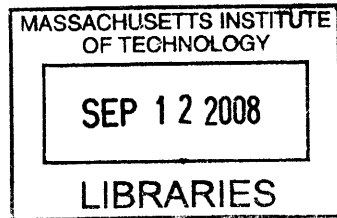


Machine Couture: Manufacturing as Consumer Spectacle

Margaret Hwang

B.A., Visual Arts  
Brown University, 2001

ARCHIVES



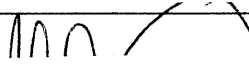
SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE  
IN PARTIAL FULFILLMENT FOR THE DEGREE OF


MASTER OF ARCHITECTURE AT THE  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

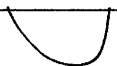
September 2008

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Thesis Reader



Machine Couture:  
Manufacturing as Consumer Spectacle

by Margaret Hwang

Submitted to the Department of Architecture on  
August 8, 2008 in partial fulfillment of the requirements  
for the Degree of Master of Architecture.

## **Abstract**

By creating spectacle through architecture, clothing labels have developed new branding techniques through which to redefine and provoke. However, the essential behind-the-scenes models of production have remained the same: consumption, manufacturing, and distribution are linked but always independent. This thesis proposes to compress the stages of production for a new type of spectacle: a consumer factory that uses the process of manufacturing as a branding technique.

Set in Shanghai, the project studies how retail and manufacturing spaces can intersect to elevate the consumer experience. Through this co-dependency, manufacturing remains within the city's urban fabric and provides an experiential consumer environment new to the traditional retail models of China.

Thesis Supervisor: Mark Goulthorpe  
Title: Associate Professor of Architecture



## **Acknowledgements**

To the following I give my thanks:

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The encouraging staff and faculty at MIT who have helped and hugged along the way during the past four years.

My family for allowing me to run backwards and sideways to move forward. And for accepting and supporting me through the highs and lows of school and life.

The un-named for helping me get to where I am today.

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## Introduction

10

*The brand, according to the new cognoscenti, was a relationship, a thing of nuance and complexity, of irony and evasion. It was not some top-down affair, some message to be banged into consumers' heads. The brand was a conversation, an ongoing dialogue between companies and the people. The brand was a democratic thing, an edifice that the people had helped build themselves simply by participating in the market. The brand, in short, was us.<sup>1</sup>*

### BRANDING, SPECTACLE, ARCHITECTURE

#### BRANDING TRENDS

As fickle as aesthetic and cultural trends, the identities of brands shift and adjust constantly to stay relevant. The methods of defining or branding are rule-free and limitless, crossing every medium and through every media. To provoke, one must awaken the senses. To be provocative, one must create spectacle. As recent marketing ploys have shown, spectacle is a brand's best friend.

How retail brands create spectacle has been achieved through a variety of tactics. For high end couture and ready-to-wear, fashion shows have become larger, complicated, full-blown events. Stages are no longer single catwalks but entire sets and installations designed to inspire, shock, and awe. For the commercial lingerie chain, Victoria Secret, the fashion show is a televised event with music, interviews, and behind-the-scene bloopers. Through cultural institutions such as the Guggenheim and Metropolitan

Museum of Art, fashion brands such as Louis Vuitton sponsor invitation-only events that 'educate' the public on art and fashion, creating a dubious setting that instigates feelings of appreciation and desire for the brands' 'works of art.' At the level of the stores, the fashion stage for the everyday consumer, brands such as Comme des Garçons have issued guerrilla tactics. Instead of opening at permanent locations, stores appear in cities for only a period of months then disappear, shortening the supply to create anticipation and demand.

#### SPECTACLE THROUGH ARCHITECTURE

However, retail branding has achieved the greatest spectacles through architecture. By commissioning high design stores and architecturally-choreographed installations, labels have escalated their image to new levels. With architects now as brands themselves, the coexistence and even codependency of architectural brands and product brands has

never been stronger. It demonstrates that the what, who, and how of branding defies any fixed or clear cut relationship. What is being sold is no longer just the object displayed but also the display itself.

The most aggressive of these partnerships is Prada with the architectural brand of Rem Koolhaas. The symbiotic relationship has provided new opportunities and attention for both brands. Koolhaas's current stretch of activities with Prada demonstrates the fashion brand's desire to expand the idea of itself into an indefinable zone that evolves and contorts beyond conventional limits. By associating itself with activities far outside the definition of fashion, the brand continues to stretch consumers' understanding of experientially new. To be hip is the goal and unexplored territories the solution. Architecturally, pushing the envelope of traditional retail began with the luxury of wasting space and introducing hi tech devices.



Figure 1. Chanel Mobile Art Pavilion

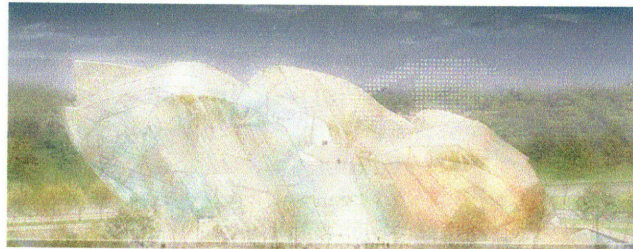


Figure 2. LV Foundation For Creation

However, by treating consumer space as rough and unpolished provides a contradictory aesthetic that redefines trend by contrasting existing luxury typologies.<sup>2</sup> Prada's recent VIP party set within a produce market, where DJ's spun inside deli stalls and merchandise was displayed within fruit stands, did exactly that.

Chanel has also provided architecturally spectacular events, including a partnership with the brand of Zaha Hadid, who designed the Mobile Art Pavilion. A traveling art show whose participants' works are all inspired by the Chanel quilted bag, the brand intentionally associates itself with Hadid's cutting edge image. Not to be outdone, the parent company of Louis Vuitton, LVMH, has commissioned the Frank Gehry brand to design the Louis Vuitton Foundation For Creation in Paris, which will be a venue for art and culture. Both Chanel and LV have stepped outside fashion to associate with what and who is in fashion in architecture.

### INNOVATION and EXPERIENTIAL STORES

Automotive and technology industries have found their own ways of branding through spectacle of architecture: through innovation and experiential stores, and exhibition halls. By exposing the consumer to behind-the-scenes knowledge about products, brands are using the manufacturing stage of production to increase value and interest, which lead to an increased consumer following. These new types of 'stores' generally are so technologically tied, that they require new, innovative architecture to match their new image. Both BMW and Mercedes Benz commissioned new museums (the BMW Welt by Coop Himmelblau and the Mercedes Benz Museum by UN Studio) to portrayed each brand's commitment to pioneering ideas. Apple stores, while developing an architectural retail image as sleek as their computer designs, ended up patenting new structural glass with Dupont that's used in their transparent glass stores.

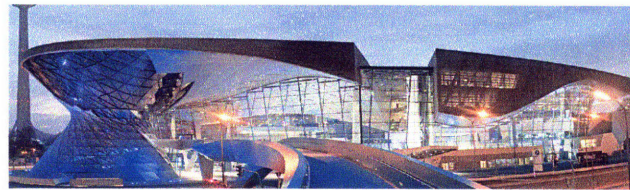


Figure 3. BMW Welt

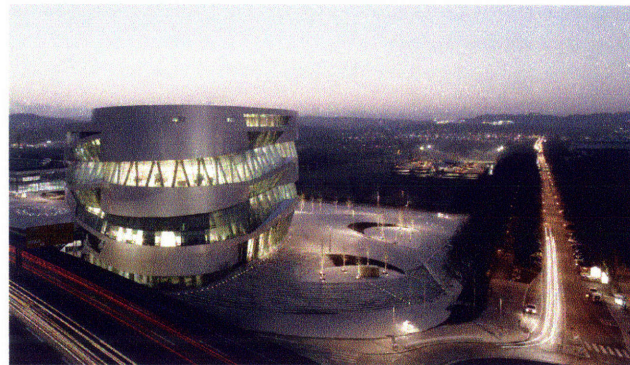


Figure 4. Mercedes Benz Museum

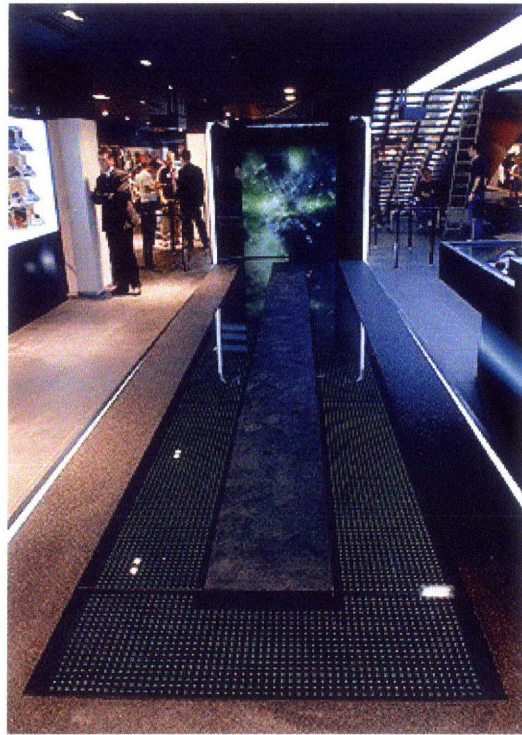
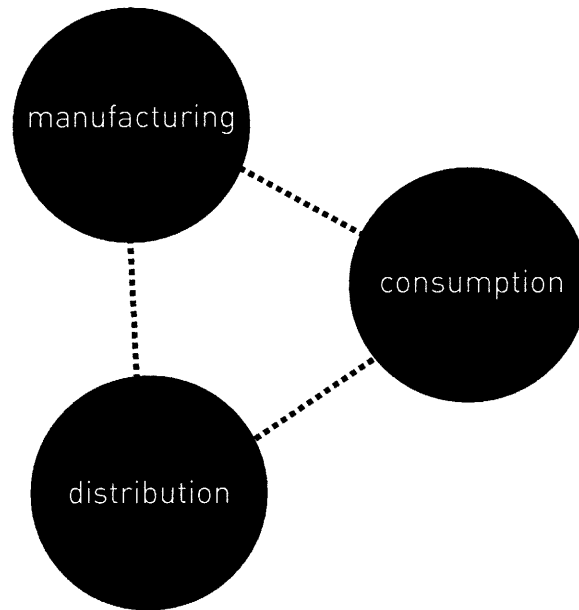


Figure 5. Adidas Mi Innovation Center

Other brands have innovation stores that provide a different connection with otherwise hidden stages of manufacturing: in-store mass customization. Athletic stores such as Adidas and Puma have started to provide mass customized services that create spectacle in the savvy techniques provided within the stores to offer customers new ways of buying. Puma's Mongolian Barbeque, which allows customers to "design" their own pair of sneakers in stores and online, is a successful way of providing that extra service for consumers in need of individuality and who have a little more money to spend. However, because of the time it takes to oversee the order to manufacturing, where it's then fabricated and shipped back to buyers, the total estimated time to receive the shoes after ordering is seven weeks.

What prevents these brands from pushing spectacle further towards full exposure of the manufacturing process? While brands explain the process of manufacturing, the greatest spectacle is that of performance. And as reality shows such as Project Runway and Iron Chef have indicated, the public finds the 'how' just as interesting as the 'what.' However, to understand how manufacturing could fully be used as a branding spectacle, the existing models of production must be discussed.

## THE THREE STAGES



In the most typical model, the three phases of manufacturing, distribution, and consumption are entirely separate enterprises. While the retail industry relies heavily on the three stages to run coherently and act as one continuous process, in actuality all three act independently and are generally spread across the globe. As costs drive decisions, manufacturing is moved off-shore where labor is cheaper. Distribution becomes a cross-continental measure, and overseeing the three stages is a remote matter. The result of individually run stages is longer turnaround time: starting from the beginning of the design stage through to the displaying of products on shop floors takes months. While trends change overnight, and numbers off the floor quickly indicate consumer tastes and buying tendencies, it takes so long to adjust the season's lines to fit shoppers' wants through to production that the end result is stagnant inventory and over-production of less desirable items each season. This leads to wasted costs on all levels.



