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Drawing, Thinking, Doing: From diagram work to the superfold

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ABSTRACT
In 1998, when the names Gilles Deleuze and Félix Guattari still exuded a seductive attraction for architectural thinkers and practitioners, Any Magazine, edited by Cynthia C. Davidson, published an edition entitled Diagram Work, which was guest edited by architects Ben van Berkal and Caroline Bos. The diagram work in question drew predominantly on the philosophical thought of Deleuze and Guattari, especially their version of the diagram, or 'diagrammatic', as mobilised in their book A Thousand Plateaus where the diagram is also referred to as an 'abstract machine'. This essay will present a series of different ways in which the concept of the diagram can be argued to be at work in Deleuze, and Deleuze and Guattari's ethico-aesthetics. Their speculative, projective and radically creative employment of the diagram will also allow me to present a discussion of Deleuze's concept of the 'Superfold', which he introduces briefly in the Appendix of his book Foucault. I will conclude by discussing the relevance of the concept of the Superfold with regard to computational architectures and (post)digital diagrammatic processes, and also as a concept that alerts us to the risk of assuming too much about our relationship with diagrammatic forces.

Diagram work

The work of the diagram in the philosophy of Gilles Deleuze describes a sometimes violent exertion of thought in the face of the unthought, which is at the same time a battle between finitude and the infinite, or a struggle between (human) processes of 'subjectivation' and the forces of the outside. By stressing the term 'subjectivation' Deleuze wants to emphasise the mobile and ever-transforming emergence of the human subject in relation to diagrams of power. Likewise, with a focus on the diagram as the means through which animated assemblages of forces are tracked, this essay explores the diagram not just as an abstract, explanatory arrangement of lines. The diagram here will be presented as an active process of creative thought and endeavour that allows us to think otherwise upon a mobile, folding and unfolding field of immanence. Although I want to distinguish Deleuze's radical sense of the diagram as a process, it is also important to discuss how the diagram bears a specific relation to the labour undertaken by the architect, and is relevant to the designer and the artist. The diagram, according to a standard definition, is simply a graphic and material means of exploring ideas, and a convenient way to visualise information. It is the discipline of architecture that I will discuss in the most detail by offering an account of the deployment of a Deleuzian definition of the diagram at a moment when new techniques and technologies of computation were becoming increasingly commonplace in the architectural studio. As I will show, Deleuze redefines how the diagram can operate in fields of creative action, and what is interesting

in the case of architecture is how this redefinition is taken up at a moment when architecture is also tackling the issue of how to integrate new computational processes.

It is also important to add that Deleuze, as well as Deleuze and Guattari's body of work makes frequent use of actual diagrams to augment concepts and complex arguments. A survey of their philosophical work exhibits a number of actual diagrams, which they themselves have drawn in their texts, to graphically demonstrate their acts of concept creation. While an immediate distinction should be made between the set of graphic diagrams that Deleuze and Guattari use in their philosophical writings, and the definition of the act of diagramming that Deleuze gives in his book on the British artist Francis Bacon, as well as in his book on Foucault, with this essay I will draw these distinct definitions and uses of the diagram into a cooperative and co-productive relation. What can be elaborated through the different functions of the diagram presented here is a battle that takes place in order to maintain, through acts of aesthetic resistance, new modes of thinking and aesthetic creation. I will conclude with a brief study of what Deleuze, in his book *Foucault*, calls the 'Superfold'. He offers this as a brief speculation on the promises and risks of emerging combinations of new technologies and diagrammatic processes.

The engagement of the discipline of architecture with Deleuzian diagrammatics will be located here across a number of architectural publications that emerged at the close of the millennium when the names Deleuze and Guattari still exuded a seductive attraction for architectural thinkers and doers, or theoreticians and practitioners. I will touch on three publications in particular to remark on the influence of Deleuze and Guattari's concept of the diagram in architecture: the special edition of *Any Magazine*, called *Diagram Work* (1998), guest edited by Ben van Berkal and Caroline Bos, of UN Studio; Peter Eisenman's *Diagram Diaries* (1999); and an essay, *The Doppler Effect and Other Moods of Modernism*, by R.E. Somol and Sarah Whiting (2003). In addition, in order to arrive at my closing argument concerning the Superfold as an exemplary instance of what a diagrammatics can do, I will refer briefly to Greg Lynn's guest edited edition of *AD* (*Architectural Design*), *Folding in Architecture*. Most of the discourse generated in the above publications circulates on the east coast of the States, although van Berkal and Bos are Dutch architects. However, I will not comment upon the peculiarly geopolitical location of this diagrammatic thinking in this essay. What is primarily of concern is how an engagement in Deleuze and Guattari's diagram thinking emerged briefly only to effectively fade away as the discipline began to express its exhaustion in not only Deleuze and Guattari, but also in architectural theory more generally (see Frichot, 2009b; Rendell, 2007).

