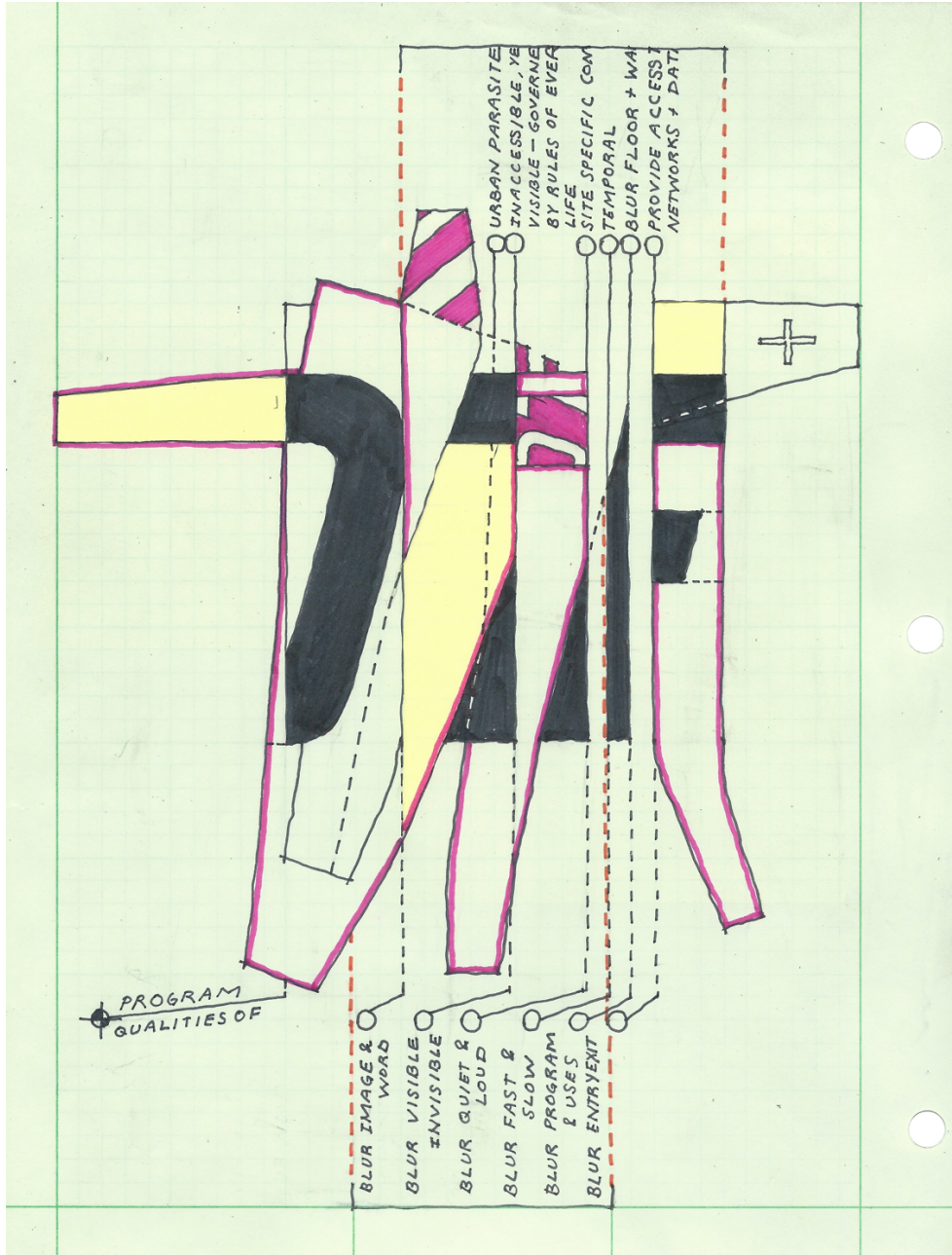


COLLISIONS: FROM ANALOG TO DIGITAL
the cybernetics of drawing, movement, and materiality



[performed] by
Earl Nguyen-Rand Crandon

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Preface

The technology of the computer age is a force influencing architectural design and conceptualisation, leading us further away from a personal and physical involvement in the design process and the drawing of architecture.

*Jeremy Avellino, Amy Chorey, Cindy Cizmarik, Christopher J. Golin, Richard Sanford
Winning Competition Project Brief
Schools of Architecture*

This project began with an interest in an ongoing shift: the transition from the analog to the digital.¹ To explore such a vast landscape, the drawing, and the act of drawing, became an appropriate vessel to begin this investigation. Amidst the surfacing of the digital “canvas” and the image first-platforms of today’s consumer culture, the drawing has been pulled in a number of different directions. Within architectural education & practice, it has become at odds with the seductive and the interpretative, the hand and the machine, and the subjective and the objective. This tension has reconfigured the ways in which the body receives the sensory world.

To tackle these issues, an investigation of architectural representation & theory offered key insights.² Subsequent research moved the project to a study of discursive imagery³, a form of representation that:

- (i) suggests a path non singular in its direction
- (ii) encourages an architectural discourse in the space that it is perforating
- (iii) functions beyond an objective, reductive set of instructions for building

Consequently, the discursive image⁴ became a fundamental tool of inquiry for this exploration.

The project then collided with a design challenge: the *2017 Innovative Minds Cybernetic Framework Competition*.⁵ Its call to investigate a site-specific, cybernetic framework gave the project a grounded objective: the speculation of an urban interface that explores the sequences of collisions between divergent entities.

¹ This transition refers to the integration of new technologies (computers) into the design and use of the built environment. One can organize the transition into two affected camps: (i) the user – those that inhabit space and are affected by the cybernetics and sensory alterations of technology and (ii) the designer – those that use technology in the process of designing the object, place, and/or experience. This project focuses on the latter.

² A survey of works highlighted by Stan Allen, Neil Leach, Brian Massumi, and Brian Cantley – to name a few.

³ Bryan Cantley provides a thoughtful definition of discursive imagery in “Deconstructive Text(s),” an essay within Volume 70, Issue 1 of *JAE Design as Scholarship*.

⁴ In the proceeding text, discursive image and drawing are interchangeable.

⁵ Competition brief: “*Innovative Minds 2017 is an exploration into the relationship between the virtual world blending with physical architecture. As cybernetics increasingly interconnects the virtual and physical worlds, how will this relationship influence architecture and its physical context to solve complicated problems? Use these site-specific characteristics to investigate a cybernetic framework that will expand architectural strategies such as environmental contextualism, user interaction, building function, and/or construction techniques.*”

Identifying these divergent entities, or themes, became an important part of the creative process. They are as follows:

- (i) the collisions between old and new
- (ii) the collisions between body and materiality
- (iii) the collisions between narrative and fragment

To explore these collisions in multiple dimensions, creative efforts were organized into three phases of production:

- (i) Drawing as Performative Filter
- (ii) Model as Movement Sequence
- (iii) Site as Materiality

These phases of production were used to organize the proceeding text, with each installment outlining the processes, artifacts and divergent entities that have been gathered.

Although the exploration culminates with the proposal for an urban receptor that synthesizes moments of collision [part IV], the project also attempts to offer a new [cybernetic] design strategy – one that employs discursive imagery and narrative structures.

Part I

DRAWING AS PERFORMATIVE FILTER

This is not to accept that the development of an idea into architecture need be fixed so resolutely. In this relationship the drawing potentially offers itself as an interrogative apparatus that has the capacity to critically engage with the production of architecture. That it is rarely used this way says much about the translatory relationship of both architect/building and idea/architecture.

Peter Cook

Drawing the Line: A Working Epistemology for the Study of Architectural Drawing

Introduction

The act of drawing was a critical catalyst for this project, and the [digital] canvas served as a medium [stage] where competing ideas could collide into one another. Each drawing was similar to a brainstorming exercise – a collection of layered media that explored a collection of themes.

