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Rhetorical Investigations
A General Theory of Design and Architectural Education

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The Challenge

This paper focuses on the common difficulties in architectural education – its role, and its motives. The construction industry has consistently needed more qualified project managers, more technicians, and better business practices. Yet, a primary tenet of architectural education is that the industry is more qualified to train the student in the intricacies of practice. The education about practice is limited primarily due to the emphasis on design education. What is it that we, as educators, teach in design education?

Architecture draws from many sources and is interpreted through many theoretical constructs. Attempting to define "architecture" is virtually impossible, however, we may have been asking the wrong question. Instead of tactical responses to the relationship of design education to the profession, or the discussing the structure of how something is taught, have we actually defined what we mean by the term "design"? Moreover, how is "design" understood in context to other professions, practices and the culture as a whole?

Design education has always been a precarious and shifting construct, and today we find ourselves in an increasingly difficult position. The pace of the innovation is forcing a commitment to resources that severely constrain what is taught. As architects, we are not alone in this fact, especially when you look to other industries like information and communication technology, biotech and others. The argument that the pace in innovation has resulted in the disjunction between academics and the profession does not hold true. In fact, the opposite is true in other professions. The focus of an argument needs to be on the act of education itself, on how we educate the profession. What we do know within the architectural profession is that there is no real agreement as to what design is, what is "good", versus what is "bad", and how it is valued as a distinct competency to the public. The problem of teaching design is in part created by the inability to define what design is, paired with the hybrid definitions on which designers and design educators rely. Where there is no general design theory at hand, it should not be surprising that there is no consistent design pedagogy.

There is a growing need to identify a general theory of design. Designing something and making it where once mutual extensions of each other; however since the industrial revolution, designing itself has become a specialized activity. This specialization has been expressed in the realization of a model, or prototype. In architecture, the model has been two-dimen-

sionally represented through plan, section and elevation, creating a body of theoretical work that supports its analysis and production. Formerly, the model was often made with the traditional craftsman's techniques, through drawing and model making, so the designer could still visualize themselves as craftsman and maker. With the advent of information technology, three-dimensional modeling, and rapid prototyping, all of the craft, drawing, and making based theoretical constructs are being challenged, with virtually no support in terms of historical precedent. The designer/maker is finally severed from the process of making they once controlled absolutely. Design education has not successfully addressed this change in production or the new position of the designer.

Approaches to design have been outlined within distinct professions, but not as a distinct competency in itself. The current approaches do not really address the complexity of the situation. If design is a heuristic technique, then what is its object of study? Heuristic techniques are rooted in a scientific method, however the use of a technique does not make design a science. The view is a defensible one, however other professions also investigate the world in their respective aspects, be it legal, medical, or economic. Under what rubric does the designer investigate the world?

What Is Design?

Design is not a craft, nor is it an autonomous art, standing alone in the world without relationship to other means and methods. Craft relies on the application of prescribed materials and applications, and design does not have these, although skill and craftsmanship is a component of design. Design is also a component of many professional practices, from graphic design and marketing, to engineering and law. Design also can't be reduced to pure aesthetics, as the impulse of design comes from many sources, notably outside the designer in the form of a client. Design is as much a social activity as it is an internal process.

The most common way to define design, in order to get around the lack of a general theory, is to define design as ability, a savoir-faire. To this general definition, a general theory of design is not only superfluous, but harmful to the drawing out of "latent" talent from their respective pupils. In this definition, rather than seeking a foundation in theory, design training clings to dominant styles or schools of design. This education then imparts the knowledge, the procedures, the skills, and the attitudes of the selected example, so the students learn to
design into the chosen style, look, result or feel that is appropriate to the school. Modernism became a "style" through the act of codifying of a canon of modern projects. Specific attributes were defined as representing a vocabulary of "modern" design applications. Imitating a style or a design vocabulary would hardly seem to qualify as an ideal preparation for a profession, and is in fact a contradiction to what the profession professes design to be.

