Diagram
An Original Scene of Writing

Peter Eisenman

Architect and theorist Professor Peter Eisenman (Cooper Union, Yale University and Principal, Eisenman Architects, New York), has generated perhaps the single most important research project on the diagram in architecture. From his PhD thesis and other texts to designs and built projects, Eisenman’s work has consistently been determined by and depended on his rigorous and decades-long research into the architectural diagram. A seminal text in architectural diagram theory, this essay was first published in Eisenman’s Diagram Diaries (1999) and has since become one of the most recent, significant and original contributions to architectural theory. The central subject of this essay is architecture’s and the architectural diagram’s relationship to writing and the text. For Eisenman, the diagram traces and writes, and can be traced and read in, architecture. As such, the diagram mediates between the history of architecture (diagrams of anteriority) and the ways in which this is traced in a real building and the other possible buildings that are within it (diagrams of interiority). Diagrams of exteriority, those from outside architecture, are defined as agents from the ‘specific site, the programme, or the history’. Through his concept of ‘superposition’, Eisenman’s account of the diagram demonstrates a close reading of Derridean deconstruction and other Postmodern, post-Structuralist theories of the diagram, language, text and writing which are together marshalled to critique ‘the premise of architecture’s origin in presence’. Effectively placing architecture on a new ontological, metaphysical and epistemological basis, this account uses the diagram to expand architecture into a more complex concept. Drawing on such diverse fields as metaphysics, aesthetics, psychology and literary theory, Eisenman references Villard d’Honnecourt, Palladio, Serlio and Le Corbusier from the history of architecture as well as such diverse thinkers as Wittkower, Freud, Foucault and Deleuze. This central text in his theoretical corpus introduces many of the concepts and lines of thought that he was to elaborate in other essays in Diagram Diaries, and in a second, later book on the diagram, Feints (2005), and through designs and built projects around the world.

As in all periods of supposed change, new icons are thrust forward as beacons of illumination. So it is with the idea of the diagram. While it can be argued that the diagram is as old as architecture itself, many see its initial emergence in Rudolf Wittkower’s use of the nine-square grid in the late 1940s to describe Palladian villas. The diagram’s pedigree continued to develop in the form of the nine-square problem as practised in the American
architectural academy of the late 1950s and early 1960s, when it was seen as an antidote to the bubble diagramming of the Bauhaus functionalism rampant at Harvard in the late 1940s and to the parti of the French academy that was still in vogue at several East Coast schools well into the late 1960s. As a classical architectural diagram, the parti was embodied with a set of pre-existent values such as symmetry, the marche and poché, which constituted the bases of its organising strategy. The bubble diagram attempted to erase all vestiges of an embodied academicism in the parti. In so doing, it also erased the abstract geometric content of the nine-square.

Generically, a diagram is a graphic shorthand. Though it is an ideogram, it is not necessarily an abstraction. It is a representation of something in that it is not the thing itself. In this sense, it cannot help but be embodied. It can never be free of value or meaning, even when it attempts to express relationships of formation and their processes. At the same time, a diagram is neither a structure nor an abstraction of structure. While it explains relationships in an architectural object, it is not isomorphic with it.

In architecture the diagram is historically understood in two ways: as an explanatory or analytical device and as a generative device. Although it is often argued that the diagram is a post-representational form, in instances of explanation and analysis the diagram is a form of representation. In an analytical role, the diagram represents in a different way from a sketch or a plan of a building. For example, a diagram attempts to uncover latent structures of organisation, like the nine-square, even though it is not a conventional structure itself. As a generative device in a process of design, the diagram is also a form of representation. But unlike traditional forms of representation, the diagram as a generator is a mediation between a palpable object, a real building, and what can be called architecture’s interiority. Clearly this generative role is different from the diagram in other discourses, such as in the parsing of a sentence or a mathematical or scientific equation, where the diagram may reveal latent structures but does not explain how those structures generate other sentences or equations. Similarly, in an architectural context, we must ask what the difference is between a diagram and a geometric scheme. In other words, when do nine squares become a diagram and thus more than mere geometry?