Diagrammatics

Architects usually conceive of architectural diagrams as being representative of existing or else speculative scenarios. For instance, where analytical diagrams can be used to study a given site or conjunction of material products and physical forces, a speculative diagram arranges the conventional set of drawings that plan yet to be realised built environments. Rather than emphasise these conventional senses of the diagram, the publication *Diagram Works* responded to what architectural theorists and practitioners perceived to be the processual force of Deleuze and Guattari's diagrammatics. The promise that was perceived in the 1990s by architectural thinkers and designers was that the diagram could become more than a mere means of representation, and could be deployed instead as a generative tool to bring forth the possibility of new and ever-transforming built worlds. In *A Thousand Plateaus* Deleuze and Guattari emphasise the animated quality of the diagram, or specifically the *process* of diagramming. They qualify their well-known concept of the abstract machine by calling its operation 'diagrammatic' (141), and further elaborate on the dynamism of the concept by stressing that it operates according to a combination of matter and function, as distinct from the more stable categories of substance and form. With the diagrammatic functioning of the abstract machine they intended to disrupt the philosophical privilege given to substance and form from the ancient Greeks onwards. Instead Deleuze and Guattari place an emphasis on mutable matter and operational function. The abstract machine has

as its genealogy the desiring-machines and social-machines that Deleuze and Guattari introduced initially in *Anti-Oedipus*, the first volume of *Capitalism and Schizophrenia*. It is important to stress that the machines of which they are talking are not meant to be understood as mechanical constructions or closed systems with limited tasks, nor are they intended to be understood as mere metaphors. For Deleuze and Guattari an abstract machine is a diagrammatic open system, which is to say it organises for the time being mobile and transforming relations between people and things. Matter is not demoted in favour of the power of form; rather it is always a question of how the whole assemblage functions or works. The abstract machine is a concept that is named to account for the volatile state of organization that emerges in different situations, and at different scales of the socius; it is the way an assemblage of human and non-human actors can be said to operate in relation to one another producing different kinds of effects depending on how the abstract machine works itself out. Immediately this poses problems for the architectural designer, who for the most part focuses on the craft and materiality of building, and can sometimes forget the life of both the building, and more importantly those inhabitants who engage with the building.

Again, the promise for architects is that through the employment of diagrammatic procedures the building, primary object of architectural engagement, can be activated beyond its designerly objecthood with risks of associated design reification, and instead can be reframed in terms of the life forces with which it continues to intermingle. The diagram, as described by Deleuze and Guattari, "constructs a real that is yet to come" (1987: 21). As Manuel DeLanda puts it in his contribution to *Diagram Work*, "we must struggle to model the future as open-ended, and the past and the present as pregnant not only with possibilities which become real, but with virtualities which become actual" (1998: 30). The diagram operates in at least two directions: it both offers an explanatory model of a given situation composed of functions, actions and material aggregates combining and disintegrating over time, and it is also a way of imagining and making emerge new kinds of worlds. It moves toward a reconfiguration of how we understand the past and present, as well as new ways of generating futures. Stan Allen, yet another contributor to *Diagram Work*, explains, "A diagram therefore is not a thing in itself but a description of potential relationships among elements, not only an abstract model of the way things behave in the world but a map of possible worlds" (1998: 16). Importantly, even the conventional diagram that is employed in architectural representation can be analysed in terms of the way it operates in the midst of more complex diagrammatic assemblages. This includes the gathering of human actors with different skills, the various materials that are drawn into relation, and the socio-political forces that impact upon any given architectural project.

