

TRANSFORMATIONS

n. explorations in portable body shelter

ROCHESTER INSTITUTE OF TECHNOLOGY

M.F.A Industrial Design Thesis

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As a designer, my life experiences have influenced my design practice. Over the past decade I have moved from one culture to another and lived through cultural and language adaptations. These transitions have interested me in the issue of transience and how it relates to the role of identity, belonging, and living in a society of global and technological developments.

For the past few years I have been working with the idea of fabrics merged with architecture and exploring concerns in relation to the body, memory, temporal, mobility and most recently the environment.

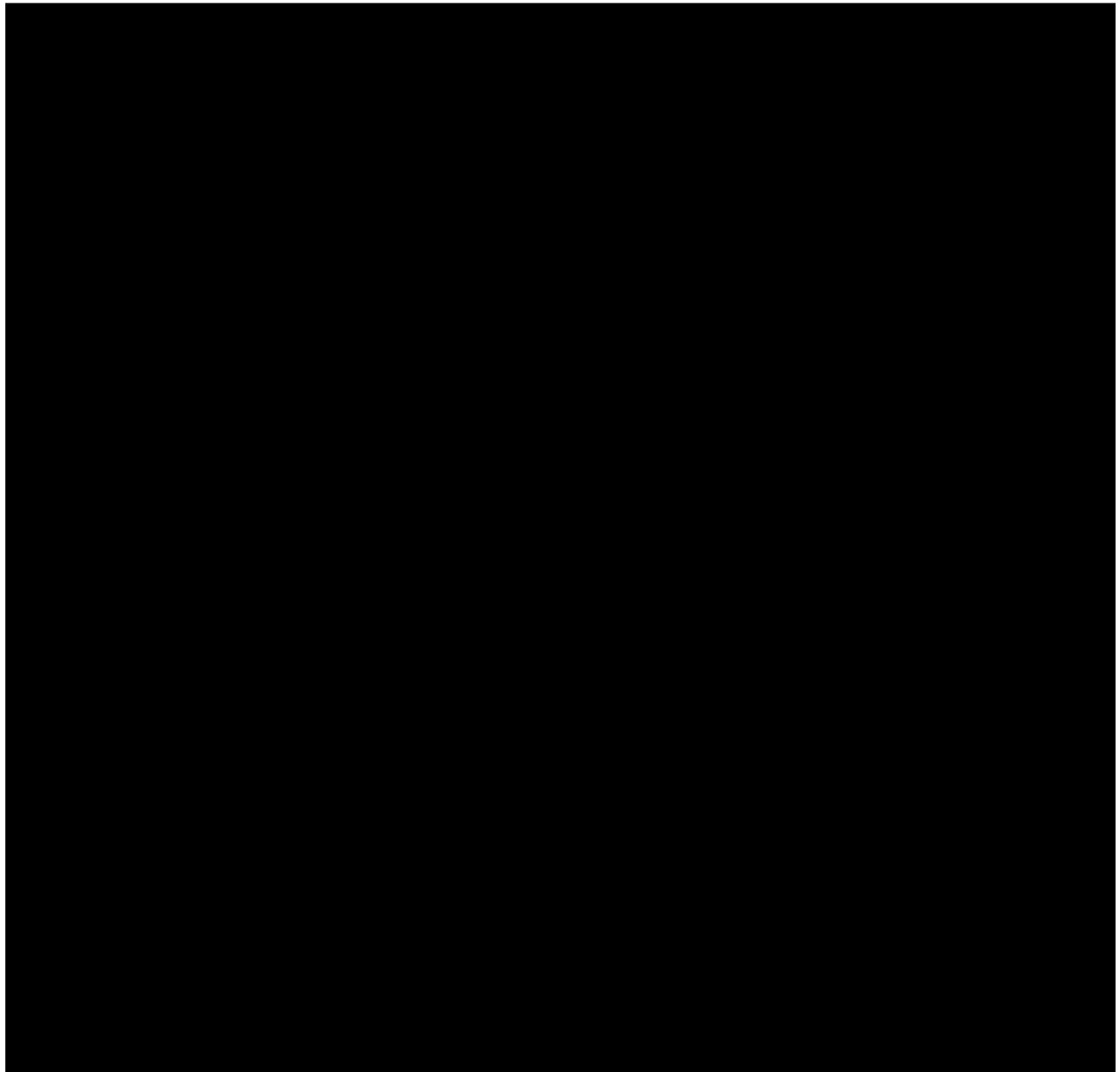
This thesis project evolves around the idea of clothing as portable body shelter in 'you never know WEAR?' situations of local and global emergencies. Keeping in mind that our lives have become multi-dimensional and multi-demanding, this work attempts to touch upon global uncertainties and the relation between shelter and everyday life.