Wittkower’s nine-square drawings of Palladio’s projects are diagrams in that they help to explain Palladio’s work, but they do not show how Palladio worked. Palladio and Serlio had geometric schema in mind, sometimes explicit and sometimes implicit, which they drew into their projects. The notations of dimensions on the Palladian plans do not correspond to the actual project but to the diagram that is never drawn. A diagram implicit in the work is often never made explicit. For example, as Kurt Forster has noted, in the earliest parchment drawings in architecture, a diagrammatic schema is often drawn or etched into the surface with a stylus without being inked. The later inking of the actual project over this then becomes a superposition of a diagrammatic trace. In many of these drawings – from late Gothic architecture to the Renaissance – the overlay does not
actually take all of the diagrammatic imprint, only partial traces of it. The quality of the ink on the page changes where it runs over the diagram as opposed to the places where the diagram is actually part of the plan of the building. Thus, there is a history of an architecture of traces, of invisible lines and diagrams that only become visible through various means. These lines are the trace of an intermediary condition (that is, the diagram) that exists between what can be called the anteriority and the interiority of architecture; the summation of its history as well as the projects that could exist are indexed in the traces and the actual building.

The diagram is not only an explanation, as something that comes after, but it also acts as an intermediary in the process of generation of real space and time. As a generator there is not necessarily a one-to-one correspondence between the diagram and the resultant form. There are many instances, for example in Le Corbusier’s Modulor, where the diagram is invisible in the building, yet it reappears as a repetitive element that occurs at many different scales, repeated in little segments of houses to large segments of urban plans, yet it is rarely an explicit form. Thus Le Corbusier’s statement that the plan is the generator will be seen to be different from the diagram is the generator. There are many examples of diagrams where a variety of shapes can be arrived at through a geometry that is exfoliated into different shapes. For example, Villard d’Honnecourt used geometric matrices to evolve natural and animal forms. One of the most interesting is the manifestation of a camel drawn from interlocking squares and diagonals. In the chateau architecture of the Loire valley in the 16th century there are irregular forms that could only have been produced through some sort of manipulation of diagrammatic geometry into a three-dimensional process called ‘stereotomy’. Stones were cut from templates generated by these kinds of diagram. As Kurt Forster notes, in the late Gothic, for example, there is a diagrammatic process that leads the schematic articulation of foliage on column capitals to change from a stylised or conventional nature with bilateral symmetries to a more naturalistic, free-form nature. Such a process differs from the straightforward manipulation of geometry that was the tradition in
Gothic leaf capitals. The naturalistic evolution of these other capitals comes not from geometry but from a diagram. In this sense, the diagram becomes an intermediary condition between a regular base geometry and the capital itself. Here the diagram acts neither as geometry nor as the existent capital. It is a trace or phantom, which acts between something which can be called the interiority of architecture and the specific capital; between some explicit geometric formation which is then transformed by the diagram or intermediary process on to a result.

Reacting against an understanding of the diagram that characterised it as an apparently essentialist tool, a new generation, fuelled by new computer techniques and a desire to escape its perceived Oedipal anxieties – with regard to the generation of their mentors – is today proposing a new theory of the diagram based partly on Gilles Deleuze’s interpretation of Foucault’s recasting of the diagram as ‘a series of machinic forces’, and partly on their own cybernetic hallucinations. In their polemic, the diagram has become a keyword in the interpretation of the new. This question challenges both the traditional geometric bases of the diagram and the sedimented history of architecture, and in so doing they question any relation of the diagram to architecture’s anteriority or interiority.

The second point Deleuze makes is that the diagram is different from structure. The classical architectural idea of a diagram exhibits a belief in structure as something that is hierarchical, static and has a point of origin. Deleuze says that a diagram is a supple set of relationships between forces. It forms unstable physical systems that are in a perpetual disequilibrium. Deleuze says that diagrams that deal with distribution, serialisation and formalisation are all structural mechanisms in that they lead to structure and a belief in structuring as an underlying principle of organisation. If a structure is seen as a vertical or hierarchical ordering of its constituent parts, the diagram must be conceived both horizontally and vertically, both as a structure and something which resists structuring: ‘From one diagram to the next, new maps are drawn; thus there is no diagram that does not also include besides the points which it connects up (that is, besides its structural component) certain relatively free or unbound points, points of creativity, change and resistance to that existing building.’ In this sense, diagrams are those forces which appear in every relation from one point to another, as superimposed maps. The distinction between Deleuze’s idea of superimposition and my use of the term superposition is critical in this context. Superimposition refers to a vertical layering differentiating between ground and figure. Superposition refers to a coextensive, horizontal layering where there is no stable ground or origin, where ground and figure fluctuate between one another.