The intersection between the body and the machine was a motif that took hold early; the collisions of the two acted as a stimulus for the fictional operations that were playing out. Among other things, the digital archives of CAD-block machine blueprints were used as a resource for collaging.

The book was also a reoccurring element; its surfaces and narratives acted as a stage [site] for each action sequence to augment and react to. The use of the scanner allowed for the collection of these components.

It became clear that this series was not [and should not be] self-referential. In each performance, divergent entities and incompatible partners were temporarily brought together using line and collage – as a means of commenting on the tense moments of collisions between:

- (i) the old and new
- (ii) the body and materiality
- (iii) the narrative and fragment

Indeed, as Bryan Cantley affirms, the context of the drawings evolved as the drawings progressed (Cantley 187), but the prevailing sequences of action remained consistent – and about a corporeal engagement with space.

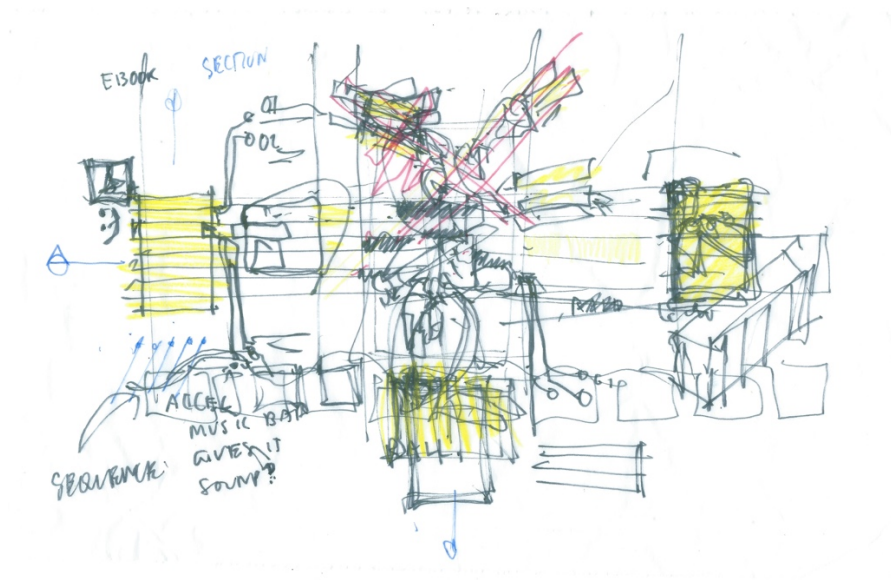


Figure 01: Process Sketch 03

01.
Tracing Things
The Plug-In City

Through the “snapshot effect” of the index, the interpretation of the work is connected back to the process of its making. Minimalism’s emphasis on making is reread in the context of evidential reconstruction: the index initiates a narrative of process.

Stan Allen
Practice: Architecture, Technique, and Representation

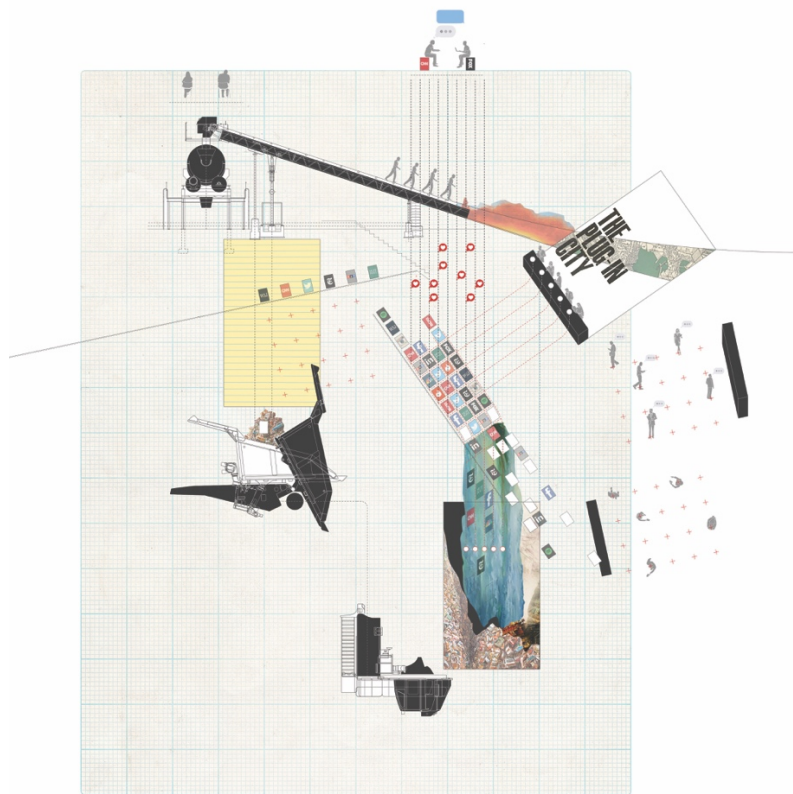


Figure 02: *The Plug-In City*, composed digitally

In this performance, the body is interested in the interplay of different perspectives and different speeds. For all the digitized social interactions it sees, the body is dissatisfied with its isolation. In response, it seeks a tactile action sequence. The conveyor belt and dump truck are brought into the scene, and they begin to organize the trash [information], connect the unseen [bodies], and in doing so, break the picture plane. Consequently, the machines’ precise degree of measure begins to erode.

02.
Illegible Passages
The Uses of Sidewalks

The problem of architecture and the contemporary city is also a problem of representation, resulting from the substitution of the intangible for the tangible, and marking the inadequacy of the image as a descriptive mechanism.

Stan Allen
Practice: Architecture, Technique, and Representation

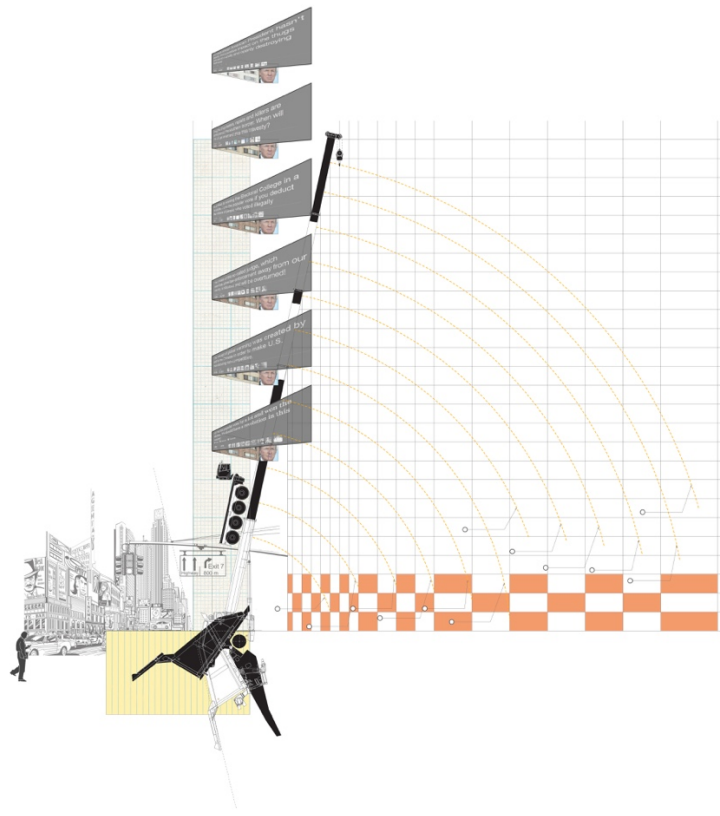


Figure 03: *The Uses of Sidewalks*, composed digitally

In this performance, the body has accepted the machine as an inseparable prosthetic. The union between the two has allowed for vertical passage along the sidewalk, giving it a new place to view the digital city from. Scrolling [reading] the digital has become mechanized [analog] again. Nonetheless, the body [creature] is disheartened to realize that information does not equate to knowledge. To fully make connections, the creature now understands that it will have to encounter an unseen geography or infrastructure – by violating it.

