# Why Architectural Program Today?

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***Abstract**. This study aims to contribute to the architectural history, theory and design research. As being part of the modern tradition, it is an enquiry into the epistemological consequences of program-based architectural design whose progenitors lie at the very idea of the modern movement. It aims to develop arguments at the continuation of the discussion of the program emerged in the 1960s. In the study, the main problem in the contemporary design and especially in the digital design that are caused by the disengagement from a convincing epistemological clarity is addressed via a review on program, and an additional introductory survey.*

***Keywords**: architectural program, digital design theory, epistemology, science, tradition*

## Introduction

In his article "Toward a Theory of the Architectural Program" which has been published in October in 2003 Anthony Vidler argues that for discussing architectural program in link with the present tasks of architecture one should focus on the late 1950s. Although the roots of the concept of "architectural program" might be traced to earlier periods, especially in the famous notion of "functionalism" of the Modern movement in the early twentieth century, or rather of the French rationalism in the 18th century, a wider, deeper, and critical argumentation of the concept occurred in the late 50s. Vidler points out that two architectural historians John Summerson and Reyner Banham opens up a new and critical perspective for the "reconception" of this concept. Summerson's text "The Case for a Theory of Modern Architecture" (1957,) and Banham's ground-breaking article "Architecture after 1960" (1960) are seminal to clarify the critiques concentrating on the differences between early and late characteristics of the concept.

Banham foregrounds an impressive former epistemological debate on the relationship between "science" and "tradition" in the context of design. The present study suggests that reopening of the debate for understanding the present tasks of design with focus on the digital design is vital. With Banham's article in 1960, the dual function of program has been mainly assigned. According to this, the primary role of the program is defined as being the key operational tool for the project of a radical inclusion of science and technology into design; and its secondary role is defined as being charged with the duty of exclusion of tradition from design. Banham's radical position created its counter argument at short notice. The paradigmatic or the tradition-based interpretation of program proposed by Stanford Anderson in 1963; the critique of technological determinism was done by Alan Colquhoun in 1969; and the primacy of paradigm as the main evaluative authority in design process over the program advocated by Colin Rowe in 1980.

Today, like Banham's program-based approach to design in the 1960s, pioneers of the digital design theory demand a radical "re-examination of the current design theories and methodologies." They argue that the new media has challenging and extensively changing the traditional theory, knowledge and models of design. They claim to pursue a novel understanding of design based on science and technology. In such a framework, the present study is an attempt to layout the epistemological inclinations of such demands to clarify the existing state of the emerging theorization of digital design and to develop further discussions on the field. It is a survey on tracing the existence of the two previously defined epistemological structures – science and tradition- in the key publications of the digital design. Scope of the survey is limited with three journals and a design index: Design Studies, Journal of Architectural Education (JAE), Environment and Planning B (EPB), and Cumulative Index of Publications about Computer Aided Architectural Design (CumInCAD.)

## Historical and Conceptual Background of the Architectural Program

On the basis of the idea of the need to the re-conception of the architectural program, there has always been a concern that the essence or the unique characteristic of architectural creation has been lost. Thus, reviewing and reexamining the program is primarily an effort to differentiate what is architecture from what is not. It is also an effort to construct a theory for crystallizing the evaluative mechanisms of architectural design process. It is then an effort to clarify what is novelty (creativity) for architectural design and to understand how it might be achieved and finally an effort to do all of these under the guidance of the architectural program.

Seeing through the dictionary definitions, one can detect that program by its origin closes up in the rational, positivistic approaches of designing things. It aims to change the existing situation into a preferred one with clarity, and precision. Between "the extremes of a prefatory remark" and a "series of coded instructions of an open process," (Oxford Dictionary) definitions of program cover a wide range in the task of control. In architecture, such control turns into a more spatial in character. Yet, in his article "The Case for a Theory of Modern Architecture," Summerson emphasizes that visual and spatial control mechanisms of architecture have been traditionally producing as being detached from their content in other words from their program (Ockman, 1993.)