Diagram as process

In their introduction to *Diagram Work*, the architects van Berkal and Bos explain that "[t]he diagram is a loophole in global information space that allows for endlessly expansive, unpredictable, and liberating pathways for architecture" (Berkal & Bos, 1998: 15). With this statement they speculate on the work of the diagram as that which operates in the midst of new information systems, but also as an approach that generates tactics for resisting the increasing ubiquity and insistence of global networks of information. The diagram can be deployed as a tactic that allows for what van Berkal and Bos claim are infinite engagements in the physical world, in spite of the seeming threat of the homogenising forces of globalisation. They set the tone clearly: the diagram is to be understood as a process, specifically and potentially a liberatory process, that allows architects to think otherwise than according to opinion, habit and cliché. Their argument, from the late 1990s, can also be located at the moment when the wholesale uptake of new computational techniques of representation and of form generation, are being disseminated in architectural studios.

Van Berkal and Bos identify three versions of the diagram at work in Deleuze's philosophy that can be considered valuable for architecture: via the French historian of philosophy, Michel Foucault; the British artist, Francis Bacon; and the French novelist Marcel Proust (1998: 20). Though they relate

these three versions of the diagram to the concept of the abstract machine, they allow the collaborative work of Deleuze and Guattari on the diagrammatics of the abstract machine in the volumes of *Capitalism and Schizophrenia* to recede into the background. Van Berkal and Bos explain the three versions of the diagram as three stages, from what they see to be the dry intellectual argument outlined in Deleuze's book, *Foucault*, which explains the non-representational work of the diagram, to the embodied experience of the painterly approach via Francis Bacon where the diagram is "used as a proliferator in a process of unfolding" (22), and finally through to the novelistic techniques of Proust, where the landscape of the story, character, and 'black holes' productively combine together as signs of art (22). The black hole is a concept that emerges in Deleuze and Guattari's *A Thousand Plateaus* where they treat the risks of 'faciality' (1987: 167-191). The black hole and faciality, or the signifying regime of the face, are concepts that van Bos and Berkal have somewhat misappropriated. They argue that it is around the diagrammatic trait of the black hole that something is stimulated to happen, as an event to emerge, a shift in the direction of the narrative, whereas on the contrary, Deleuze and Guattari argue that it is instead necessary to escape from the face and the black hole. One such escape is through creative production. Deleuze and Guattari explain that "Proust was able to make the face, landscape, painting, music, etc., resonate together" (1987: 185), that is to say, they produced something beyond the face upon which we amorously fixate, and the black holes that are the eyes of the face into which we risk falling or drowning. Proust's 'Search' is described as a machine that produces signs, which might be called diagrammatic traits. "Why a machine?" asks Deleuze in the context of Proust, and we might add, why diagrammatic?, "[b]ecause the work of art [or architecture for that matter], so understood is essentially productive––productive of certain truths" (Deleuze, 2000: 146). Proust's Search is "anything we like provided that we make the whole thing work" (2000: 146). Importantly, it is not a question of meaning, but a matter of use: what are you going to do with it? How will the diagram function? It is apt that van Berkal and Bos conclude their three stages of the diagram with Proust, as it is with Proust that Deleuze and Guattari explain, what it is you can do with the matter of existence, how you can approach it in such a way so as not to get stuck in creative ruts. It is this attitude to creative resistance that is invested in what I have called Deleuze and Guattari's ethico-aesthetics. Diagrammatic procedures are meant to enable the practitioner to avoid falling into the trap of habit, opinion, and cliché, but it does require an ongoing vigilance to avoid such inclinations.

Diagram Diaries

Peter Eisenman's *Diagram Diaries* was published in 1999, and notably includes an opening essay by R.E. Somol, whose co-written essays with Sarah Whiting I will treat below. These are essays, which I should add, have had a considerable impact on the waning of architectural theory, and which have argued for a shift in the discipline of architecture to a post-critical, more project-based approach to design practice research. *Diagram Diaries* offers a review of a series of Eisenman's architectural projects by taking recourse to the concept of the diagram, which we promptly discover from Somol's essay needs to be understood through a Deleuzian lens. In many respects, Eisenman's projects could be read without any reference to Deleuze, but Deleuze *a posteriori* offers a convenient post-justification and curatorial intelligence to the projects. Over the last, close to forty years Eisenman has become a highly influential architectural designer, as well as a prominent and influential voice in architectural discourse. One after the other he has made use of such thinkers as Friedrich Nietzsche, Noam Chomsky, Jacques Derrida, and Gilles Deleuze, to discuss his architecture and the status of architecture in general. *Diagram Diaries* offers a considerable cross-section through the history of Eisneman's practice, and does so with a special emphasis on what is taken to be Deleuze's sense of the diagram. The diagrams that illustrate Eisenman's *Diagram Diaries* display several examples of contorting fields that appear to be riven by invisible forces, or else complex folding grids set out in iterative arrays. The drawings frequently resemble the early wire frame models that became familiar with the uptake of computer aided design. Some of the influences behind these diagrams, according to Eisenman, include the behaviour of liquid crystals, the wave function of the