03.

Translating Text

The Reductive Book Sequence

Though the flattened skins could be described as representations of the original objects, their material presence offers something more in the evidence, or the trace, of the material and process involved. Unanticipated details are picked up in places which offer a texture of readings in addition to the geometry involved in re-forming the objects.

Jeanine Centuori

Flattened Room

Architecture Studio, Cranbrook Academy of Art 1986-1993

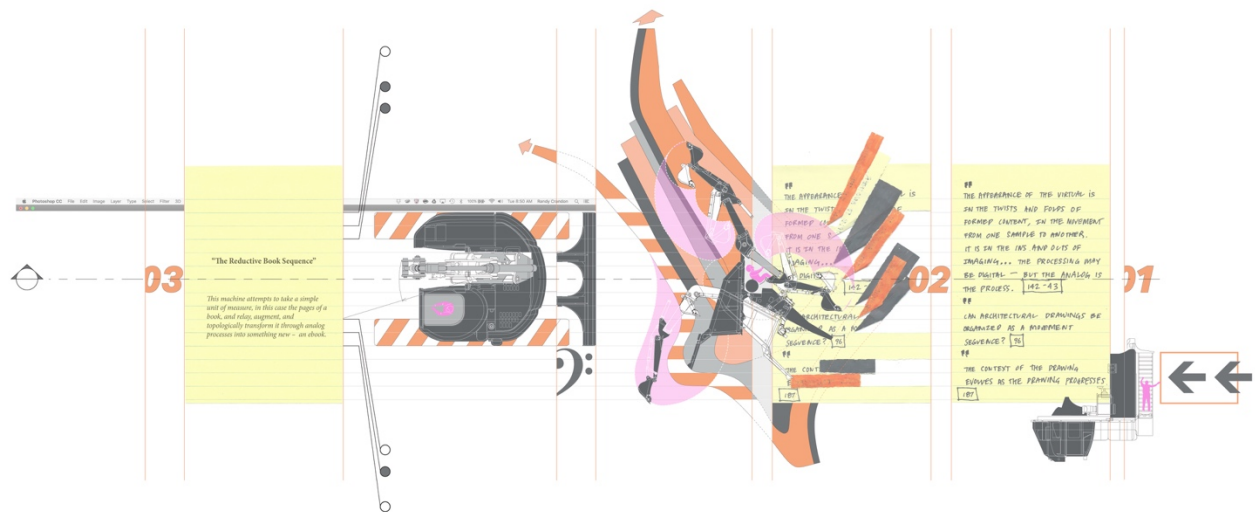


Figure 04: *The Reductive Book Sequence*, mixed media, composed digitally

In this performance, the creature [body] has become interested in the translations between the analog and the digital. The machine is now fully eroded; it is fleshy and violent. It has taken to the pages of a book and begins by relaying, augmenting, and topologically transforming them. Although the text has remained, the narrative is different. Just like the blueprint of the machine, the book has been reduced to an objective set of instructions. Curiously, the creature has remained suspended in the interstitial space – the collision threshold – the crash.

04.
Projecting Narratives
Enacting the Histories of Fedora and Ersilia

'The superiority of the analog' over the digital refers to the fact that its paths of co-operation – transformative integration, translation, and relay – are themselves analog operations.

Brian Massumi
Parables for the virtual: movement, affect, sensation

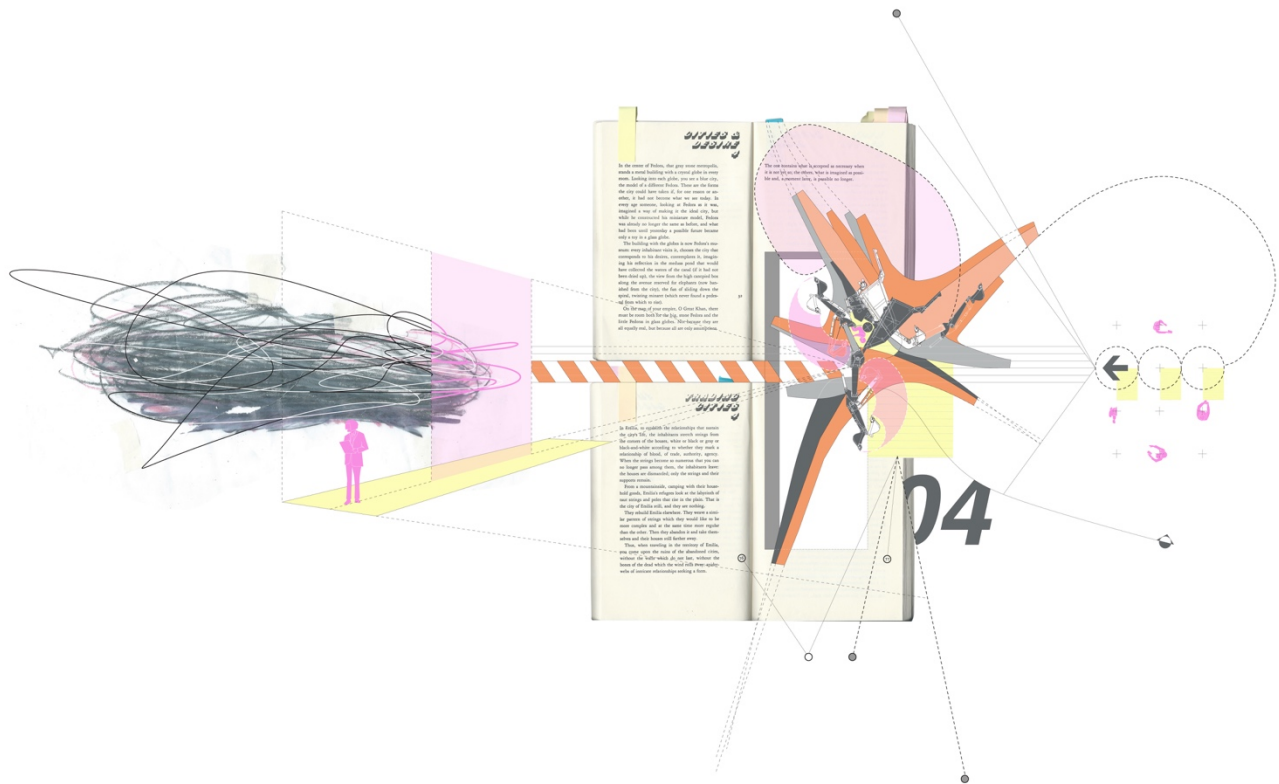


Figure 05: *Projecting the Histories of Fedora and Ersilia*, mixed media, composed digitally

In this performance, the creature has become infatuated with visiting the Invisible City. To do so, it has latched onto its book – twisting and folding itself into a well-seated projection terminal. However, to visualize the unseen, it must rely on the imaginations of those that choose to pass through its center. This action sequence is closest to a symbiotic relationship; the creature presents Ersilia's spider-web of connections [pragmatism], and the body offers its crystal orb [optimism] of Fedora. Using the spider-web as a screen, the creature projects the body's orb onto it. The light seeps into the cracks and edges of the web, and the Invisible City is finally seen in the shadows cast.

05.
Filtering as Archiving
DEMATIC Operations

Can a book or a drawing be a theoretical project, an abstract endeavor aimed at exploring the “place” where architectural space encounters the movement of real bodies? Can it describe an architectural interpretation of reality – both the building and what happens in it?

