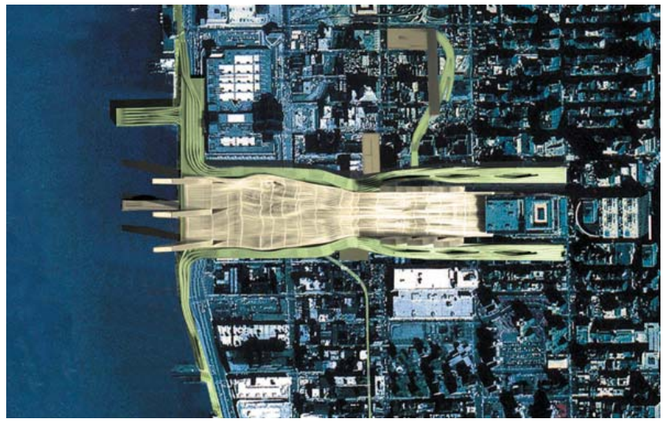
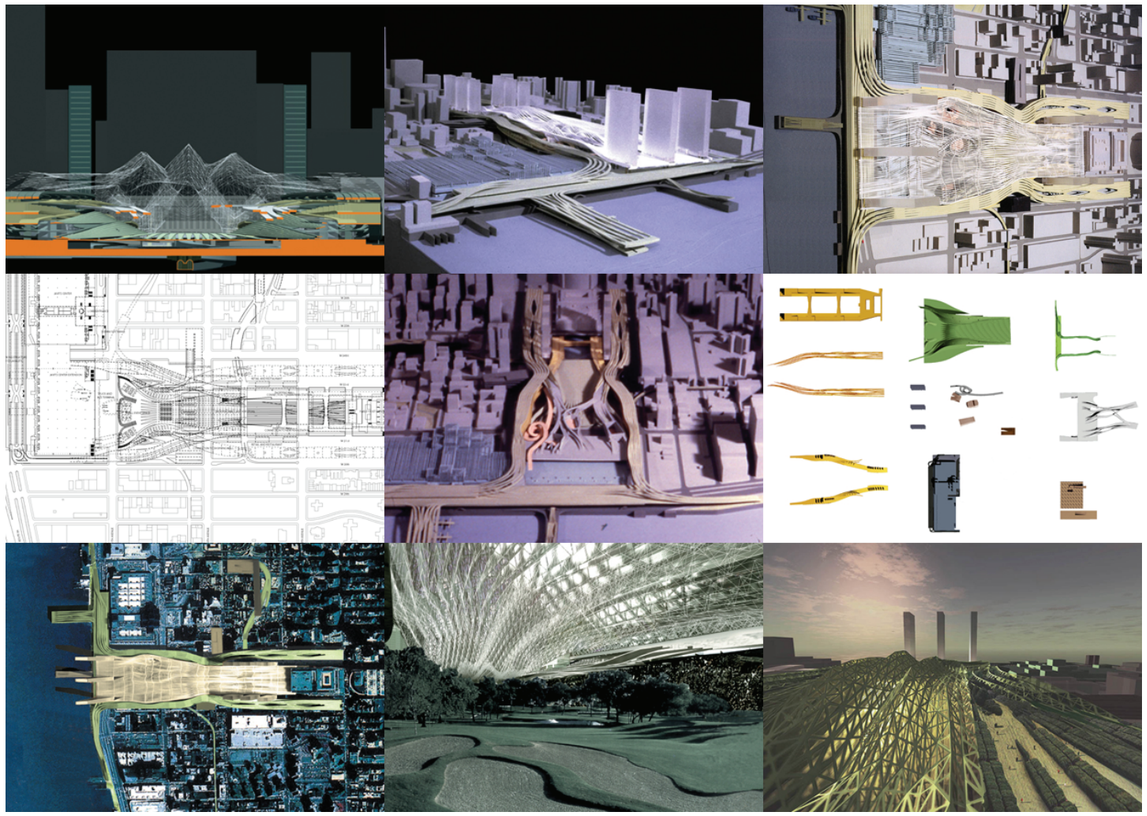


Julian Wylegly | evda 621

Reiser + Umemoto

West Side Convergence

New York, USA



INTRODUCTION

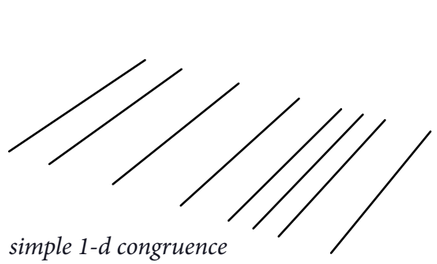
West Side Convergence Project Description

"Cities are the nexus of material and informational flows, developed within multiple infrastructures of transportation, distribution, culture, and knowledge. The increasingly interconnected world has produced cities where global systems are intermeshed in local environments, and scale shifts rapidly from the local to the regional and international. As the locus of intense economic, social, and idea exchanges and connections at all levels, the city of the 21st century must support these vital urban interactions, and design new meeting, working, and entertainment environments. With this competition comes the opportunity to reinvent this site by transcending the separation and mono-functionality of many of its large infrastructural elements through a mode of operation we term 'infrastructuralism.' There are very real benefits - social and political as well as functional and economic - to the loosening of the stratification of infrastructure and activity in this area. It is at this level that we would operate to produce change in the form of the city."

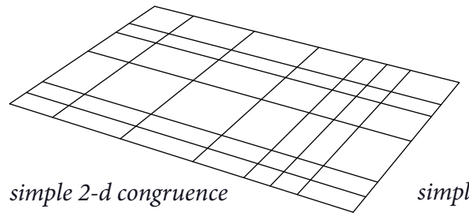
-Jesse Reiser + Nanako Umemoto

Size: 8 city blocks by 5 city blocks
Type: mixed-use urban landscape
Structure: spaceframe, concrete, glass, landscape

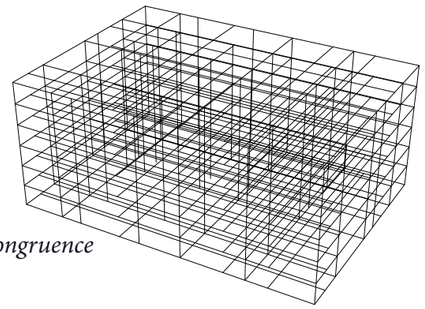
The following study attempts to deconstruct various principles expressed both through Reiser + Umemoto's theoretical writings in relation to their project, West Side Convergence. It is expressed in four parts: form, body, technique, and space.