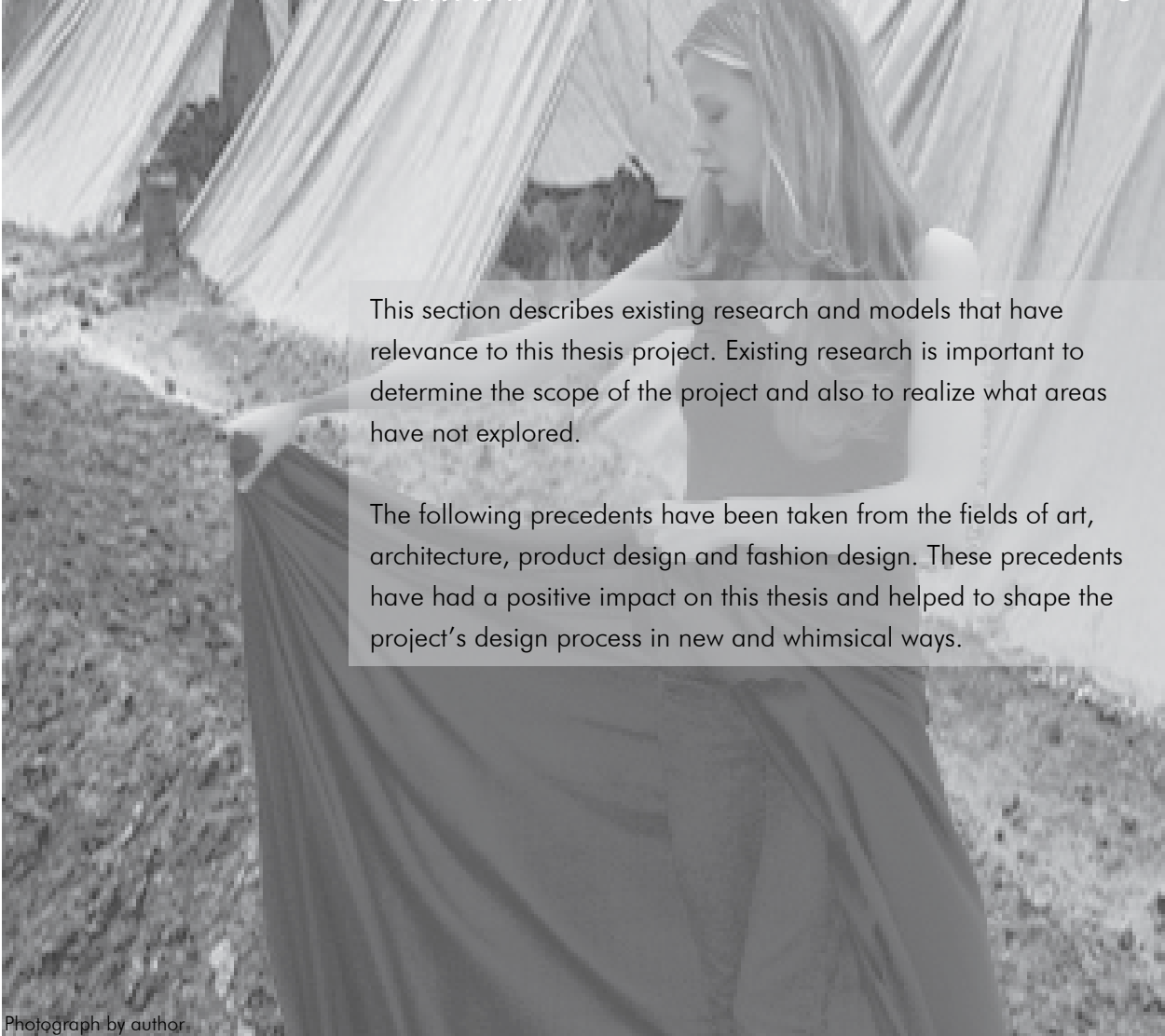
Transformations brings our individual needs to the basic, everyday experience of survival and consists of five prototypes: A dress, a skirt, shorts, a vest and finally a one man tent all via one simple pattern.