Bernard Tschumi
Bernard Tschumi: architecture: concept & notation

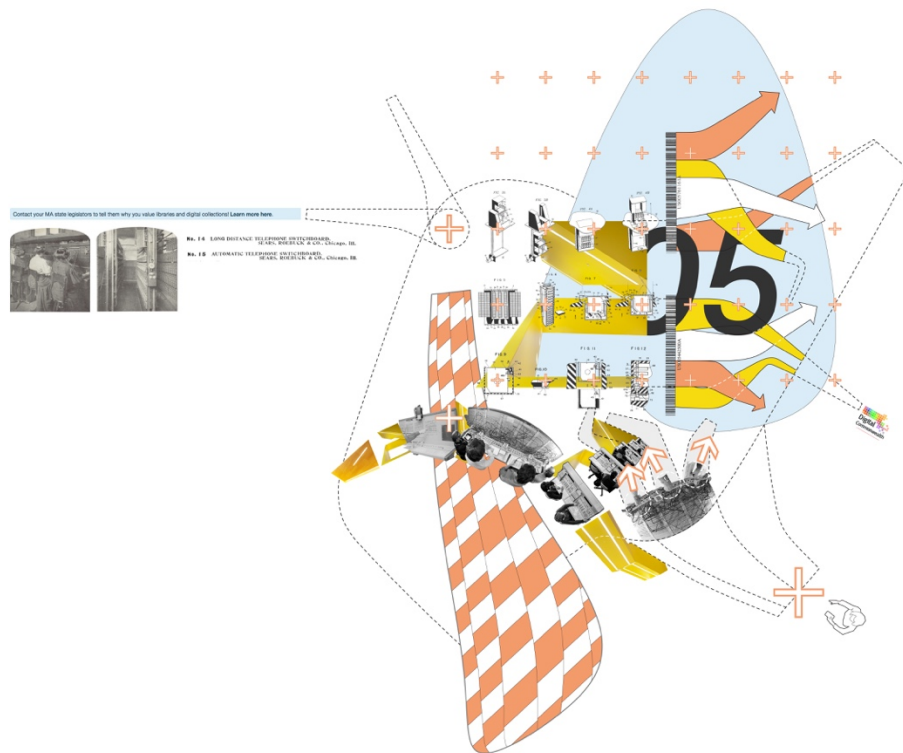


Figure 06: *DEMATIC operations*, composed digitally

In this performance, the creature has met competition – the DEMATIC automated library system, a champion of speed and efficiency. Jealousy [seduction] takes hold of the creature, and its functions slow. In that instant, however, it remembers why these feelings have spread: because it is part human. Unlike the creature, DEMATIC lacks curiosity. It doesn't have the body to regulate its switchboard of connections – to directly engage in a critical discourse. The creature, however, uses the body to filter ideas, speculate potential, and regulate function. From that moment forth, the creature never took its identity [site] for granted again, and it archived the memory close to center.

Part II – Interlude

MODEL AS MOVEMENT SEQUENCE

It is fitting that the detritus of an older, industrial age be used to examine lost relationships between the body and building, since many of the found pieces bear traces of the body in their production.

*Dan Hoffman
Building Measure
Architecture Studio, Cranbrook Academy of Art 1986-1993*

Introduction

The translation from two-dimensional drawing space to three-dimensional habitable space is a challenging leap to make. Interpretations of the drawing [discursive image] can be too literal, resulting in form that is self-referential and superfluous. Conversely, the translation may be too abstracted, in which case the richness of the original ideas and concepts is lost.

Here, the task was to extract a methodology, rather than an aesthetic. To make the leap, a number of things were gathered:

- (i) the five themes identified in the drawings above
- (ii) Italeri and AMT model making kits – a medium[material] referential to the machine

Using these two components, the challenge was to design a passageway – an architectural element that engages the body in movement sequences. The resulting constructions were able to synthesis these divergent pieces into something unique and unexpected.



Figure 07: Italeri model making kit

A.
Sectional Passage
Spatial Sequence 01

It is the section cut's incisiveness, its ability to penetrate the body of a building, that opens up the possibilities of an activated and embodied space. As the section exposes and reveals, it also cultivates an imaginative counter-argument to a totalizing overview. The section's fragmentary and conditional character points the way to an engaged and visceral experience of space, a way of working and imagining space that participates in what I am provisionally calling a Sectional Consciousness.

Joseph Krupczynski
The Labyrinth's Section

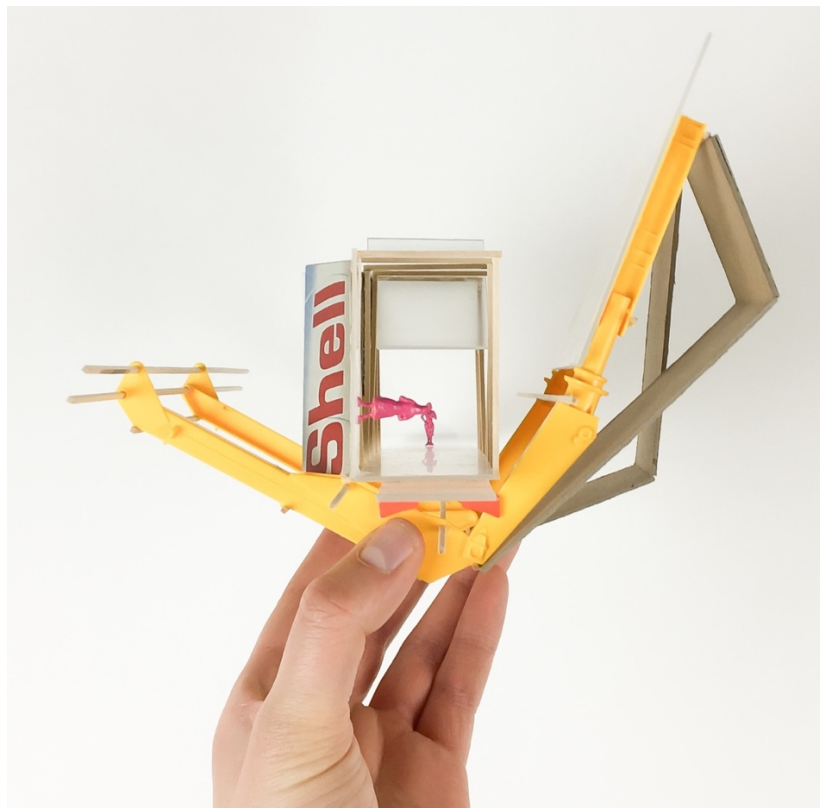


Figure 08: *Spatial Sequence 01 – View A*

In this movement sequence, the creature has folded into a framed passage way. To break up the saturation of images the body will encounter, the creature uses the section. It decides to cut into the signs along the path and situate them on a series of thresholds [frames]. The configuration is such that there are multiple ground planes [interpretations]. The envelope of the passage undergoes similar operations of fragmentation and folding, bringing in light to the lonely [decorporealized] body. It is grounded using the parts of an eroded crane.



Figure 09: *Spatial Sequence 01 – View B*



Figure 10: *Spatial Sequence 01 – View C*

B.
Silence and Noise
Spatial Sequence 02

While an installation can be diagrammed, photographed, videotaped, or described in language, its crucial element is ultimately missing from any such two-dimensional construction, that is, “the space in between,” or the actual construction of the passage for bodies or figures in space and time.

Margaret Morse
Blurring Genres
Scanning, The Aberrant Architectures of Diller + Scofidio



Figure 11: *Spatial Sequence 02 – View A*

In this movement sequence, the creature has folded into a suspended passage way. The body, wishing to hover between the silence of the library and the noise of the performance, can only do so temporarily – it is a difficult task [collision]. The vessel the body sits in is unstable, malleable, and dependent. It is the interstitial space of movement. It sways with the forces surrounding it, propped up by the eroded parts of a tractor trailer shell [screen].



Figure 12: *Spatial Sequence 02 – View B*



Figure 13: *Spatial Sequence 02 – View C*

C.
Theatrical Tension
Spatial Sequence 03

I am interested in the ways cinema constructs spaces in the mind, creates mind-spaces, thus reflecting the inherent ephemeral architecture of the human mind, thought and emotion. The mental task of buildings and cities is to structure our being-in-the-world and to articulate the surface between the experiencing self and the world. But doesn't the film director do exactly the same with his projected images?