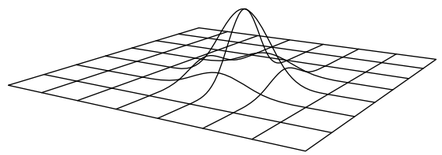
simple 1-d congruence



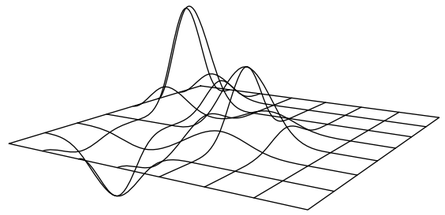
simple 2-d congruence



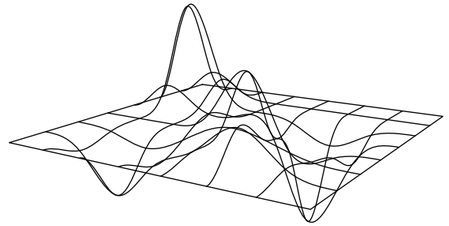
simple 3-d congruence



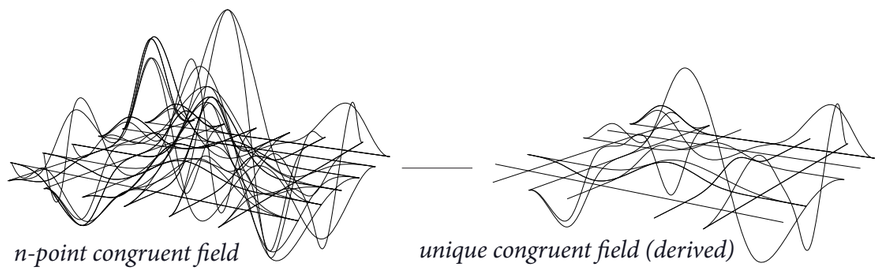
1 point congruent field



3 point congruent field

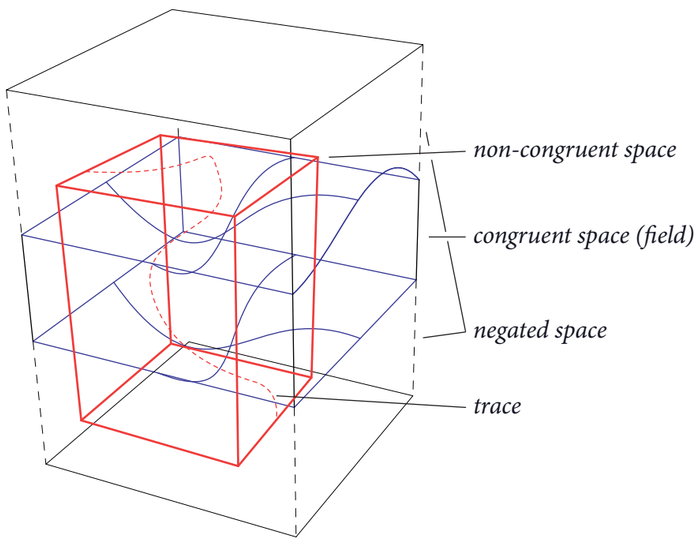


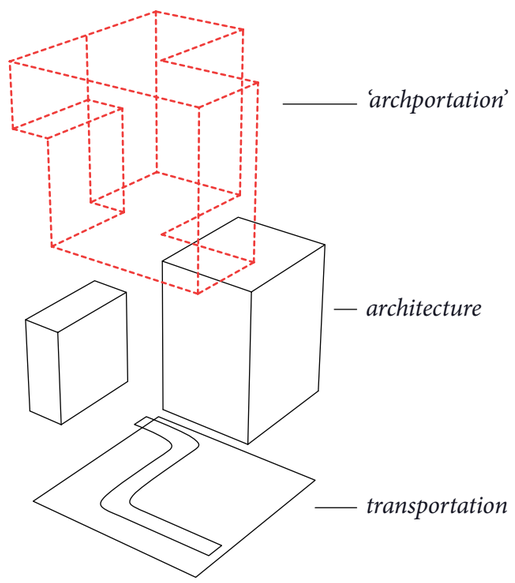
5 point congruent field



n-point congruent field

unique congruent field (derived)





FORM

Congruence vs Non-congruence

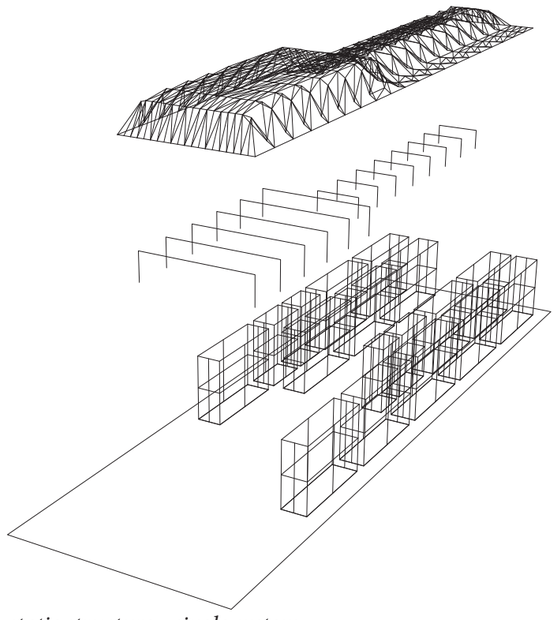
"Mass-customization is most successful when mobilized in some larger construct rather than individual units marketed and released into society in isolation from the rest of the series" (Reiser et al, 62).

Congruence is the state of agreement that is achieved by the coming-together. This defines a set of operations that will output systems with positive intrinsic relationships. As stated by Reiser and Umemoto, systems provided in larger constructs that are then parsed to provide a series containing 'uniques' or customizations are more successful. However, when it comes to combining multiple systems (in this case, architecture and transportation infrastructures), conventional distinctions become negated. This exemplifies the case for non-congruence. Non-congruence becomes the state of agreement that is achieved by disassociating. It creates a coherence through the utilization of both congruent forms and the conditions extrapolated by the negation of said forms. This, in essence, provides a loosening of existing fabrics that allows for the interjection of new programmatic, spatial, and formal possibilities.

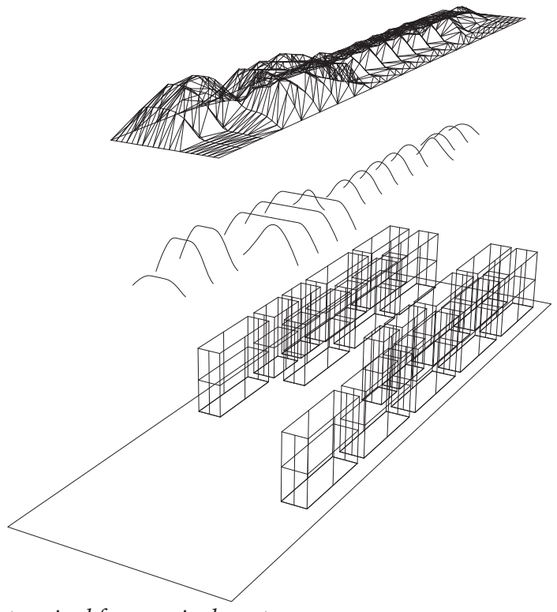
Expressing Non-congruence

"Trace is a partial or fragmentary sign; it has no objecthood. It signifies an action that is in process. In this sense a trace is not a simulation of reality, it is a dissimulation because it reveals itself as distinct from its former reality. It does not simulate the real, but represents and records the action inherent in a former of future reality, which has a value a value no more or less real than the trace itself" (Eisenman, 222).