There are companies who have managed to solve these problems by streamlining and retaining tight control over the entire production process. The Spanish brand Zara's is the most noted example of a company who has cut down the overall turnaround time of products to a mere two weeks. By quickly translating observations on buyer's trends to the two hundred person design department, and keeping all stages of production within close physical proximity to headquarters, less quantity is made of each item and more styles go through manufacturing.<sup>3</sup> Keeping all processes together is key to greater overseeing control and reactionary speed. With its factory and distribution center across the street of headquarters, and sewing provided at local cooperatives, the entire process occurs within easy traveling distance. The use of automation in key stages of design through distribution keeps the company running literally like a well oiled machine.

Another model for successful vertical integration, where all stages of design, manufacturing, and distribution work together for tighter control, is the recent phenomenon American Apparel. Located in Los Angeles, the company founder finds control over every stage can only occur if all stages remain in one building. As the belief in the ethical treatment of employees and 'made in America' are the definitions of the brand, this approach to management is also a marketing tactic that has worked in separating it from other stores.

## **Proposal**

A clothing retail model which combines two trends: branding through experiential spectacle and vertical integration of the production process. This leads to a consumer environment where all stages of manufacturing, consumption, and distribution exist under one roof and are exposed as a branding spectacle for customers.

Consumption occurs at all stages.  
All stages serve the act of consumption.

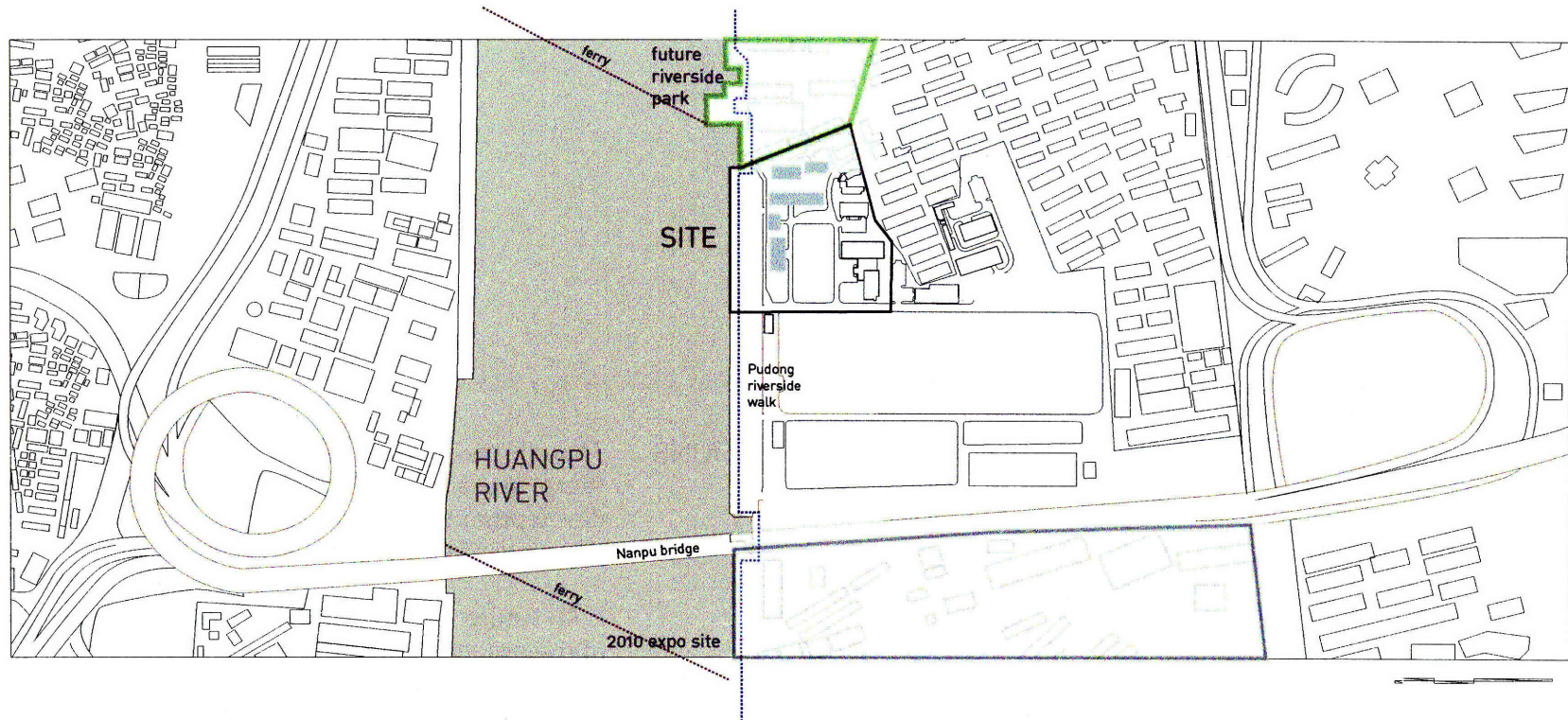
## Context

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### SHANGHAI



In Shanghai, China's largest city with the highest consumer spending power, especially for luxury goods consumption, manufacturing has all but left the core of the city. With real estate values skyrocketing and the cost of labor increasing, factories have left for the outskirts of the city. Looking at the larger trend in China, those factories that do exist in Shanghai and other coastal cities are mainly research hubs while larger scale manufacturing has moved to central China. The architectural remnants of Shanghai's previous manufacturing era are now being 'historically preserved', and many converted into Creative Industry Parks where the open factory layout needs little change to support artist studios and galleries. However, as effective as these developments are in promoting the arts in Shanghai, they don't provide a way for manufacturing to remain within the urban fabric.



**SITE: PIER 5, PUDONG**

To expand the retail typology of the city and increase the spectacle of the program, the proposed site is already industrial in scale. The site is located along the Pudong banks of the Huangpu river, next to the Nandu Bridge. Originally a conglomerate of office and factory buildings that serviced a shipyard, the prime location sits on the north edge of the future Shanghai 2010 Expo site and acts as the south-

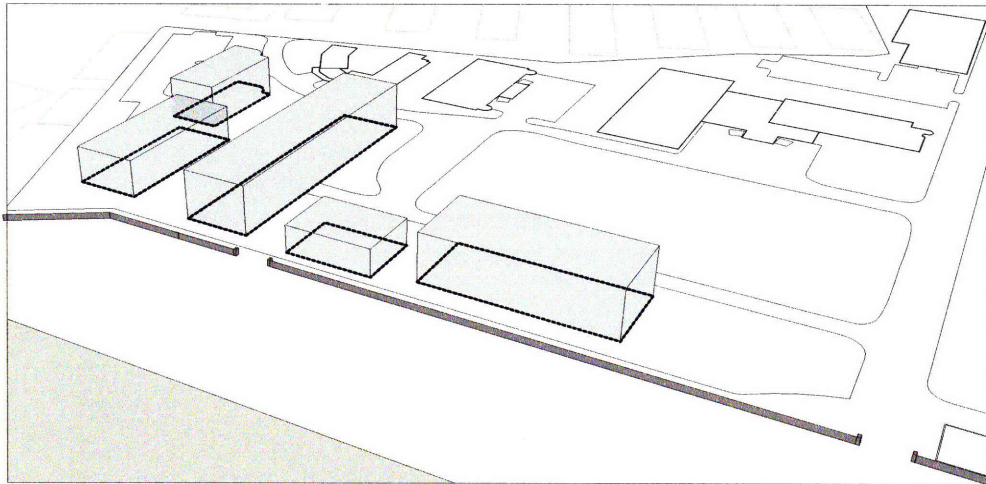
most anchor of the future redevelopment plans for a Pudong River Walkway, which will run along the entire banks of the river.

Far from the high end retail of the Bund and Nanjing Lu, the development of a consumer factory on this site will help anchor further commercial development in the region and propose programmatic preservation.

## SITE RESTRICTIONS

Though the original buildings were torn down, there are a number of restrictions for future development of the site that attempt to sustain the scale of those previous conditions:

- I. All future buildings must follow the footprints of the original buildings.
- II. All new buildings must not exceed the heights of the original buildings.
- III. Buildings must stay 50 meters from the edge of the Huangpu river.
- IV. Due to annual flooding, a wall 1.5m in height must stand between all buildings and the river.

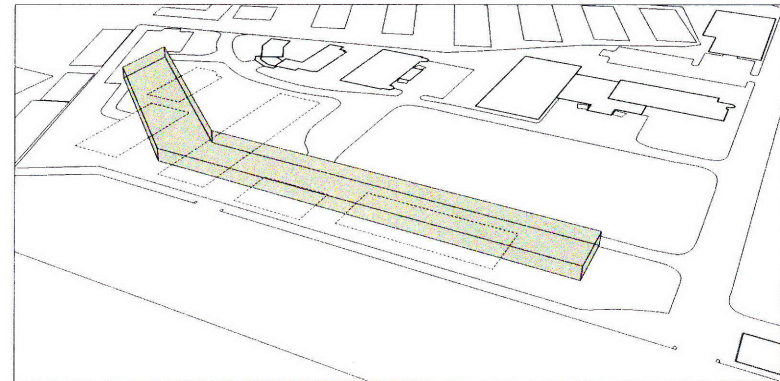


Footprint and height restrictions are based on the dimensions of the original buildings.

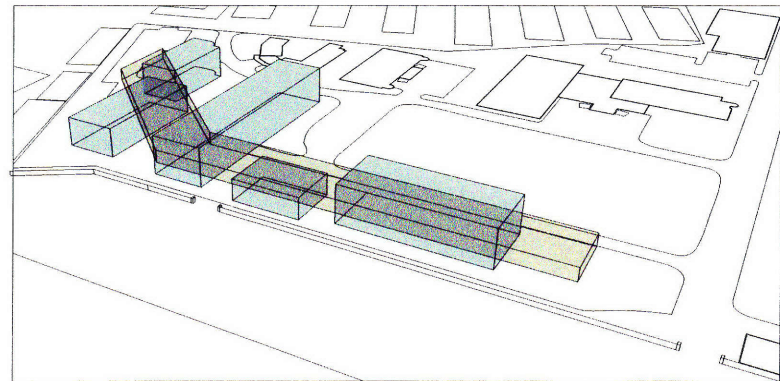
## Design Approach

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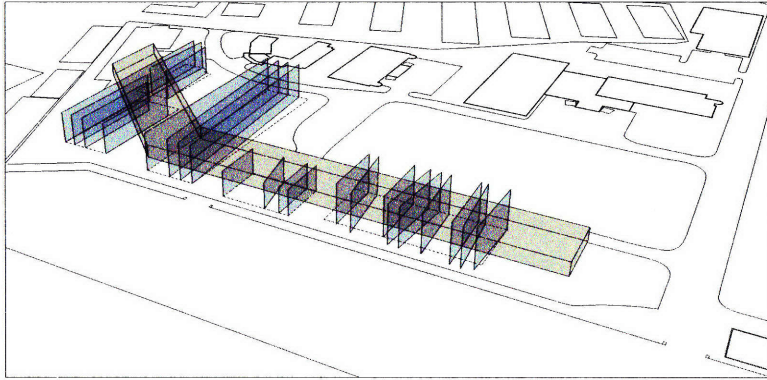
To achieve a continuous manufacturing program that allows fluid movement of inventory, a single story bar acts as a central spine that connects the five footprints. However, the bar is elevated so that the footprints of the previous buildings aren't affected.



