

# The Studio Experience: Change, Order, & Maximum Entropy

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## INTRODUCTION

Over time, educators in various fields have studied the relationship between order and disorder. Physical science, social science, and the humanities have all looked with interest at the potential of a universal cultural expression and the possibility of a permanent reality.<sup>1</sup> This paper examines order and chaos in post-structural architecture pedagogy to determine how meaning and value relate to, or are developed through, composition and form. Our current educational model has trapped architecture in a paradox of order and escape whereby meaning, conveyed through organized composition clashes with emotionally charged, yet seemingly chaotic design concepts.

Resolving the dilemma of architectural order in a post-modern/post-structural framework requires examining the definition and nature of both order and entropy and their relation to form. To begin, a link between order and architectural meaning will be temporarily established to create an ideational structure within which disorder may be tested as a negating hypothesis. Second, post-structural fragmentation will be introduced to critique the previously developed notion of architectural order. Through post-structural thought, a rationale for fragmentation and architectural disorder will be proposed and examined. Finally, conclusions will be offered which negotiate between the constricting excess of order versus the apparent schizophrenia of disorder. This paper is important to architecture pedagogy because it addresses a lack of definition in architecture design and offers possibilities for the re-introduction of intellectual and compositional rigor to the design studio.

## DEFINING ORDER AND ENTROPY

Webster's defines order as a system of arrangement, classification, or coordination by sequence or rank. Conversely, disorder, measured through entropy, is defined as a lack of regular arrangement; an irregularity.<sup>2</sup> Physical science most clearly describes order and entropy through the first two laws of thermodynamics. The First Law of Thermodynamics states that matter is neither created nor destroyed--it is transformed from one state to another. In conjunction, the Second Law of

Thermodynamics suggests that entropy strives toward a maximum. Although constant in amount (First Law), mass and energy are subject to dissipation and degradation. In the hypothesized heat death of the universe, through entropic dissipation, the tendency of the physical world will be to move toward uniform inertness. All systems will eventually interact and no inherent power of action or motion will remain--disorder will prevail.<sup>3</sup> That with the most potential for dissipation is that which is orderly. Therefore, by definition, order is unstable. Conversely, the disorderly has exhausted its potential for interaction and is most stable.

One final association which requires definition is the relationship between education, disorder, and order. Fundamental to education is a belief in a worthwhile future. Rhetoric, cynicism, and nihilistic philosophies are all inherently anti-educational because of their denial of Future. The change of consciousness defined as learning involves the pursuit of a wider and deeper understanding of the World. This is similar to an Aristotelian philosophic model in which everyone desires existential perfection. Education is not an ordering process; it does not seek to tie together partial informative systems into one concise, unalterable, statement. Education maximizes multiformity, and paradoxically strives for unattainable stability. Nobel Prize laureate, Ilya Prigogine states, "No system is stable to all structural fluctuations; there will be no end to history."<sup>5</sup>

## MEANING AND ORDER

This paper proceeds from a belief that through the emotional impact of form, architecture becomes meaningful. It also contends that it is possible to know or understand a building in a way that goes beyond a mere utilitarian knowledge of construction and function--meaningful works of architecture have the power to evoke an emotional response in their user. This emotional response may manifest itself as a vague recollection of a past experience, or as an intuitive understanding of a spatial construct. In either case, conceptual and formal ordering make architecture accessible and allow one to find meaning and value in it. In a paper examining the nature of meaning, architecture professor Christopher Egan states,

“Meaning is born of memory when patterns emerge within us, both patterns we have known, and new patterns compiled from memory fragments.”<sup>6</sup> Egan continues, stating that meaning from memory arises as either an internally or externally initiated sequence. Internal meaning requires the object or phenomenon involved to passively receive the meaning that a user might project. This internal form of memory evocation reveals “more about the observer, than the observed.”<sup>7</sup> The second form of memory initiated meaning arises when one externalizes their actions on the world around them and reveals patterns or orders within the artifact. Thus, meaning can be understood as an effect of the transference of information. Egan, echoing Le Corbusier’s cry for architecture to be more than a utilitarian container, continues,

The artifact we make will only mean when it triggers meaning in another. If a work moves us, it is because it has touched something within us, some layer or layers of memory.<sup>8</sup>

In this explanation defining the synchronous relationship between order, memory, and meaning is a humanistic charge in the creation of architectural space. As a future direction for a post-structural society, philosopher Madan Sarup suggests, “We need to provide individuals and social groups with public ‘spaces,’ in which they can deal with subliminally felt experiences and learn to understand these experiences on a more conscious, critical level.”<sup>9</sup> Understanding the role recognition and memory (individual and collective) play in architecture design suggests that primary to spacemaking is an understanding of the human condition. And conveying this human understanding is accomplished through ordering of the formal and functional systems of a building.