Another definition has been attempted by marginalizing design into the construct of other practices, such as planning, product engineering, modularization, or process engineering. With this approach, the lack of a general theory of design has either isolated the design process, or, as is the case in architecture, eliminated the economic substantiation for design as a vital component of an intended result. It also has relegated the design functions in other industries to be seen as an extension of the machine of production — without regard or analysis of the assumptions that formulate the final result. The demise of the US automotive industry through the late 80s and the lack of design in the American suburban landscape is proof of the problems with this approach. The problem of seeing design as a component of other processes is that design is defined in terms of disciplines whose foundations are essentially different than those of design.

A primary question in design education is a result of the ease of new tools of production and visualization. Time has been collapsed in the realization of the model, since it takes days to design, draw and visualize what once took months, or years. Yet, the theory and conceptual framework for the use of new tools has not kept pace. The history and theory of architecture has centered on the careful construction and analysis of the plan, section and elevation, where the act of production informed the result. While two-dimensional production still occurs with the computer tools, three-dimensional visualization tools are increasingly being used as a design tools. In the past, three-dimensional and sculptural approaches have been presented as modes of inquiry. However, the method is seen as an extension of the individual artist, branded around his or her "genius", or interpreted as an extension of an art movement. If three-dimensional design tools are to be used in the process of design itself, they need to be contextualized in relation to the invaluable storehouse of design knowledge within the traditional modes of architectural production. The difficulty today is that the traditional modes of production, drawing and thinking through plan, section and elevation, are increasingly being marginalized — both within the classroom and the profession. A general theory of design may hold the key to accessing and utilizing existing theory and precedent in a fresh and investigative manner.

A further problem in the education of design is the exclusion of the client as a necessary part of the design process. An argument can be made that communication, client relationship management, and fundamental business principles in design are lacking in the education of the practice. Without a method of teaching and investigation that includes the client voice as an integral part of the act of designing, we as a profession will find a continuing difficulty in addressing the relevance of our work.

Creating A Construct or Uncovering What Has Always Been There?

The key to a general theory of design is to give a context to the designer in the construction of meaning and cultural relevance through the act of design. Distinct outlines of a general theory of design begin to appear through the investigation of the context that designer occupies while designing. The focus of a general theory of design separates the act of design as a distinct method, subject to review and qualification outside of the means of production, intended result, and realm of inquiry, and subject to the critical context that gives impetus to the work at hand. The position of the designer in this case is in the center of the axes between client and public, and object and context:

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   client
   |
   object   designer          context
   |
   public

A construct and general theory of design addresses each of the value systems within the design process, identifying with the theoretical, cultural and physical framework for each one of the five contributors above: the client, public, object, context and the designer themselves. Since the historical separation of the act of making and design has occurred, the communication of the relationships within a process of design becomes the elemental vehicle of design. Design becomes both an inquiry into the object and context and an inquiry into the client and the public. It is the unique expression of the synthesized position of the designer; positioning the designer within an infinite range of value systems on these axes. As shown in the axes, the designer themselves create a fifth position. Self-knowledge is critical to grounding a general theory of design, since it is the designer that crafts the expression and result of design's inquiry.

Two main components of a general theory of design have already surfaced: communication, and inquiry, or a method or process that garners a desired result. Historical references to both communication and inquiry have been codified within architecture for ages — plan/section/elevation have been the dominant tools of representation and communication. Today, however, the traditional means of architectural communication and investigation are losing ground, becoming secondary to virtual modeling, removing the abstraction within the representation and its legibility, and thereby seemingly removing the needed indoctrination into a way of seeing, interpreting and documenting space. Information technology is having the same effect to all the "design" professions and practices as well as the culture as a whole. In order to give context not only to a viable general theory of design, but also to the emerging difficulties in education, an understanding of the latent ideas of
design and design process is necessary in order to address the continuing questions of what design may be.