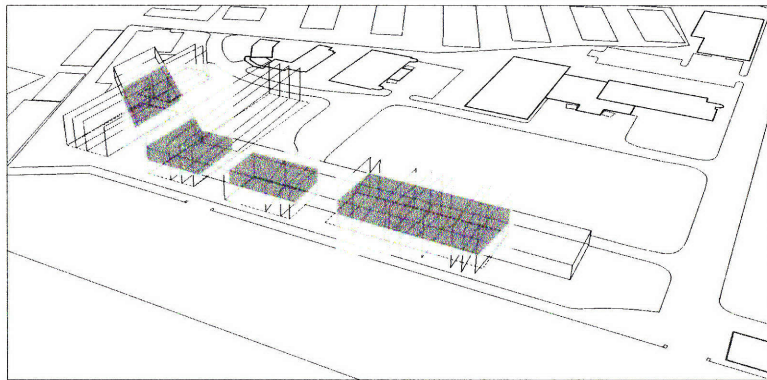
Consumer space fills the previous footprints at maximum height. The north-most two buildings are treated like a single volume though remain separate at ground level. Because of the height allowances for the consumer areas, those five volumes structurally hold up the floating manufacturing spline.





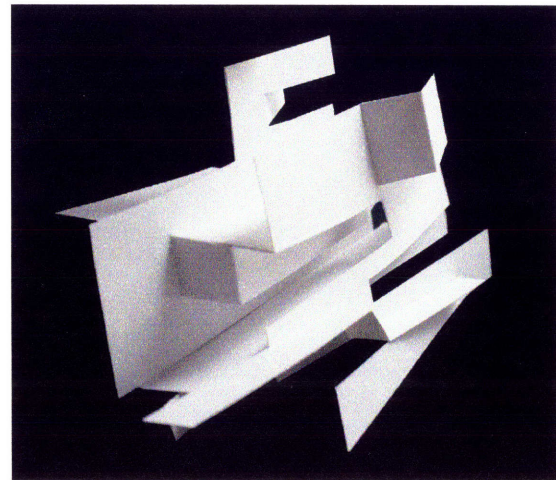
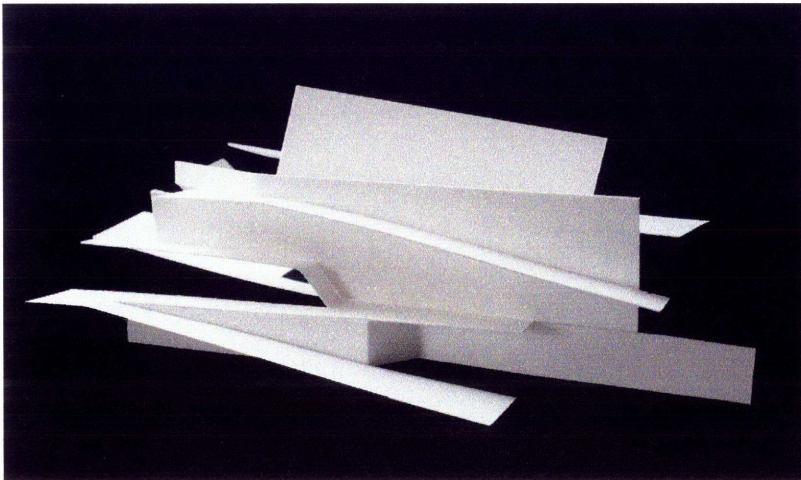
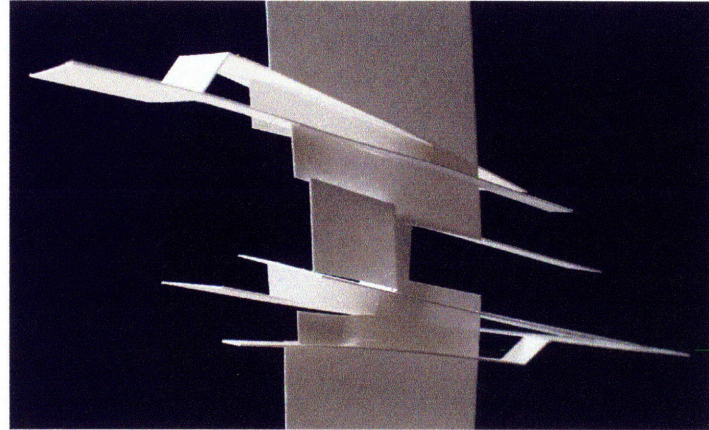
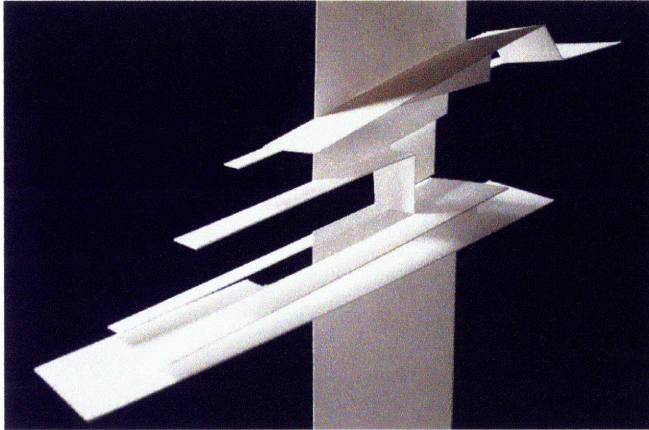


To counter the feeling of a large mass, the consumer areas are made up of a system of vertical plates that act as the structure of the building and create a perpendicular motion that counters the longitudinal motion of the manufacturing.



The consumer program intersects with the manufacturing spine at four points. At these points, sectional changes indicate the juxtaposition or intertwining of the programs.

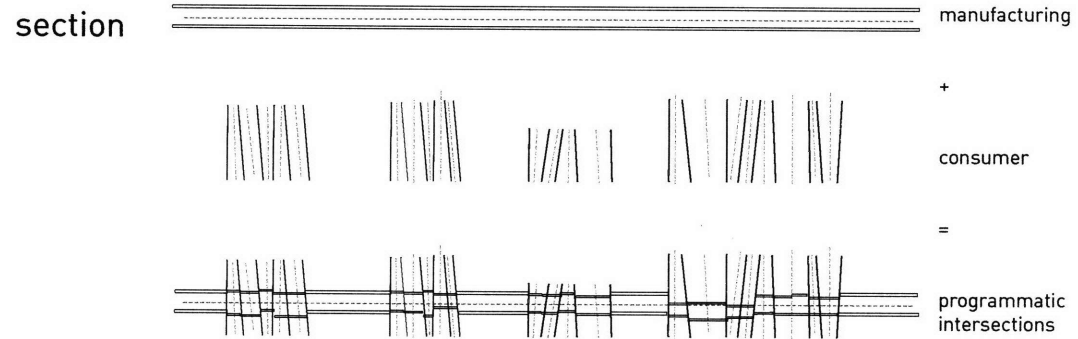
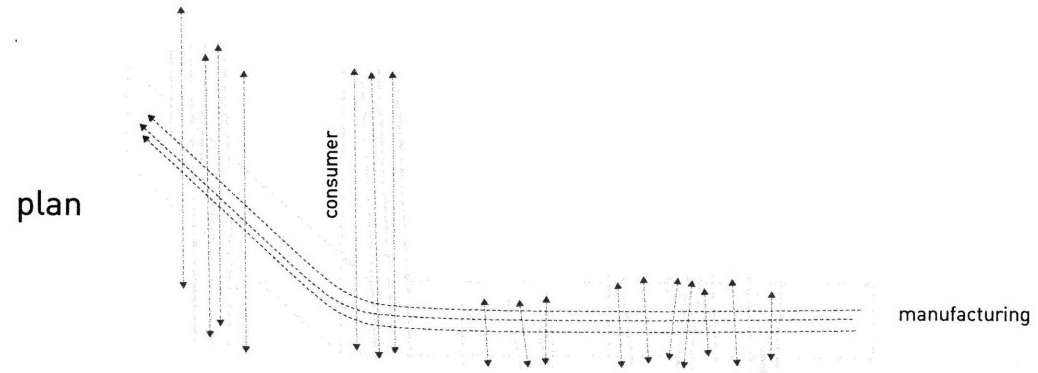
## **Sectional Models of Consumer Circulation**



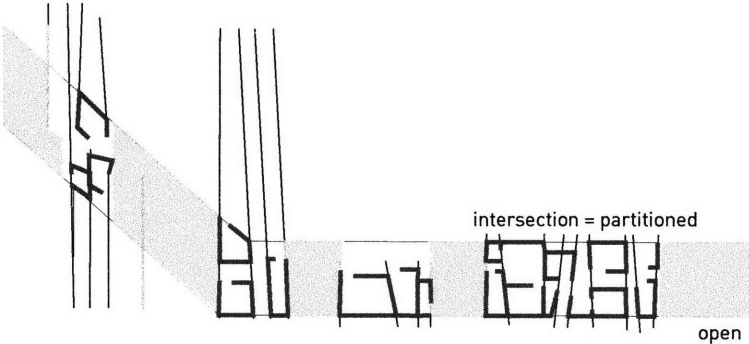
# Affects of Intersections on Section and Plan

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## CIRCULATION GRAIN



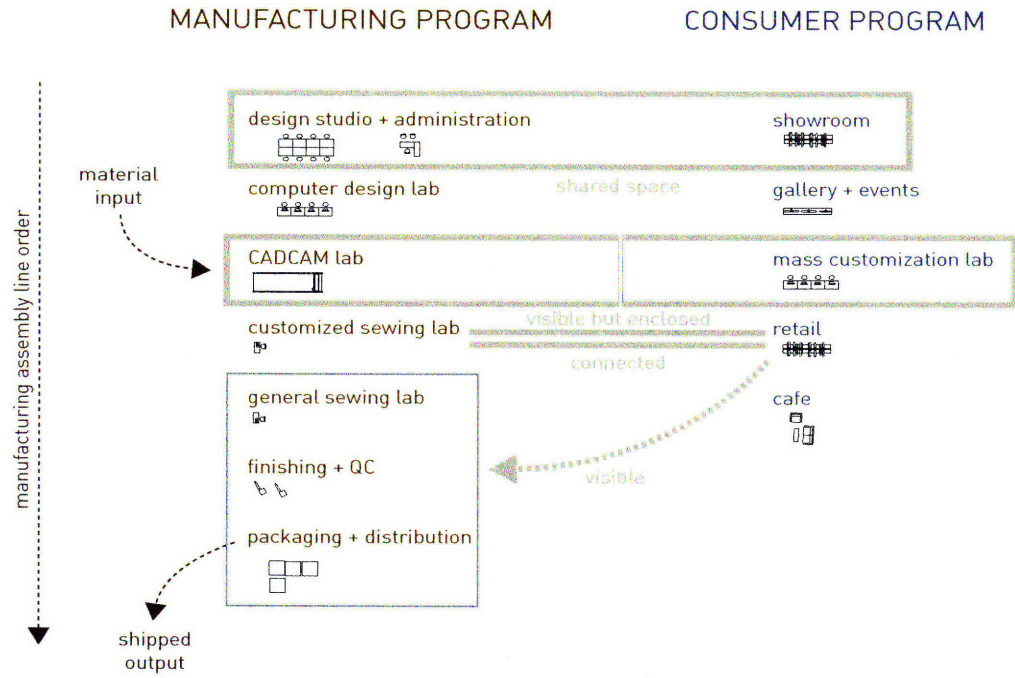
OPEN/  
PARTITIONED  
PLAN



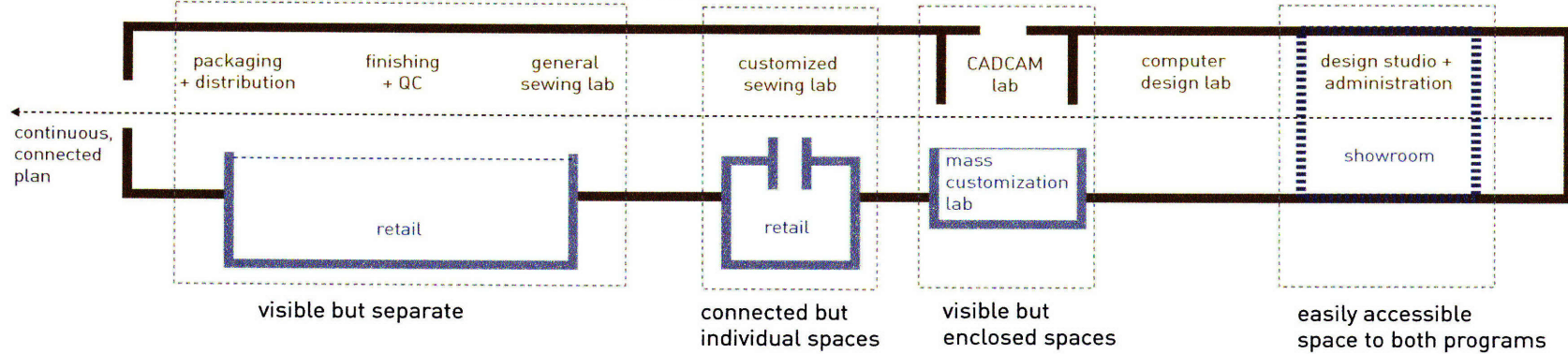
By limiting the walls of the building to the consumer vertical plates, manufacturing is left with an open plan. All core program that requires a partitioned plan are pushed towards the four points of programmatic intersection.