human brain (1999: 203); or else they make allusions to the flows of movement across given sites, or demonstrate serial formal experiments based on generic building envelopes. The diagrammatic procedures illustrate a degree of automatism that is purported to be liberating, as though releasing the architect from the oppressive obligations that can be associated with her authorship. However they also demonstrate a thoroughgoing fascination in connections that can be made between architecture and the seething of life forces.

It is easy to conflate two senses of the diagram here: On the one hand, the drawn artefact representing a more immediately recognisable understanding of what a diagram is, at least for architects, and on the other hand, there is the suggestion of the invisible set of forces that have come together to allow for the emergence of the projects represented in the book. Somol, who introduces *Diagram Diaries*, expressly draws on Deleuze's essay on the diagram in *Francis Bacon: Logic of sensation*, where we are to understand the diagram less as a statement of some fact, than, as has been noted above, the means through which another world is made to emerge (1999: 23). Somol explains in relation to the survey of Eisenman's projects that "the diagram has seemingly emerged as the final tool, in both its millennial and desperate guises for architectural production and discourse"; but which diagram is this? There persists an ambiguity, for the architect-reader is apt to see the represented drawings as the set of diagrams that is being alluded to, but the theorist, Somol seems instead to be forwarding the notion of the diagram as the means through which forces come to be organised. Specifically, he notes, the diagram is the means by which the "*matter* of architecture" (7) can be actualised. Although Somol takes care to distinguish the diagram from the drawing by arguing that over the second half of the twentieth century the fundamental "technique and procedure" (7) of architectural knowledge shifted from the drawing to the diagram, there is still a tendency to assume that the subject of his discussion is exactly that set of lines arranged together to communicate some architectural end. Although there is no explicit mention by Somol of emerging digital architectures, I would argue that these new technologies are part of what have contributed to the shift that Somol identifies between drawing and diagramming. Presumably in the background of Somol's argument is the realisation that drafting in the architectural profession is gradually being superseded by computer aided design and a whole promising raft of new modelling and animation softwares. Nevertheless, the seemingly effortless shift from drawing to diagramming, announced as a *fait accompli*, should also be treated with some wariness on two counts: firstly, the process of diagramming should not be confused with the completed drawn artefact, and secondly, as will become clear when I introduce the concept of the diagram via Francis Bacon and Deleuze, the process of diagramming can still include the embodied series of gestures, the haptic transports between eye and mind, that can be associated with drawing practices.

Some three to five years after his introduction to *Diagram Diaries,* Somol co-writes with Sarah Whiting what will become two highly influential and much debated essays that use the diagram as a means to dispel critical and theoretical approaches to architecture in favour of a 'projective' architecture that engages in doing (Whiting & Somol, 2002, 2005; see Rendell, 2007). In their essay *Notes Around the Doppler Effect and Other Moods of Modernism*, Somol and Whiting argue for a realignment of architectural design research with a focus on the diagram, rather than the index. With evidence of C.S. Peirces's semiotic definition at work, the index is what Somol and Whiting call a "physically driven sign" (2002: 74). The architectural built object can operate as an index in so far as its materially says something about itself, 'I am a church!', 'I am a house!', as well as beckoning through its material signature to a history of architectural construction and ideology. The diagram, or the diagrammatic, on the other hand does not have to refer to anything outside of its own action. It suggests a way of doing, rather than a means toward meaning construction, or denomination, connotation, and signification. Somol and Whiting argue with respect to Eisenman's work, with an emphasis on the projects and critical commentary arising in the nineteen seventies, that Eisenman is more fixated on the index than on the diagram. They thereby relegate him to a period of architectural critical history that has become too caught up with questions of signification, self-referentiality and the role of representation in architecture. They argue with reference to Eisenman's