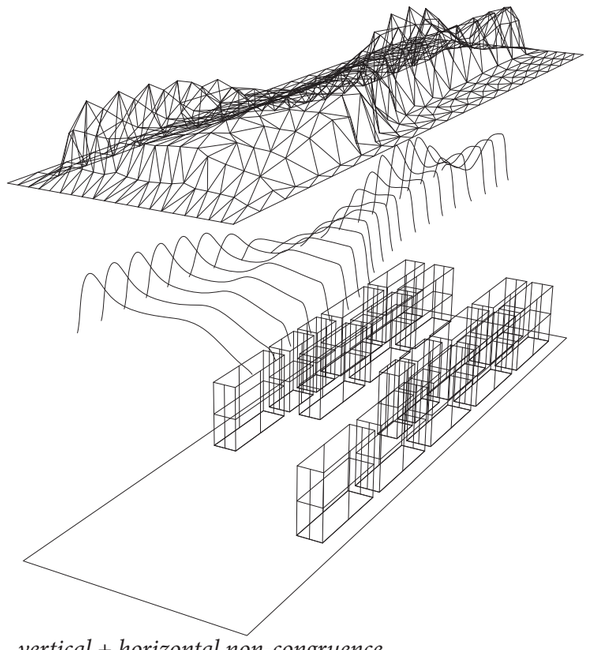
Traces capture non-congruence. They become the tools by which one can define and expose the passage from congruent space to its negation. They document the particular conditions through which non-congruence provide convergence between what is congruent and what lies in the negation of congruent space. Tracing provides us with a means of explaining a non-congruent system through which rationalization can then take place. This enables the creation of the in-between (in particular, the 'archportation' space), that allows for the breakdown of distinct objects and merge them together. The defining of non-congruent spaces through tracing allows that architect to create an artefact. This artefact then provides the architect with an artificial stratification through which existing fabrics become loosened (and thus changeable).



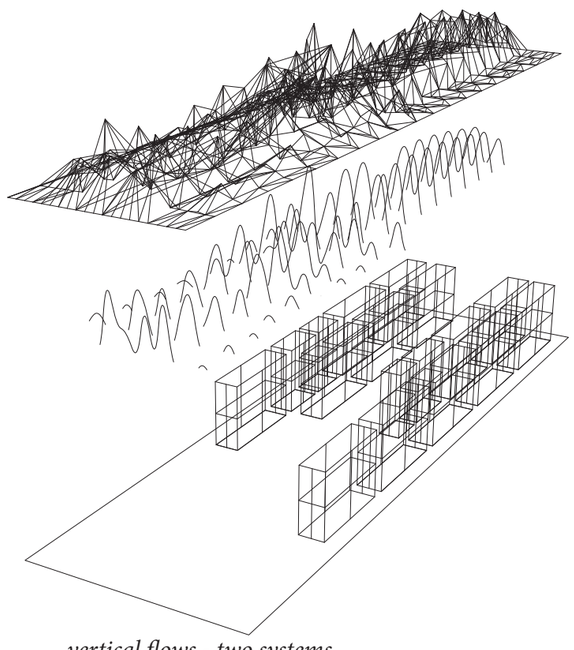
static structure - single system



terminal forces - single system



vertical + horizontal non-congruence



vertical flows - two systems

FORM

Non-congruence and West Side Convergence

"The extreme sectional variation produced by these infrastructures generates not one ground upon which a building is built, but rather, multiple grounds within which spaces are developed" (Rahim, 83).

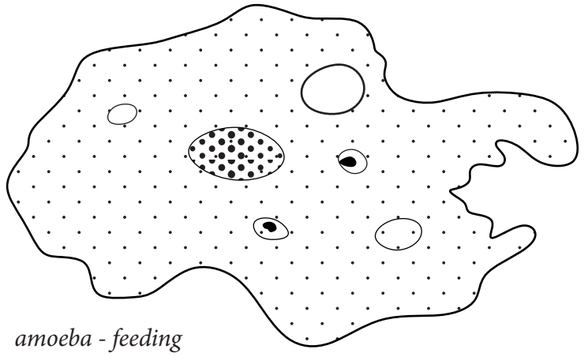
West Side Convergence incorporates three separate but necessary systems: the global parkscape, the local city grid, and the global transportation infrastructure. In order to keep all systems intact, Reiser and Umemoto work outside of congruence - that is, the West Side Convergence does not work to establish one system as dominant (whether it be the transportation or architecture), but rather, combine the parkscape, city grid, and transportation infrastructure to create a basis for developing a cohesive space through non-congruence. An effect is that this creates a varied system in which each space becomes articulated separately, but remains under one cohesive whole. Separate articulation is reflected in the fact that a requirement for multiple grounds is necessary. Multiple grounds arise from the fact that each congruent system can derive unique spaces from it, but the unique spaces from the different systems are themselves not congruent (that is, the space required for the hotels and convention centre cannot be shared with the space that is required for vehicular access, they're too *different*). Depending on the number and types of systems at play, it is possible to arrive at vastly different forms.

Flows

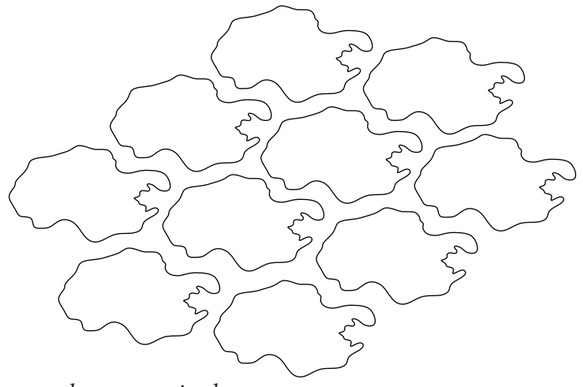
"Urban form...is not characterised by static, isolated objects, but is conditioned by a network of flows that both influence and promulgate the material organisation of the project. There are no flows without matter, and no matter without flows" (Rahim, 87)

One of the major factors regarding the form of this building arrives from an extrapolation of flow. Reiser and Umemoto seem to adhere very closely with the view of the city brought up by Stan Allen. He states that "the city today is a place where visible and invisible streams of information, capital, and subjects interact in complex formations. They form a dispersed field, a network of flows" (Allen, 60). Flow is an integral part of the form of the West Side Convergence. In order to understand how each of the parkscape, the city grid, and the transportation infrastructure work, it is possible to examine them through their flows. Reiser and Umemoto account for this as a principle strategy, which can be easily seen in the renders of the building. The building becomes about flow - it uses the flows of parkscape, city grid, and transportation infrastructure to create its own nexus within the greater nexus of New York.

