

Kiasma Museum of Contemporary Art

Helsinki, Finland

Steven Holl, Architect

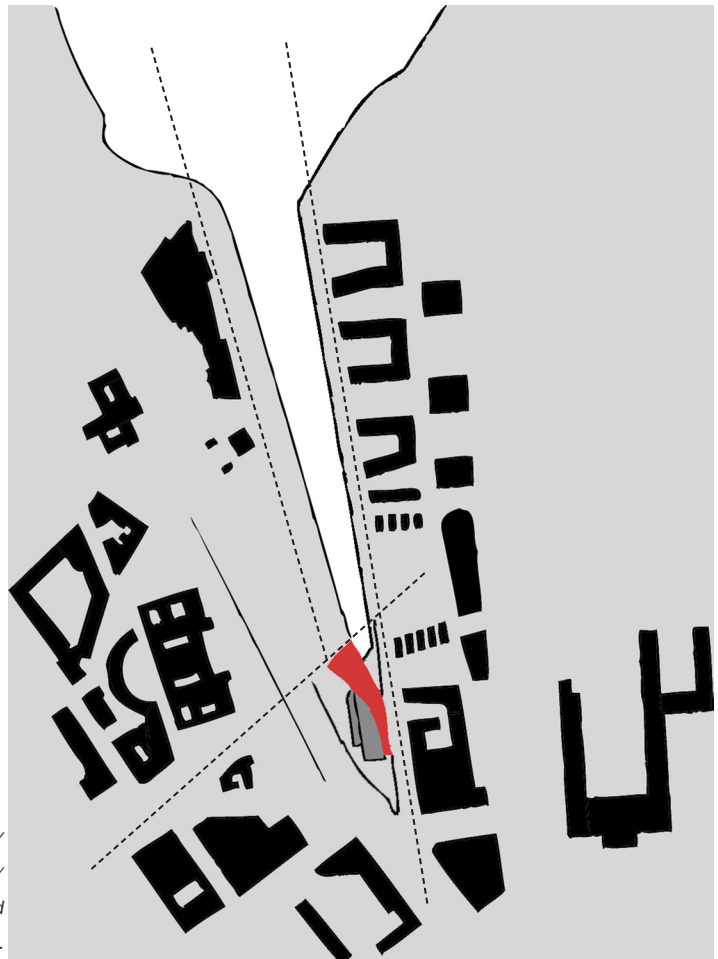


form / body / technique / space

Form/

Sitting at the end of Töölö Bay, in Helsinki, Finland, the Kiasma Museum of Contemporary Art is a typological form expressed through force evident in the synthesis of building and landscape. American architect Steven Holl engaged local determinants and typological precedents to create the aptly named Kiasma, Finnish for “chiasma,” an intersection or crossing, particularly in medicine, a crossing of the optic nerves at the base of the brain. This analysis will consider the form of the building through research, diagrams, and readings on form and typology from D’Arcy Wentworth Thompson and Giulio Carlo Argan, respectively. In researching this architecture, Steven Holl’s book, *Urbanisms: Working with Doubt*, has been the main source of information pertaining to the architect’s intent.

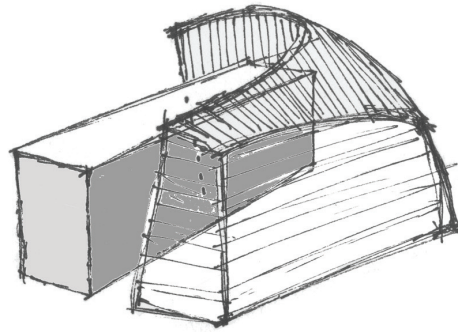
Holl views the site as a “confluence of various city grids,” where the building is a “mass intertwining with the geometry of the city and landscape.” In doing so, he sites the architecture as it corresponds to a proposed extension of Töölö Bay. The form engages the water and landscape; a stream permeates the form at the exterior passageway. From the north end, the patinated zinc oxide roof wraps across the three storey program, twisting with the force of the architect’s hand and enmeshing with a modernist steel frame box. Holl explains the topological transformation as an “interior mystery and exterior horizon, like two hands clasping each other, form[ing] the architectonic equivalent of a public invitation.” Ultimately, the union of the two forms results in a post modern typology that makes reference to the classical, (Holl notes the importance of the contextual architecture: the Parliament, Alvar Aalto’s Finlandia Hall, and Eliel Saarinen’s Helsinki Station,) the modernist expression of function, (the main circulation elements, in plan, reflecting the orientation of building form and exterior walls,) and the integration of technological shape and material found in contemporary designs.



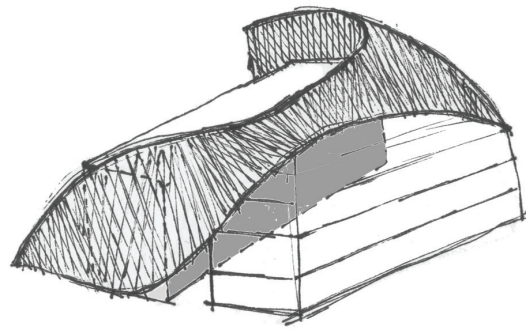
*Kiasma Museum: Reproduction of Holl Site Diagram/
from his book “Urbanisms: Working with Doubt” /
the site viewed as a convergence of urban grids and
landscape elements.*

In addressing Argan's essay *On the Typology of Architecture*, and his paraphrasing of Quatremere de Quincy, Argan suggests type "as the idea of an element which should itself serve as a rule for the model," which is evident in Holl's Kiasma Museum as the twisting form becomes the rule for organization of space. This is similar to other post modern architectural designs of the time, such as Eisenman's Columbus Convention Center, where the rule for form overrides a standard grid layout, and the main programmatic spaces become arranged in irregular or non-linear ways. Holl's implementation of the rule in form, however, is limited to one surface. While the rule engages the architecture on the whole, it is not necessarily indicative of the summation of the form. The interior spaces flow along the main axis, ramps rise along the gentle curve, while the temporary galleries are characterized by the sloping roof overhead. The main public functions, however, are strictly rectilinear. The bar and street level cafe open to the west plaza but do not maintain any of the characteristics of the architecture's expressive form. The entry sequence from the south is more appropriate; as the occupant approaches from the street, it is evident multiple forms are converging upon entry. Once inside, the form presents itself as the axial curve extending north to Töölö Bay.

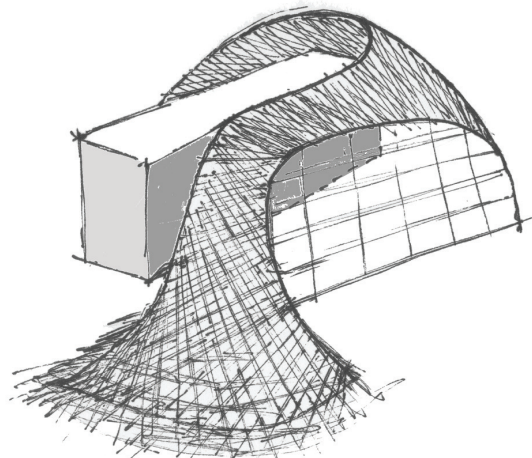
*Form Existing /
sharp edges form a tenuous
relationship between morphological
form and modernist shape.*