work that "although the indexical program for architecture may proceed through diagrams, it is still tied to a semiotic, representational, and sequential ambition" (2002: 74, 75). In opposition to Eisenman they offer up the work of Dutch architect Rem Koolhaas, whose use of the diagram suggests "the production and projection of new forms of collectivity" (75). On the one hand there is Eisenman's approach, which is one of autonomy and process, and on the other there is Koolhaas, who invests in force and effect (75). The first approach suggests an autonomous architecture too fascinated in its own internal production, and the second approach suggests an architecture that is willing to accept interferences from the outside, but also an architecture eager to avoid a critique of the forces of Capitalism by which it is so readily co-opted (Rendell, 2007). Somol and Whiting in effect dismantle some of the claims that Eisenman makes about his use of diagrams in *Diagram Diaries*, by suggesting that Eisenman is not nearly radical enough in his diagrammatic approach. And Somol reveals an ulterior motive hidden in his opening essay for *Diagram Diaries*, that is, a will to succession, or how the old guard of architectural thinking and doing can be outmanoeuvred by way of new deployments of conceptual tools. The diagram is then deployed as a potential means of disrupting relations of knowledge and power, as well as a tool for the creation of new architectures, that in turn allow for the imagination of new forms of collectivity, that is, if we are to follow Somol and Whiting's diagram.

Different senses of the diagram

There are three kinds of diagram that I would like to suggest are at work in Deleuze's philosophy. Unlike van Berkal and Bos, I do not want to suggest that these diagrams proceed in any particular order. The first kind pertains to the diagrams of power and knowledge described in Deleuze's book, *Foucault*. The second kind of diagram, or diagrammatics, refers to the prospective and creative process of diagramming, which Deleuze treats in *Francis Bacon: The logic of sensation*. With respect to these prospective diagrams it might be helpful to hear prospecting in the sense of hunting for some precious mineral. The third kind of diagram that cannot be forgotten in Deleuze and Guattari's writings is the set of diagrams that they use to augment their arguments and concept creation. Many of these are to be found across *A Thousand Plateaus*, and *What is Philosophy?*; also in *Kafka: Toward a minor literature*. They can be discovered also in Deleuze's books, *The Fold*, and *Foucault*. I have not been exhaustive here, for there are also the strange drawings that Deleuze undertakes in his conversation with the artist Stefan Czerkinsky in *Desert Islands* (2004). Deleuze's drawings, simply named *Sept Dessins* [Seven Designs] were published in the French journal *Chimères* (1994). They belong less to the collection of Deleuze and Guattari's explanatory and conceptual diagrams, than to the diagrammatic process Deleuze describes in relation to Bacon. Together the three loosely collected understandings of the diagram that I have suggested above can be supplemented by the discussions concerning abstract machines, as well as desiring and social machines, delivered across the two volumes of *Capitalism and Schizophrenia*. While the third kind of diagram at work in Deleuze and Guattari's philosophy is of crucial importance to the understanding of what a diagram can do, this essay instead treats the first and second kinds of diagram as a means to move toward my conclusion, which presents the concept of the Superfold.

Diagrammatic foldings

In *Foldings, or the Inside of Thought (Subjectivation)*, which is the second last chapter of Deleuze's book, *Foucault*, he uses a diagram—as it may be conventionally understood—to display a topological arrangement of Foucault's thought. The diagram in question looks like a cross-section through the skin, or else an illustrative cut made through some geological formation, but one of its key distinguishing marks is that it is folded in on itself. There are three agencies of the so-called topology: (1) the chaotic outside, which is inaccessible to thought, but which establishes the very possibility of thinking; and then, sheltered beneath the defining line of the outside there persists,