## DISORDER AND THE DYNAMIC

If compositionally ordered architecture is the perfect vessel for carrying meaning and displaying intention, why is the disorderly so frequently embraced? Professor of philosophy and co-founder of the Metaphysical Society of America, Paul Weiss states, “Order is a product of creativity, but we are creative only when we reject some order. Creativity, though it both produces and possess order, denies the building power of any order.”<sup>10</sup> Weiss continues,

We rebel against an order out of consideration for the entities ordered, we want them to stand in some independence of one another, so as to be able to express themselves fully. We want some way of relating various items, but not the exclusion of all spontaneity, or the possibility of discovering other ways of relating the entities on which the order is imposed.<sup>11</sup>

Weiss suggests that all-out adherence to order limits the possible readings of a work. It has been stated that a single, orderly, theoretical (or compositional) posture does not exist which can account for all political and social situations--there is no organic whole, only partial fragments. The idea of spatial

and temporal fragments became a major point of investigation for early twentieth-century artistic movements such as the Futurists and the Cubist as they explored the possibility of simultaneous visual occurrence. Events do not occur in linear seclusion from one another--simultaneity and synchronicity speak about multiple events occurring with some relation to one another. Fragmented compositions are emotionally provocative because their purposeful disorderliness leaves edges uncovered and exposes dynamic associations which exist between ideas and spaces. To see a building element “flicker” between its individual identity and its part as component of a greater whole is to see that which is truly dynamic of architecture.

Continuing the aesthetic explorations begun during the early twentieth century, many contemporary architects are currently creating impressive, evocative works which explore the edges and overlaps of various fragments.

However, a danger exists if architecture is driven only by an obsession to compose the most diverse or extreme fragments; inventiveness and rule making become ends in themselves--the laboratory is substituted for the studio, and process justifies product. The unfortunate circumstance of an architecture predicated on inventive process is the transference of the architecture public from participants to observers.<sup>12</sup> The patron’s involvement with architecture occurs as brief moments of spatial entertainment. In this process, the architect’s task moves from the creation of spaces of profound emotional impact to acts of momentary superficial excitation. The compulsion to collage more bizarre fragments will increase as the existence of the architect is dictated by the ability to momentarily grab the attention of the observer before they suffer visual boredom and move to another space. Timelessness is no longer an issue, temporary visual preoccupation is. Art historian and critic Edgar Wind has examined both the role of the artist and the patron. In a series of lectures discussing anarchy and the visual arts he states, “If modern art is sometimes shrill, it is not the fault of the artist alone. We all tend to raise our voices when we speak to persons who are getting deaf.”<sup>13</sup>

Wind sees the design intentions of artists and architects being shaped by a disengaged and unaffected audience. If one does not care for the architecture, one leaves the space--entertainment requires no profound emotional investment. The public, as observer instead of participant, reinforces the compositionally anarchistic actions of the architect which in turn reinforces the public’s role as observers. The time required or available to focus on any one project for an extended duration has become minimal. We are given much architecture to examine, but it touches us lightly and that is why we can take so much of it. The “sacred fear,” which Plato discussed in reference to the power of art to impact our lives, is no longer with us. We have become immune to shock. Although some things temporarily stir us, they are quickly proven tame. The impact of architecture on our lives becomes marginal, “...in the margin it does not lose its quality as [architecture] it only loses its direct relevance to our exist-

ence: it becomes a splendid superfluity.”<sup>14</sup> Wind continues, “When [architecture] is removed to a zone of safety, it may remain very good [architecture] indeed, and also very popular [architecture], but its effect on our existence will vanish.”<sup>15</sup>

This description of the architectural loss of meaning is not a call to censorship, it is merely a plea for architecture to reexamine its intentions and refrain from misdirected, superficial indulgences. Writers such as Baudelaire and Goethe were very cautious to guard against the reckless possibilities of an uncontrolled imagination. The wild release of imaginative force is a threat to the artist and the art, and must be carefully controlled.<sup>16</sup> Plato’s “sacred fear” for the power of the uncontrolled imagination led him to hopeless proposals of censorship as a way to deny superficiality. His calls for censorship were attempts to preserve meaning in a crumbling Greek society in which the citizens judged political orations, not by their content, but by their poetic delivery. According to Baudelaire, “Pure fantasy produces ‘art for arts sake,’ a proud art which is no ones servant, posing all of its problems from within.”<sup>17</sup>

### MAXIMUM ENTROPY AND BEGINNING DESIGN

To summarize, two opposing points have thus far been presented. First, order, through its relationship to memory and meaning, was shown to be necessary for conveying intention. However, complete reliance on order is stifling in that its directness precludes the possibility of uncovering new relationships and thus limits the work to single readings. Second, the dynamics of the disorderly were seen as appealing for their seemingly uninhibited emotional content. However, the danger in the unrestrained is that it becomes an end in itself, precluding meaning and significance for visual spectacularism.