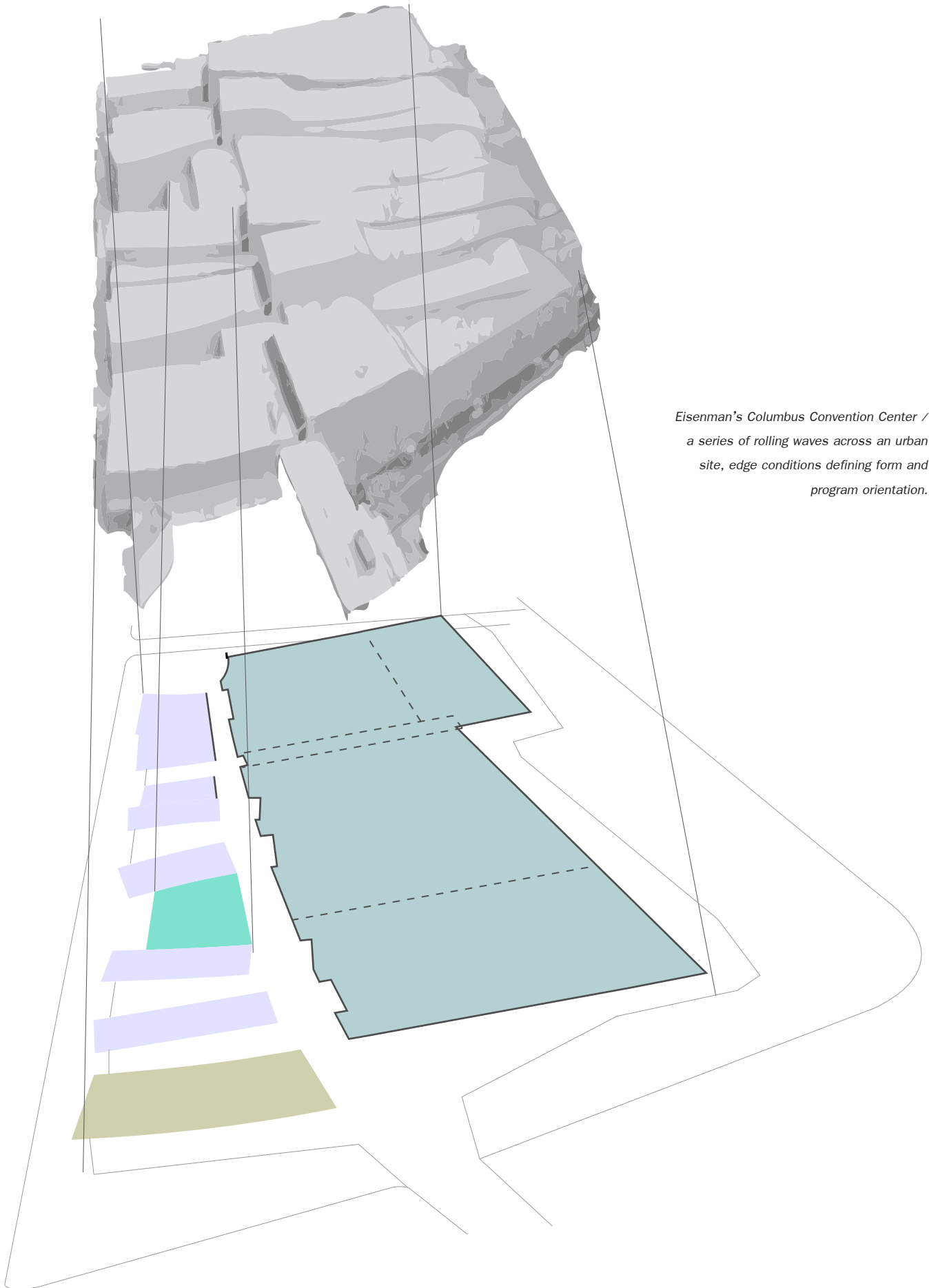


*Form Finishing /
The twisting element reaches a totality
as it cloaks the south facade of the
form.*



*Form Softening /
The form sprawls out across the
landscape, softening the edges in the
figure-ground relationship.*



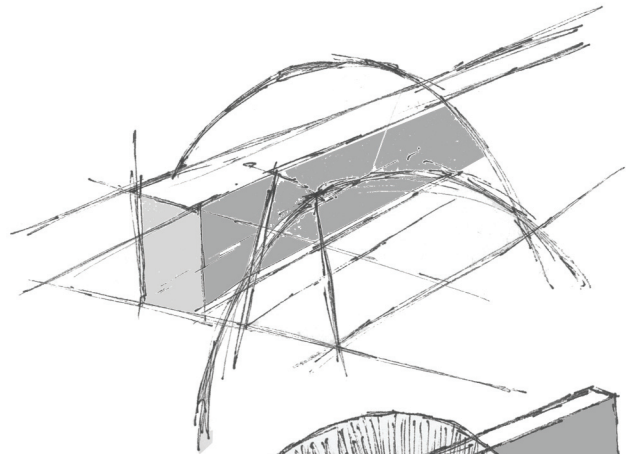


*Eisenman's Columbus Convention Center /
a series of rolling waves across an urban
site, edge conditions defining form and
program orientation.*

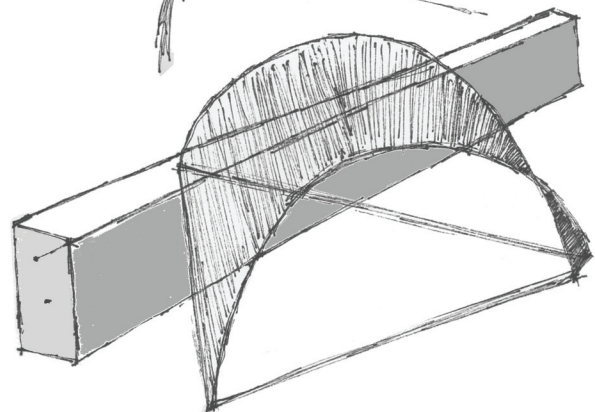
The form of Holl's Kiasma Museum seems abbreviated when considered through the lens of D'Arcy Wentworth Thompson's *On Growth and Form*. Thompson argues that form, as a product of forces acting on matter, is a manifestation of physical energy. The form is a holistic and thorough diagram of these forces. Holl's form stops short of being representative of the summation of forces. As the architecture bends in plan and section along the north-south axis, the edges at the end of the programmatic space are sharp, a distinct break from the visible vector that constitutes the form. The form, instead, should be as Thompson writes, "a symbol for the magnitude and direction of an action in reference to the symbol or diagram of a material thing." If Holl was to fully express these forces in his form, the resulting architecture may be dramatically different. While it may still incorporate those elements identified earlier as being integral to the design (the chiasma, crossing of axes, twisting form representing public invitation, etc.), the form can adapt to a full representation of forces, pervading the landscape and softening the edges. This, in turn, lends greater credence to the exterior elements of form, the integration of water, or extending the architecture south towards the city. The form may better articulate the west facade, the public face, to better communicate the architect's intent in "confirm[ing] art, architecture and culture... [as] integral parts of the city and landscape." A cascading, twisting form can better engage the ground level rather than remaining an elevated roof condition.

As a post modern typology, form illustrating vectors of force and process, Steven Holl's Kiasma Museum of Contemporary Art generates landmark architecture in the urban landscape of Helsinki, Finland. While the form is representative of fusion between two surfaces, the resulting effect is presentable as an integrative, public experience. The architecture successfully approaches local vernacular, recognizing the importance of water and responding to a meeting of urban thoroughfares. The form is topological in its monolithic roof, turning from the facade facing the bay, to sloping across programmatic space and defining the confluence of massing. The public front remains a static experience, somewhat subduing the dynamism with its flat three storey facade, an abrupt end to an otherwise fluid form. Ultimately, the form becomes a definitive element amongst the surrounding context, an appropriate response to a highly responsive environment.

*Extending Vectors/
allowing the forces evident in form to
maintain intensity and direction.*



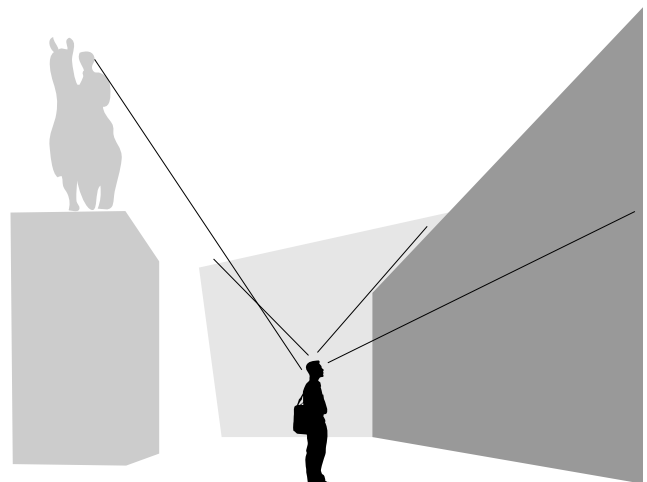
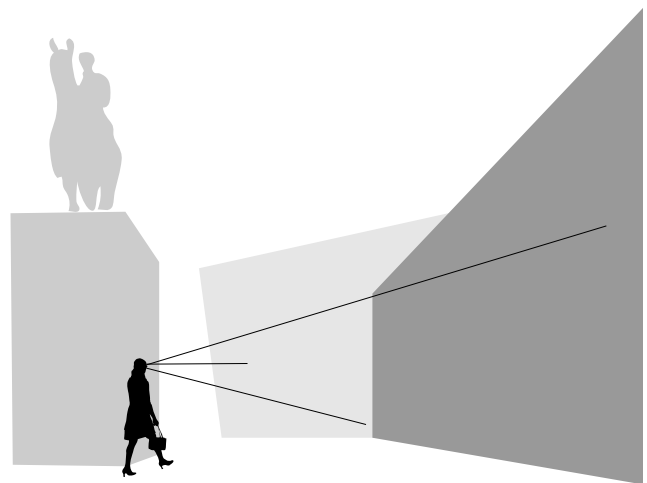
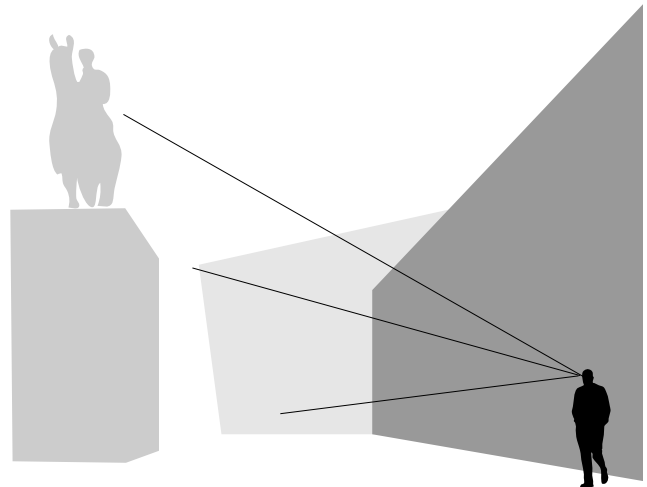
*Surfacing Vectors/
new surfaces result with the extension of
form, and variability in porosity.*