Juhani Pallasma
Lived Space in Architecture and Cinema
The Architecture of Image: Existential Space in Cinema

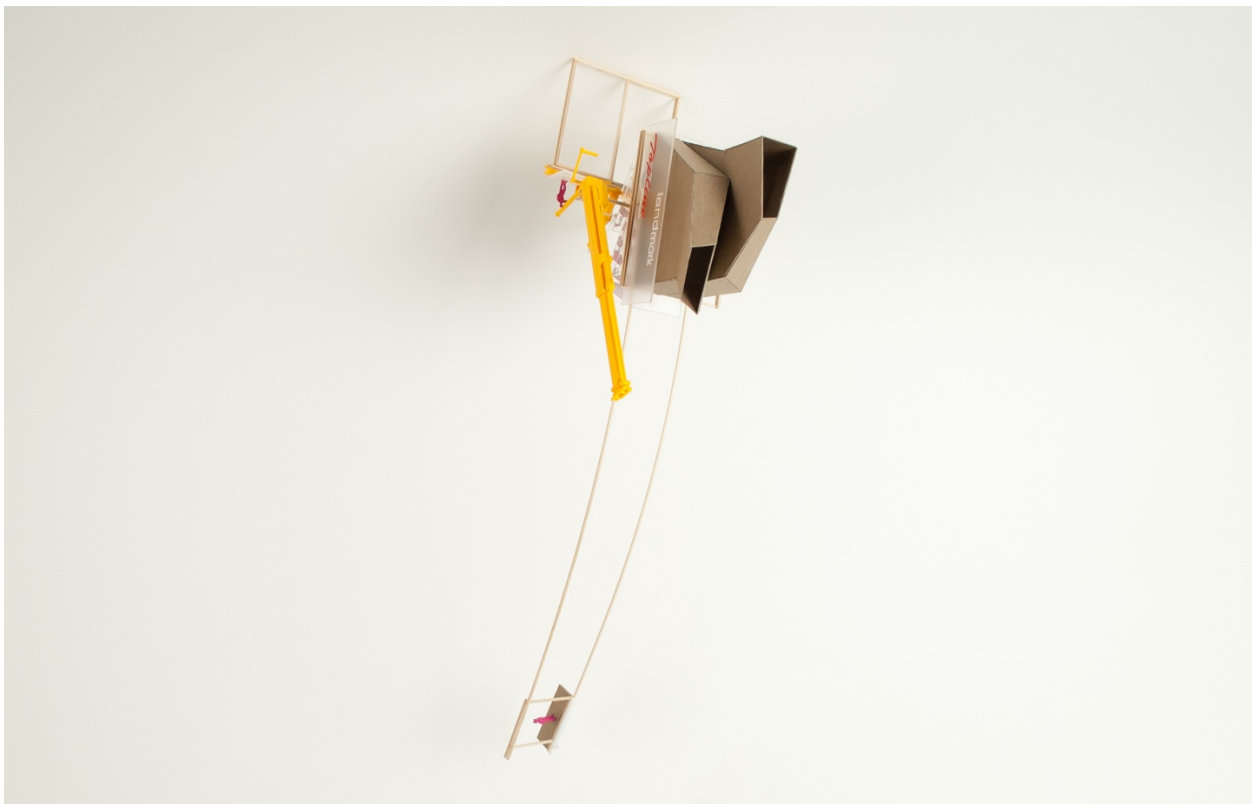


Figure 14: *Spatial Sequence 03* – View A

In this movement sequence, the creature has folded into a theatrical passage way. Rather than view the performance, the body wishes to augment it. Consequently, it programs the creature to erect a series of mirrors, windows, and lines within the passage – some are floating above one another, others conjoined to its cables. This gives the body a costume to wear while on stage. The tension that arises is a strange one; the body is neither on stage nor sitting in the audience – rather, it is trapped between the two. The production crew [site] is [happily] surprised at the manner in which the spotlights pass through the passage and onto the stage.



Figure 15: *Spatial Sequence 03 - View B*

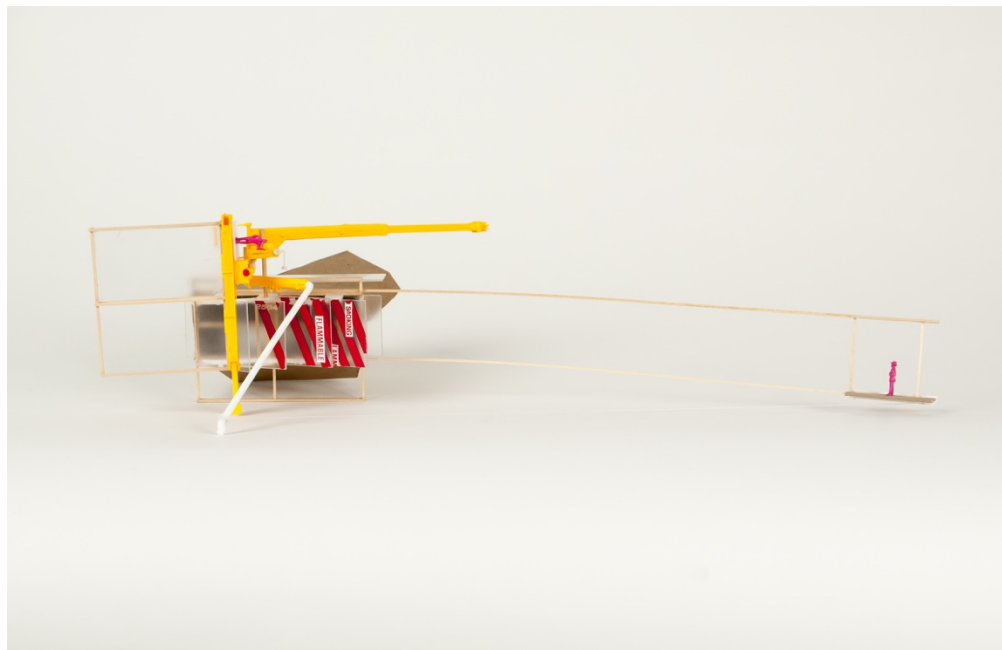


Figure 16: *Spatial Sequence 03 - View C*

Part III

SITE AS MATERIALITY

This is a condition that I have labelled 'postliminal fuzz' – a circumstance of the recognition of liminal space, the physical and conceptual properties of the drawing surface and the production of new policies based on their collision(s).

Bryan Cantley
Deviated Futures and Fantastical Histories
Drawing Futures

Introduction

The emerging concept of “collisions” redefined the notion of “site.” In many ways, the collision itself, whether it be between old and new, body and materiality, or narrative and fragment, was the site that was being excavated. Similarly, the canvas, page, and book became a material that was subject to topographical augmentation. This suggested that the project was dealing with site typologies – defined, in part, by material properties.

To test the various sequences that had been developed, an abandoned parcel in Holyoke, MA was identified – one rich with fragments, histories, and potential. To critically analyze the site, indexical operations continued, and the discursive image was referred back to.



Figure 17: View from the East at Former Hotel Jess and neighboring lot & vacant building

06.
The Palimpsest
Urban Parasites

The producer plays the contents, the parasite, the position. The one who plays the position will always beat the one who plays the contents. The latter is simple and naïve; the former is complex and mediatized. The parasite always beats the producer. The producer, always attentive to the game of the things themselves, supposes that the other does not cheat, since the things themselves are fine but loyal, as physicists say.