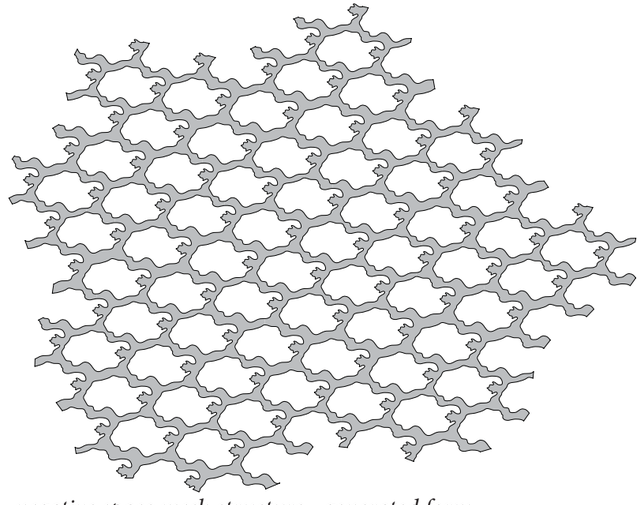
organizational principle - generative body



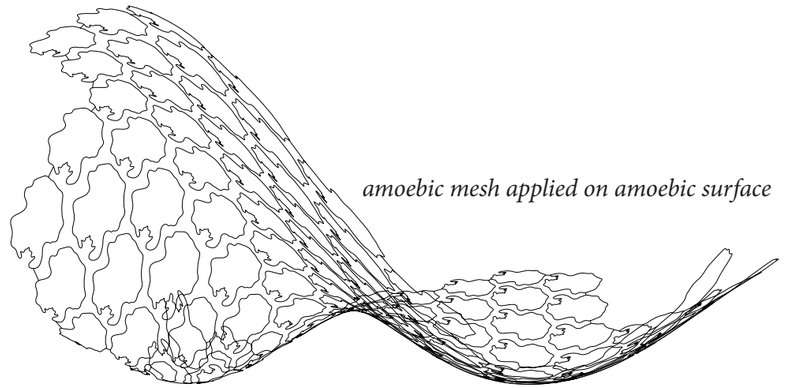
amoeba - feeding



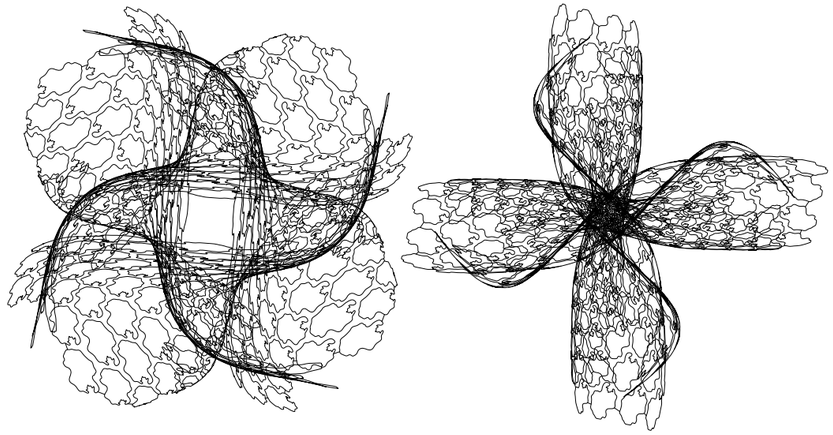
amoebas - organized array



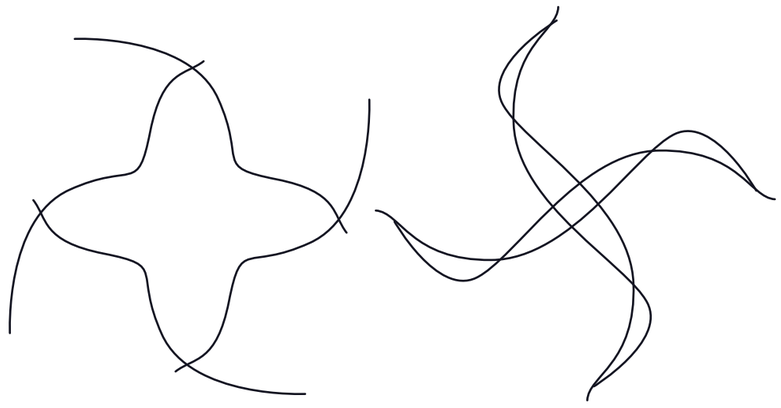
negative space mesh structure - generated form