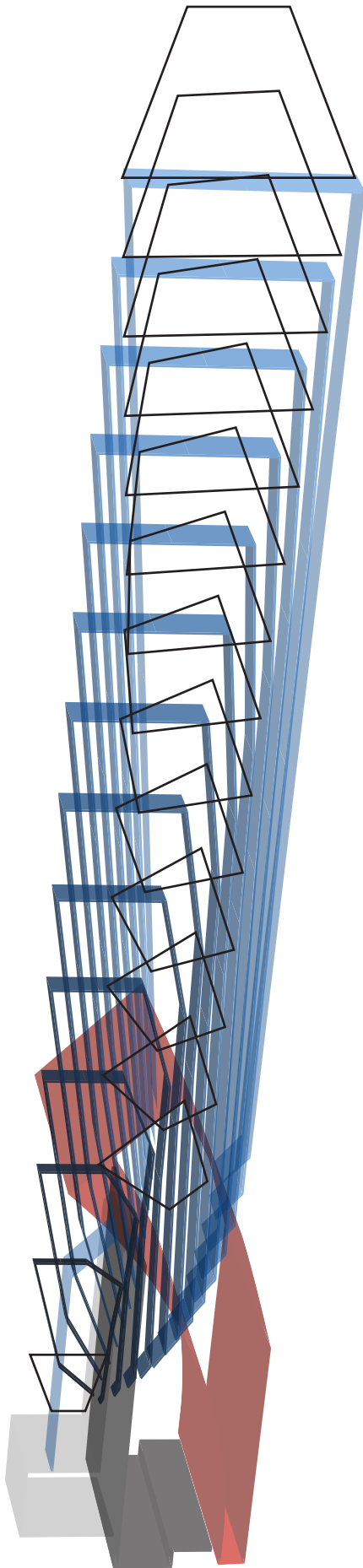
Body/

The body's subjective experience in architecture can generate a variety of reactions. The phenomenological perceptions of the body allow human ecologies to be that of our own accord. We are able to mould and form space in ways only known to our intelligent species. Architecture is a primary consideration in this regard. Architects strive to intervene in space and improve it. By doing so, architects must consider the phenomenological aspects of the body's experience in space. Steven Holl is an architect who supports these hypotheses through his writings and his professional practice. This case study will analyze the phenomenological body in space through the architecture of the Kiasma Museum of Contemporary Art in Helsinki, Finland. Through consideration of the interior and exterior conditions of the Kiasma Museum, this case study will identify attempts by the architect to engage in the creation of phenomenological qualities with the body in space, and the symbiotic subjective experience.

In his book, *Urbanisms: Working with Doubt*, Holl writes particularly about the architect's purpose bound to creation of phenomenology, and how phenomenological characteristics can determine the qualities of setting. Holl's supposition reflects the theoretical thinking present in Merleau-Ponty's *Phenomenology of Perception*, where the body in space is understood through a relational subjectivity. Merleau-Ponty writes, "To be a body, is to be tied to a certain world, as we have seen; our body is not primarily in space: it is of it." In elaborating on the affect of this phenomenology, Merleau-Ponty states, "There exists an affective presence and enlargement for which objective spatiality is not a sufficient condition." This is to suggest that, in architecture, phenomenology is able to generate a subjective experience for the body in space, and that there must be some elemental quality that affects the body beyond objective reality. Holl's architecture, or more precisely, his intent, reaches to achieve this affective presence. As a starting point for analysis, the exterior conditions of the Kiasma Museum are poetic in their subtle differentiation and geometric continuity. The lines and edges seem to



*Affect/ing/ed Body in Kiasma Museum Plaza /
the architecture becomes the generator for
phenomenology in the bodily spatial construct, while
similarly acting as an affecting body.*



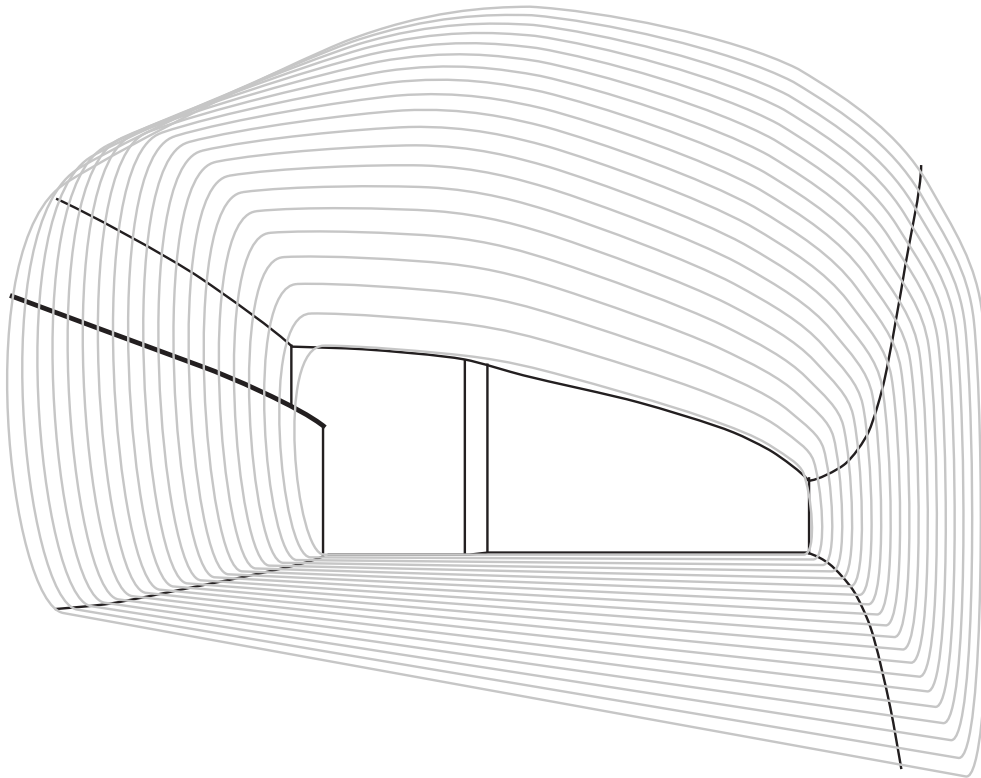
be vectors moving through the spatial construct. The architecture clearly defines the limits of the space with strong and clean massing. This language speaks as a body and becomes affective. The subjective experience of the body is transformed through habitation, as Vidler's anecdote on Councillor Krespel, from *Unhomely Homes*, would reflect.

The way in which the Kiasma Museum influences the body in space with phenomenological characteristics is similar to that of Freud's discussion in his paper *Creative Writers and Day-Dreaming*. Freud credits the writer for creating enjoyment through an imaginative process by which the reader is afforded "the character of a fore-pleasure," which precedes the "liberation of tension in our minds." Holl is the poet, affording the body the fore-pleasure of form and function. Then it is the architecture that leads the body through a series of imagined graduating volumes, setting the body within inclines and enclosing space, the phenomenological aspects creating enjoyment through variation.

Holl not only aims to affect the realization of bodies in space, but modifies and informs the architecture as a phenomenological body in space. By proposing the extension of Töölö Bay, and integrating the water with the architecture, Holl creates a bodily extension. Again, the architecture references Merleau-Ponty's seminal argument for the blind man and his cane, where the cane is a phenomenological extension of the body's spatial construct. By extending the bay, Holl can successfully extend the architectural body, what Merleau-Ponty calls "a bodily auxiliary, an extension of the bodily synthesis." The extension generates a relationship between the visual and tactile portions of the body; the architecture both sees and touches the bay. To this end, Holl is successful in creating a symbiosis; unfortunately the extension of the bay was not included in the final realization.