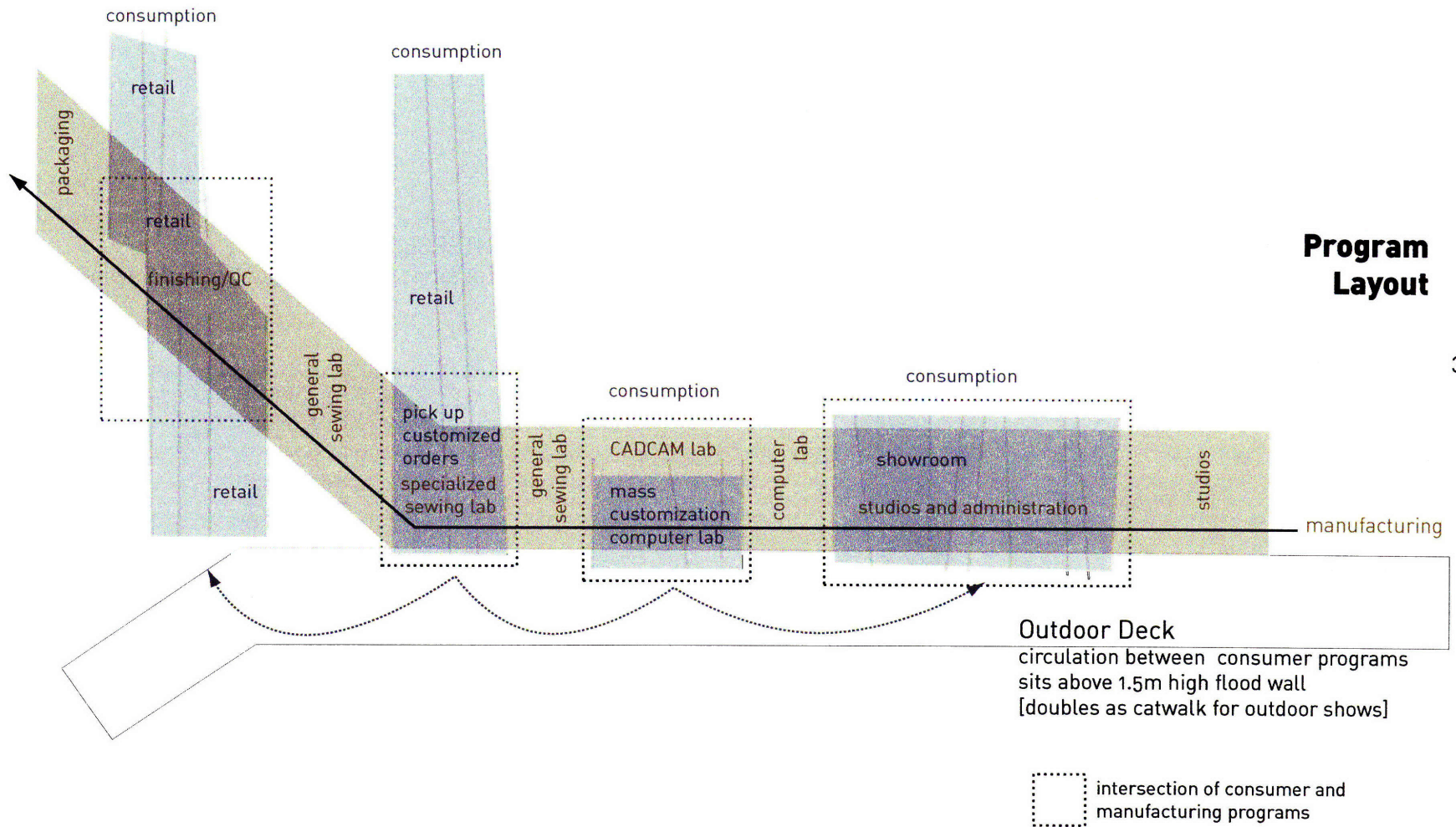
# Program Intersections

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## MANUFACTURING AND CONSUMER PROGRAM INTERACTIONS



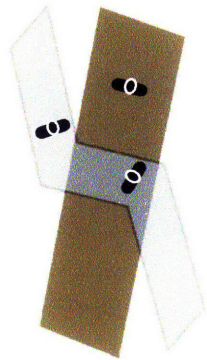


**Intersection  
Typologies:  
section=plan**

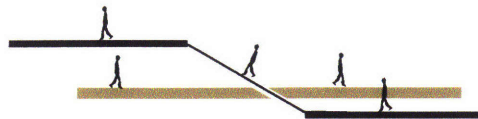
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INTERSECTION:  
Retail / Finishing + Packaging

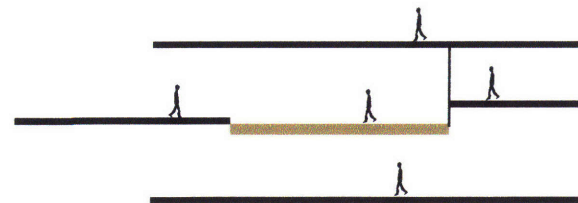
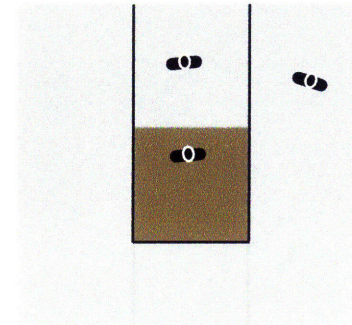
PLAN



SECTION

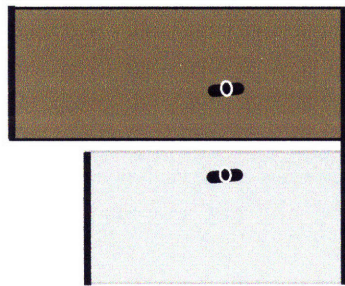


INTERSECTION:  
Customized Retail / Specialized Sewing Lab

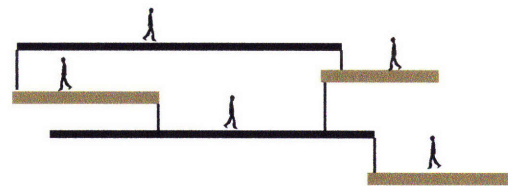
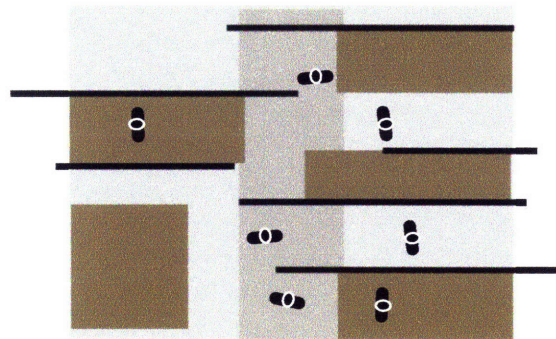




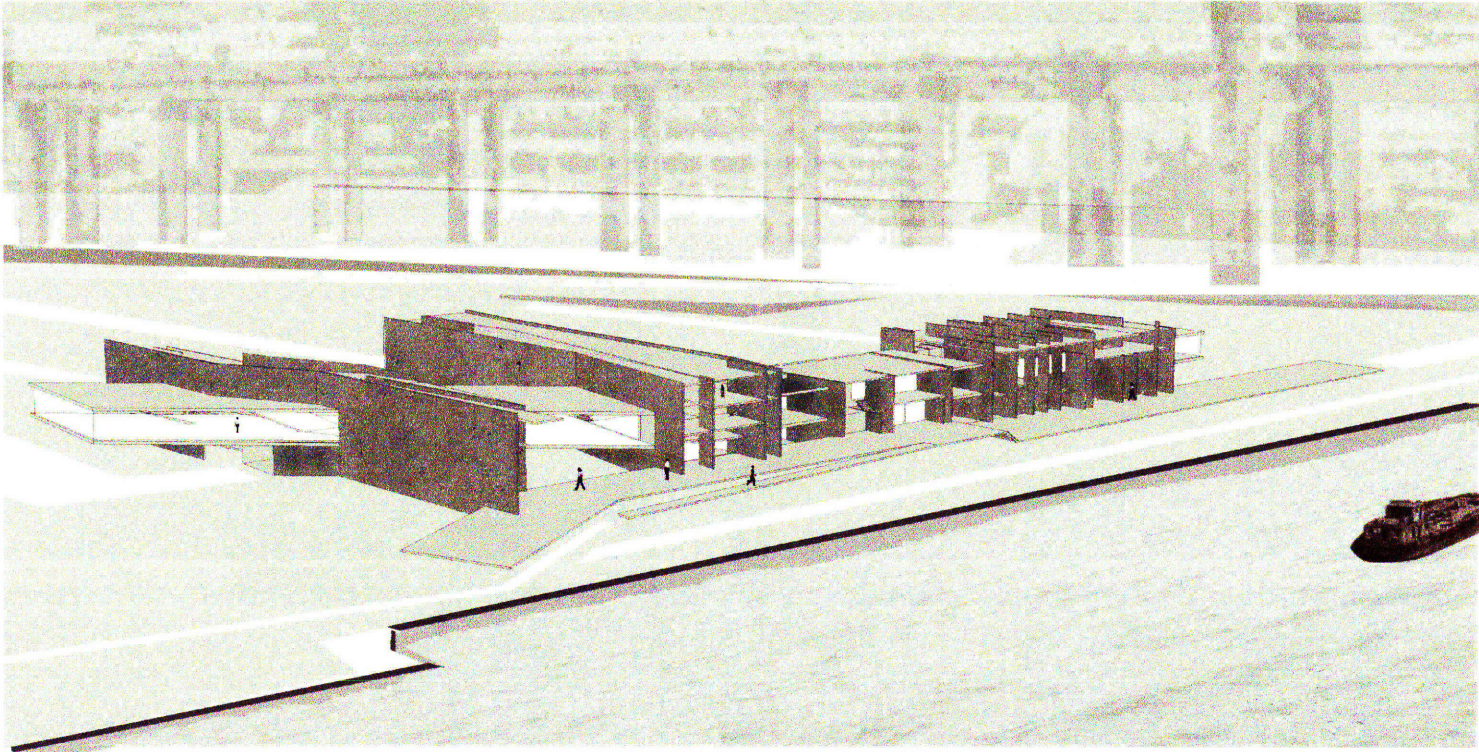
INTERSECTION:  
Mass Customization Lab / CAD/CAM Lab