As a designer and former architecture student, I find the idea of blending clothing with architecture very intriguing. Most clothing is defined by the context in which it is worn. Transformations became a project that explored the possibilities of clothing that responds to transitional spaces and the urban nomad.

I tried to imagine different ways of living in mobility including the vision of forming a community under nomadic circumstances. During the initial stages of the design process, I researched the many notions of shelter as they occur in our society.

My end goal was to develop a product that is transformable or has multiple functions and that which challenges the boundaries between body and space.





This section describes existing research and models that have relevance to this thesis project. Existing research is important to determine the scope of the project and also to realize what areas have not explored.

The following precedents have been taken from the fields of art, architecture, product design and fashion design. These precedents have had a positive impact on this thesis and helped to shape the project's design process in new and whimsical ways.

Precedent A : CP Company : Tent

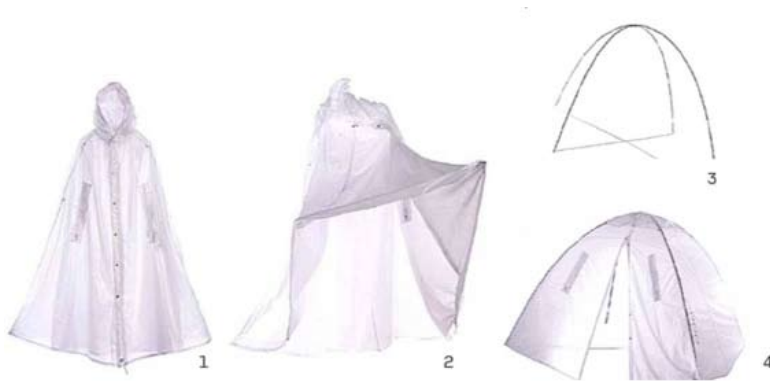


Image seen on-line

CP Company is a clothing company that designs clothing that is very functional. Their designs literally transform themselves in response to the multi functionality of transitional spaces.

The "Tent" that is a white long hooded double cloak made from rubberized rainproof nylon mesh. It transforms from a cloak to a tent in four easy steps by just zipping and unzipping its sides. This explores the idea of clothing + shelter making the user reconsider the boundaries between the two.

Precedent B : Vexed Generation : Parka

The Vexed Parka is from design company Vexed Generation's first collection in 1995. Their brief was to design a range of London street wear that met both the practical needs and political concerns of today's urban generation.¹

A mixture of form and function, the designers considered things like personal safety and protection against air pollution. They also allowed more unusual ideas to influence the design of the Parka, such as civil liberties, street protest and CCTV surveillance.

The Parka is made from knife repellent, fire resistant nylon and has padding around the spine, kidney areas.



Image seen on-line



Precedent C : Lucy Orta : Refugee Wear

Lucy Orta is a British artist based in Paris. Her work first made headlines in the early 1990's during the economic recession, Gulf War and rampant instability around the globe.



Image seen on-line

Refuge Wear was Orta's response to the refugee crisis as well as global unrest. "Habitent" is a portable shelter with minimal personal comfort for nomadic populations. Her goal was to create an environment that would focus more on the "spiritual refuge" of the individual rather than the physical. The garment consisted of an aluminum coated one person tent that transforms into a wind proof poncho when needed.

Lucy Orta : Body Architecture 12



Image seen on-line

Following *Refuge Wear*, Lucy began working on “*Body Architecture*” .

This series of works focused more on the community as a whole rather than just the individual. The concept behind the project was to establish physical links between individuals both socially as well as spiritually.