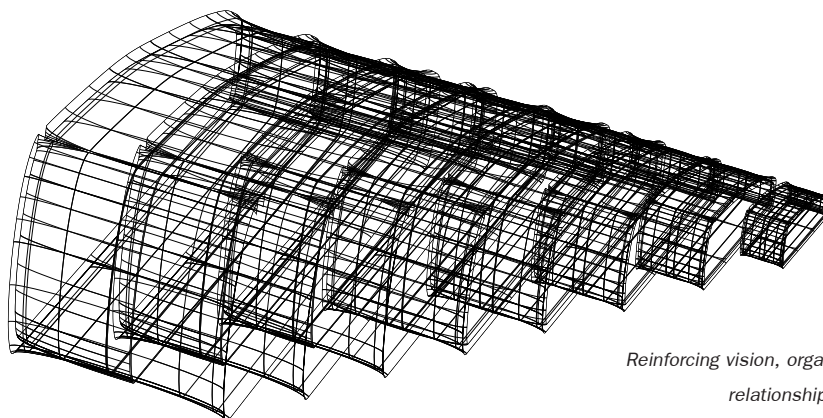
*Töölö Bay, Extension of Architectural Body/
the architecture and water cross, creating a chiasma that would extend through the
subjective experience of the body, linking the building to Helsinki's Töölö Bay.*

The phenomenal qualities of Holl's Kiasma Museum are relevant to Peter Eisenman's essay *Visions Unfolding: Architecture in the Age of Electronic Media*. Because Eisenman's work deals with the vision of the body, and how the body may be affected through vision, he speaks of phenomenal characteristics generated through the folding of space, or more literally, the way in which form becomes the architectural body and defines spatial relationships. Holl's Kiasma Museum offers pertinent examples of this, particularly the interior gallery conditions. The galleries fold space in a gentle curvilinear fashion, with openings to daylight above, affecting the space with an ephemeral quality. The main circulation axis bends around corners at such a slight degree, but to leave small portions of detail out of view just enough to create mystery. Of these types of folded space, Eisenman highlights their ability to engage in the object and subjective, from effective to affective:



Gallery, Folding Space 1 /

The body comes to be affected by the subtle folding, and the realization of the subjective beyond the rationalization of space.



Gallery, Folding Space 2 /

Reinforcing vision, organizing space and defining the relationship between subject and object.

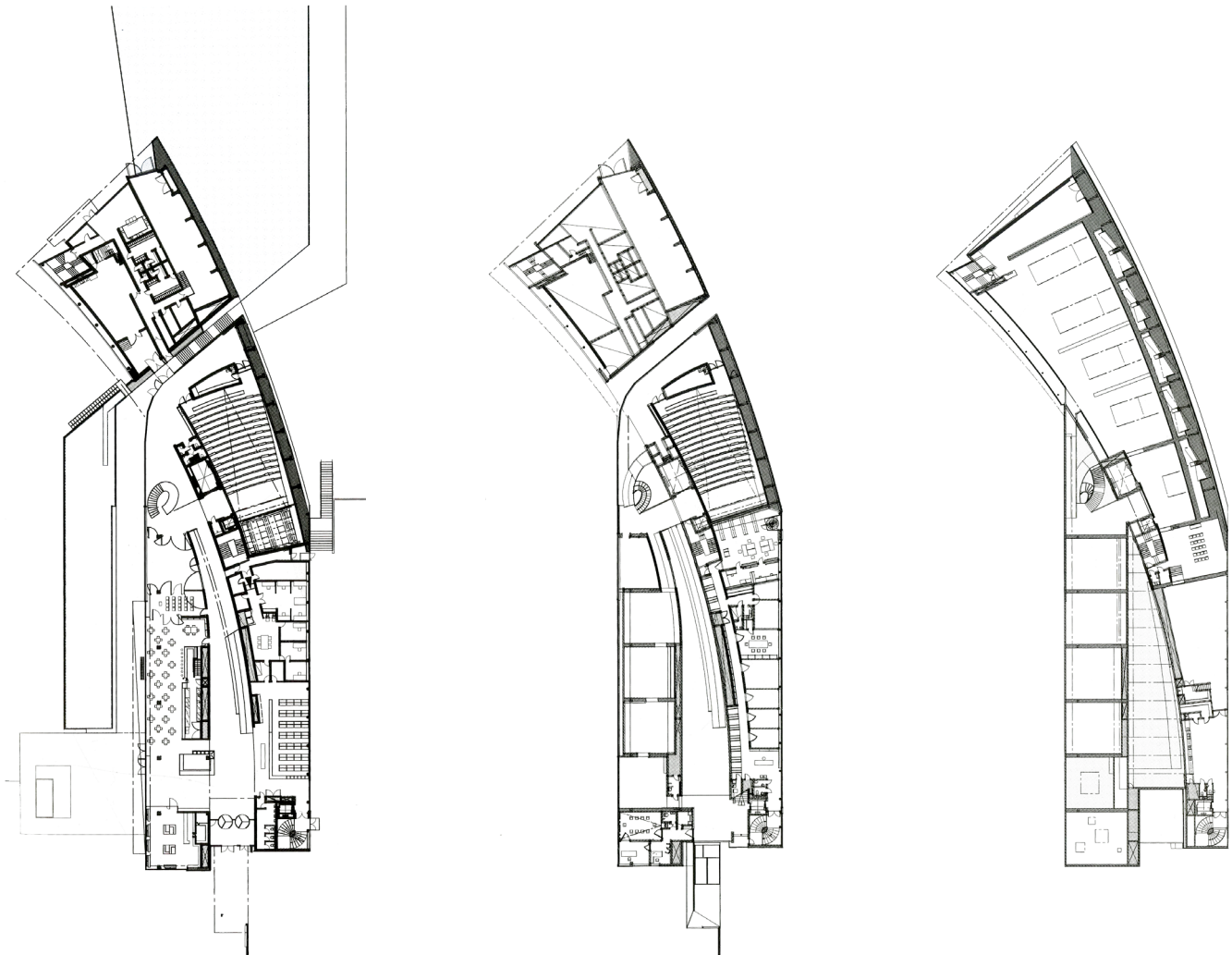
Folding changes the traditional space of vision. That is, it can be considered to be effective, it functions, it shelters, it is meaningful, it frames, it is aesthetic. Folding also constitutes a move from effective to affective space. Folding is not another subject expressionism, a promiscuity, but rather unfolds in space alongside of its functioning and its meaning in space – it had what might be called an excessive condition or affect. Folding is a type of affective space which concerns those aspects that are not associated with the effective, that are more than reason, meaning and function.

Holl's folded spaces are at once affective, informing the body of volume and spatial quality, and what Eisenman designates "looking-back." They reach beyond the rationalization of space, no longer a citation of traditional construct.

The experiential and phenomenal qualities of Steven Holl's architecture cannot go unnoticed. It is clear through careful analysis of his formed space that the bodily relationship is a priority. His writings further clarify his intentions; Holl writes, "if modern medicine has finally acknowledged the power of the psyche as a factor in physical health, perhaps urban planners may realize that the experiential and phenomenal power of cities cannot be completely rationalized and must be studied subjectively." Holl's views are embedded in his architecture, that which is of body and mind, in the generation of the phenomenological qualities we all can appreciate.