INTERSECTION:  
Showroom / Studios + Administration



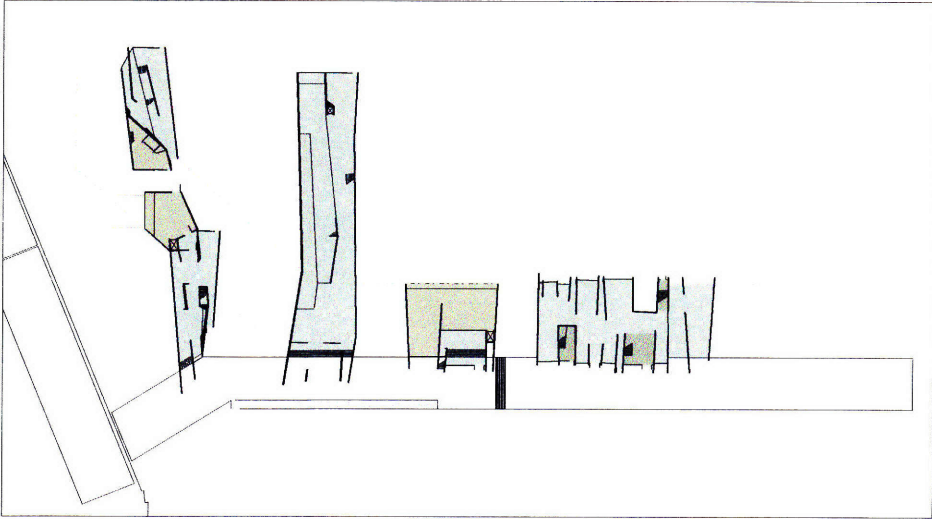
## **Design**



GROUND FLOOR PLAN

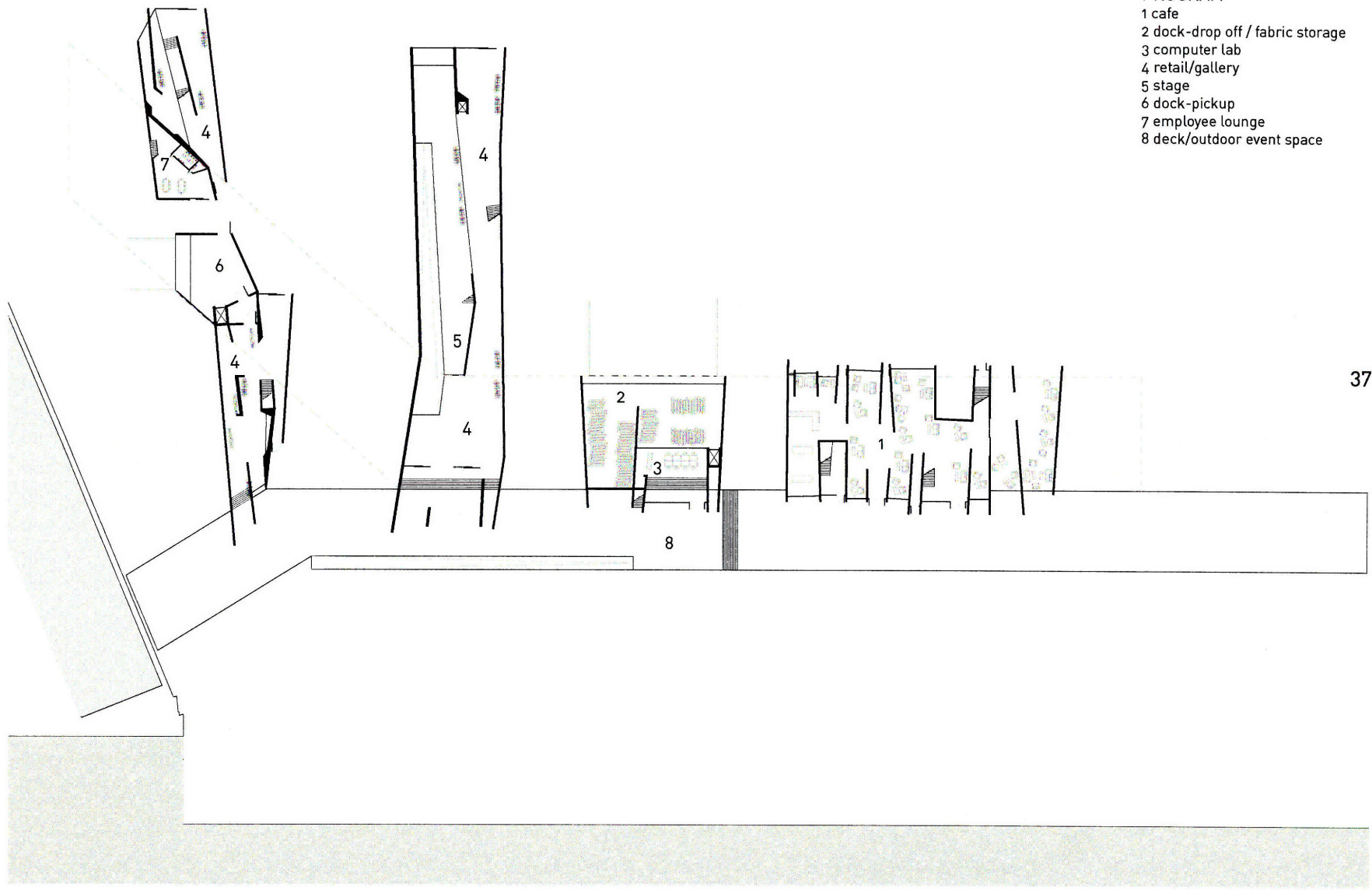
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- Consumer Program
- Manufacturing/  
Distribution Program



PROGRAM

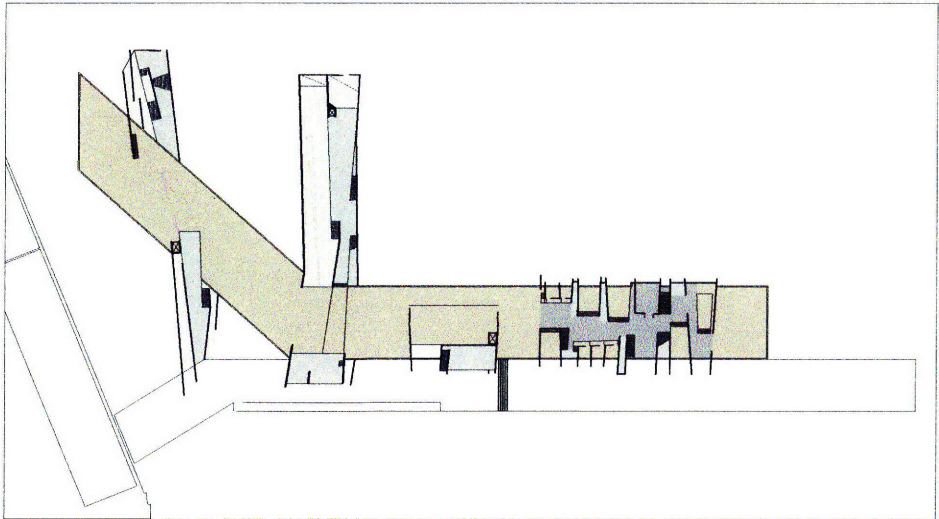
- 1 cafe
- 2 dock-drop off / fabric storage
- 3 computer lab
- 4 retail/gallery
- 5 stage
- 6 dock-pickup
- 7 employee lounge
- 8 deck/outdoor event space



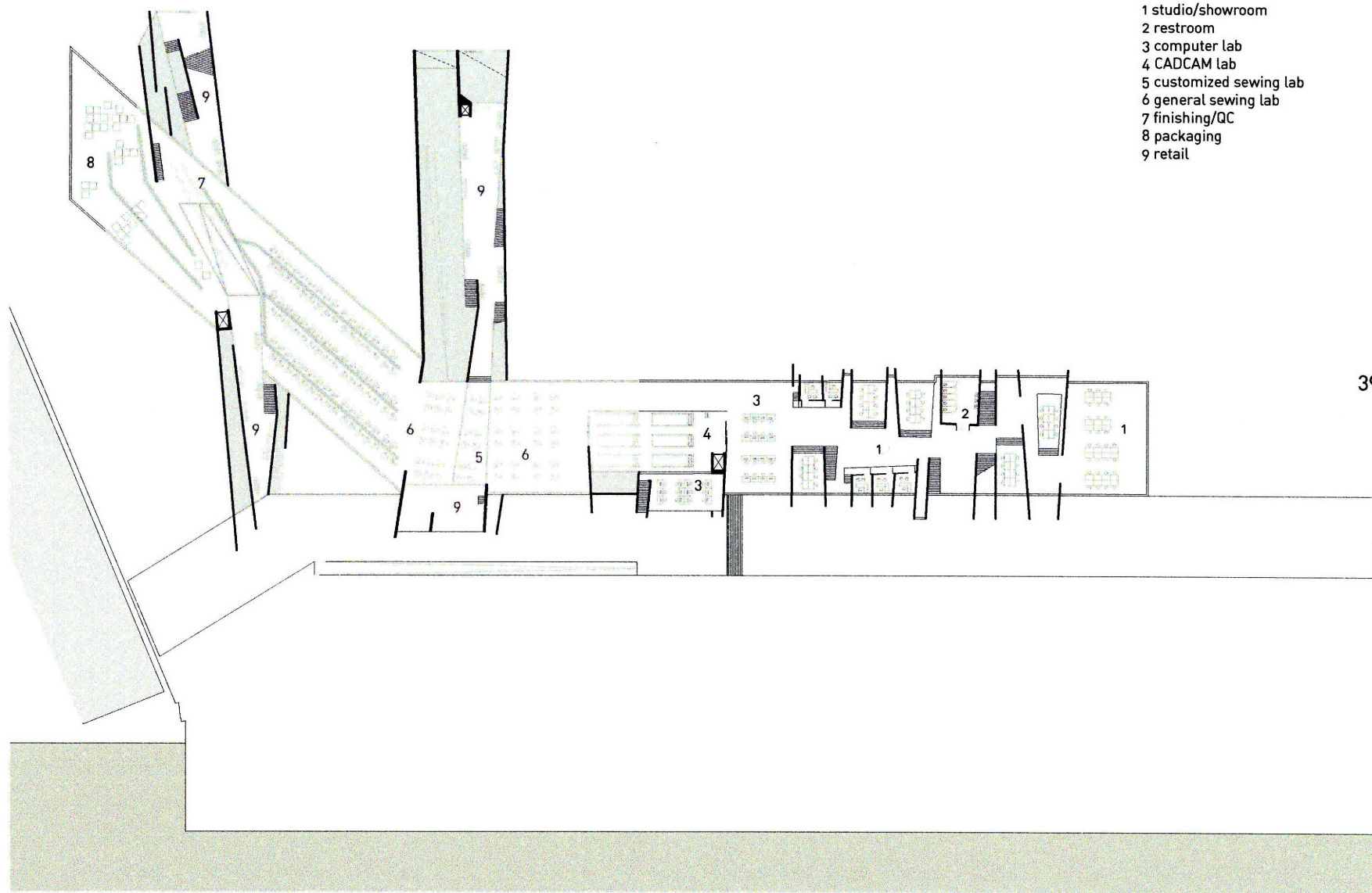
M FLOOR PLAN

38

- Consumer Program
- Manufacturing/  
Distribution Program



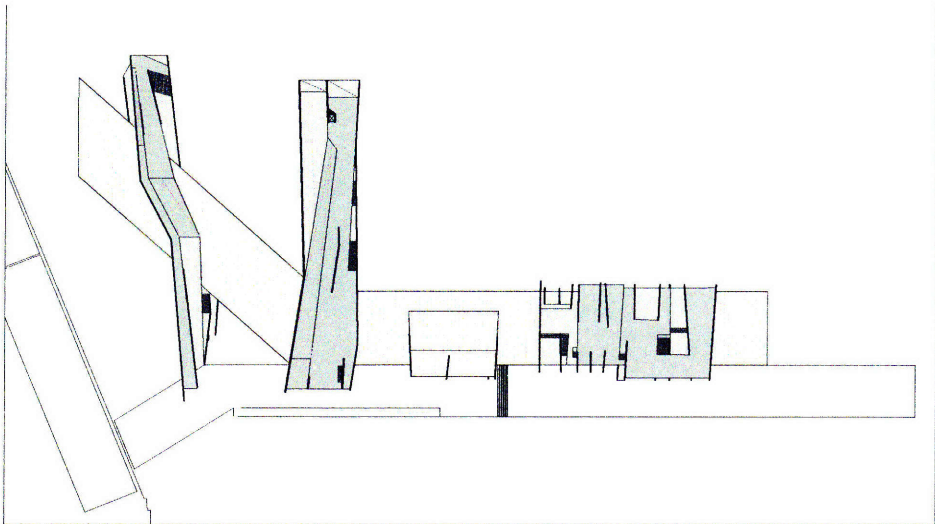
- PROGRAM**
- 1 studio/showroom
  - 2 restroom
  - 3 computer lab
  - 4 CAD/CAM lab
  - 5 customized sewing lab
  - 6 general sewing lab
  - 7 finishing/QC
  - 8 packaging
  - 9 retail