amoebic mesh applied on amoebic surface



spatial organizations - iterations



new bodies - new organizational principles

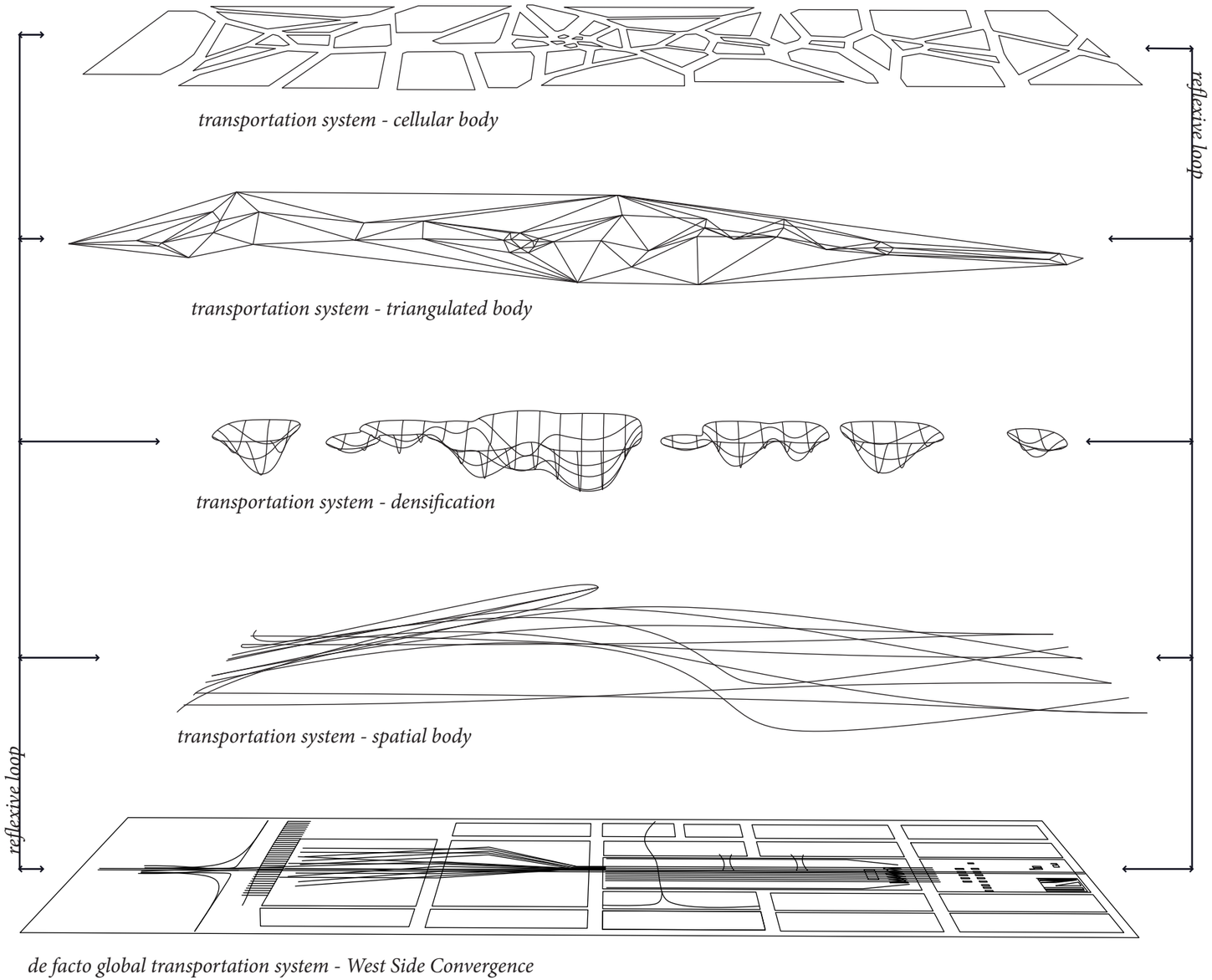
BODY

Reiser + Umemoto + Body

" Ours is therefore not an argument about phenomenology but an organizational principle of architecture that understands architecture as a great body, or an assemblage of bodies, that cut across a wide range of scalar and material regimes. While the phenomenological could be understood as a special case of this work, it is impossible to simply use embodied experience, or phenomena, as a generative model. There is no organizational principle in architecture directly linked to phenomenology. In fact, all architecture can be understood phenomenologically. As a result, phenomenological architecture typically lapses into some form of modernism for the purpose of organizing space. Such a phenomenological practice could never propose a new architecture, only a projection upon existing systems" (Reiser et al, 84).

Reiser and Umemoto create a system for body that rejects phenomenology. As stated above, they are uninterested in how phenomenology works within architecture for two reasons. First, all architecture can be understood phenomenologically. This is not particularly useful when attempting to generate architecture that requires a specific organizational principle. Second, using phenomenology to generate architecture essentially reduces the architecture down into a modernist formation of spatial organization. Instead, they propose that their architecture engages "...what a body can actually do. A skateboarding ramp, for instance, is not patterned on a human. Rather, it is an intervening technology that belongs to a totally different pattern of order upon which the human works. The ramp augments the body; it is an extension of the body via the vehicle of the skateboard, but it does not represent it" (Reiser et al, 85). The view of the body becomes abstracted not in a phenomenological sense, but as a relation to the user. Architecture becomes performative, allowing for assemblages through augmentation in relation to how the human works.

Maurice Merleau-Ponty expresses a similar philosophy to that of Reiser and Umemoto. He states "it is a bodily auxiliary, an extension of the bodily synthesis. Correspondingly, the external object is not the geometricized projection or invariant of a set of perspectives, but something towards which the stick leads us and the perspectives of which, according to perceptual evidence are not signs, but aspects" (Merleau-Ponty, 152). The body becomes related to the external world through objects that augment it. In Merleau-Ponty's case, the blind man's walking stick becomes a perspective through which he relates to the world. For Reiser and Umemoto, the skateboard ramp creates the same relationship of body and object that the walking stick does with the blind man. The object-human augmentation becomes cybernetic as it produces a third knowledge--it breaks down the original body and presents a new body (or assemblage thereof), complete with a new set of organizational principles.



BODY

The Body and West Side Convergence

"Reflexivity, the after-effect of such thinking has been the intensely stratified conception of the city and how its systems relate to one another. In this sense, the site in question is astonishingly paradigmatic of this phenomenon, with the profound separation and ensuing monofunctionality of each of its singular (albeit colossal) programmes" (Rahim, 80).

Reflexivity refers to causal relationships. Essentially, a loop is created whereby systems reflect upon each other, creating cause and effects that re-relate between the elements. The outcome of reflexivity is that elements relate both to themselves and other elements. The reflexive body becomes both self-relational as well as related to the surrounding environment. West Side Convergence becomes reflexive within the fabric of New York, while at the same time folding in upon itself. It creates an assemblage that merges its programs: global parkscape, the local city grid, and a global transportation infrastructure. Each of these contribute to the body of the West Side Convergence, as their specific assemblages provide an overarching logic through which each become articulated and combine with the others. In this way, this building relates to Eisenman and his discussion on folding. Eisenman reiterates Gilles Deluze, stating "folded space articulates a new relationship between vertical and horizontal, figure and ground, inside and out" (Eisenman, 559). West Side Convergence dissolves traditional relationships between its parts in the same way - its body disconnects traditional relationships between its elements with the logic of flow. Flows between inside and outside, figure and ground, and vertical and horizontal augment the body assemblages of the West Side Convergence.

Taking it one step further, it the reflexivity of West Side Convergence and the site upon which it is situated may be pushed in the direction of recombinant architecture. Bratton suggests that reflexive architecture can emerge from bio-machinic codification. He states "Reflexive architecture would emerge from the deliberate and indiscrete incorporation of the genetic, machinic codes of these multiple animal-machines" (Bratton, 106). The organizational principles that Reiser and Umemoto employ to relate architecture to a body (or assemblage of bodies) may be further explored on the principle of recombinant architecture. By re-codifying the systems they used to produce the logics found in the West Side Convergence, it may be possible to explore different bodies that still express the colossal monofunctionality of each programmatic elements found, but at the same time dissolving the separations of each element, much like how genetically modifying sheep to produce spider silk through lactation fundamentally breaks down separations between the systems of sheep and spider.