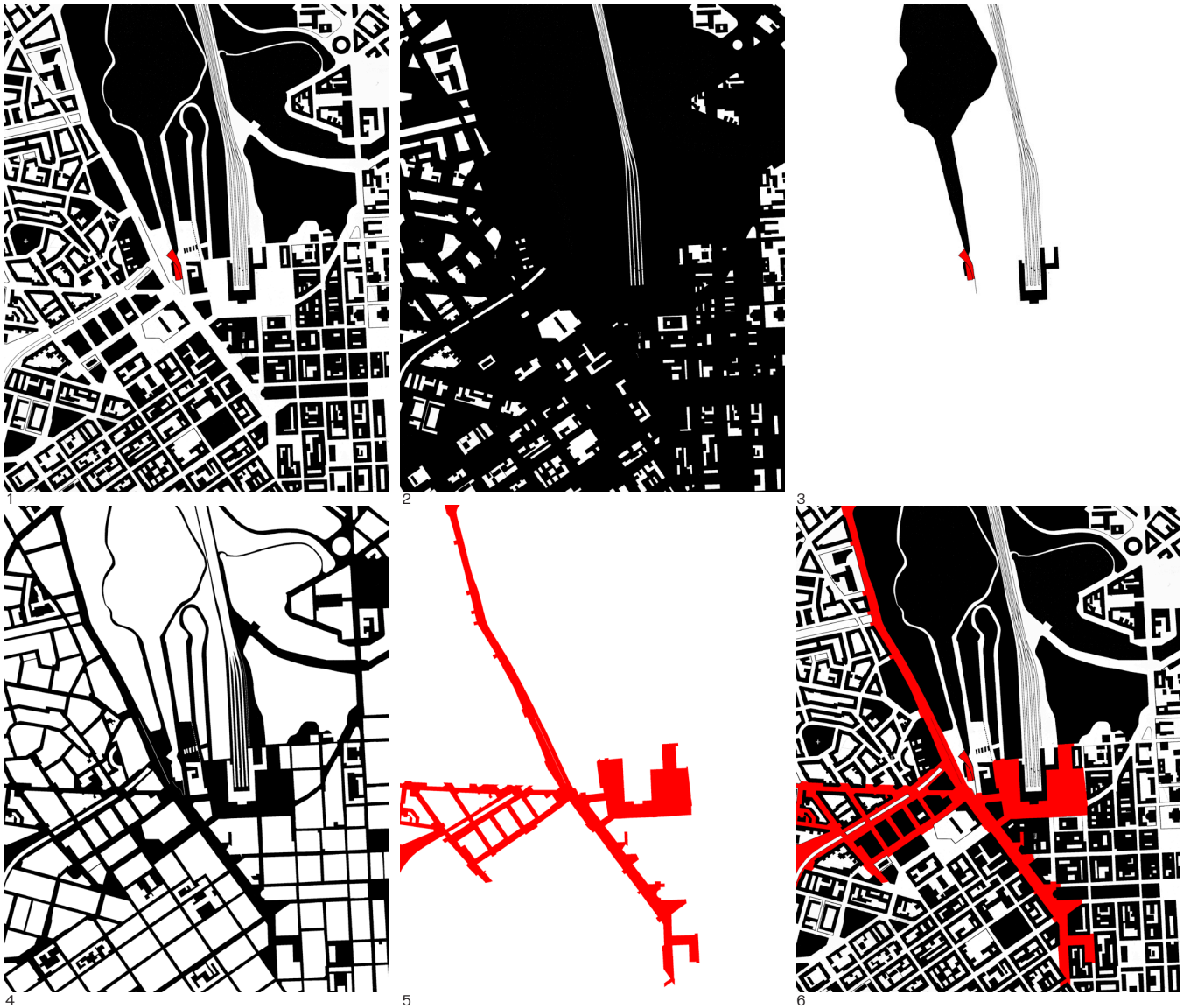
Technique/

Informing architecture with technique allows it to attain a level of instrumental quality beyond that of the generic space. Steven Holl's Kiasma Museum of Contemporary Art, in Helsinki, Finland, will be subjected to such an analysis in this document so as to identify qualities of the architecture through a repeatable process determined by a set of rules. This analysis will be conducted through the use of sequential diagrams, where the individual steps work to illuminate facets of the architecture which allow it to operate at an instrumental level. The three conditions which will be addressed are as follows: The instrumental affects at the scale of the site, the operational aggregation of circulation through the spatial volume, and the ability of major formal elements to create vectors, informing the permeation of the facade. These diagrams incorporate three basic steps: Identifying the base drawing, highlighting and abstracting those elements which are integral to the general concept of the architectural technique, and applying technique or populating those concepts with agents which work to inform the desired result.



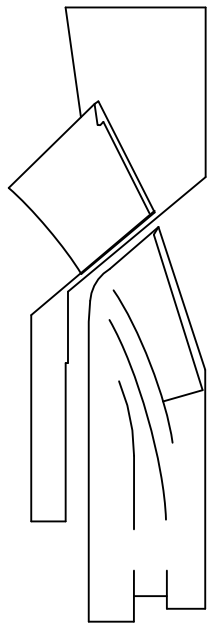
Floor Plans/

*Referenced from Steven Holl's book,
Urbanisms: Working with Doubt*

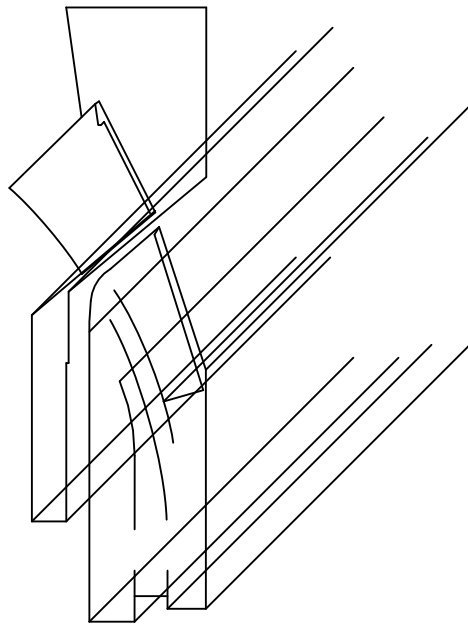


By addressing the site scale of the Kiasma Museum, we may find that specific elements of the surrounding context work to inform the architectural technique used to orient the occupant within the space. The top set of diagrams begins with a general site diagram (1) reproduced from Holl's book *Urbanisms: Working with Doubt*. The second diagram (2) inverts the figure ground relationship, identifying certain major ground elements, specifically those which were wholly bound by figure from (1). This results in the rail becoming the prominent element of operation in the figure ground, which when paired with Holl's extension of Töölö Bay in diagram (3), illuminates the relationship Holl desired in siting his building.

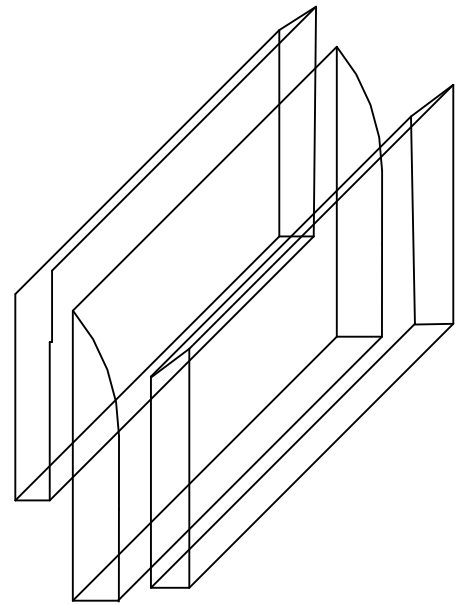
Diagram (4) begins with the direct inverse of (1), which leads to the highlighting of major ground level networks in Helsinki, depending on the area and number of connecting routes. These routes and plazas are then rendered in a solitary state in diagram (5); this works in concert with Holl's general concept of the chiasma, where the major city routes intersect and overlap one another. (6) then illustrates the overlay of the major routes with direct relation back to diagram (1), informing the orientation and siting of the building with specific consideration for the major ground elements.



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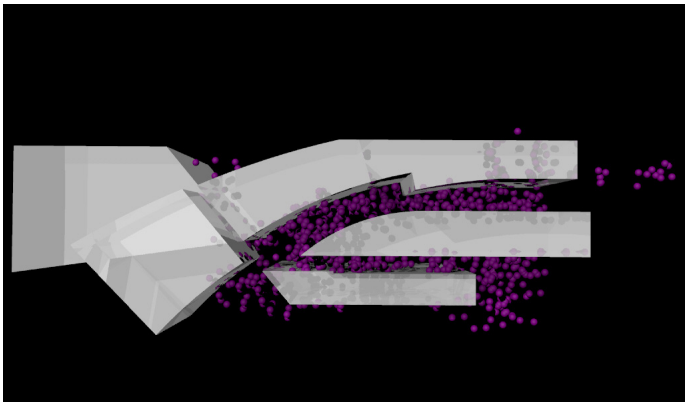


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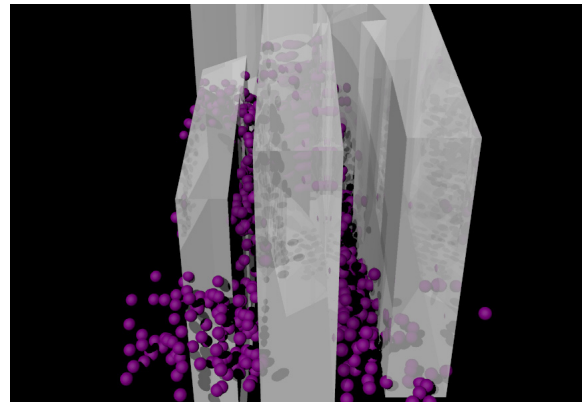


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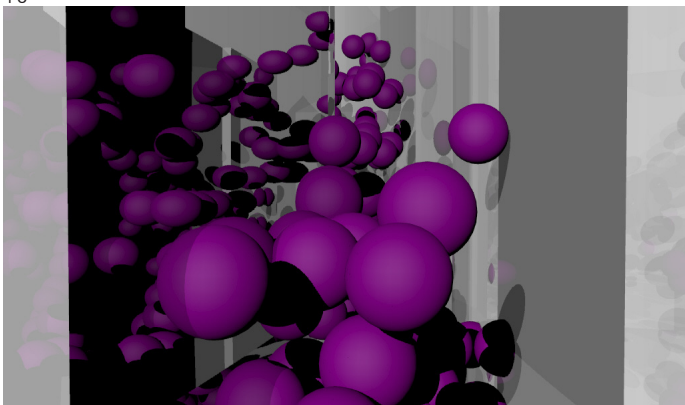
Diagrams (7),(8), and (9) work from a pared down floor plan, where the major organizing mass elements are selected as extruded volumes which inform the circulation of agents within the architecture. In diagrams (10) through (13) these elements can be seen as solids, leaving the interstitial space to become populated by the agents of circulation. The agents are tightly controlled within the volumes, while at the ends the agents freely disperse into the ether. The agents are affected by the opening and narrowing of volume, and aggregate accordingly. As the space opens up, they are permitted to rise vertically, best illustrated in diagram (13).