Right after introducing the program as the "source of unity," an essence, of architecture and the foundation of a theory of modern architecture, Summerson points out the dilemma of the lack of a cause and effect relation between function and form. Such dilemma - the crux of Summerson's theory - becomes the anchor point for the followers of the program-based design.

As opposed to the pessimistic conclusion of Summerson on filling the gap between function and form, Banham argues the possibility of finding a satisfying answers to program - form relation based on the real science(Banham,1960-1965)

This study argues that program-based positions, summarized above, lay a ground for the idea of reconsideration of program in design and though implicitely these positions also give basis for the idea of the "revolutionary" digital design. Understanding such a perspective necessitates a retrospective glance at the two traditionally rival paradigms of design represented by science and tradition.

## The two Paradigms of Design

> *Tradition means, not monumental Queen Anne, but the stock of general knowledge (including general scientific knowledge) which specialists assume as the ground of present practice and future progress. Technology represents its converse, the method of exploring, by means of the instrument of science, a potential which may at any moment make nonsense of all existing general knowledge, and so of the ideas founded on it, even 'basic' ideas like house, city, building. Philosophically it could be argued that all ideas, traditional or otherwise, are contemporaneous, since they have to be invented anew for each individual, but the practical issue is not thereby invalidated. For the first time in history, the world of what is suddenly torn by the discovery that what could be, is no longer dependent on what was.*
>
> *(Reyner Banham, Stocktaking, 1960)*

> *… You pick up and try to continue, a line of inquiry which has the whole background of the earlier development of science behind it; you fall in with the tradition of science. It is a very simple and a decisive point, but nevertheless one that is often not sufficiently realized by rationalists-that we cannot start afresh; that we must make use of what people before us have done in science. If we start afresh, then, when we die, we shall be about as far as Adam and Eve were when they died (or, if you prefer, as far as Neanderthal man.)*
>
> *(Karl Popper, Towards a Rational Theory of Tradition, 1963)*

Science and technology oriented design approaches, in the sense of seeking to dismantle tradition, have leaned towards the idea that science and technology can easily supplant tradition and can still have a full authority over design. They usually contradict all known evaluation forms gained from tradition and claim that a "modern" architectural design is only possible through a Kuhnian revolutionary evaluation processes caused by a rupture in the existing general knowledge. Banham as an advocate of such approaches claims a radical detachment from tradition and a radical transparency in the decision processes of design. (Banham,1964, 101.) Karl Popper on the other hand, with the example of the Neanderthal man, basically argues that because world is infinitely complex, it can never be transparent as demanded by the rationalists and one can never have such radically transparent objective knowledge in evaluating the world. Tradition is necessary because, "it serves us a kind of network, or a system of coordinates to which we can refer the various complexities of this world. We use it by checking it over, and by criticizing it. In this way we make progress" (Popper, 1963,129.)

The two quotations clearly ilustrate these rival mind sets behind the two paradigms. For the science camp, knowledge has a cumulative structure, but it creatively evolves through the revolutions which demand for rupture in the same structure. According to this scheme, science is a framework to make sure that the architectural program as the sole authority of the design process gives no access to any historicist (uninventive) structure. On the other hand, for the tradition camp, program has a scientific basis, but that does not mean that it ends up with a "science of architecture or design." They claim that for understanding science in design, emphasis should rather be on its explanatory and predictive -therefore cultural and historical- quality (Anderson, 1964.)

In the following part, the study simply searches for "tradition" in the fields of digital design and computation and tries to detect whether or not they follow the conventional epistemological rivalry between science and tradition.

## A Survey of Tradition within the Science and Technology Oriented Design Approaches

For a deeper understanding of the epistemological inclinations of the contemporary program-based studies, this part of the study aims to clarify use of previous architectural design traditions within the domains of digital design and computation. As discussed previously, the argument on the opposition between the authorities of science and tradition reveals two different epistemological structures resulted in either inclusion or exclusion of tradition from the design process. The present study argues that if the massive amount of the digital design studies and computation-based studies are on the science side, they implicitly or explicitly must agree to exclude tradition. (Table 1) shows the relation between the "digital design" and the "traditional design" in general.