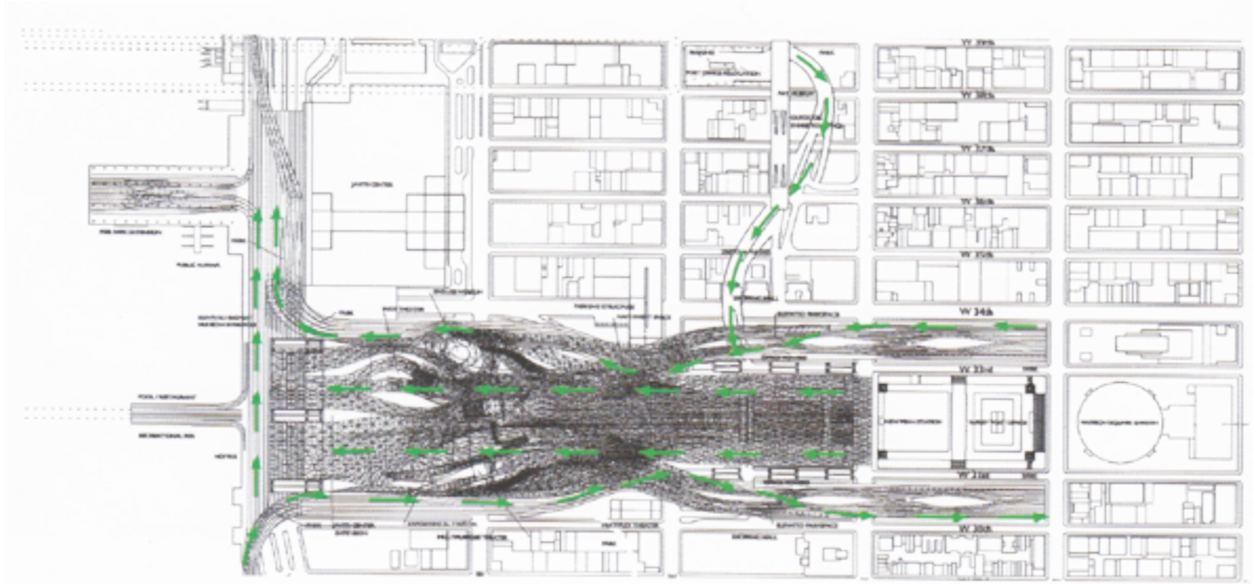
TECHNIQUE

West Side Convergence Technique: Part One

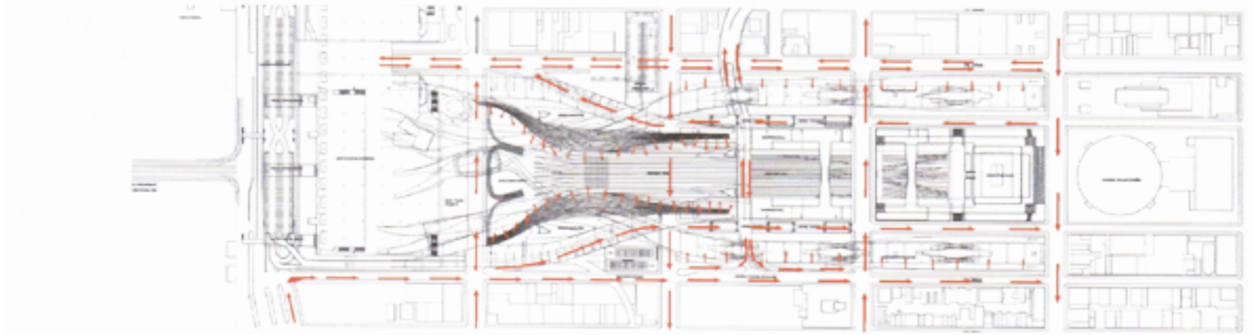
"What makes the anexact different is that its geometry is assumed to play out in real space rather than in the ideal space of abstract geometry...In the anexact, the matter/force index is precisely that which establishes its rigor and distinguishes it from the inexact, which is merely a less precise form of the exact. The anexact is therefore intimately tied to a material field, the expressions of which are the direct index of forces and the energetic of which is manifest through intensity." (Reiser et al, 144-146)

The frameworks by which the form and body for the West Side Convergence are expressed provide many ways in which technique is also expressed. Three ways in which I will discuss technique are through the deconstruction of force, flow, and reflexivity. The first deconstruction, force, is discussed by Andrew Benjamin, who examines Reiser and Umemoto's recent works. He states "while history is not communicated, force is. The magnitude and directions of a force, its vectorial resultant, finds expression not simply in itself, but non-linearly in the adjoining media. These exchanges, while mutual, are not equal. The dominant media exerts proportionally greater influence than the relatively weak forces of the flow of space." (Benjamin, 51). This relates heavily to the idea of the anexact. The exertion of pressures, while equivalent is not equal. This provides the basis for realistic architectural geometries that exhibit non-idealized geometries--those found in the real world. The second deconstruction, flow, relates heavily to force, but differs in a fundamental way. While force provides pressure, flow reduces time to a linear progression. Flow can then be captured in such a way that is physically expressed. For Reiser and Umemoto, this deconstruction of flow "suggested a methodology and yielded a proposition that is highly dependent upon the unique situation and density of material and cultural flows that is characteristic of New York" (Rahim, 83). The subsequent reconstruction of flow allowed a folding of both cultural and material information that further articulated the West Side Convergence.

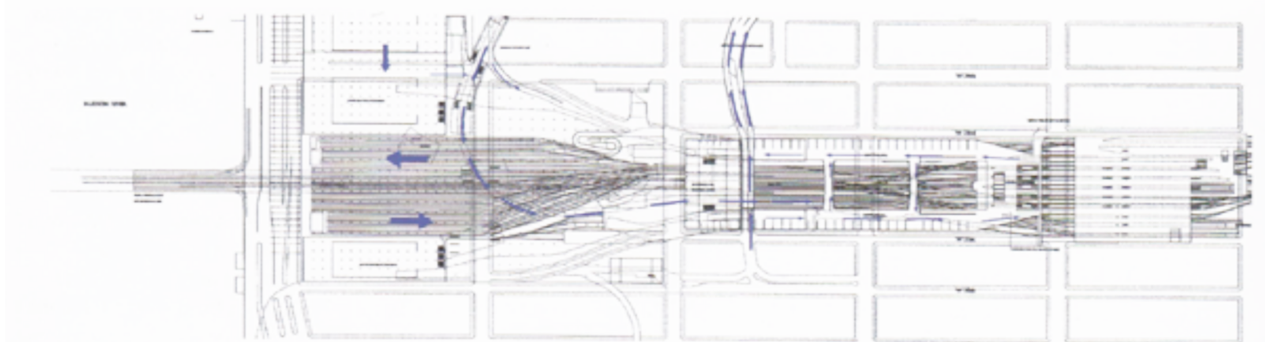
The third deconstruction, reflexivity, further iterates the folding of information through the processes by which the West Side Convergence is created. Lars Spuybroek suggests that "we need to start from a state of equilibrium that already contains information through its structure, then we need disequilibrium to increase the amount of information, then we need equilibrium again to memorize it" (Spuybroek, 355). Reiser and Umemoto employ a framework where three smaller systems (global parkscape, local city grid, and global transportation system) are put into one larger system, exert pressures on each other, and are recombined and memorized to emerge as a the equilibrium that is solidified as the West Side Convergence.