Thus diagrams for Deleuze must have a non-structuring or informal dimension. It is ‘a functioning abstracted from any obstacle or friction, detached from any specific use’. This is an important movement away from the classical idea of an architectural diagram. Deleuze says that ‘a diagram is no longer an auditory or visual archive, but a map, a cartography that is coextensive with the whole social field. It is an abstract machine.’
This abstract machine is defined by its functioning in unformed matter, as a series of processes that are neither mechanical nor organic. The diagram then is both form and matter, the visible and the articulable. Diagrams for Deleuze do not attempt to bridge the gap between these pairs, but rather attempt to widen it, to open the gap to other unformed matters and functions which will become formed. Diagrams, then, form visible matter and formalise articulable functions.

RE Somol follows Deleuze in situating these ideas of the diagram in architecture. For Somol, diagrams are any kind of explanatory abstraction: ‘cartoons, formulas, diagrams, machines, both abstract and concrete. Sometimes they are simply found and other times they are manipulated.’ A partial list of what Somol labels as ‘previous’ diagrams includes the nine-square, the Panopticon, the Domino, the skyscraper, the duck and the decorated shed, the fold, and bachelor machines. Somol says that he is searching for an alternative way of dealing with architecture’s history, ‘one not founded on resemblance and return to origins but on modes of becoming an emergence of difference’. The problem with this idea of the diagram as matter, as flows and forces, is that it is indifferent to the relationship between the diagram and architecture’s interiority, and in particular to three conditions unique to architecture: (1) architecture’s compliance with the metaphysics of presence; (2) the already motivated condition of the sign in architecture; and (3) the necessary relationship of architecture to a desiring subject.

Somol’s argument for a diagrammatic project takes as axiomatic that every design project, whether in practice or in the university, needs to take up anew the issue of what constitutes the discipline or, in other words, that architecture both as a discipline and a social project needs to suspend and rearrange ruling oppositions and hierarchies currently in operation. This would suggest that design projects and processes cannot simply be derived from their contexts, but rather must transform their very social and intellectual contexts. In this sense, Somol’s diagrammatic process, as a machinic environment, is already given as a social project. That is, it is not abstract or autonomous, but rather presumes that architecture already contains in its being (ie its interiority) the condition of the social.

If in the interiority of architecture there is a potentially autonomous condition that is not already socialised or that is not already historicised, one which can be distilled from a historicised and socialised interiority, then all diagrams do not necessarily take up new disciplinary and social issues. Rather, diagrams can be used to open up such an autonomy to understand its nature. If this autonomy can be defined as singular because of the relationship in architecture between sign and signified, and if singularity is also a repetition of difference, then there must be some existing condition of architecture in order for it to be repeated differently. This existing condition can be called architecture’s interiority. When there is no interiority, that is, if there is no relationship between interiority and the diagram, there is no singularity which defines architecture.
If architecture's interiority can be said to exist as a singular rather than dialectical manifestation of a sign that contains its own signified, the motivation of the sign is already internalised and thus autonomous. Yet if the diagram is already social, as Somol suggests, this definition immediately historicises autonomy. The notion of the diagram being proposed here attempts to overcome the historicisation of the autonomy of architecture, that is, the already motivated nature of architecture's sign.

In this context, the relationship between the diagram and architecture's interiority is crucial. Foucault's understanding of an archive as the historical record of a culture, and of an archaeology as the scientific study of archival material, can be translated as architecture's anteriority and interiority. These cannot by their very nature be constituted merely by unformed matter, as Somol suggests, but in fact already contain presence, motivated signs and a psychical desire for delineation by the subject of both ground and figure. A diagram of instability, of matter and flows, must find a way to accommodate these concerns specific to architecture. In this context, another idea of the diagram can be proposed, one which begins from Jacques Derrida's idea of writing as an opening of pure presence.