Quoted directly from Lucy Orta’s web site, French theorist Paul Virilio reflects on Orta’s work and says”

The precarious nature of society is no longer that of the unemployed or the abandoned, but that of individuals socially alone. In the proximate vicinity our families are falling apart. One’s individual life depends on the warmth of the other. The warmth of one gives warmth to the other. The physical link weaves the social link”.²

Precedent D: Raneen Nosh: Design for the Displaced

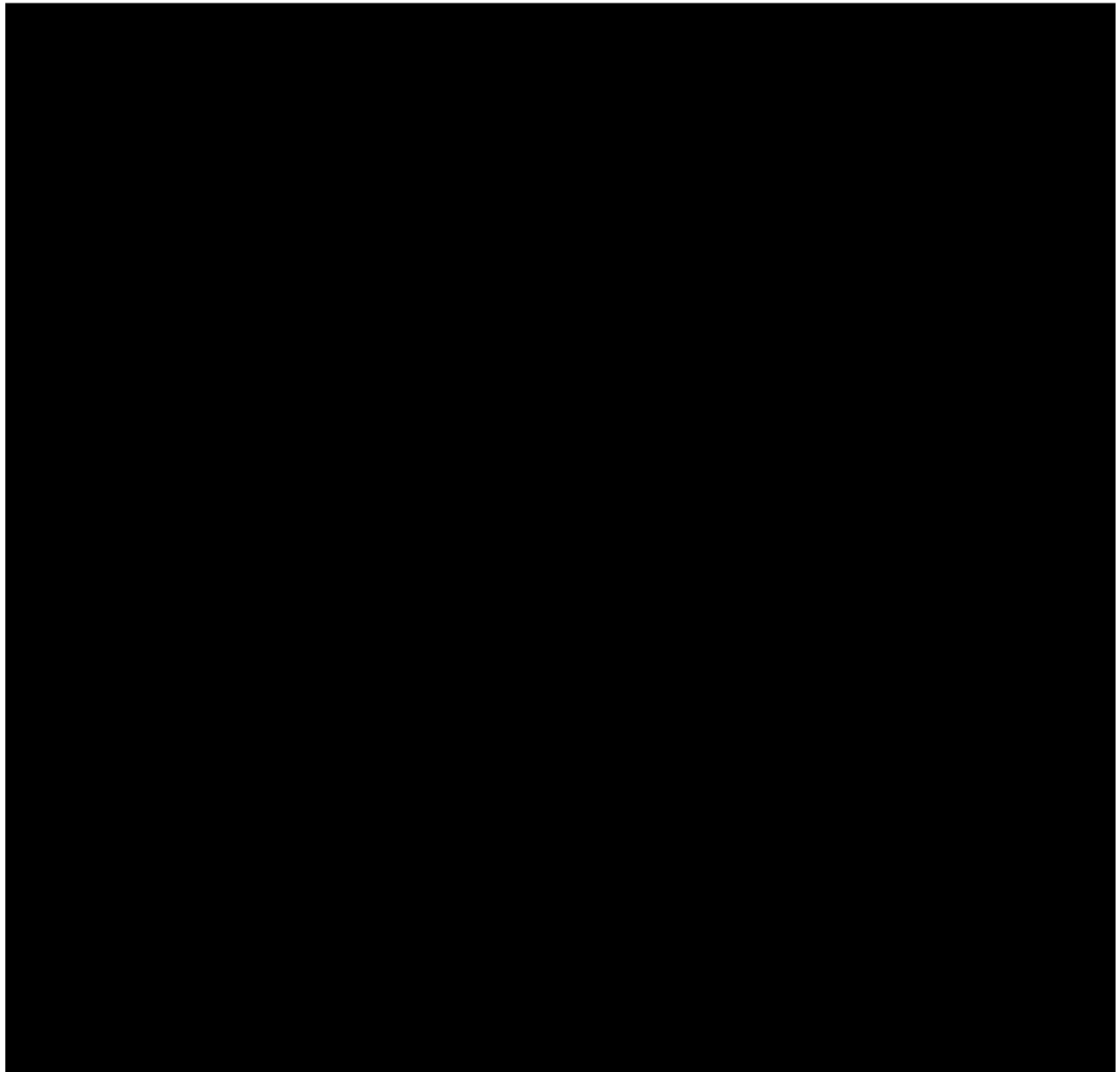


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Design for the displaced project by Raneen Nosh looks into the emotional impact of being displaced. In her project she tries to question the true meaning of home for those who are affected in the face of a disaster or a damaging event.