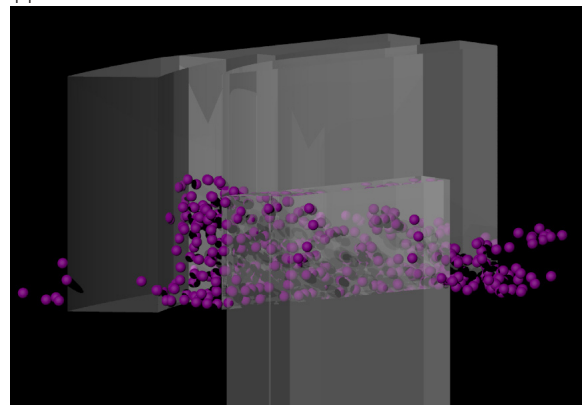
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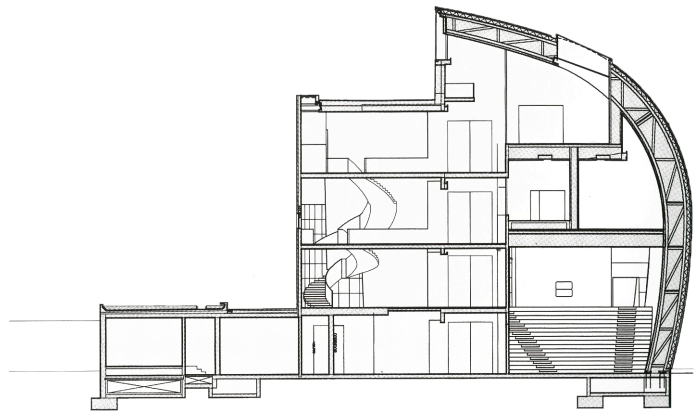


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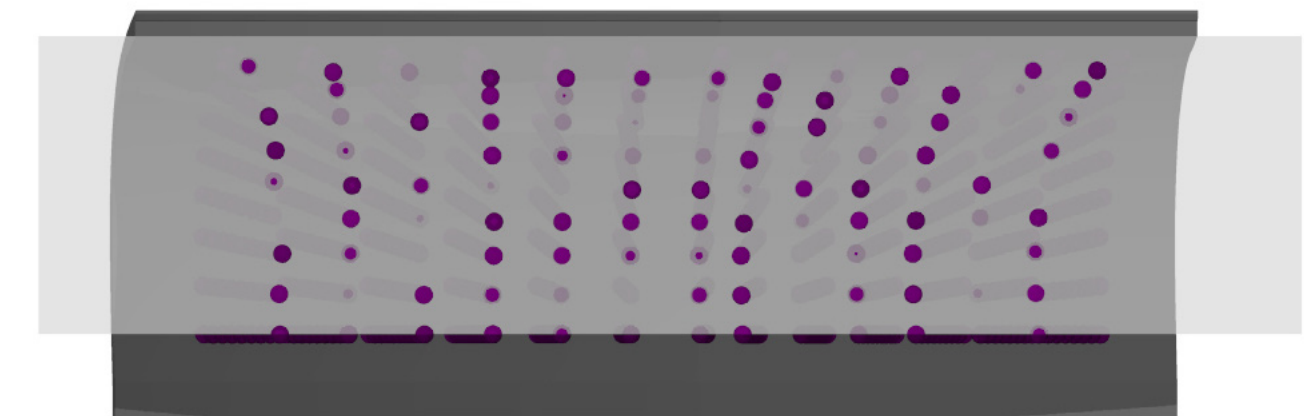
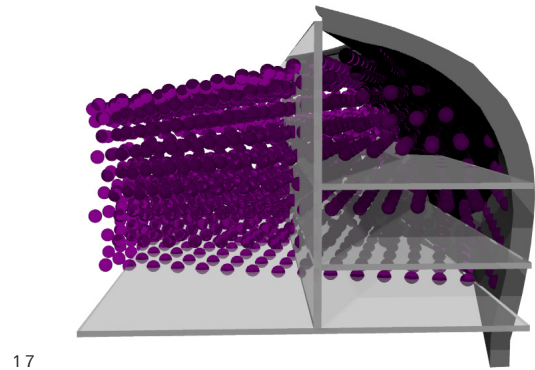
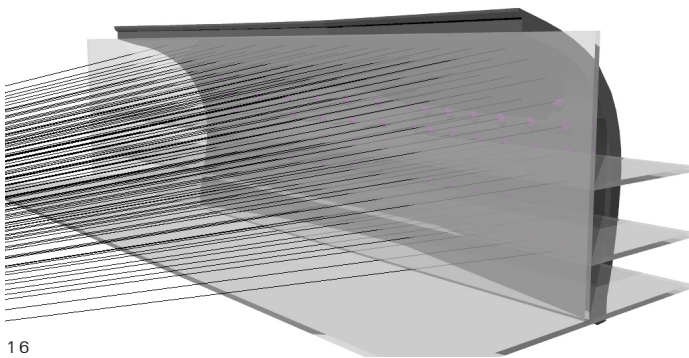
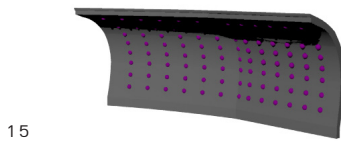
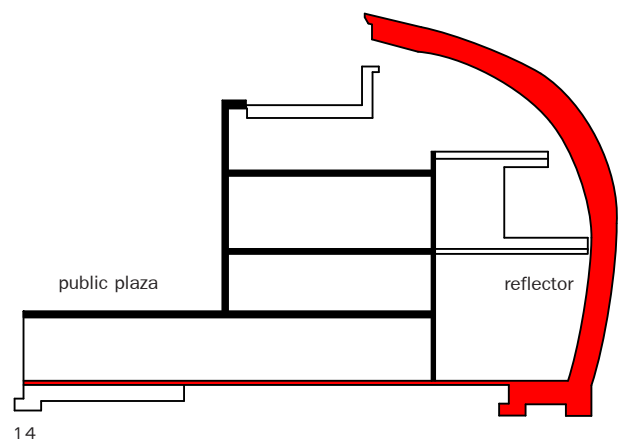
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Identifying the major organizing element in section allows technique to inform how the architecture may be informed by its qualitative properties. The sectional aspects of the Kiasma museum show that the major exterior wall is instrumental in defining the space of the public plaza in diagram (14). Diagrams (15) through (18) work to identify how the supporting properties of the mass wall focus activity on the exterior facade and public plaza. The technique begins in diagram (15) where a field condition of agents is applied across the interior face of the mass wall. Vectors are then drawn between the points on the surface and a common focal point, allowing for the intersection with the exterior facade in diagram (16) and (17), where the agents array along the defined vectors. Finally, in diagram (18), the level of permeation caused by the agents on the exterior facade is seen in elevation paralleled to the surface.



Building Section/

*Referenced from Steven Holl's book,
Urbanisms: Working with Doubt*



Space/

The generation of space may be considered a process activated either out of necessity, or for the sake of moving beyond necessity towards an indeterminate quality. DeLanda's argument in *Intensive Science and Virtual Philosophy* would suggest that the space is a product of populations, and that the space is generated out of a necessity to adequately support populations. In contemporary architecture, this may be true, that the limit defining qualities are generated to properly address the current and future needs of populations. This can be done in many ways, and is generally resulting in a clear and decisive boundary between volumes. The boundary may be defined by doorways, changes in material, or permeability. Often times, when these boundaries are blurred, the space becomes an extension of the architectural realm, less defined and yet allowing for greater affecting qualities.