Michael Serres
The Parasite

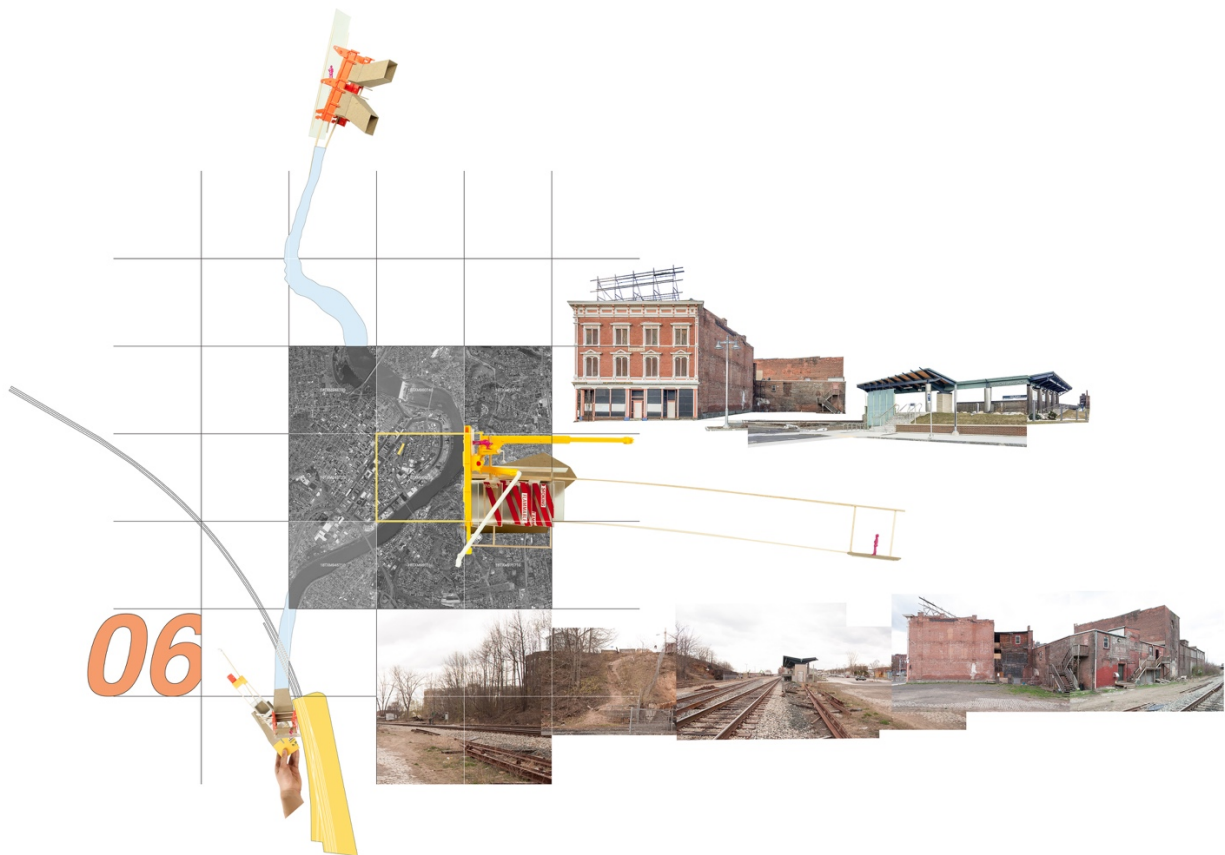


Figure 18: *Urban Parasites*, composed digitally

In this performance, the creature has found a [new] palimpsest. It seeks surfaces that are rich in texture and histories. Previously, its palimpsest was a book of stories. Now, it is the exposed brick wall of Hotel Jess and the earth of an adjacent lot. To engage with site, it remains mobile and in its most recent state of configuration: the movement sequence. Like before, it will soon twist, fold, and topographically transform.

07.
Delayed Seduction
 Bridging Text and Image

Seduction attempts to enchant the viewer on a purely visual level and to prevent any deeper level of inquiry. Seduction can therefore be contrasted with “interpretation.” Whereas interpretation strives to rupture the realm of surface appearances and inquire after some underlying truth, seduction seeks to bewitch the viewer within the enchanting world of the surface, never to look beyond.

Neil Leach
The Anaesthetics of Architecture

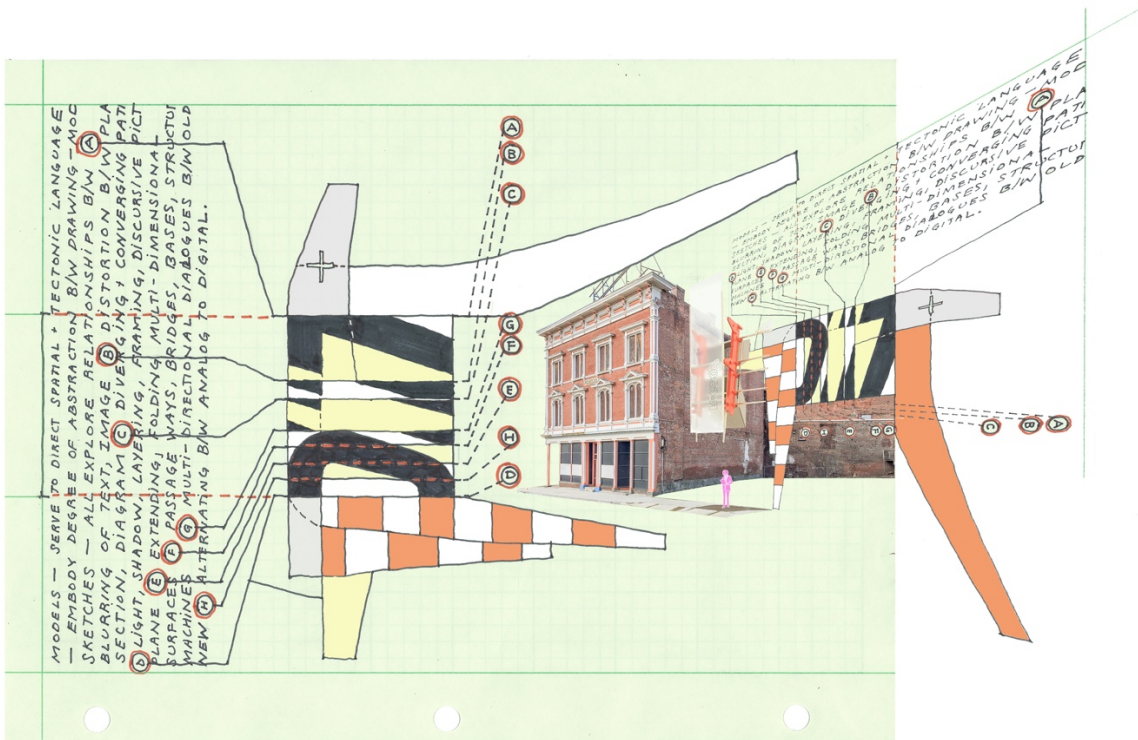


Figure 19: *Bridging Text and Image, Mixed Media*

In this performance, the creature has been seduced by its own image. With the body removed, the creature makes little effort to critically engage with the wall – it takes it for granted. It doesn't seek the idiosyncrasies, the broken, the haptic. It ignores what the section may yield. It is only concerned with alluring the attention of the passing trains. Although the creature has begun to fold, twist, and augment its own text, it avoids cutting into the brick to uncover a new narrative. Until it does so, it will be caught in the limbo of Zeno's paradox.

08.
Indexical Fragments
The Subtractive Window

First of all on the surface on which I am going to paint, I draw a rectangle of whatever size I want, which I regard as an open window through which the *historia* is seen.

Leon Battista Alberti
Perspective: A "Window on the World"
Elements of Venice



Figure 20: *The Subtractive Window, composed digitally*

In this performance, the creature seeks to subtract the shell separating the visible and invisible, the allowed and the prohibited, the interior and the exterior. By violating the brick wall [site] separating the two, it has removed the threshold of collision between the light and dark. The indexical cuts have given the parasite new windows into the building's history, but fragments and voids remain disjointed – there is no more surface to ground the architectural elements in. Consequently, the window must now find a new receptor to live in. The creature, once anxious, is now satisfied – it has tricked its producer.

Part IV

URBAN RECEPTOR [COLLISION]

Taking the ordinary environment as their “new theater of operations in culture,” in the phrase of the Situationists, these artists challenged its exclusion from the gallery, the museum, or the performance space. They sought to examine how architecture, consumerism, advertising, the mass media, suburbanization, culturally sanctioned gender roles, and notions of domesticity maintained relations of control in bases whose naturalness and benign function appeared increasingly dubious.

