in the realm of Tradition, in other words, the collective culture, that imprints its members with certain sets of values and concepts.

Interpreting this thesis, on the level of design process this means that the designer approaches the design product not as a tabula rasa, but influenced by his preconceptions on what that design product should be. That in turn is defined by a series of external parameters, such as the designer's education and opinions, social and political influences and so forth.

At this point, it is useful to cite the critique Jurgen Habermas made on the model of the hermeneutic circle, and on Gadamerian hermeneutics in general. Although Habermas shared Gadamer's views on the fallacy of the concept that truth can only be reached through objective (instrumental) reason, he disagreed with the status Gadamer bestowed on prejudice, as the final arbiter of truth. What Habermas noted if an external party, not participating in the hermeneutic circle, sets the limits of the language used, although the participants of the dialogue are under the impression that coherent understanding is achieved, in reality, we have a case of systematically

distorted communication that is of pseudo communication (Habermas 1970). In other words, what Habermas questioned is the seemingly unconditional embracing of preconceptions that seems to be implied by Gadamerian hermeneutics, and the dangers presented by the possible external manipulation of prejudices.

This brings us to the concluding question of the this paper, the issue of digital design pseudo communication. As has already been outlined, the introduction of digital tools in design processes can be conceptualized as two variants of the hermeneutic circle, were either the digital design tools or the digital design product are viewed as part of the prejudices affecting the hermeneutic circle of design. Taking into account Habermas's critique on Gadamerian hermeneutics, what are the dangers of a systematically distorted communication in digital design processes?

The answers to these questions, raised by a hermeneutic approach to digital design tools and processes require the establishment of a holistic approach to digital design methodologies. As long as digital design processes remain focused on the narrow, quantifiable elements of the design object, such matters will remain beyond the scope of digital architectural research. And, as has been demonstrated whether we chose to focus on the -digital -design tools or the -digital- design product, the critical questions of what prejudices are are silently being accepted and by whom are those preconceptions defined will remain unanswered.

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