Space, therefore, works between both the objective and the subjective. Its effect is immediately quantitative on our senses, but qualitatively changes with time. We can understand that walls and ceilings define the limits of the space, that unseen space beyond or outside is related only in that it is excluded from the interiority. As spaces move towards the exterior, the inclusive space expands with the view, but only in that instance are distant physical objects related. Qualitatively, the space will bring about

fluctuations affecting logic over time, but with less permanence than those quantitative affects. It is the quality of materiality and light, both of which are dynamic in their presence within space.

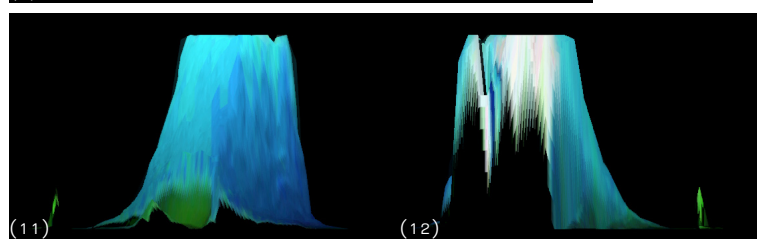
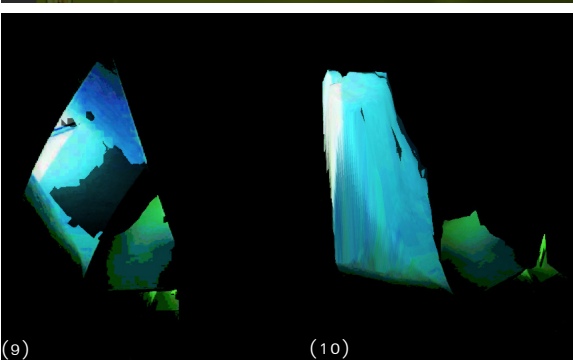
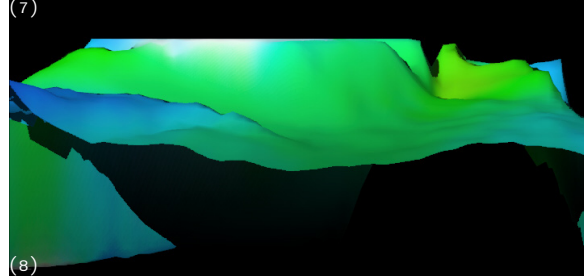
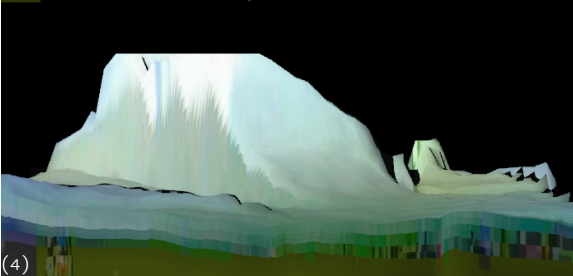
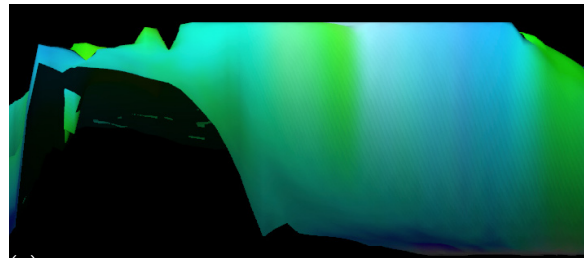
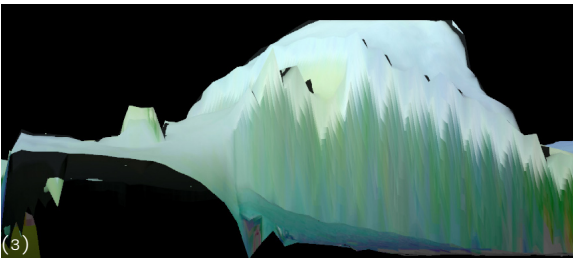
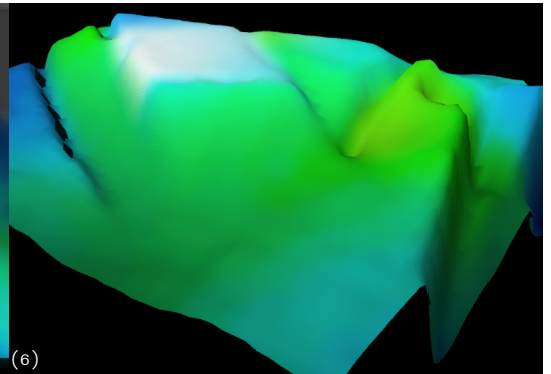
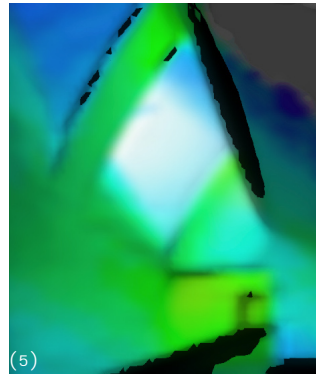
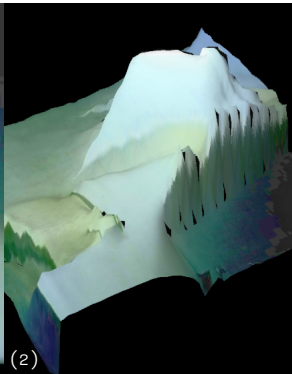
This analysis will further consider the quantitative and qualitative aspects of space present in Steven Holl's Kiasma Museum of Contemporary Art in Helsinki, Finland. The three intensive diagrams will consider the logic of light, the logic of boundary, and the logic of mass, and how each of those may govern the affecting qualities of the spatial experience. The diagrams will further transform these logics in order to predict a future condition in which the architectural space may become more extreme in its quantitative and qualitative aspects.

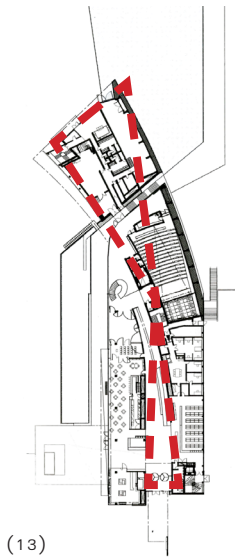


*Material Palette/
Steven Holl's Kiasma Museum
utilizes a range of materials,
from the mass of concrete
to the light curves of metal
panelling, to define the
boundaries of space.*

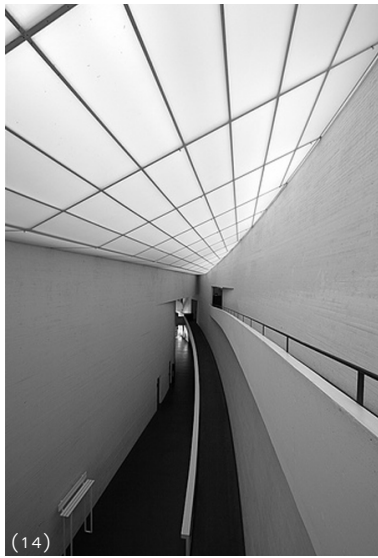


A common detail throughout the Kiasma Museum is for the admittance of daylight through a high level skylight. The light bounces in off of the opaque white concrete walls, and diffuses amongst the galleries. In analyzing this element, I began by creating a heightfield based on brightness within the space. The images are placed in order of top, perspective, left, and right. Images (1) through (4) illustrate the rises and drops in light levels which help to define the qualities of space. As the light levels are transformed, I aimed to attain both a greater consistency across the field in images (5) through (8), and extreme conditions in images (9) through (12). The last set became the most polarizing affect, predicting a post apocalyptic condition where the quality of the space becomes almost dungeon like, with a large penetrating beam of light from above. This ultimately results in an equivalency throughout the space, it being incredibly dark, but highlights and emphasizes focus on the penetration. The affect on the inhabiting population would decrease density, and result in a space formally organized around the singular rather than the multiple.