(2) a strategic zone where power relations dynamically arrange and rearrange themselves; and below that again, (3) strata, which are also described as the archive. The strata, given as the most sedimented level "force something new to be seen or said" (1988: 120), and collect and store all that has come to be known. Then, finally, (4) the zone of 'subjectivation' is the folded area of the diagram where the outside and the inside are drawn into the closest proximity, and where all the layers, including the archival strata and the strategies, are placed into provisional contact. The conceptual diagram depicts the dynamic forces of power and knowledge. The folded line should be apprehended as undergoing constant transformations, folding and unfolding, peristaltic in its undulations. Following Foucault, Deleuze avers that the list of diagrams that map historical arrangements of power and knowledge is endless, for they are the means of describing configurations of knowledge and power from the Greek to the Roman to the Feudal 'diagram', and so on. The diagram depicts the entire, ever-emerging movement between the forces of the outside, a strategic zone, and the strata where knowledge has been archived, as such, the diagram of power and knowledge describes a relation between forces "in a perpetual state of evolution" (Deleuze, 1988: 85). In so far as it is a description of mobile relations it is, Deleuze insists, less a place than a non-place (85). Now where the diagram begins to solidify knowledge and power, where it risks stultifying these mobile relations, Deleuze, after Foucault, recommends that we disrupt the diagram and turn it upside down (94). The diagram is always at risk: on the one hand, it can tell us something of complex power relations so that we can remain mobilised in creative thought, and on the other hand it risks falling again into mere opinion, habit and cliché and fixing on channels of knowledge that lead us through nothing but old routines and repetitive refrains. That is, the diagram can prescribe a way of understanding a given state of affairs, historical or else contemporary to our action that alleviates the burden of critical thought. The diagram can both open up the way we think about and engage in a world, as well as immobilise us into conservative patterns of thought and action, depending upon what we do with it. Importantly, while we may assume that we hold the reigns of the whiplash unfurling of diagrammatic forces and can curate them toward our own ends, it would be more accurate to say that the diagram draws us into relations of power that are more or less coagulated or fluid.

It is how the diagram of power and knowledge also alerts us to tactics through which we can activate creative resistance that allows me to make a transition here to the diagram as it is treated in Bacon's work. In relation to Francis Bacon's artistic procedures, the diagram, or the sometimes violent act of diagramming, is what allows the work to commence. To begin, "asignifying traits", involuntary free marks, local scrubbings must addle the canvas (Deleuze, 2003: 7, 8). Deleuze insists more generally that the artist's canvas is never empty, but already filled with the given debris of "habit, opinion and cliché", a triptych of conventional approaches about which Deleuze frequently issues warnings. It follows that "an entire battle takes place on the canvas between the painter and these givens" (81). The preparatory work includes: "make random marks (lines-traits); scrub sweep or wipe the canvas in order to clear out locales or zones (colour-patches); throw the paint, from various angles and at various speeds" (81). These diagrammatic actions scuttle the givens, the clichés and the habitual platitudes, all the preoccupations that the artist brings to the canvas. The action of the diagram as a preparatory force produces shifts of scale, juxtaposes close-up and far-away, shatters things, splits them apart, disrupts them: "It is like the emergence of another world" (82), and a pictorial order yet to come (84). The manual marks shake up the order of things, and it is as though a catastrophe, or else chaos, entered the painting, and as though the unruly outside were allowed a point of access. This relationship of struggle with chaos and catastrophe is further elaborated in Deleuze and Guattari's book *What is Philosophy?*. Deleuze explains, "the diagram is thus the operative set of asignifying and nonrepresentative lines and zones, line strokes and colour patches" (82, 83). They mark out possibilities of fact, but do not yet constitute a fact, "the diagram is indeed a chaos, a catastrophe, but it is also the germ of order or rhythm" (1994: 83). The diagram can be seen to both arrange forces into some provisional state of order, but also disrupt power relations where they have become dangerously coagulated.

From the fold to the Superfold

I would also argue that the concept and active force of the fold is an exemplary instance of a diagrammatic procedure at work in architecture, one that was popularised in the discipline of architecture by Greg Lynn's *Folding in Architecture*. The fold, or the action of folding, proved particularly compelling for architects as it seemed to offer direct formal applications without necessarily having to engage too explicitly in the associated philosophy, which also caused its own set of problems. I include Lynn in the story of diagrammatics and architecture because *Folding in Architecture*, which was originally published with *AD* (*Architectural Design*) in 1993, was subsequently reissued as a revised edition in 2004. By way of the two introductory essays that attend the original and then the revised version of this publication, the diagram work that I describe above pertaining to the field of architecture can be seen to be book- ended, at least for the purposes of this essay. It is a crucial period across which not only is the philosophy of Deleuze and Guattari being broadly engaged, but, as mentioned above, the wholesale uptake of computer aided design is being witnessed in architectural studios.

