Before the Projective… there was the Diagrammatic

By Gale Fulton

"At one level, nothing more (or less) is claimed for the diagram than this: a diagram architecture is part of a new sensibility characterized by a disinterest in the allied projects of critique or the production of meaning, preferring instead immediacy, dryness, and the pleasures of the literal."

--Stan Allen, "Diagrams Matter"[1]

"Diagrammatic technique provides a foothold in the fast streams of mediated information."

--Ben van Berkel and Caroline Bos, "Techniques Network Spin/Diagrams"[2]

In the introduction to *Any 23*: *Diagram Work*, editors Ben van Berkel and Caroline Bos state that the discussions of the diagram of that issue offered "relief from the mediated world condition by enabling and stimulating the imagination through the use of diagrams."[3] The present essay, a response to the provocation of the editors of thawed to 'define a critical stance relative to contemporary issues facing architecture and media in the immediacy of the now', argues that it is precisely because of the increasingly 'mediated world' that designers should (re)consider the potentials of the diagram. It is my contention that the discussions of the diagram that flourished in architecture in the late nineties in places such as *Any* and Peter Eisenman's *Diagram Diaries*, were all too soon overshadowed by the now stagnating critical vs. projective discussions, and that it is to the diagrammatic that we should once again turn our attention as designers and critics. The diagrammatic, like so many other worthwhile concepts in 'contemporary' architectural culture, was never developed in such a way as to really unleash its full potential – certainly this was the case in landscape architecture – as a form of practice that, rather than seeking relief from today's mediated world, may be the only one that can begin to make sense of it. This being said, what follows is an attempt to extend beyond the critical-projective debates by way of a return to the 'diagrammatic' as a form of practice capable of engaging the complexities presented today by the chaotic interrelationships of such potent contemporary cultural streams as 'architecture, information, and (print) media' without resorting to merely representing or critiquing such forces. This essay, far too brief to adequately trace a genealogy of the diagram, is instead a quick reintroduction of some relevant formulations of the diagram, which, if fully 'incorporated' by designers, might serve as useful re-entry points for the diagrammatic practices of the future.

Why Diagram or What Has the Diagrammatic Done for Me Lately?

"Everything, and every individual emerges, evolves, and passes away by incorporating and being incorporated into, other emerging, evolving or disintegrating structures that surround and suffuse it. Indeed, incorporation may well be the name of the new primary logic of creation and innovation in our late modern world."

--Sanford Kwinter and Jonathan Crary, *Incorporations*[4]

Given the interest of the editors to situate the content of this publication in some relationship with contemporary issues of architecture, information, and media, the question of why a diagrammatic practice should be pursued or how such a practice departs from typical design practices is significant. For now we might consider two primary motivations for the revival of diagrammatics: the management of and engagement with, *complexity*; and the exploration for and production of, *novelty*. With regard to the former one has only to think of the potentially mind-numbing, and practice-paralyzing, onslaught of information pressing in on all contemporary design work concerned with anything other than a new fetishization of the object. This onslaught takes many forms which in turn have many consequences – a plethora of informational channels competing for our attention while simultaneously offering us previously undreamed of info-matter from which to elaborate design scenarios or organizations of all kinds. Faced with this reality, the diagrammatic's potential for the incorporation and management of information, to instrumentalize without being reduced to mere functionalism, becomes paramount. Such a practice is described by Robert Somol as one that has shifted in its focus from the traditional 'vertical' concerns of architecture to the more horizontal 'forces' which now course across global society. As he states it:

> "A diagrammatic practice (flowing around obstacles yet resisting nothing) – as opposed to the tectonic vision of architecture as the legible sign of construction (which is intended to resist its potential status as either commodity or cultural speculation – multiplies signifying processes (technological as well as linguistic) within a plenum of matter, recognizing signs as complicit in the construction of specific social machines. The role of the architect in this model is dissipated, as he or she becomes an organizer and channeler of information, since rather than being limited to the decidedly vertical – the control and resistance of gravity, a calculation of statics and load – "forces" emerge as horizontal and nonspecific (economic, political, cultural, local, and global). And it is by means of the diagram that these new matters and activities - along with their diverse ecologies and multiplicities – can be made visible and related…to understand architecture…as a discursive-material field of cultural-political plasticity."[5]