At the upper side of the table from left to right there were listed different connotations of the term "traditional design." Keywords were selected from the studies of the leading theoreticians (such as Rivka Oxman (2006,2008); William Mitchell (1994); Bryan Lawson (1980); Richard Coyne (1995); Yehuda Kalay (2004); Branko Kolarevic (2005)) who are aiming to establish the theory of the digital design.

In the table, searched media were numerically represented under the related keyword. In giving results, two types of usage were stressed. These are: negative (N) and positive (P). Negative uses indicate that previous design traditions are simply excluded from the design process; on the other hand, positive uses indicate two tendencies:

| {digital design} | {traditional design} | {conventional design} | {paper-based design} | {classical design} | {non-digital} |
|---|---|---|---|---|---|
| **Design Studies** from 1979 to 2009 | | | | | |
| N | 3 | 5 | 4 | - | 2 |
| P | 3 | - | - | - | 1 |
| **JAE** from 1999 to 2009 | | | | | |
| N | 4 | 1 | - | - | - |
| P | 2 | - | - | - | - |
| **EPB** from 1974 to 2009 | | | | | |
| N | - | - | - | - | - |
| P | - | - | - | - | - |
| **CumInCAD** from 1983 to 2009 | | | | | |
| N | 5 | 1 | 1 | 1 | - |
| P | 1 | - | - | - | - |

Table 1: the keywords within the context of "digital design"

| {computation} {computing} | {traditional design} | {conventional design} | {paper-based design} | {classical design} | {non-digital} |
|---|---|---|---|---|---|
| **Design Studies** from 1979 to 2009 | | | | | |
| N | 20 | 14 | 5 | - | 3 |
| P | 3 | 4 | 1 | 1 | 1 |
| **JAE** from 1999 to 2009 | | | | | |
| N | - | - | - | - | - |
| P | - | - | - | - | - |
| **EPB** from 1974 to 2009 | | | | | |
| N | - | - | - | - | - |
| P | - | - | - | - | - |
| **CumInCAD** from 1983 to 2009 | | | | | |
| N | 1 | 1 | - | - | - |
| P | - | - | - | - | - |

Table 2: the keywords within the context of "computation and computing"

the first tendency implies that for the reason that there is an existence of inadequate technology now, one should still take previous traditions into account; whereas the second one involves the idea that, studying on the technology necessitates developing a framework for the question of how to deal with the tradition.

Although the survey is introductory, limited and obtains only a brief information about the field, the keyword search shows that there are almost no tradition-based epistemological structures within the selected science oriented discourses and overwhelming majority of such studies are emphasizes position of science and technology as opposed to the tradition and convention. In the second part of the survey (in Table 2) , the words “computation” and “computing” selected as substitutes of the key phrase “digital design.”

Similar to the Table 1, Table 2 shows that research fields of the new programmatic studies which are represented by the words for the science side (digital design, computing, computation) clearly do not include the selected representative words for the tradition side (traditional design, conventional design, paper-based design, classical design and non-digital.) Yet, similar to Table 1, Table 2 shows that for some keywords, some of the selected media are more encouraging. Finally, both tables show that the words for the science side and the words for the tradition side have weak or null connections.

## Conclusion

Though they are in very small numbers, today there are some studies which concern theoretization of the digital design. The quest for the theorization of the new programmatic perspectives in design indicates an emerging consensus on the necessity of undertaking efforts for a comprehensive answer for the relationship between the ontological foundations of the science and technology oriented design approaches and tradition. In light of these, the present study gives only introductory clues on the selected search fields and their relation to science and tradition. It is a reference search for designing a research and just one of many approaches for understanding this relationship, It is a framework for answering the relationship between science and tradition in reference to a traditional line emerged in the 1960s. It is then an introductory framework for future studies on the potential of an uncompetitive program-form relationship in architectural design.

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