Lynn remarks that the work of the practices collected in the first edition of *Folding in Architecture* is undertaken "at the instant before they would become completely transformed by the computer" (Lynn, 2004: 10). In 1993 the focus had been on "compositional, organisational, visual and material sensibilities", and yet, he suggests in the 2004 revised edition, the architectural works seemed to pre-empt what would emerge over the following ten years and beyond. CAD (Computer Aided Design) has become commonplace in design offices, and a further paradigm shift has occurred, which means that architects not only use computer programs to represent their schemes, they also use computation to generate architectural projects. This is to say their techniques are supported by what Lynn has called a calculus-based medium. Architects, rather than mechanically applying the fold, by inflicting a form imagined *a priori* onto a mute material, begin to recognise ways in which they can follow the fold conceived as a material force. Through the recognition of the liveness of material flows and by modelling this liveliness through computation, architects begin to privilege the models that biology, as a logic of life, uses in its attempts to understand how life develops. To achieve life like qualities in architecture, borrowed from the life sciences and which have been frequently and fruitfully modelled through computation, requires an investment in the algorithmic codes that underlie computer softwares. The result is that digital architects employ algorithms that are often derived from the algorithms biology have developed to model life and living systems, whether at the scale of genes, organisms, species, and even ecological niches. The combinatorial force of the differential disciplines of architecture and biology is what contributes to what can be recognised as the intimation of what can be called the "Superfold" in architecture, the implications of which it is still too early to fully assess.

In Deleuze's Appendix to *Foucault*, entitled, *On the Death of Man and Superman* the concept of the Superfold is introduced in its relation to new configurations of Life, Labour and Language, or biology, political economy and linguistics (1988: 127). In the first instance this is emerging out of the historical formation of the nineteenth century, and thence toward new formations of the future (129). The Superfold, Deleuze suggests, displaces a former sense of the infinite as that which raises relations all the way to infinity, and in its place introduces an unlimited 'finity' where "a finite number of components yields a practically unlimited diversity of combinations" (131). Hence the foldings of the genetic code, the potential of silicon in third generation machines (Deleuze is writing in the 1980s), and the contours of the sentences of modern literature (131). What he suggests is that "it would be neither the fold not the unfold that would constitute the active mechanism, but something like the Superfold, as borne out by the foldings proper to the chains of genetic code, and the potential of silicon in third generation machines, as well as by the contours of a sentence in modern literature, when literature 'merely turns back on itself in an endless reflexivity'" (131). The exemplary form of the Superfold, or else the best known example according to Deleuze is the double

helix (132), by which Deleuze appears, at least in passing, to privilege what is at work in genetics. Implicit to the genealogy of the influence of Deleuze and Guattari's diagrammatics on architecture, which I have offered in brief survey above, is the concept of the fold as one example of how to diagram virtual forces toward the creation of new architectures. The problem remains, as Deleuze concludes in his book on Foucault, as to whether the advent of such new forms, for instance, those signed by the concept of the Superfold, will prove better or worse than what came before (132).

The vitalism of life as a stimulus to aesthetic creation operates as a kind of resilience against habit, opinion and cliché; it configures an ongoing effort to disrupt the routines of narration, illustration and figuration. What Deleuze, reading Foucault, insists is that it is resistance that comes first (Deleuze, 1988: 89). Françoise Proust suggests that to paradoxically claim that resistance comes first (but what is it resisting?) is to propose that "resistance is like a line … at once straight and twisted, at once firm and supple" (2000: 24). That is to say, the line of resistance is exactly the line of the outside, resisting the influx of chaotic forces, managing to hold at bay complete disorder, but at the same time filtering the forces of the outside so that novel forms of life can be invented. The diagram in question here "stems from the outside but the outside does not merge with any diagram, and continues instead to 'draw' new ones" (Deleuze, 1988: 89). In this way, Deleuze continues, the outside is always an opening onto a future: "We must take quite literally the idea that man is a face drawn in the sand between two tides: he is a composition appearing only between two others, a classical past that never knew him and a future that will no longer know him" (89). Furthermore, "this is no occasion for either rejoicing or weeping" (89). With the introduction of the Superfold as a diagram that emerges after the human subject has arrived and departed the world historical scene, beyond such thresholds of thought only wild imaginings are possible. The Superfold inaugurates a posthuman future, which is not to say that the human species is entirely dispensed with. The two directions that Deleuze posits for this new diagram of the Superfold, as noted above, are towards genetics and computation. If we conjoin these two experimental tendencies what we have is a new biotechnological paradigm, signs of which are becoming increasingly evident in design and art practice today. The architectural thinker and designer needs to remain cautious. While they wield the tools that allow them to use diagrams so as to facilitate the emergence of new worlds, they are at the same time inextricably caught up in diagrams of power and knowledge. What Deleuze and Foucault finally demonstrate is that 'man' is himself composed by the diagrammatic forces of an outside of thought, and may well in time also find himself rewritten by such diagrams.