parkscape



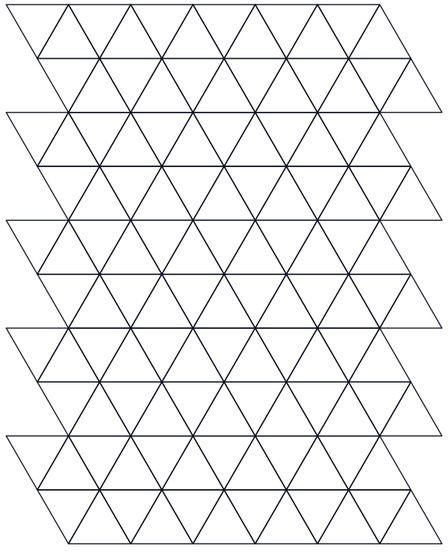
city grid



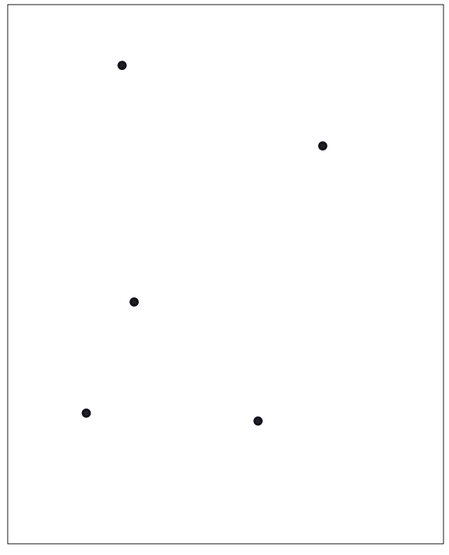
global transportation system

examining systems that create form and body

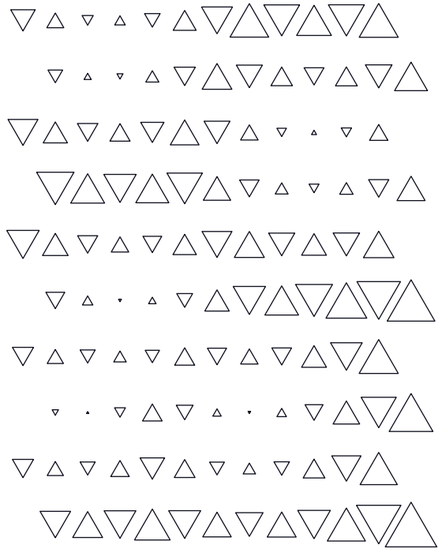
Recipe:
Force systems can be deconstructed in such a way that examines resultant effects and potential outcomes. Forces can act both in congruent and non-congruent systems. Results vary depending on force location, intensity and proximity.



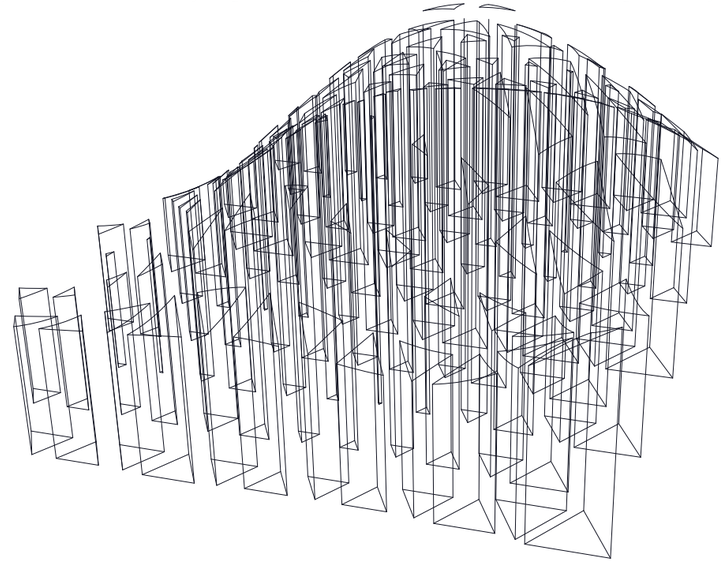
congruent tessellation



acting force points

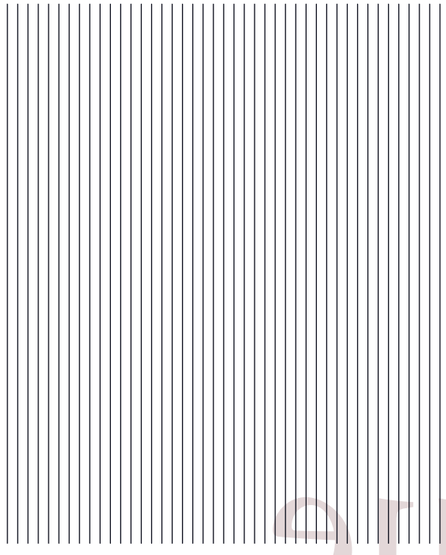


force change in tessellation

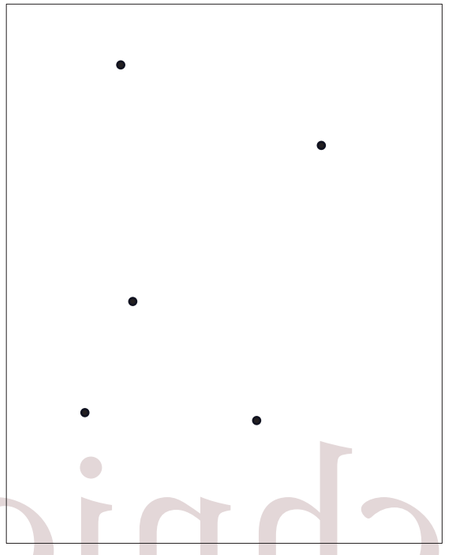


resultant 3D variation in surface modulation

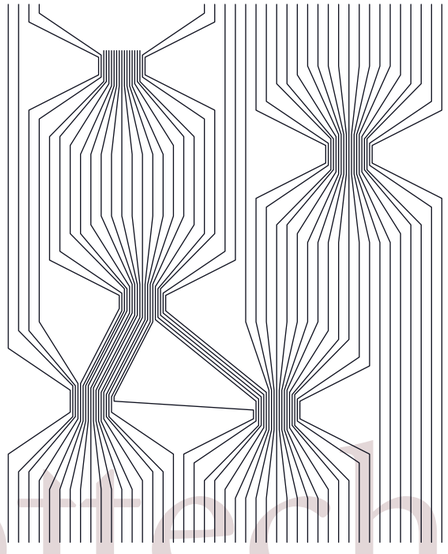
Recipe:
Flow systems are also deconstructed in the same manner as forces. The primary difference results in path relationships when flows are represented through euclidean geometries. Nonetheless they can be useful in generative techniques.