The importance of the diagrammatic, then, is at least doubly important as a model for contemporary practice in that it is always both incorporational and virtual. The former allows designers to approach complexity with optimism and even delight, and the latter provides a mechanism for the continual exploration and production of the new, or what van Berkel and Bos refer to as "a loophole in global information space that allows for endlessly expansive, unpredictable, and liberating pathways for architecture."[6] The potentials of this incorporational mode can be understood to be at the root of recent inter-, multi- or transdisciplinary shifts such as that of a renewed interest in landscape as a model for architecture and urbanism. Recent discussions in this vein stress concepts of continuity and connectivity and echo Somol's figure of the designer as an 'organizer and channeler of information'. Old ways of knowing in architecture, urban design, and landscape architecture require this diagrammatic reconceptualization, along with diagrammatic methods, in order to fully capitalize on this new 'landscape' of organization, program, connectivity and feedback. Stan Allen, one of the instigators of a shift in architectural thinking towards the possibilities offered by the performative, sums up the

integrating potentials of the diagram beautifully when he says: "The complexity of these real world constraints is neither held at arm's length nor literally incorporated, but reformed as architectural material through the vehicle of the diagram. It is an architecture that travels light, leaving the heavy stuff behind."[7]

The second reason contemporary designers might return to the diagrammatic as a model for practice is that of the pursuit and production of novelty in a way that no longer relies on an aesthetic of collage. Diagrammatic practices locate much, if not all, of this novelty producing capacity in the realm of the virtual, and this has nothing to do with your new virtual reality goggles. Instead, the contemporary understanding of the diagram, and its preoccupation with novelty, seems to be typical of diagrammatic thinkers in architecture such as van Berkel, Somol, Sanford Kwinter, and Alejandro Zaera-Polo, to name only a few, who propose a rethinking of the diagram which departs from earlier modernist versions at least in part through the influence of Deleuze's thought on 'becomings.'[8] In line with Somol's more recent development of the 'projective' in architecture, both van Berkel and Somol see the diagram as a device which avoids the pitfalls of representation, critique, and type, in favor of the projection of new worlds.[9]

It is impossible to overstate the importance of the thinking of Deleuze and Guattari on the subject of the diagram in architecture. Particularly their notion of the "abstract machine" is one that has informed the language and practices of contemporary diagrammers of various stripes whether landscape urbanists or of a more projective cast(e):

> "That is why *diagrams* must be distinguished from *indexes*, which are territorial signs, but also from *icons*, which pertain to reterritorialization, and from *symbols*, which pertain to relative or negative deterritorialization. Defined diagrammatically in this way, an abstract machine is neither an infrastructure that is determining in the last instance nor a transcendental Idea that is determining in the supreme instance. Rather, it plays a piloting role. The diagrammatic or abstract machine does not function to represent, even something real, but rather constructs a real that is yet to come, a new type of reality."[10]

The abstract machine, or diagram, is a device which is always incorporating and virtualizing on the way to the actualization of some form – not the only one, or the right one, but one out of many that might be actualized given the forces at hand. It accomplishes these functions in such a way that requires no reliance on the imposition of form, concept, or idea which comes from beyond the matter of the situation at hand. Sanford Kwinter gives a particularly elegant description of such actualization in his description of the formation of snow crystals:

> "The snow crystal is different. Its genesis is dynamic and can be situated initially at the convergence of three distinct fluxes: mica and mineral particles; a moisture-saturated field; and a thermal flow of heat exchange. One does not know in advance where or when such a crystal will begin to nucleate or form, but one knows it will emerge – apparently spontaneously – from a flux or convergence of flows, not in a prepared form or space…As the snow crystal falls it absorbs, captures, or incarnates all the chance events, all the fluctuating conditions (magnetic, gravitational, barometric, electrical,

thermal, humidity, speed) and builds them, or rather *uses them*, to assemble itself, to form its structure or edifice. The snow crystal creates itself in the middle of, and by means of the convergences of flux."[11]

A diagrammatic practice which understands such processes of formation is more closely analogous to the blacksmith or metallurgist of Deleuze and Guattari who is to be understood as an elaborator of, or a collaborator with, matter – matter is not made to conform to some external concept or idea but is invited to participate in the evolution of form or organization. The designer's task, then, is "less realizing previously defined possibilities than actualizing virtualities along divergent lines."[12] It is key to understand this immanent nature of diagrammatic work in order to fully understand its potential as a vehicle of the new.

How to Become Diagrammatic?

"For learning evolves entirely in the comprehension of problems as such, in the apprehension and condensation of singularities, and in the composition of ideal events and bodies. Learning to swim or learning a foreign language means composing the singular points of one's own body or one's own language with those of another shape or element which tears us apart but also propels us into a hitherto unknown and unheard-of world of problems."

--Gilles Deleuze, *Difference and Repetition*[13]

"Cultivate the mind of the brain and the mind of the body. All design, like all music, comes from the body. Practice a (physical) discipline (martial art, dance, yoga, sculpture, tea arts, tracking, psychedelics, windsurfing, race car driving, etc.), and take it seriously as a form of knowledge."

