

# Digital Distortion

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The paper will discuss a set of conceptual drawings investigating morphogenesis within spatial environments through the means of representation. The speculative work funds a progressive discourse and creates a dialog towards the investigation of strategies to generate form and design.

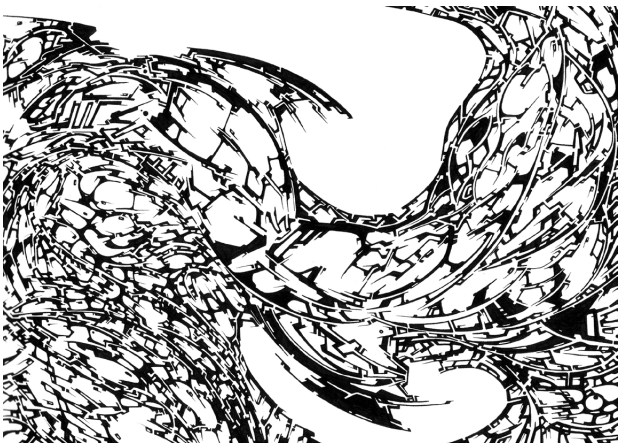


Figure 1. White Series Illustration, #15

Within the architectural realm, drawings are considered to either represent the 'idea of a design', or to be 'drawings of a design'.<sup>1</sup>

The introduction of digital processes has changed parameters within the equilibrium and introduced new variations of representation. Within this discourse, it is necessary to discuss the shift of relationships within the nature of drawing.

With digital tools nurturing disciplinary and professional notions within the last ten years, the ideolo-

gies of drawing paradigms have not yet fully developed into its capacity of emergence. However, while the profession of architecture benefits immediately from parameters of efficiency, reproduction, and logistics, the discipline can still maneuver within the benefits of the digital realm.

Therefore the drawings discussed furthermore are falling into the category of the discipline with the exception that the interest lies not to produce the 'idea of a design', but rather to produce a 'systematic for design'.

In order for these systems to continuously develop morphogenetic form, they require emergent properties, such as 'non-linear' organization, and 'heterogeneous' qualities. From a representational aspect, it is important to delineate from drawing techniques used during the Renaissance, Modernism or Post-Modernism, such as the use of perspective view, axonometric view, or medium of collage, but to work in a new Zeitgeist with a non-dimensional, abstract fashion.

The premise is to develop analog and digital drawing techniques into systematic relationships through basic principles of design such as form, dimension and space.

## DESIGN

In terms of philosophy, design is seen as a pattern, a purpose, or is described as a matter of complexity.<sup>2</sup> Complexity has always been a prominent topic within the field emergent properties since it represents a structured, non-random organization. This organization consists of related basic compo-

nents, which create mutual dependencies and act as a system. Components are defined as flexible members within these systems and vary in any appearance, number, size, or function.

Digital tools based on algorithmic and parametric principles furthermore nurture this realm of complex systems and are highly dimensional within a spatial environment.<sup>3</sup>

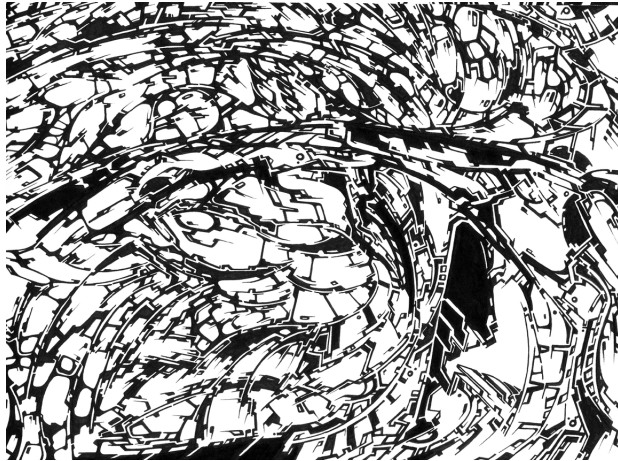


Figure 2. White Series Illustration, #45

The aim of systems to continuously develop morphogenetic form can be originated within these environments. Through the use of components with abstract parameters it is possible to develop form within this setup. The term abstraction is a key entity to the discussion and requires investigation in its context and origin.

### ABSTRACTION

Abstraction is one of the central questions of metaphysics, which basically manifests principals of reality and how we understand the world, our existence, space, time.<sup>4</sup>

Abstraction is also a process or result of generalization by reducing the information content of observable phenomena, typically to retain only information which is relevant for a particular purpose, in this case to create a variety of form and investigate their relationships within a system.

In the 20th century the trend towards abstraction coincided with advances in science, technology, and

changes in urban life. Today, abstraction manifests itself in more purely formal terms, and a reduction of form to basic geometry. Fundamental parameters for drawings are to introduce a framework of geometry and aesthetic. While aesthetic values are defined through shape, contrast and composition, the geometry is referring to scale, space and dependence. A mutual agreement between these terms is essential to understand their occurring relationships.

The platform for each drawing in these examples manifests itself within a media of representation. Both the digital screen and analog paper background are infiltrated by basic lines, geometric elements, shades and color. The simple use of this familiar media represents already a more complex configuration and refers back to similar ideologies in architectural history.