In the 1800s, the academic establishment, with its focus on classification and individualization, abandoned the explicit use of Classical Rhetoric as a structural component of all the liberal arts. Specifically, Classical Rhetoric was associated with the intricacies of court presentation within the aristocratic governing systems of Europe. It was the means for the communication, argument and execution of an idea. The rise of Kantian aesthetics and the case of “the individual as authority” devalued the social and cultural underpinnings of Classical Rhetoric. Within the academic establishment, a need arose to codify and qualify the growing classification and delineation of the liberal arts, thus creating autonomous areas of specialization. The search for the “universal” in the modern theoretical constructs further devalued the use of Classical Rhetoric and context driven, reflexive philosophies and theories. Within Postmodern thought, there was also a shift from the search for meaning into the search for structure and syntax. However, the new philosophical approaches that arose from Kantian aesthetics onwards have not shifted the methods and means of constructing ideas in design, and in fact appropriat-ed rhetorical systems for their own use. The stripping of method within the new philosophical systems was resolved through the fracturing of method into the distinct applied arts of writing, art, political science, education and debate. Yet, the underpinnings of the distinct arts never changed far beyond the original structure given to it by Classical Rhetoric.

The methodology of inquiry is centered on the use and application of Classical Rhetoric as a tool for communication and investigation. Classical Rhetoric has been defined as the art of speaking and writing well on any and all matters that fall outside of pure science or technique. As opposed to Science, which attempts to formulate and validate “true” statements, Classical Rhetoric is a distinct structure of thought available to formulate probable statements about matters of human concern. The structure of a rhetorical investigation is formulated to provide and analyze the context within which an idea is generated, supported and executed.

The key to understanding the linkages of design and rhetorical investigation is that each has a reliance on the chain of dependencies that construct thought. Within Classical Rhetoric, the chain of dependencies that one adheres to in the process of constructing an argument have been articulated since Aristotle: Inventio, Dispositio, Elocutio, Memoriam, and Actio. The modern interpretation, in a general sense, is invention, arrangement, style, memory, and delivery.

The following descriptions are from the “Silva Rhetoricae” found online at http://humanities.byu.edu/rhetoric/silva.htm:

Invention concerns finding something to say (its name derives from the Latin invenire, “to find.”). Certain common categories of thought became conventional to use in order to brainstorm for material. These common places (places = topoi in Greek) are called the “topics of invention.” They include, for example, cause and effect, comparison, and various relation-ships. Invention is tied to the rhetorical appeal of logos, being oriented to what an author would say rather than how this might be said. Invention describes the argumentative, persuasive core of rhetoric.

Arrangement concerns how one orders speech or writing (its Latin name, dispositio means “placement”). In ancient rhetorics, arrangement referred solely to the order to be observed in an oration, but the term has broadened to include all considerations of the ordering of discourse, especially on a large scale.

Style is a rich and complex concern of rhetoric that goes far beyond the connotation of “personal flair” or the use of figurative language. Unfortunately, the field of rhetoric has sometimes been reduced to nothing but just such a limited understanding of style in which substantive ideas were simply given some attractive dressing or ornamentation.

In classical and renaissance rhetoric, style was in indeed concerned with ornamentation, but in the original sense of that word (from “ornare”: to equip, fit out, or supply). In other words, “ornamentation” meant to equip one’s thoughts with appropriate words and expressions sufficient to accomplish one’s intentions. Because style has so much to do with propriety (of the message to the thought and of the expression to the audience), it is closely tied to the rhetorical concerns of decorum and audience. Consequently, style encompasses both very minute and very large scale language choices, all of which affect the overall style.

At first, Memory seemed to have to do solely with mnemonics (memory aids) that would assist a budding orator in retaining his speech. However, it clearly had to do with more than simply learning how to memorize an already composed speech for re-presentation. The Ad Herennium author calls memory the “treasury of things invented;” thus linking Memory with the first canon of rhetoric, Invention. This alludes to the practice of storing up commonplaces or other material arrived at through the topics of invention for use as called for in a given occasion. See copia.

Thus, Memory is as much tied to the improvisational necessities of a speaker as to the need to memorize a complete speech for delivery. In this sense Memory is related to kairos (sensitivity to the context in which one may communicate) as well as to the concepts of copia and amplification.

Delivery, one of the five canons of rhetoric, has often been ignored in rhetorical studies. In antiquity, however, the importance of delivery was emphasized in discussions of exercitatio (practice exercises) and was generally divided into concerns of vocal training and training in the use of gestures.