Nosh created a textile based object that is "designed to suit the nomadic needs of a displaced person, while also serving to recreate a sense of domestic comfort to preserve personal and cultural memory."³

The projected resulted in a multi functional garment that turned from a bag, to a bed to a tunic.



During the research phase of this project, it was helpful to look at the history and relationship between architecture and fashion. Fashion conjures images of constantly changing trends and leans towards the frivolous instead of practical. It helped me to reduce both terms to their basics: Clothing and Shelter.

The aim of the project was to hit higher in the hierarchy of needs. Identity is deeply rooted in our clothing. We always identify ourselves with the clothes we wear. With transformations I wanted to create a garment that the user could define

With this garment, I hoped to bridge the gap between shelter and dress and explore the many facets of second skin..

Design Objective : Utilitarian



All clothes have social, psychological and physical functions. Some may emphasize one of the categories over the others.

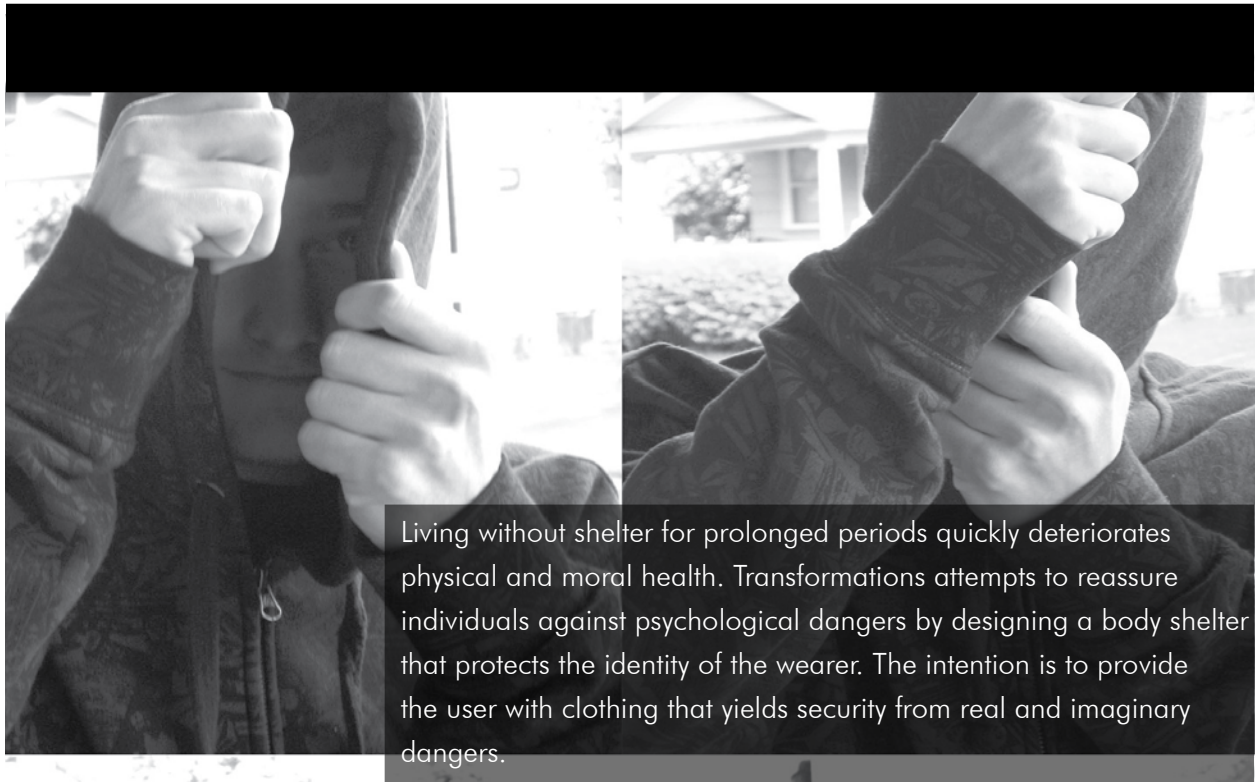
Transformations focuses on accentuating the physical functions of the garments.



Design Objective : Mobility

"People who are forced to travel by foot, by day or night, with little food or water, security and little excess energy for carrying their belongings, would need a structure that could minimize weight and maximize versatility." - Lucy Orta⁴

Visible and hidden pockets might hold water, food and papers. Other features such as vent openings would allow for better air circulation during perspiration.