TOP FLOOR PLAN

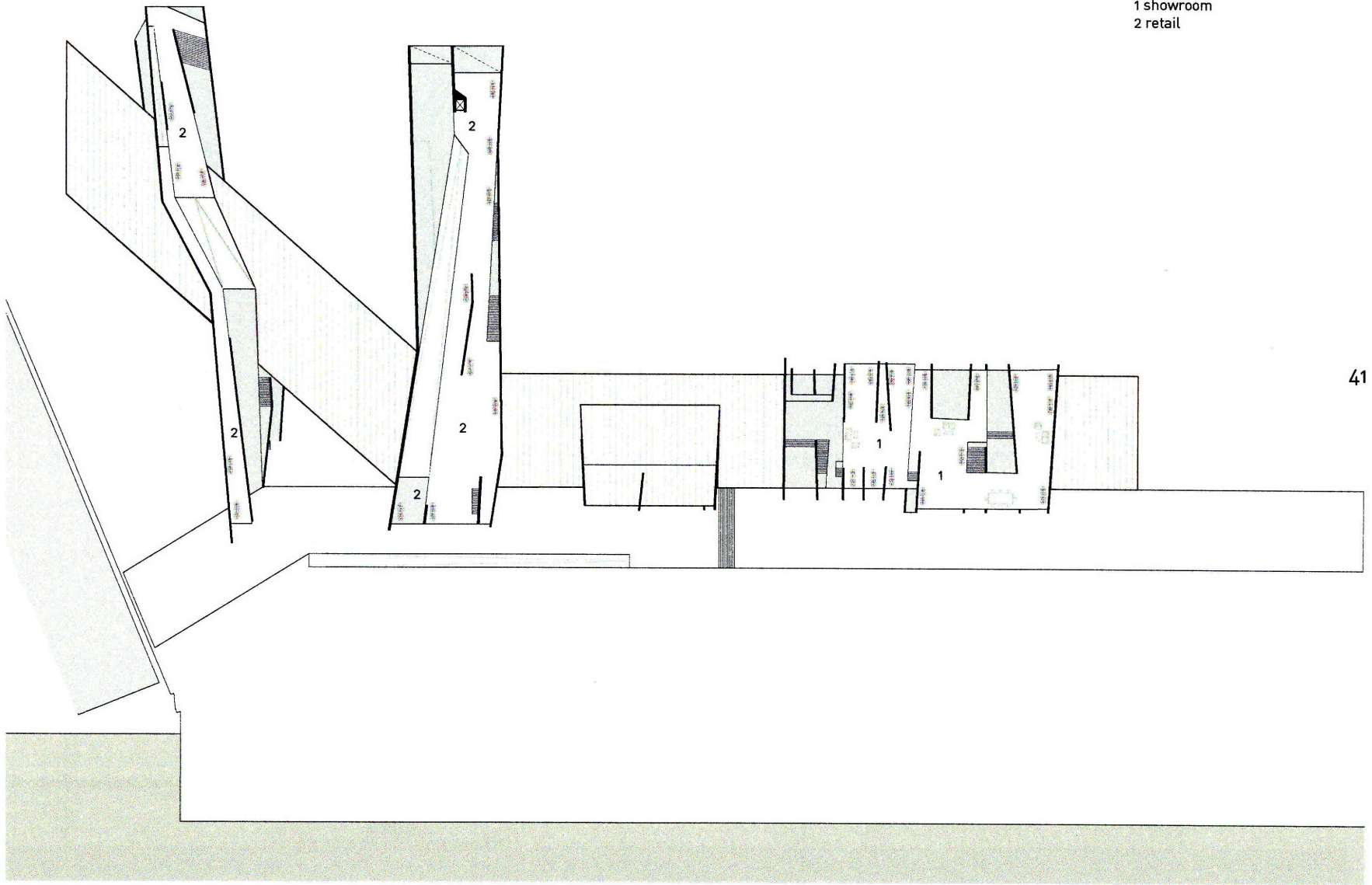
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■ Consumer Program



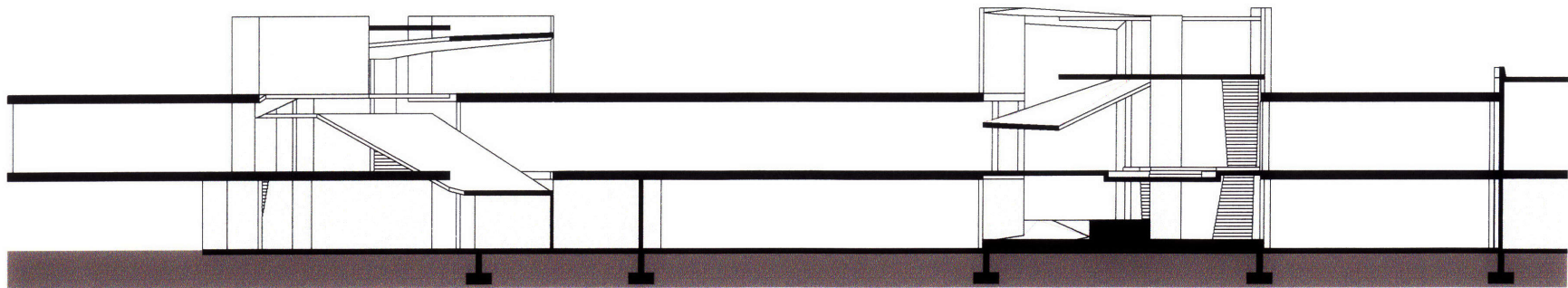


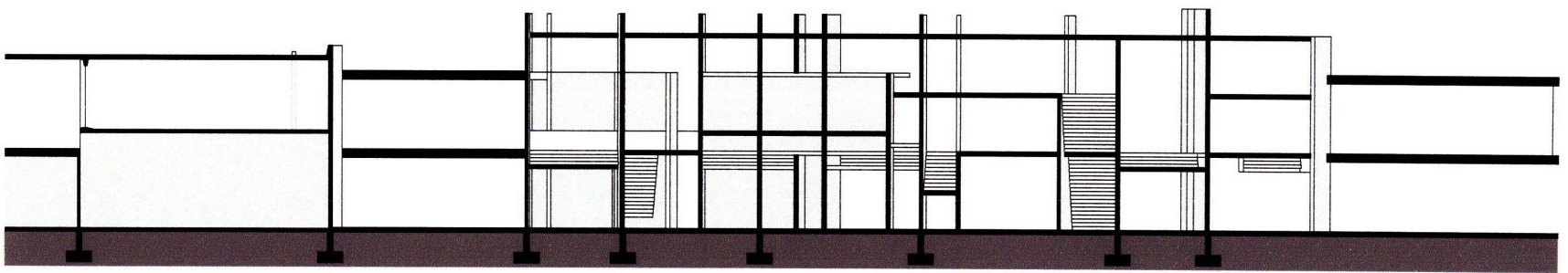
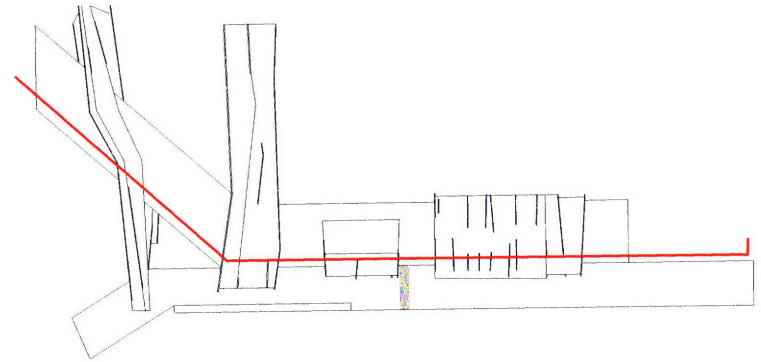
PROGRAM  
1 showroom  
2 retail