For Derrida, writing is initially a condition of repressed memory. The repression of writing is also the repression of that which threatens presence, and since architecture is the *sine qua non* of the metaphysics of presence, anything that threatens presence would be presumed to be repressed in architecture's interiority. In this sense, architecture's anteriority and interiority can be seen as a sum of repressions. While all discourses, Derrida would argue, contain repressions that in turn contain an alternative interior representation, architecture must be seen as a special case because of its privileging of presence. If Derrida is correct, there is already given in the interiority of architecture a form of representation, perhaps as the becoming unmotivated of the architectural sign. This repressed form of representation is not only interior to architecture, but anterior to it. It is this representation in architecture that could also be called a writing. How this writing enters into the diagram becomes a critical issue for architecture.

*House II, Plexiglass, 1969–70.* Reproduced by permission of Peter Eisenman. © Peter Eisenman.
Peter Eisenman, House II, 1969–70. Diagrams of interiority: developmental sequence of the diagrams for House II showing the shifting, doubling and layering operations in the design process. Reproduced by permission of Peter Eisenman. © Peter Eisenman.
One way that memory overcomes forgetting is through mnemonic devices. Written lists are a form of mnemonic device, but one that is graphic and literal; they do not represent or contain a trace. In architecture, literal notations can produce a plan but they have nothing to do with the diagram, because a plan is a literal mnemonic device. A plan is a finite condition of writing, but the traces of writing suggest many different plans. It is the idea of the trace that is important for any concept of the diagram, because unlike a plan, traces are neither fully structural presences nor motivated signs. Rather, traces suggest potential relationships, which may both generate and emerge from previously repressed or unarticulated figures. But traces in themselves are not generative, transformative or even critical. A diagrammatic mechanism is needed that will allow for both preservation and erasure and that can simultaneously open up repression to the possibility of generating alternative architectural figures which contain these traces.

Derrida says, 'We need a single apparatus that contains a double system, a perpetually available innocence and an infinite reserve of traces.' A diagram in architecture can also be seen as a double system that operates as a writing both from the anteriority and the interiority of architecture as well as from the requirements of a specific project. The diagram acts like a surface that receives inscriptions from the memory of that which does not yet exist – that is, of the potential architectural object. This provides traces of function, enclosure, meaning and site from the specific conditions. These traces interact with traces from the interiority and the anteriority to form a superposition of traces. This superposition provides a means for looking at a specific project that is neither condemned to the literal history of the anteriority of architecture, nor limited by facts, the reality of the particular site, programme, context or meaning of the project itself. Both the specific project and its interiority can be written on to the surface of a diagram that has the infinite possibility of inscribing impermanent marks and permanent traces. Without these permanent traces there is no possibility of writing in the architectural object itself.

If architecture's interiority is seen as already written, then Derrida's use of Freud's double-sided Mystic Writing Pad could be one model for describing a conception of a diagram different from both the traditional one in classical architecture and the one proposed by Somol. Neither of these considers in any detail architecture's problem with the metaphysics of presence, the unmotivating of the sign, or the psychical problem of repression in both the interiority of architecture and in the subject. The analogy of the Mystic Writing Pad is useful because the specific conditions of site and the anteriority of architecture both constitute a form of psychical repression.

The Mystic Writing Pad, as proposed in Freud's analogy, consists of three layers: the outer layer or surface where the original writing takes place, a middle layer on which the writing is transcribed, and underneath, a tablet of impressionable material. Using a stylus, one writes on the top surface. Because of the surface underneath, the top surface reveals a series of black lines. When the top surface is lifted from the other two, the black lines
disappear. What remains is the inscription on the bottom surface, the trace of the lines that have been drawn. The indentations made by the stylus remain, always present. Thus there are infinite possibilities for writing and rewriting on the top surface and a means of recording the traces of this writing as a series of superpositions on the tablet underneath. This recalls the traces of the earliest incisions on parchment that already exist in the anteriority of architecture as described above.