--Sanford Kwinter, *Hunch 6/7*[14]

The predicament of design education today does not seem to be a new one – the notion that one either teaches something resembling pure technique or something approaching pure theory. In the typical formulations of these pedagogical models, or perhaps better termed the merest formulations, the technicians verge on the vocational, a form of practice that is only about the achievement of minimal technical competence as regulated or maintained by accrediting boards across the world. The promise of these trainees is their ability to enter into productive office life in the 'CAD ghettoes' of hierarchical firms on the day of hiring. Their counterpart, the theoreticians, sometimes accused of not being able to 'design their way out of a paper bag' are often the operationalizers of newly found, or refound, bits, pieces, and chunks of history, critical theory, and philosophy. While the latter of the two primary models of academic output is arguably more compelling to this writer due to the potential for this 'type' to evolve toward the diagrammatic better than their counterpart, it is also understandable why the architect and theorist, Alejandro Zaero-Polo, systematically expunged theory from his teaching at the AA in favor of the rigors of technique and production.[15] But the problem, and potential corrective for this continuing (and clearly reductive on my part) opposition, lies outside the continuum created by these poles. The education, training, or perhaps most appropriately – cultivation – of the diagrammatic

designer is not simply a matter of finding just the right mixture of theory and practice which seemingly continues to plague departments of art and design of all sorts, but rather lies in the combination of an expanded territory outside this line, with a vector that may at times intersect the theory-technique vector but may, at other times, operate completely independent of it – constructing a space of practice that is, to many, completely unrecognizable as a form of 'architectural,' 'landscape architectural,' or other traditional form of discipline-specific design. Once the need for this space has been identified, the question - certainly for educators and practitioners realizing the limits of the traditional theory/practice divide, as well as the limitations of the studio/seminar environments in which this divide has been institutionalized[16] – becomes one requiring a rigorous rethinking of what knowledge, and perhaps even more importantly, attitude, is required to practice diagrammatically.

It is hopefully apparent by now that working diagrammatically may have nothing to do with the use of diagrams as they are typically or traditionally used in design. In fact, many of these diagrams – the infamous bubble diagram so typical of landscape architecture and urban design, and the so-called 'decorated diagram' utilized by many 'modernist' architects - may well represent the antithesis of a diagrammatic way of thinking or working. Such diagrams remain hopelessly top-down and often driven by symbols, norms, or the logic of types. And so the question for educators remains: How does one teach, cultivate, or turn on, the diagrammatic?

One answer may be to expand upon or hybridize the notion of 'flow as optimal experience' as described by Mihaly Csikszentmihalyi with the morphogenetic capacities of the virtual discussed earlier in order to fully engage what Sanford Kwinter calls the "streaming ethos".[17] Undoubtedly, this is a project which has already begun in Kwinter's work, but it is worth a brief recap of the notion of flow since it offers what seems to be a concept of great relevance to those of us attempting to create 'edu-cultures' as opposed to simply downloading content. Csikszentmihalyi describes the flow state as "the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it."[18] In general, such a state is achieved as a result of multiple conditions including "deep concentration, high and balanced challenges and skills, [and] a sense of control and satisfaction."[19] Such states are often achieved while participating in games and sports, especially in sports or recreational activities such as surfing, snowboarding, skateboarding, and rock climbing in which the participant must possess "fluidity of movement, intuition (a quiet body harmoniously in step with its milieu – "in unity with the wave"), and innovation…transforming any found space into a smoothly quilted interlock of disparately textured, twisting, quality-emitting, sequence of surfaces"[20] – is this not simply a form of *diagramming*?

The combination of the optimal experience state of 'flow' with the 'streaming ethos' required of certain activities, is not only a compelling way to think about how designers might conceptualize their next complex urban project - it is also an important concept for contemporary educators to achieve for students through the design of curricula, since the achievement of flow for an individual, according to Csikszentmihalyi, is at least partially determined by one's external environment – especially that person's culture which carries with it various rules and codes of conduct dictating or suggesting the manner in which one participates in that culture. One hardly needs to be reminded of the fact that it seems increasingly difficult for students to achieve the 'deep concentration' that such a streaming ethos

or flow state requires due in part to the constant presence and pressure of various social computing technologies from email to Facebook to cell phones – all of which are aspects of the increasingly mediated culture that this issue of *thawed* sought to engage. This distracted state is further compounded by the fragmentary nature of most design curriculum which makes it nearly impossible for a student of design to achieve flow due to their need to be constantly jumping from one potentially unrelated course to another without the necessary skills to fuse those disparate streams into something useful for their own design assembly. What these contemporary conditions might then suggest is that the understanding of, and ongoing participation in, such activities which allow one to *feel* the streaming ethos may be one of the new imperatives for contemporary design education – is it possible that there are now students who have *never* achieved such states and so have no idea how to achieve them in or through design?