LONGITUDINAL SECTION

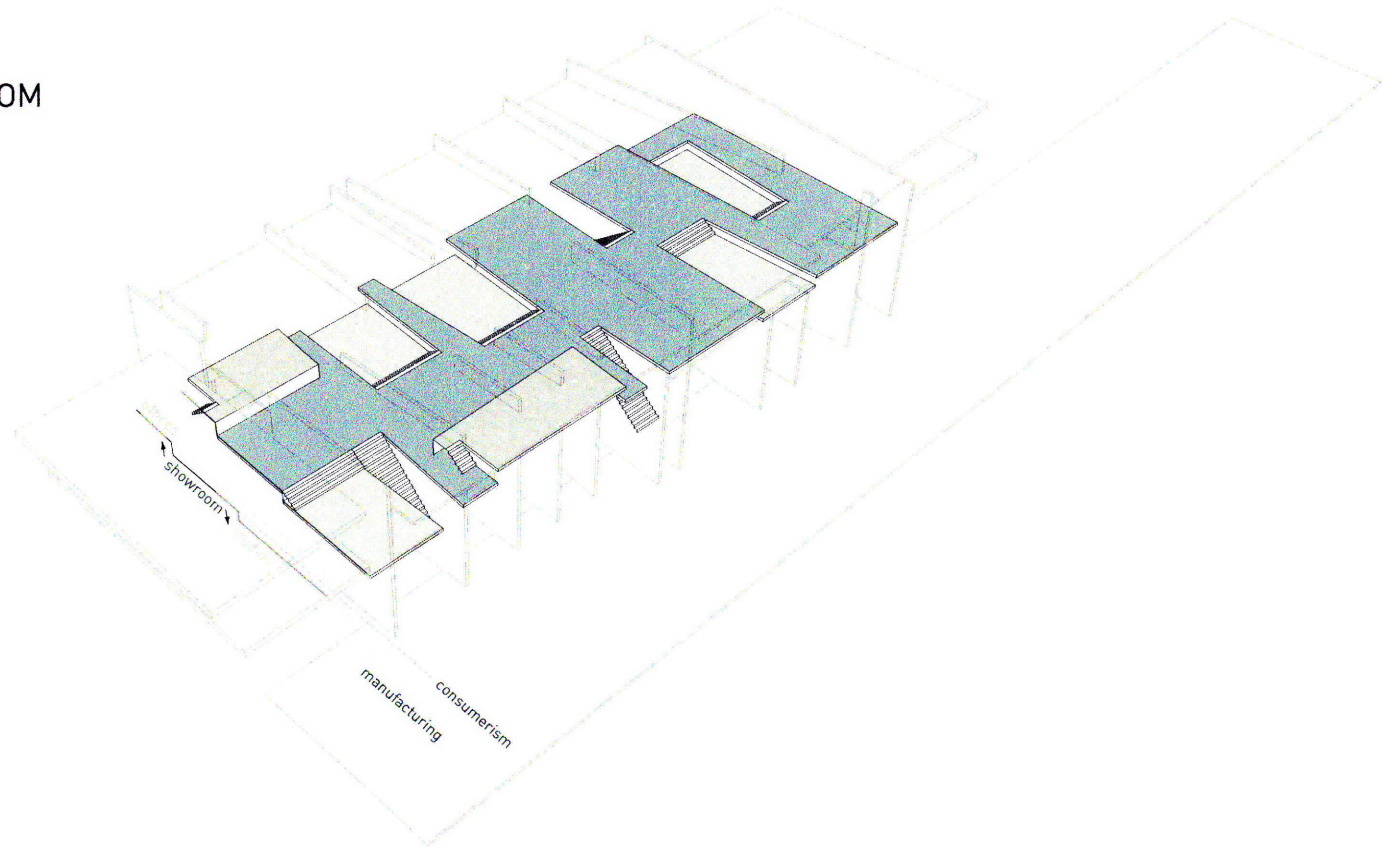
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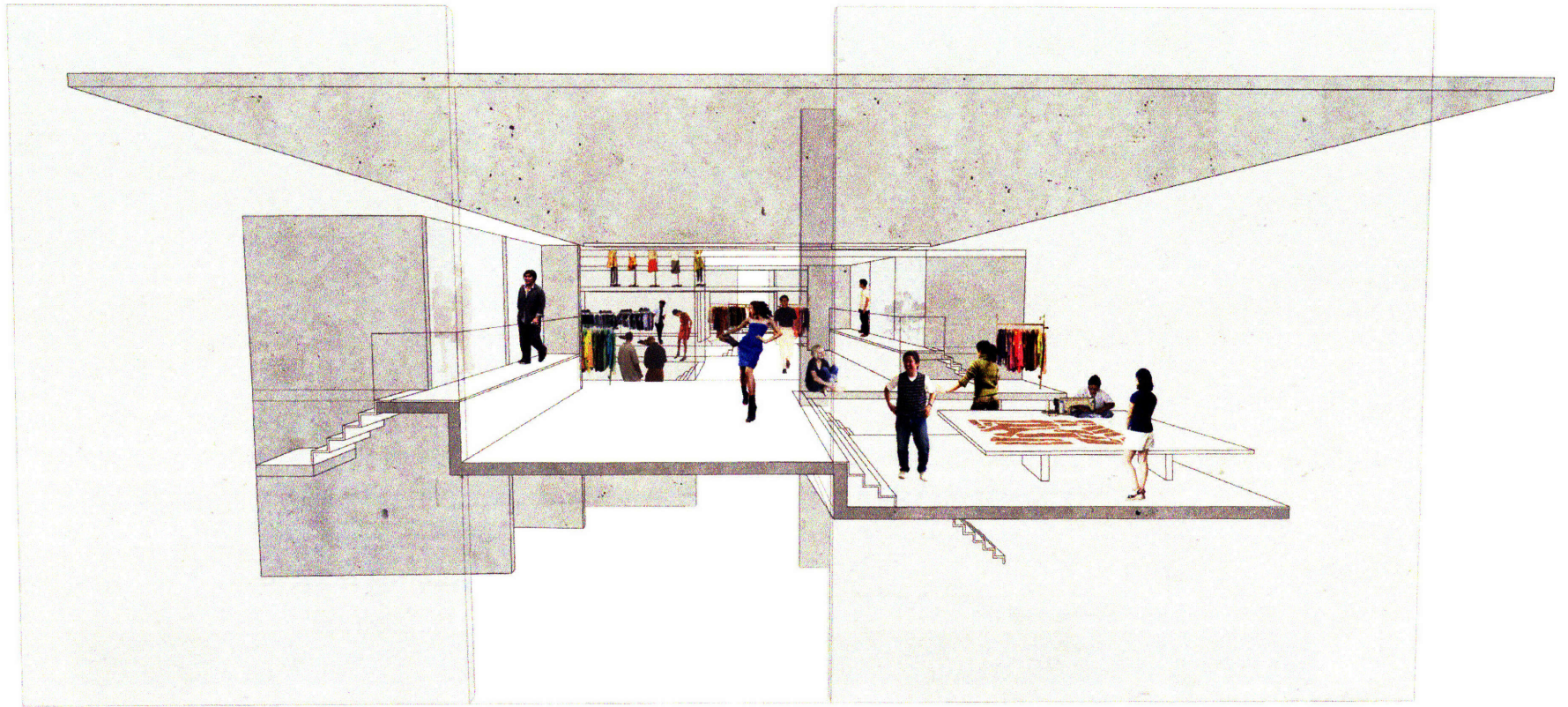




# STUDIO AND SHOWROOM

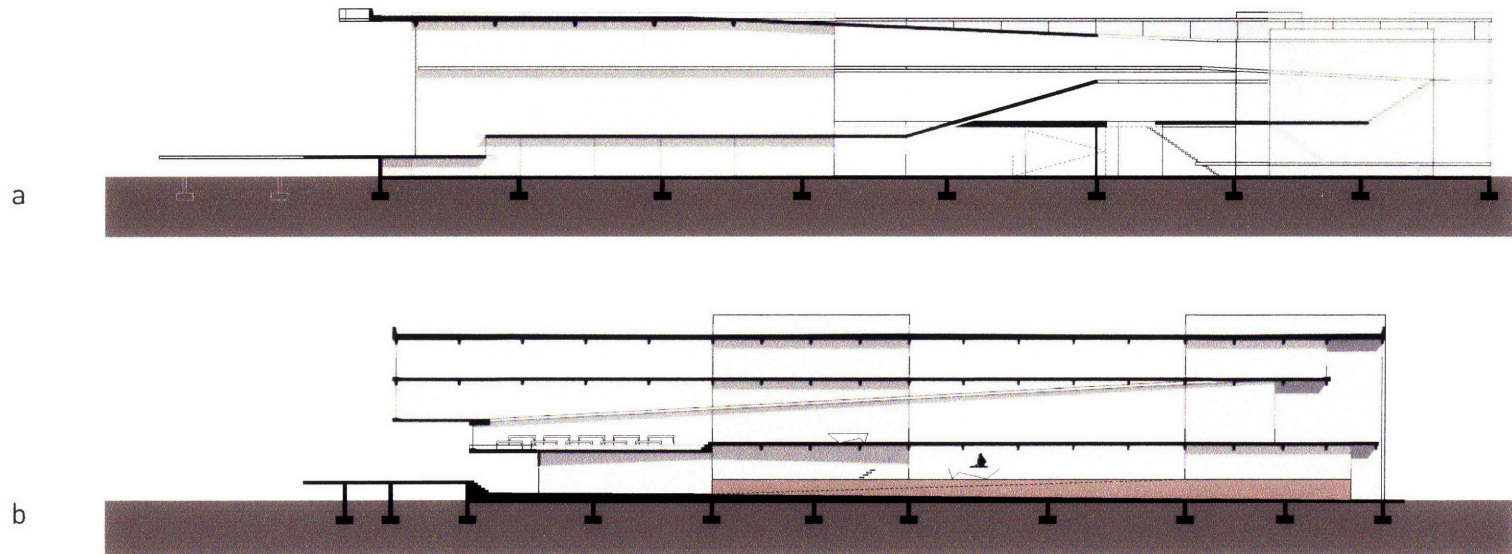
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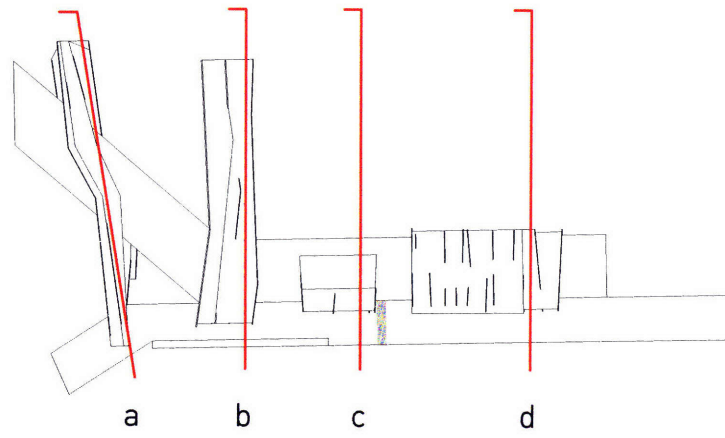




CROSS SECTIONS

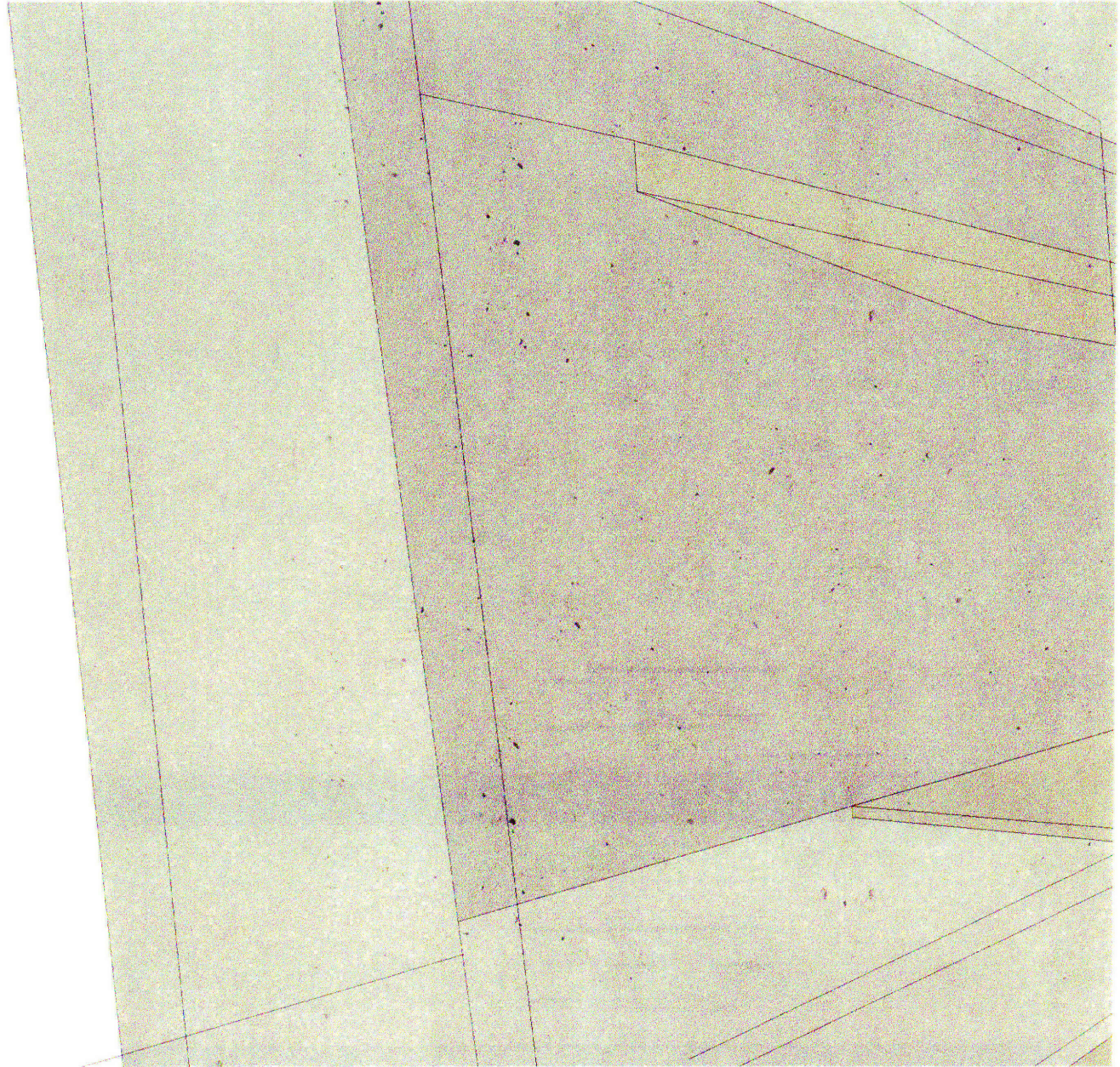
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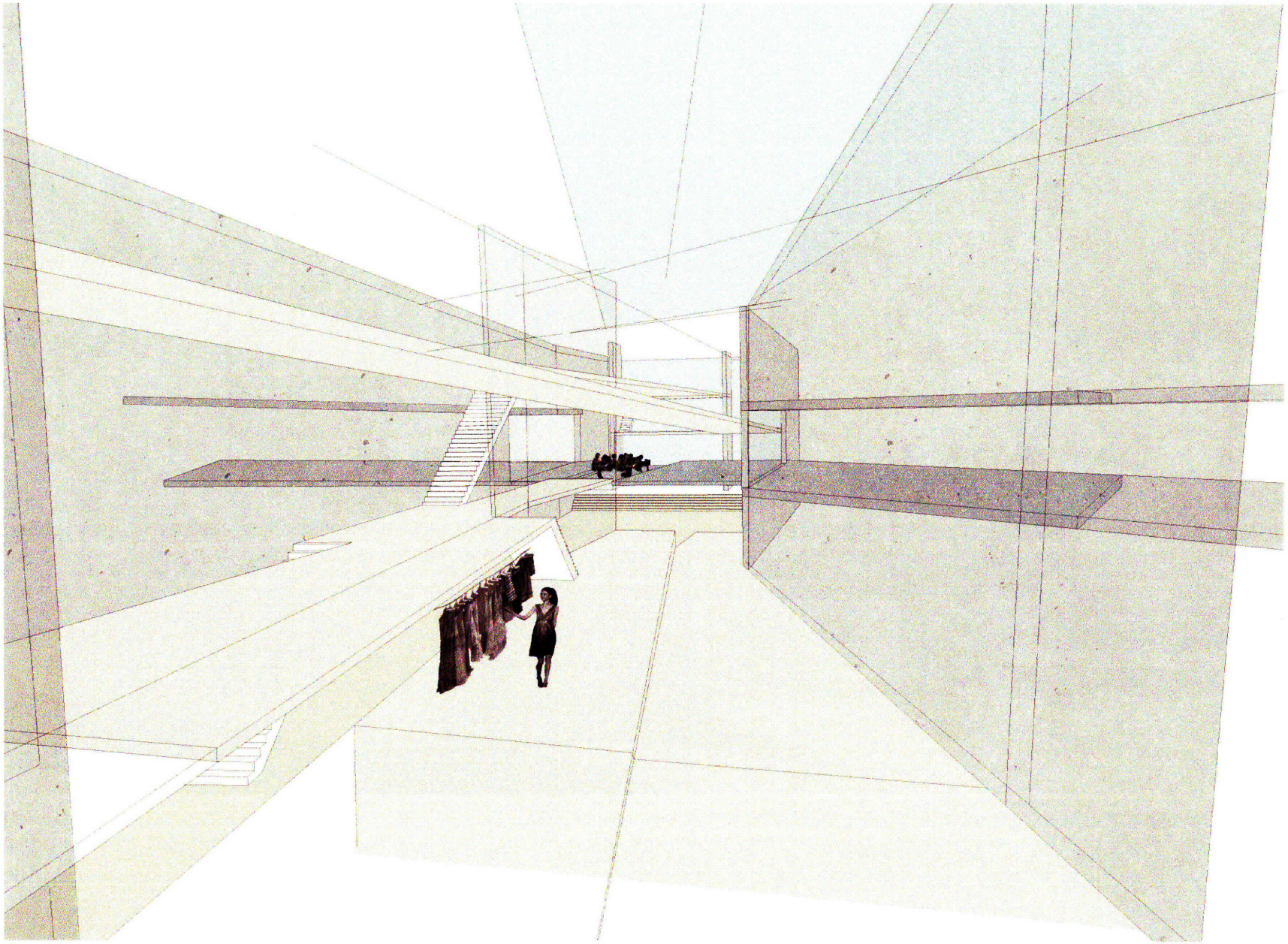