*Edward Dimendberg
Blurring Genres
Scanning, The Aberrant Architectures of Diller + Scofidio*

Synthesis Model

In architecture, which has an imaginary (sometimes pictorial) component, we can project the body into the building empathetically and represent its violation.

Robin Evans
Architectural Projection
Architecture and Its Image: Four Centuries of Architectural Representation, Works from the Canadian Centre for Architecture

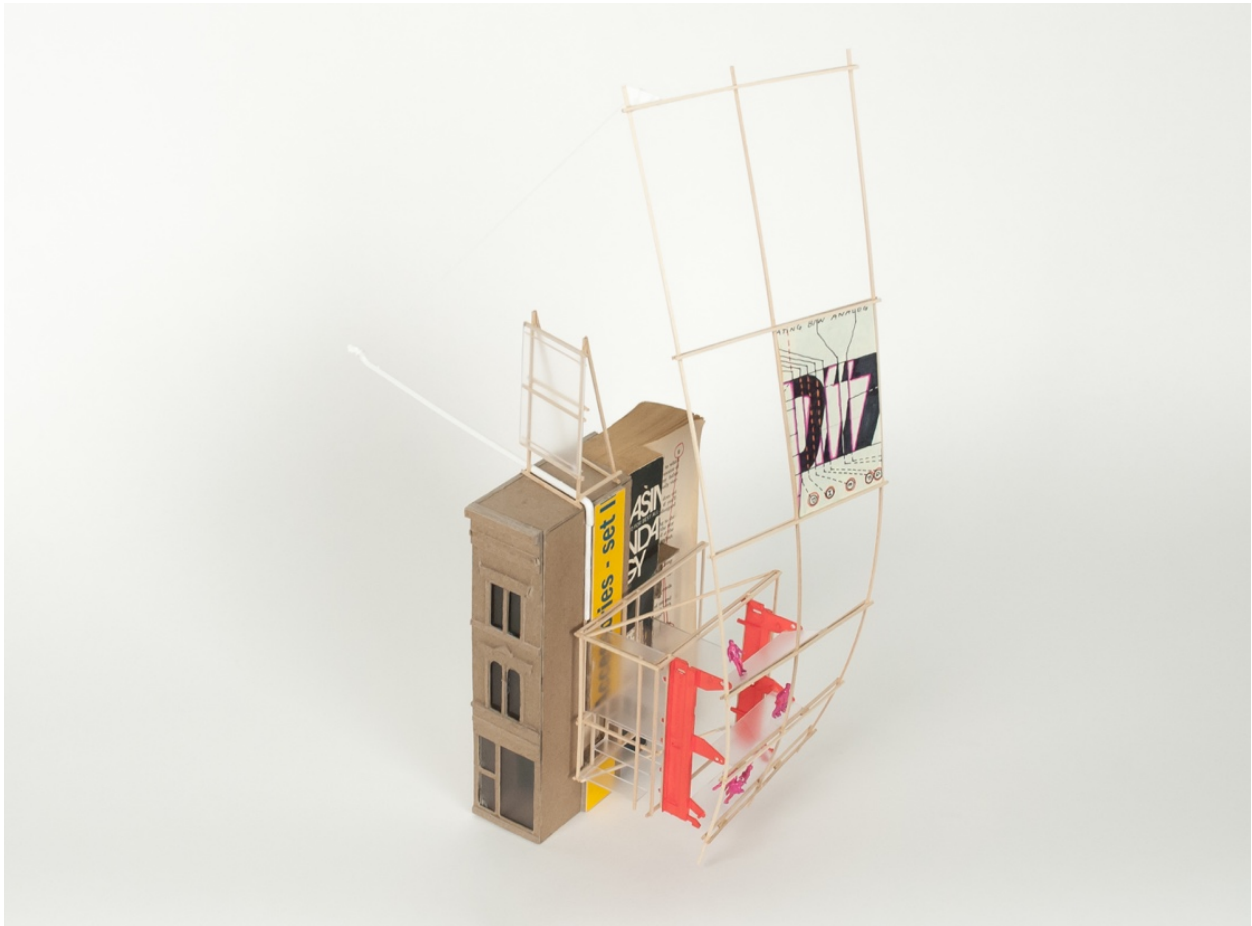


Figure 21: *Spatial Synthesis: Filtering Isaac Asimov's Fantasies – View A*

In one of its final performances, the creature has found the ideal stage to debut its newest piece on. It is neither the screen, the wall, nor the page. Rather, it is the passage that creates a new void in-between. The body longs to read the wall [book] within, but doing so requires entry. Those that take its passage, however, soon realize that they have been seduced by a newer narrative along the way – one that has perforated [violated] the space that they are ascending.



Figure 22: *Spatial Synthesis: Filtering Isaac Asimov's Fantasies - View B*



Figure 23: *Spatial Synthesis: Filtering Isaac Asimov's Fantasies - View C*

Design Proposal

This design proposal is an ongoing speculation of an urban interface that explores the sequences of collisions between old and new, body and materiality, and narrative and fragment. Rendered as a piece of infrastructure, the space mediates a number of different social interactions [collisions]:

- (i) it performs as a receptor for a new pedestrian bridge that reconnects lower Holyoke to the flats
- (ii) it performs as a highly visible marker of cultural identity in Holyoke
- (iii) it performs as a drive-in movie theater and/or stage for oral presentations
- (iv) it performs as a passage into the former Hotel Jess, which will soon be redeveloped as a public theater space
- (v) it performs as a scaffolding for graffiti artists
- (vi) it performs as a billboard for passing trains
- (vii) it performs as a catalyst for an urban plaza below