A related model upon which to build a diagrammatic practice of design is through the notion of an 'intercalary' as has been developed in the writings of Deleuze and Guattari and further elaborated upon by Manuel De Landa. The importance of this concept is again, at the very least, of two-fold importance to the contemporary designer. First, it offers a way to achieve "combinatorial richness" without the elimination of heterogeneity, which is obvious benefit to designers faced with the difficult task of increasingly complex programs requiring synthesis into an integrated whole. Secondly, and somewhat an extension of the first, is the potential for this approach to allow designers to move fully past the dependence on the 20th century paradigm of collage. As De Landa states it, a key element is "processes that allow heterogeneous elements to come together, that is, processes that allow the articulation of the diverse as such" – a function that is performed by what he refers to as "meshworks":

> "Meshworks combine heterogeneous elements by using their functional complementarities. For example, an ecosystem brings together a large variety of distinct species, interlocking them into food webs through alimentary complementarities; parasite-host, predator-prey, and others. But often these heterogeneities do not mesh well, and special intercalary elements are needed to effect the link, such as symbiotic microorganisms lining the gut of animals, allowing them to digest their food."[21]

DeLanda adds that money (or other forms of currency) may also be used as such an intercalary in its ability to aid "complementary demands to find each other at a distance".[22] Is it possible that designers, operating diagrammatically, could serve this intercalary purpose for culture? Or do they already?

Whichever the case may be, it is unquestionable that today's designers face unprecedented challenges - or opportunities - many of which are a result of the interaction of 'architecture (design), information, and media'. Learning to 'surf' these flows, or as this paper argues, *diagram* them, is one way that designers might choose to productively engage such forces on the way to the actualization of potentialities for culture.

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[1] Stan Allen, "Diagrams Matter," in Ben van Berkel and Caroline Bos guest editors, *Any 23: Diagram Work*, (New York: Anyone Corporation, 1998) 18.

[2] Ben van Berkel and Caroline Bos, "Techniques Network Spin/Diagrams," in *The Artificial Landscape: Contemporary architecture, urbanism, and landscape architecture in the Netherlands*, Hans Ibelings, editor, (Rotterdam: NAI Publishers, 2000) 281.

[3] Ben van Berkel and Caroline Bos guest editors, *Any 23: Diagram Work*, (New York: Anyone Corporation, 1998) 15.

[4] Sanford Kwinter & Jonathan Crary editors, *Incorporations* (New York: Zone Books, 1992) 15.

[5] Robert Somol, "Dummy Text, or The Diagrammatic Basis of Contemporary Architecture", in Peter Eisenman, *Diagram Diaries*, (New York: Universe, 1999) 24.

[6] Van Berkel & Bos, *Diagram Work*, 15.

[7] Allen, "Diagrams Matter," 18.

[8] For a useful entry point into the difficult but compelling world of Deleuze, see Manuel DeLanda, *Intensive Science and Virtual Philosophy* (New York: Continuum, 2002).

[9] Somol, *Diagram Diaries*, 23; van Berkel and Bos, "Techniques Network Spin/Diagrams," 282.

[10] Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987), 142, emphasis in original.

[11] Sanford Kwinter, *Architectures of Time: Towards a Theory of the Event in Modernist Culture*, (Cambridge, MIT Press, 2001) 26-28.

[12] De Landa, p. 37.

[13] Gilles Deleuze, *Difference and Repetition*, (New York: Columbia University Press, 1994) 192.

[14] Kwinter, *Hunch 6/7*, 293.

[15] See Alejandro Zaera-Polo, "A Scientific Autobiography, 1982-2004: Madrid, Harvard, OMA, the AA, Yokohama, the Globe," in *The New Architectural Pragmatism*, William S. Saunders editor, (Minneapolis: University of Minnesota, 2007) 6.

[16] "Of course the "laboratory" is a marvelous new way to conceive of creative labor and free ourselves of the stale metaphysical heritage of the studio." Sanford Kwinter, "When Did You Stop Beating Your Wife?" in *Hunch* No. 6/7, Summer 2003, 292.

[17] Kwinter, *Architectures of Time*, 29.

[18] Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience*, (New York: Harper Perennial, 1990) 4.

[19] Ibid. 83.

[20] Kwinter, *Architectures of Time*, 29. I would add to this list other sports which have the potential to flow such as rugby, soccer, and possibly even hockey, among others, in which the rules allow for long durations of continuous back and forth play between opponents without the constant stoppage of the game as in football.

[21] DeLanda, 38.

[22] DeLanda, 38.