RETAIL

48

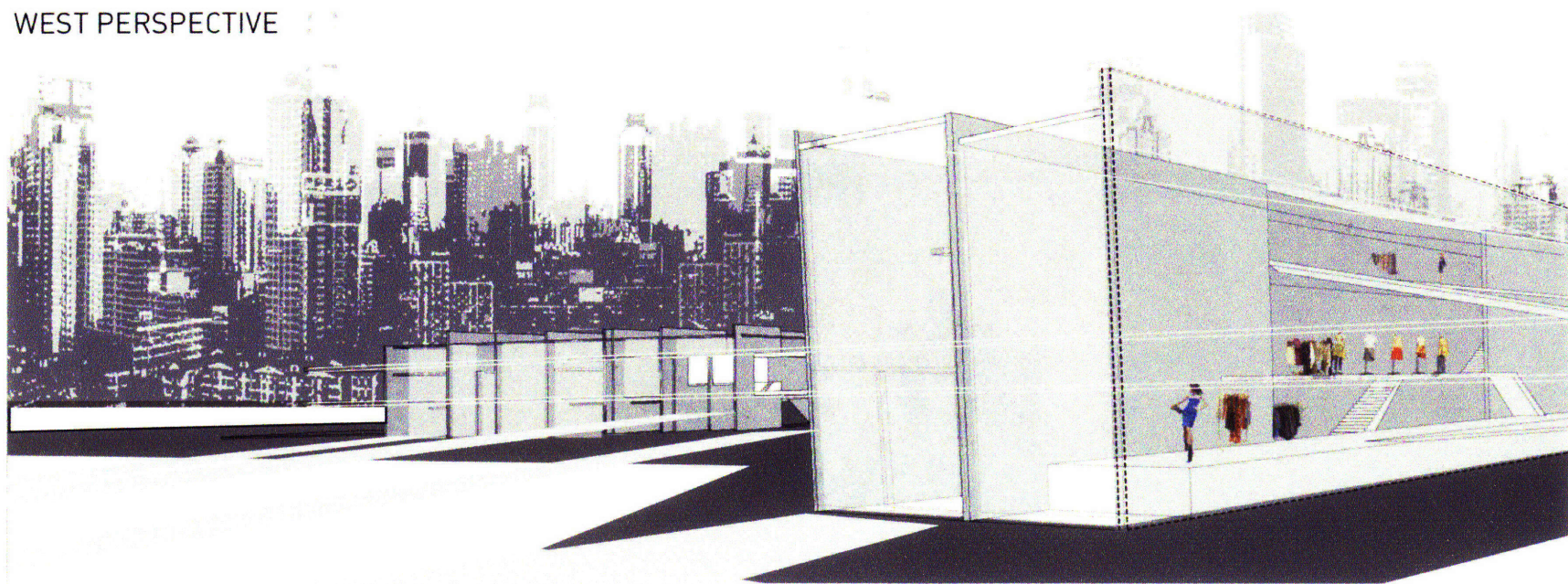


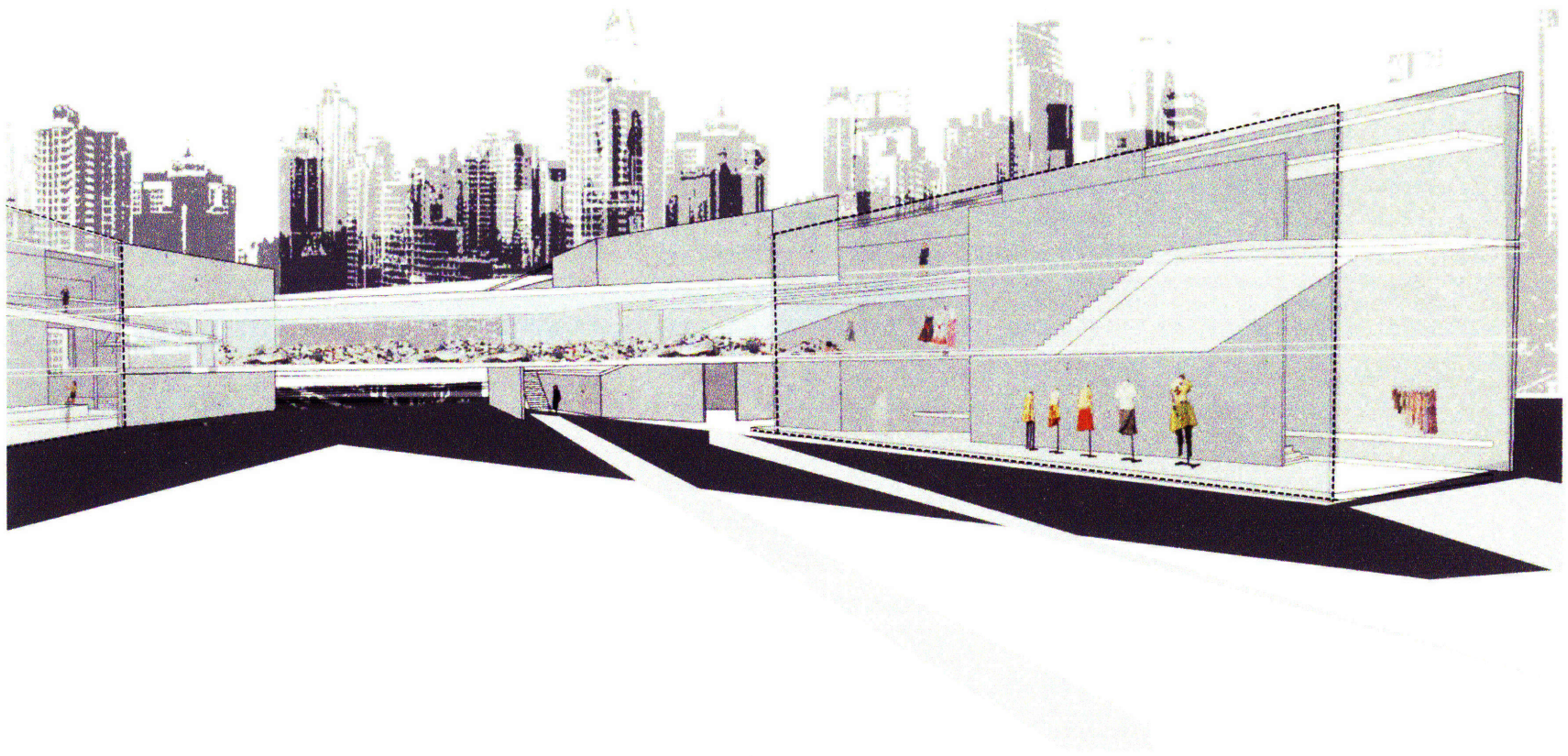




WEST PERSPECTIVE

50







## Endnotes

<sup>1</sup> Frank, Thomas. *One Market Under God: Extreme Capitalism, Market Populism, and the End of Economic Democracy*. (New York: Doubleday, 2000), 253.

<sup>2</sup> Koolhaas, Rem. *Projects for Prada Part 1*. (Milan: Nava Milano spa divisione Press, 2001), 25.

<sup>3</sup> Capell, Kerry. "Zara's Fast Track to Shopping," *Business Week* online. ([http://images.businessweek.com/ss/06/08/zara/index\\_01.htm](http://images.businessweek.com/ss/06/08/zara/index_01.htm))



## **Image Credits**

Figure 1. Chanel Mobile Art Pavilion  
[<http://www.thecoolhunter.net/events/Chanel-Mobile-Art-Container-By-Zaha-Hadid/>]

Figure 2. LV Foundation for Creation  
[[http://www.dexigner.com/design\\_news/7766.html](http://www.dexigner.com/design_news/7766.html)]

Figure 3. BMW Welt  
[[http://www.bmw-welt.com/web/bmw-welt/en/index\\_highend.html](http://www.bmw-welt.com/web/bmw-welt/en/index_highend.html)]

Figure 4. Mercedes Benz Museum  
[<http://www.museum-mercedes-benz.com/download.php/en/383>]

Figure 5. Adidas Mi Innovation Center  
[[http://images.businessweek.com/ss/06/11/1102\\_adidas/index\\_01.htm](http://images.businessweek.com/ss/06/11/1102_adidas/index_01.htm)]





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