Delivery originally referred to oral rhetoric at use in a public context, but can be viewed more broadly as that aspect of rhetoric that concerns the public presentation of discourse, oral or written. In either case Delivery obviously has much to do with how one establishes ethos and appeals through pathos, and in this sense is complementary to Invention, more strictly concerned with logos.
Each of the above steps within the course of a rhetorical investigation occurs with reference to the steps that occur before it, making a clear identification of where one may be in the process of crafting an argument. Many of the liberal arts have shifted from this clear succession of investigative activity into an iterative strategy, very similar to many current shifts in architectural investigations and lesson plans. Within the practice of architecture, however, we are solidly rooted to our rhetorical past. The traditional phases of design in architecture still follow the same chain of dependencies:

Within architectural practice:

**Inventio – Invention** translates to **Schematic Design**

**Disposito – Arrangement** translates to **Design**

**Elocutio – Style** translates to **Design Development**

**Memoria – Memory** translates to **Construction Documents**

**Actio – Delivery** translates to **Construction Administration**

The above steps were once sanctioned in the profession, to the point of becoming contractual terms. Where design education may have faltered or forgotten is design’s role within the larger process of delivering an architectural project and the importance of locating the education clearly within the process. This bias towards the total project, with a focus on the relationship to the built result does not alter the importance of singular, deep, theoretical investigations. Rather, a general theory of design could locate the investigations and provide for a deeper understanding of its relevance, both culturally and theoretically to the profession. The chain of dependencies within the architectural working process governs much of what we do in the design and delivery of an architectural project. Revisiting other fundamentals of our practice may offer similar insights.

Within each of the steps or “phases” that are traditional to the practice in the US, there are also linkages, concerns and directives that connect to the practices of Classical Rhetoric. One example in a vast source of method and analysis is the idea of “Topica”. It is the understanding of the common and the contextual, and composes a foundational aspect of the rhetorical investigation – it is the practice of creating means and applications of thought, into persuasive argument, in context. This is one of many applications of rhetorical investigations that again may benefit the student of design, the profession and the public because of its simplicity in communication. Not only can references from within the architectural discourse be cited, but “figures of speech”, classical texts, modern culture and everyday life can be used to model the investigation. If these sources are used in the manner of “models” as discussed above, the means of communicating design concepts to the beginning student, as well as the public, would multiply exponentially.

An additional benefit of the structure of rhetorical investigations may be to provide a greater link between the delivery of an architectural project in the professional world, and the design education within academia. The growing theoretical distance between professional practice and education has put the cultural relevance of the practice of architectural design in jeopardy. Important issues are being taught or discussed, but because the structure of the communication about theoretical architectural discourse, the subjects investigated and their value to the culture is rarely put in context for the public. Communicating the value of theoretical approaches, through the positioning and related explanations of how investigations fit into the work process of delivering an architectural project, will be the test the profession, design educators, and individuals in the practice of design. As such, communicating a general theory of design and orienting the public and education fields to it may be a solution, not simply to create greater awareness outside the profession, but to simultaneously create the means for the profession to teach and communicate clearly within its bounds.

The relationship of rhetorical investigations and strategies to design, within architecture at least, has some potential merit. Reorienting ourselves to the processes of rhetorical investigations may craft the initial construct for a general theory of design in education, and provide a potential source of models of practice and investigation that supports a clearer understanding of method, process and what it means to design. While showing the possible linkages and potential of Classical Rhetoric as a model for a general theory of design, this paper is solely meant as an introduction. A challenge has been made to the education of future designers, not only in the increasing complexity of the environment that we operate in, but also in the shifting of the traditional modes of communication, representation and in “Action”. First identifying the structure of the communication, using readily available and accessible modes of investigation available in Classical Rhetoric, would provide the basis for articulating a general theory of design, both within and beyond the borders of the architectural, design and arts professions.

This paper is in direct response to the challenges laid out in “Copy Proof”, by Hugues C. Boekraad and the work that the graphic design students at the Royal Academy in Amsterdam. Arguments cited form this source have been applied to the architectural discourse, and thus are paraphrased in part to maintain links to the original material. In my own design studios and students, I have been applying the ideas and constructs and have found some viable applications, in particular to students with little or no formal training.

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