Figure 24: *Urban Receptor Model – View A*



Figure 25: *Urban Receptor Model - View B*



Figure 26: *Urban Receptor Model - View C*



Figure 27: *Urban Receptor Model - View D*



Figure 28: *Urban Receptor Model - View E*



Figure 29: *Urban Receptor Model - View F*



Figure 30: *Urban Receptor Model - View G*



Figure 31: *View from the West: Photomontage A*



Figure 32: *View from the Southeast: Photomontage B*

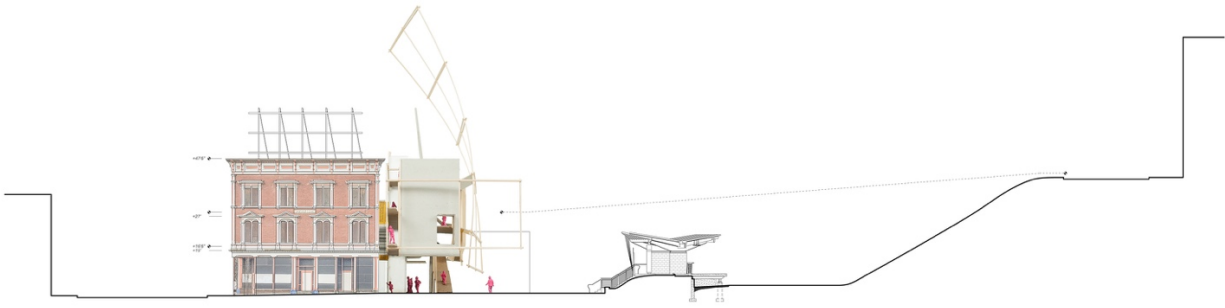


Figure 33: *South Elevation*

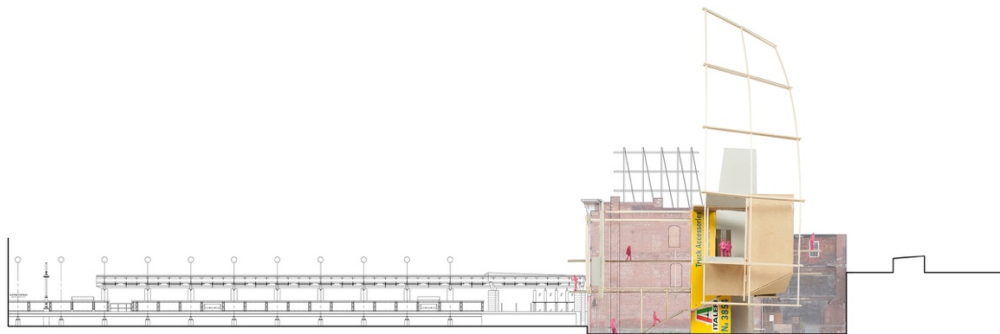


Figure 34: *East Elevation*

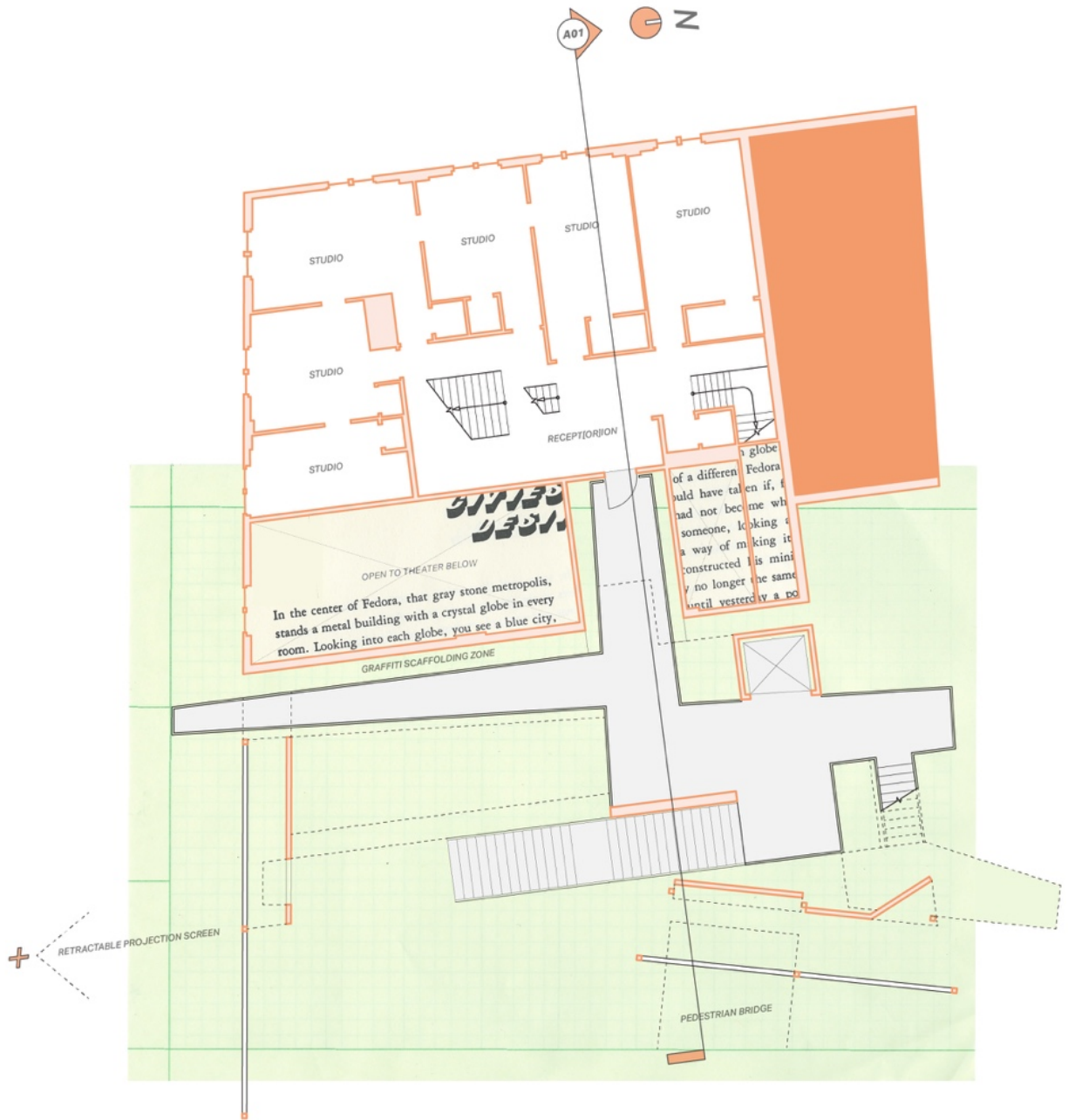


Figure 35: Plan at 2nd level – entry into Hotel Jess

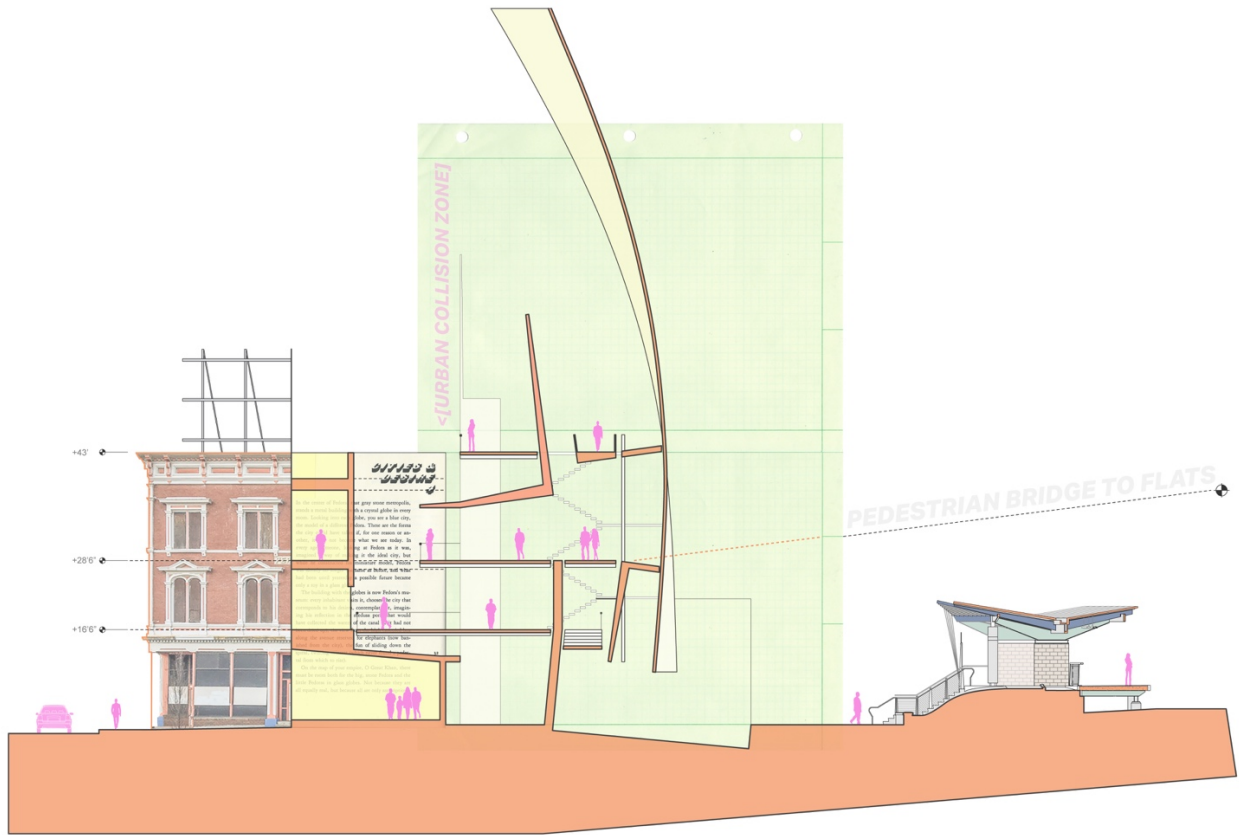


Figure 36: South Section

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