Resolving the paradox of order and escape, and the connection to the architecture design studio, lies in reconsidering that which is significant to architecture. Study of formal and spatial manipulation cannot be dispensed with for therein lies the vehicle of architecture’s emotion. Shapes have power. The force of points, lines, planes, and volumes may be experienced through that which they evoke from their placement. One need only consider the powerful effect of the Viet Nam Wall as evidence of the power of abstract form. In the design studio, to ignore discussion about the tangible qualities of the artifact is to be remiss in teaching architecture. Discussions about the form and space of the artifact must occur in beginning design studios. However, studio exercises that continually reference prescribed formula combinations limit imaginative response--theory of form in individual and relative, it is not to be discounted because it has to be reinvented each time a project is conceived. The emotional or meaningful impact of a composition of elements will ultimately be limited if the composition remains self-referential. In other words, from orderly to chaotic, composition does not exist purely for its own sake--there is a larger understanding based in the context of use. Not in the sense of a function driven architecture that relies on empirical sociological analysis, but an architecture that relies on an observed and intuitive under-

standing of the human condition in an architectural setting. Qualitative analysis and grouping that seeks to understand a situation through empirical means devalues an occurrence or experience by equating it to other experiences. Sarup explains, “We need to develop an aesthetic of cognitive mapping, a pedagogical political culture which seeks to endow the individual subject with some new heightened sense of its place in the global system.”<sup>18</sup>

Order and post-structural fragmentation offer positive and negative possibilities to the future of architecture. The richness of meaning found through layering diverse and sometimes opposing sources will be lost unless enough order is present to create a connective center for the fragments. Pedagogically, students should be encouraged to search for more distantly related compositional and ideological fragments, and then they should be held accountable for their actions. Shape creation and composition are important activities for beginning design students. Order, disorder, and organization cannot be considered as properties independent from the process by which they are produced.<sup>19</sup> Working within a conceptual frame that relates form-making to architectural concepts of site, structure, and function is a way in which intuitive, emotional design ideas can coexist with the rational pragmatics of building, and the architectural paradox of order and escape can finally be approached.

### NOTES

- <sup>1</sup> Paisley Livingston ed. *Proceedings of the Stanford International Symposium on Order and Disorder*. ANMA Libri & Co. Saratoga, CA. 1984. p vi.
- <sup>2</sup> *Webster’s Third New International Dictionary*. G. & C. Merriam Co. Springfield, MA 1976.
- <sup>3</sup> Byron Anderson & Nathan Spielberg. *Seven Ideas That Shook the Universe*. John Wiley & Sons, Inc. NY. 1987.
- <sup>4</sup> Donald Palmer. *Looking at Philosophy*. Mayfield Publishing Co. Mountain View, CA. 1988. p. 80.
- <sup>5</sup> Ilya Prigogine. “Order Out of Chaos.” *Proceedings of the Stanford International Symposium on Order and Disorder*. ANMA Libri & Co. Saratoga, CA. 1984. p 60.
- <sup>6</sup> Christopher Egan. “Layers of Memory and Meaning.” *Collaborating and Constructing: ACSA Southwest Regional Conference*. University of Southwestern Louisiana School of Architecture. Lafayette, LA. 1994. p 77.
- <sup>7</sup> Ibid.
- <sup>8</sup> Ibid.
- <sup>9</sup> Madan Sarup. *An Introductory Guide to Post-Structuralism and Postmodernism*. University of Georgia Press. Athens, GA. 1989. p. 150.
- <sup>10</sup> Paul Kuntz ed. *The Concept of Order*. University of Washington Press. Seattle, WA. 1968. P. 16.
- <sup>11</sup> Ibid. p. 18.
- <sup>12</sup> Edgar Wind. *Art and Anarchy*. Northwestern University Press. 1985. p. 21.
- <sup>13</sup> Ibid. p. 8.
- <sup>14</sup> Ibid. p. 10.
- <sup>15</sup> Ibid. p. 13.
- <sup>16</sup> Ibid. p. 6.
- <sup>17</sup> Ibid. p. 15.
- <sup>18</sup> Ibid. Sarup. p. 146.
- <sup>19</sup> Henri Atlan. “Disorder, Complexity and Meaning.” *Proceedings of the Stanford International Symposium on Order and Disorder*. ANMA Libri & Co. Saratoga, CA. 1984. p. 111.