The architectural diagram, like the Mystic Writing Pad, can be conceived of as a series of surfaces or layers which are both constantly regenerated and at the same time capable of retaining multiple series of traces. Thus, what would be seen in an architectural object is both the first perceptual stimulus, the object itself, along with its aesthetic and iconic qualities, and another layer, the trace, a written index that would supplement this perception. Such a trace would be understood to exist before perception, in other words, before a perception is conscious of itself.

Derrida says, ‘Memory or writing is the opening of that process of appearance itself. The “perceived” may only be read in the past, beneath perception and after it.’ The diagram understood as a strata of superposed traces offers the possibility of opening up the visible to the articulable, to what is within the visible. In this context, architecture becomes more than that which is seen or which is present; it is no longer entirely a representation or an illustration of presence. Rather, architecture can be a representation of this intervening apparatus called the diagram. In this sense, the diagram could be understood to exist before the anteriority and the interiority of architecture. It exists as the potential space of writing, a writing which supplements the idea of an interiority before perception. This idea of an interiority as containing a palimpsest of an already written undercuts the premise of architecture’s origin in presence.

But there is also a temporality involved in the processes of the diagram. Derrida says that the Mystic Pad includes in its structure what Kant describes as the three modes of time: permanence, succession and simultaneity. The diagram, like the writing pad, contains the simultaneity of the appearance on its surface, what would be akin to the black lines on the top layer of the pad, as well as the indentations in the wax below: the second aspect of the time of the diagram is succession, which is akin to the lifting up of the pad and is involved in erasure and the posting of a new image. This is the permanence in the wax itself. The diagram presents in such a context a discontinuous conception of time as the periodicity and the spacing of writing. These three conditions of time are not linear or connected in a narrative way. Thus, the diagram is an intermediate or interstitial condition which lies between in space and time – between the architectural object and the interiority of architecture.

Writing implies that in an architectural object, the object’s presence would already contain a repetition. In this sense an architectural object would no longer be merely a condition of being, but a condition which has within itself both a repetition of its being
and a representation of that repetition. If the interiority of architecture is singular as opposed to dialectical, and if that singularity can be defined as a repetition of difference, then architecture’s interiority may be already written.

There is a second concern that the diagram must address, and that is the potential for the becoming unmotivated of the sign. The already written introduces the idea of the index into the architectural object. The index is the first movement away from a motivated sign. Here, another layer must be added to the strata of the diagram, one which, through a process of blurring, finds new possibilities for the figural within architecture’s interiority that could not have come from that interiority. An external condition is required in the process, something that will introduce a generative or transformative agent as a final layer in the diagrammatic strata. This external agent is not the expression of a desiring subject, but rather must come from outside of architecture as some previously unfigured, yet immanent agent in either the specific site, the programme or the history. It could take the form of a transparent pattern or screen, which causes the already imprinted to appear as other figurations, both blurring and revealing what already exists. This is similar to the action of a moiré pattern or filter, which permits these external traces to be seen free of their former architectural contexts.

The diagram acts as an agency which focuses the relationship between an authorial subject, an architectural object and a receiving subject; it is the strata that exist between them. Derrida says that ‘Freud, evoking his representation of the psychical apparatus, had the impression of being faced with a machine which would soon run by itself. But what was to run by itself was not a mechanical representation or its imitation but the psyche itself.’ The diagrammatic process will never run without some psychical input from a subject. The diagram cannot ‘reproduce’ from within these psychical conditions. The diagram does not generate in and of itself. It opens up the repression that limits a generative and transformative capacity, a repression that is constituted in both the anteriority of architecture and in the subject. The diagram does not in itself contain a process of overcoming repression. Rather, the diagram enables an author to overcome and access the history of the discourse while simultaneously overcoming his or her own psychical resistance to such an act. Here, the diagram takes on the distancing of the subject-author. It becomes both rational and mystical, a strange superposition of the two. Yet according to Freud, only the subject is able to reconstitute the past; the diagram does not do this. He says, ‘There must come a time when the analogy between this apparatus and the prototype will cease to apply. It is true that once writing has been erased the Mystic Pad cannot “reproduce” it from within; it could be a Mystic Pad indeed if, like our memory, it could accomplish that.’