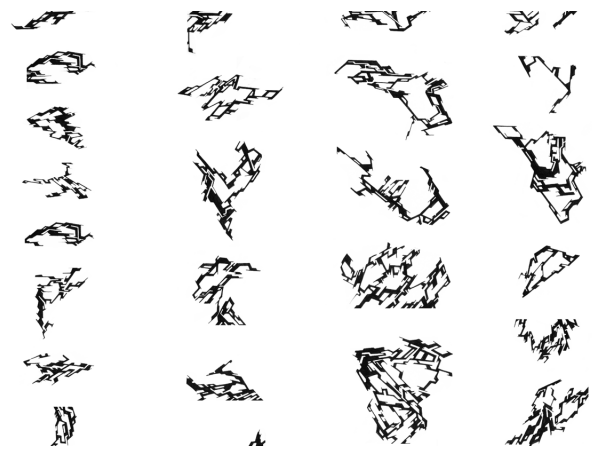


Figure 3. White Series Illustration, Taxonomy

The Suprematism and Constructivism movements by artists such as El Lissitzky, Kasimir Malevich, or Alexander Rodchenko, in Russia in the early 20th Century, established a language and use of elements on a white canvas, non-objective and non-related to anything except geometric shapes and colors. A white background was considered to be an infinite space with no dimension which allowed artists to define their work liberated from scale, gravity, and perspective, while purely generating clarity of form. Suprematism expressed forms in movement, or through time. And because of the simplicity of these basic forms, the Suprematists were able to signify a new beginning, a new area of art and form.<sup>5</sup>

## MORPHOGENESIS

Within the Suprematist manifesto any 'form' is seen as an abstract element described only through contrast, shape, and composition in space. Contrast is usually determined through color and brightness of an object within a visible spectrum. To achieve a high contrast it was important to select colors with distinguished contrast to a white background.



Figure 4. White Series Illustration, #18

The shapes itself appear as an outline or boldness. They do not imply precise mathematical configurations, size, symmetry, or orientation, but are defined only through basic geometrical elements such as points, lines, curves, hyperbolic, elliptic and planes. The combination of these shapes, then form a non-Euclidean composition which itself is depending on proportion and harmony of its components. Configurations within these compositions, can influence the general point of focus and determine the visual dimension and depth of perspective, space, and time; an Assemblage.<sup>6</sup>

## ASSEMBLAGE

Gilles Deleuze defines Assemblage as the dynamic interconnection of congruent singularities that remove the subject or object interface, yet retain specific elements.<sup>7</sup> The human assemblage for example is a multiple that forms a new assemblage with existing social and cultural networks of material movement, force and intensity.<sup>8</sup>

Author and philosopher, Manuel De Landa, in his book: "A New Philosophy of Society: As-

semblage Theory and Social Complexity", employs Deleuze's theory of assemblages to assume social entities on all scales and to define a new ontology (a theory for the nature of being) which challenges the existing paradigm of social analysis. The entities range from the individual (micro), over national, to intercontinental (macro) and imply that they are best analyzed through their components, or the networks they form.<sup>9</sup>

De Landa states that Assemblages are not seamless totalities, but collections of heterogeneous components (which are objects or systems consisting of multiple items with a large number of structural variations) that should be analyzed as such. His components are defined by relations of exteriority, or in other words: their 'role' within a larger assemblage is not what defines them. This implies that a component has essential characteristics, and may be 'unplugged' from one assemblage and 'plugged' into another space without losing its identity.<sup>10</sup>

## SPACE

The design components within these drawings are not set as a social assemblage, but as a spatial, architectural assemblage which is defined as a network of individual elements to form a unit or a structure, or to enable a perception of space.

Space can be defined in many ways including the view that it is part of a fundamental abstract mathematical structure within which we compare and quantify the distance between objects, their sizes, shapes and their speed. The most common definition of space though, is typically noted as 3 dimensional, and that each dimension is described through numbers specifying objects and their location compared to other locations. The perception of space through this particular design process manifests itself in an architectural dimension.

## DIMENSION

The parameter for this architectural dimension and environment is not set in scale and can vary in size and area ranging from micro to mega dimensions. It refers to cognitive recognition to explore the notion of dimension, dependence, and scale.

Within the space and nature of these drawings, a way to define a dimension, figural expression, or



Figure 5. White Series Illustration, #6

spatial dependence for either form or environment could be the first law of geography by Waldo Tobler:

“Everything is related to everything else, but near things are more related than distant things”.<sup>10</sup>

## ENDNOTES

1 Peter Cook, *Drawing The Motive Force of Architecture* (West Sussex: AD Primers, 2008), 9-10

2 P.E. Vermaas; P.A. Kroes ; A. Light; S. Moore, *Philosophy and Design: From Engineering to Architecture*, (Berlin: Springer, 2008)

3 Neil Leach, *Parametrics Explained*, (Architectural Biennial Beijing, 2011)

4 E. J. Lowe, *The Metaphysics of Abstract Objects*, (The Journal of Philosophy Volume 92, Issue 10, 1995), 509-524

5 Karin Thomas, *Stilgeschichte der Bildenden Kunst*, (Koeln: Dumont, 1998), 134-137

6 Aaron Betsky, *Jenseits des rechten Winkels* (Stuttgart, Thames and Hudson, 1998), 8-9

7 Gilles Deleuze, *Negotiations 1972-1990*, (New York, Columbia University Press, 1997), 123

8 Gilles Deleuze and Felix Guattari, *A Thousand Plateaus*, (Minneapolis, MN: University of Minnesota Press, 1987)

9 Manuel deLanda, *A New Philosophy of Society: Assemblage Theory and Social Complexity*, (London: Continuum, 2006), 18-19

10 Tobler, W.R.: *On the First Law of Geography: A Reply*. *Annals of the Association of American Geographers* 94 (2004) 304-310