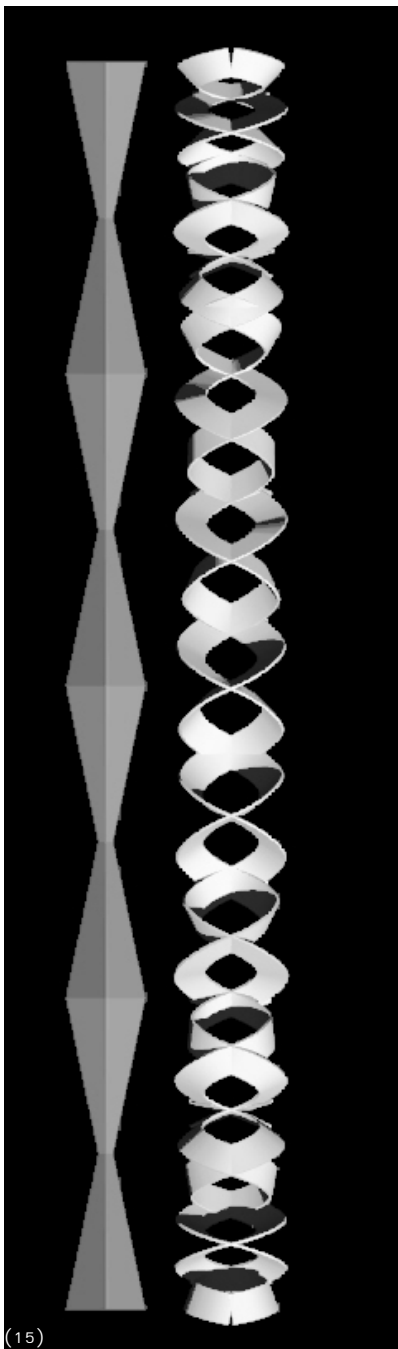


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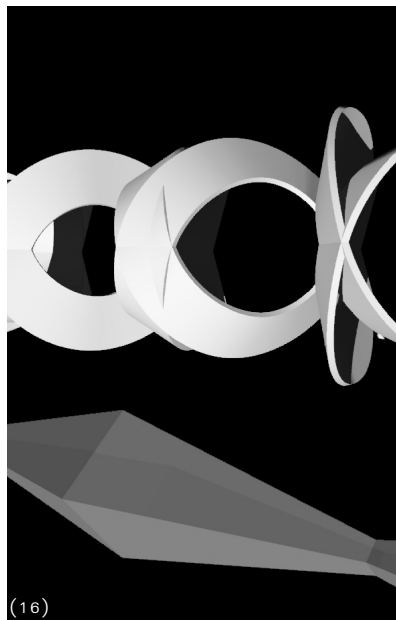


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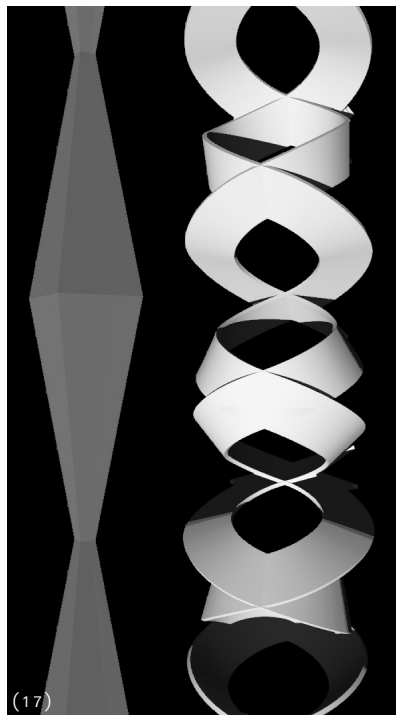
In addressing the Kiasma Museum's main circulation, I identified the use of focal points and the crossing of space from which the building gets its name. In plan (13) it becomes evident there is a desire to generate space with a twisting of boundaries, creating a pinch point at the center. In diagramming this space, I first laid out a continuous repeated pattern (15) similar to that in plan, and then further transformed it through a helical crossing of surface elements (16-17), extending and repeating boundaries. The logic of the boundaries then breaches into the bay (18), utilizing that volume Holl left otherwise untouched. The space is extended to properly address the population of water Holl initially recognized as being integral to the architecture, and a defining quality of boundaries within the site.



(15)



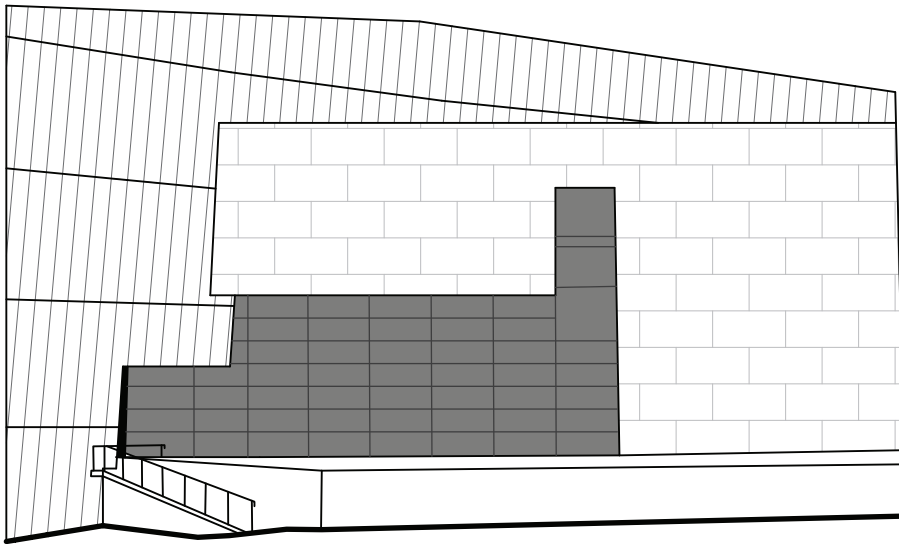
(16)



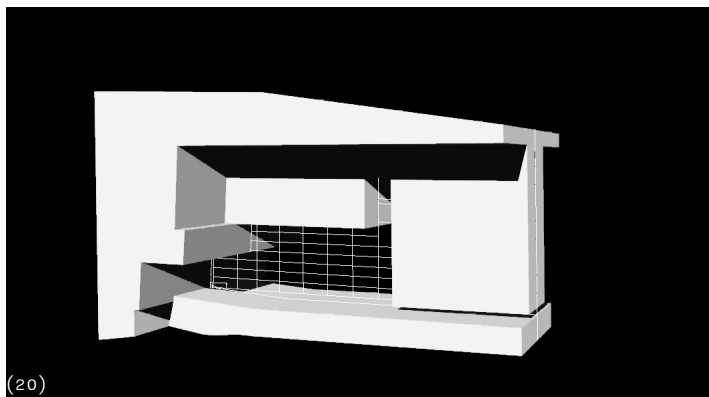
(17)



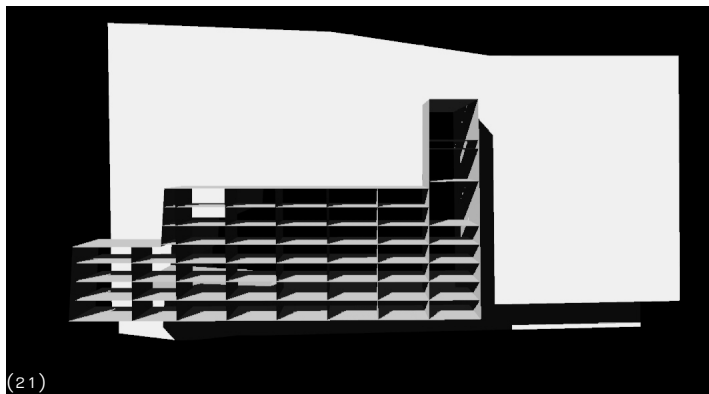
(18)



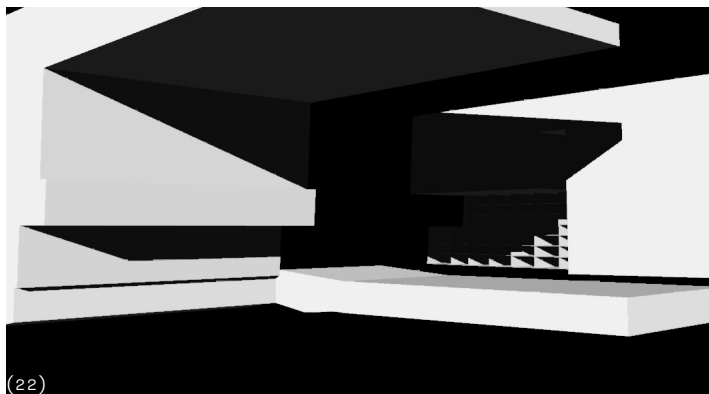
(19)



(20)



(21)



(22)

The exterior spaces of the Kiasma Museum are often characterized by movement through the site. Image (19) illustrates, in elevation the western facade of the building where three major materials meet, and the pedestrian passes through this intersection. By transforming the massing of this space, the logic becomes one more of volume than linear paths of travel. Massing generates space in a planar and cohesive organization in (20), where walls, floors, ceilings and transparencies are all clearly defined as spatial limitations. Images (21) and (22) then separate these massing elements to communicate logic of space in ways which offer the architecture clearly defined means of use. In (21) the foreground is the permeable facade while the background is the solid mass. In (22) the elements were divided to illustrate the individual functions of the overhead condition, the ground condition, and the wall condition.

Whether these illustrations may then communicate future space is dependent on populations. Should a population allow, or require such a transformation, the logic of mass is flexible and permits a change in the quantitative and qualitative aspects of space.