References

Allen, S. (1998). Diagrams Matter, in Berkal, Ben van & Bos, C. (Eds.). Diagram Work. *Any Magazine, 23*, 16-18.

Berkal, Ben van & Bos, C. (Eds.) (1998). Diagram Work. *Any Magazine, 23*.

De Landa, M. Deleuze (1998). Diagrams and the Genesis of Form, in Berkal, Ben van & Bos, C. (Eds.), Diagram Work. *Any Magazine, 23*, 30-33.

Deleuze, G. (1988). *Foucault*. Minneapolis: University of Minnesota Press.

Deleuze, G. (1993). *The Fold: Leibniz and the Baroque*. Minneapolis: University of Minnesota Press.

Deleuze, G. (1994). Sept Dessins [Seven Designs]. *Chimères*, Hiver [winter], *21*, 13-20.

Deleuze, G. (2003). *Francis Bacon: The logic of sensation*. Minneapolis: University of Minnesota Press.

Deleuze, G. (2004). Faces and Surfaces. In *Desert Islands* (pp. 281-281). New York: Semiotext(e).

Deleuze, G. & Guattari, F. (1983). *Anti-Oedipus: Capitalism and schizophrenia*. Minneapolis: University of Minnesota Press.

Deleuze, G. & Guattari, F. (1987). *A Thousand Plateaus: Capitalism and schizophrenia*. Minneapolis: University of Minnesota Press.

Deleuze, G. & Guattari, F. (1994). *What is Philosophy?*. London: Verso.

Eisenman, P. (1999). *Diagram Diaries*. New York: Universe Publishing.

Foucault, M. (1970). *The Order of Things: An archaeology of the human sciences*. London: Routledge.

Foucault, M. (1977). *Language, Counter Memory, Practice*. Ithaca, New York: Cornell University.

Frichot, H. (2009a). On Finding Oneself Spinozist: Refuge, beatitude and the any-space-whatever. In Eugene W. Holland, Daniel W. Smith, Charles Stivale (Eds.), *Gilles Deleuze: Image and text* (pp. 247-263). New York: Continuum.

Frichot, H. (2009b). On the Death of Architectural Theory and Other Spectres. *Design Principles and Practices: An International Journal*, *3*. Available at URL, http://www.Design-Journal.com

Lynn, G. guest editor. (1993). *Folding in Architecture*. London: Wiley-Academy.

Lynn, G. guest editor (2004). *Folding in Architecture*, Revised Edition. London: Wiley-Academy.

Proust, F. (2000). The Line of Resistance. *Hypatia 15*(4), Autumn, 23-37.

Rendell, J. (2007). Introduction: Critical Architecture: Between Criticism and Design. In Jane Rendell, Jonathan Hill, Murry Fraser & Mark Dorrian (Eds.), *Critical Architecture* (pp. 87-91). London: Routledge.

Somol, R.E. (1999). Dummy Text, or the Diagrammatic Basis of Contemporary Architecture. In Peter Eisenman, *Diagram Diaries* (pp. 6-25). New York: Universe Publishing.

Whiting, S. & Somel, R.E. (2002). Notes around the Doppler Effect and Other Moods of Modernism. *Perspecta 33*, 72-77.

Whiting, S. & Somol, R.E. (2005). Guest Editors, *Log 5*.