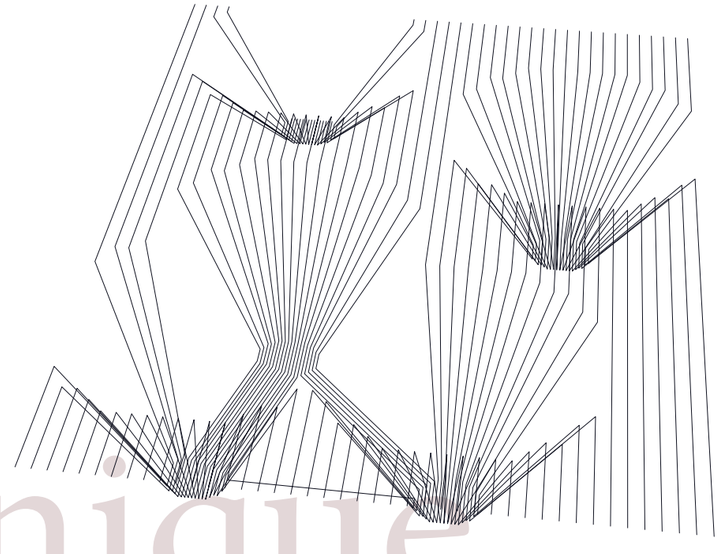
uniform flow



acting force points

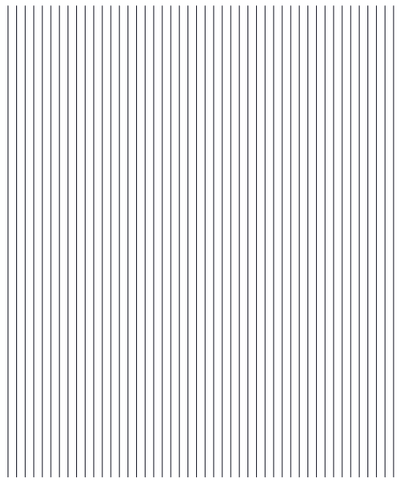


resultant topology of flow

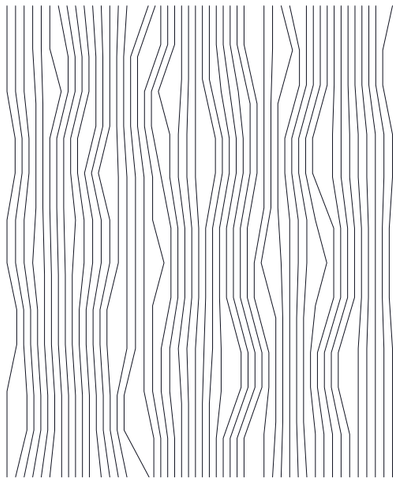


3D flow from topology

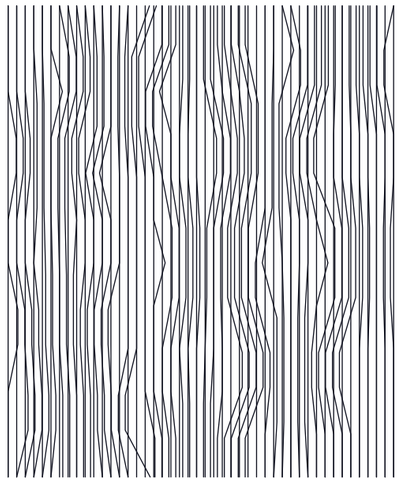
Recipe:
The inherent generative qualities of reflexivity provide an intersting study of how reflexive techniques come to generate more information.



normal condition

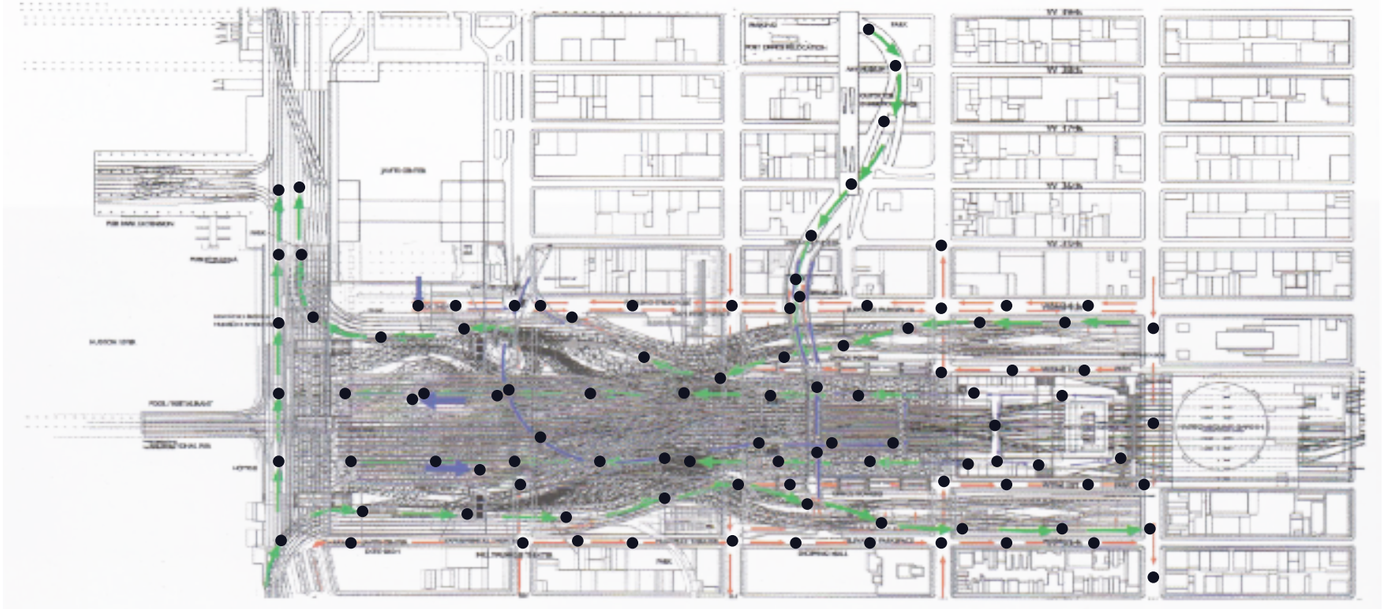


outcome (pressure enacted on normal condition to produce derivative condition)



new re-informed state (normal condition and derivative condition provides tertriary, condition)

Flow, force, and reflexivity combine to create new opportunities for the West Side Convergence, or any 'architecture of flows'.



pressure points placed for exertion: creating a second-order architecture of flows

TECHNIQUE

West Side Convergence Technique: Part Two

"Recent projects that attempt to develop organization out of a dematerialized field of flows, as for example through site analysis and substantiation, are not productive of anything new. Such analyses yield only second degree representations of what is already there. Actualizing a field of flows requires that one be propositional from the outset. Context can only provide potentials. The analytical moment, therefore, arrives in testing the new proposition rather than representing the old." (Rahim, 87)

The outcomes of deconstructing and rebuilding the techniques through which the body and form of the West Side Convergence elucidate reveal instances of differing social and material relationships. Tafuri elaborates on the condition of material and social emergence from a given framework, stating "the restructuring of the entire urban space and surrounding landscape thus corresponds to the need to rationalize the total organization of the urban machine: on this scale, technological structures and transportation systems must constitute a unitary "image" in which the antinaturalism of the termins artificiels laid out at various levels, and the exceptional nature of the road network--the superhighway running at the highest level of the serpentine block designed for the workers' residences--take on a symbolic meaning" (Tafuri, 26). The techniques employed therefore demonstrate the way in which West Side Convergence's form and body are recognized and become a symbolic expression of the way Reiser and Umemoto derive their architecture. It also provides information into how materiality and socio-cultural relationships come into play.

Reiser and Umemoto can use the West Side Convergence to further generate information on any given set of forces, flows, and reflexivity. Through their process, they devise "a system of differential repetition [that] thus has the capacity to produce a field that embodies variable scales and organisations in the same structure. These potentials thus enable the local to be created within a global system" (Rahim, 89). Essentially, the exploration of flows, forces, and reflexivity can be extracted and re-applied in any situation where local systems are combined, exert pressures on each other, and sublimated in order to be re-expressed in a larger, more stable system. In one sense, this process becomes similar to the combination of carbon and oxygen to move from excited, unstable self-states to a larger, more stable equilibrium of carbon dioxide. Engulfing flow, force, and reflexivity allow for techniques that remember unstable self-states, but stabilize and inform a new global state.