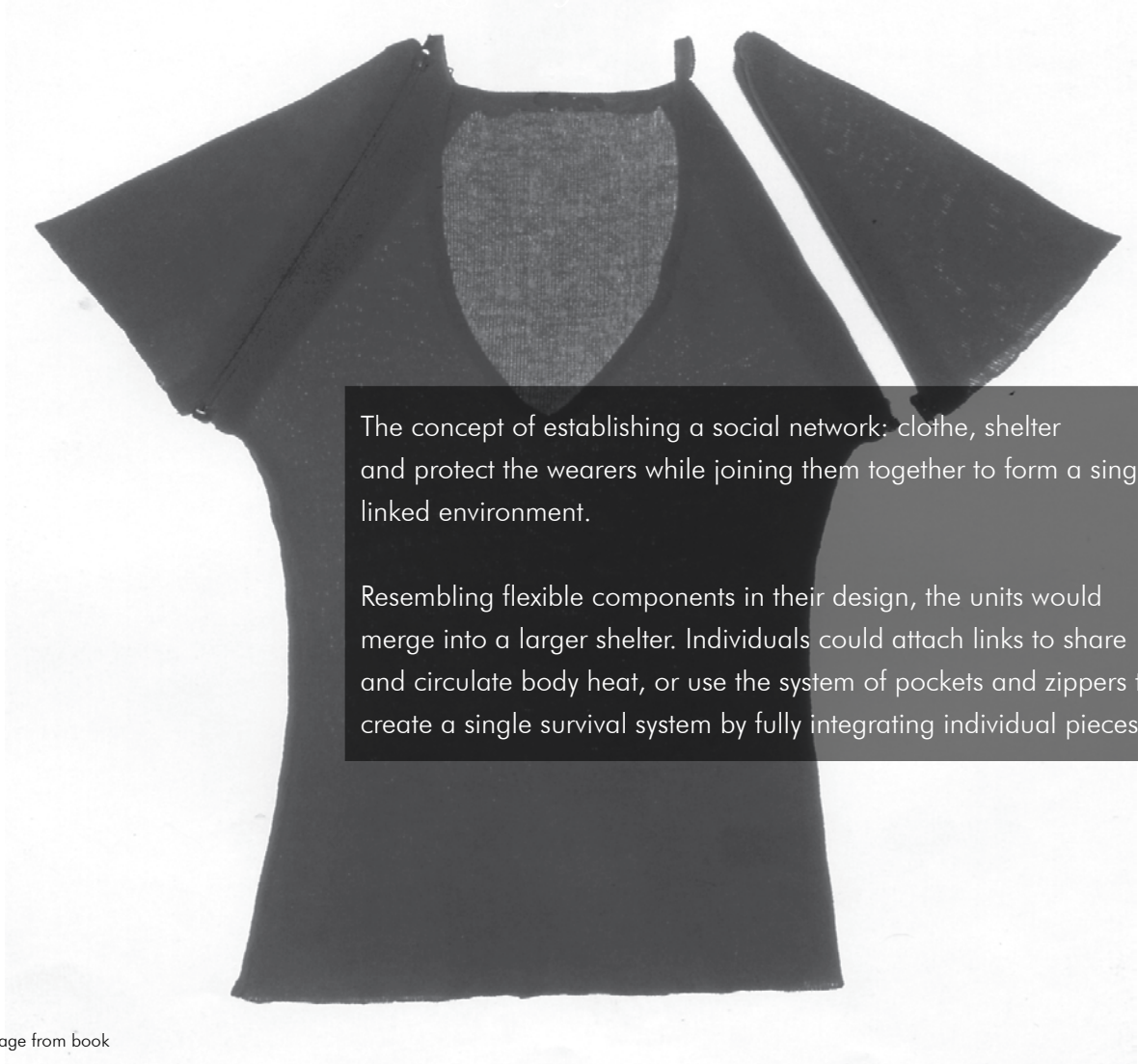


Design Objective : Shelter

Transformations takes into account the relationship between the body and clothing, and between the clothed body and the larger environment. This project was designed to function as a portable environment and provide shelter against “natural” specific climatic conditions.

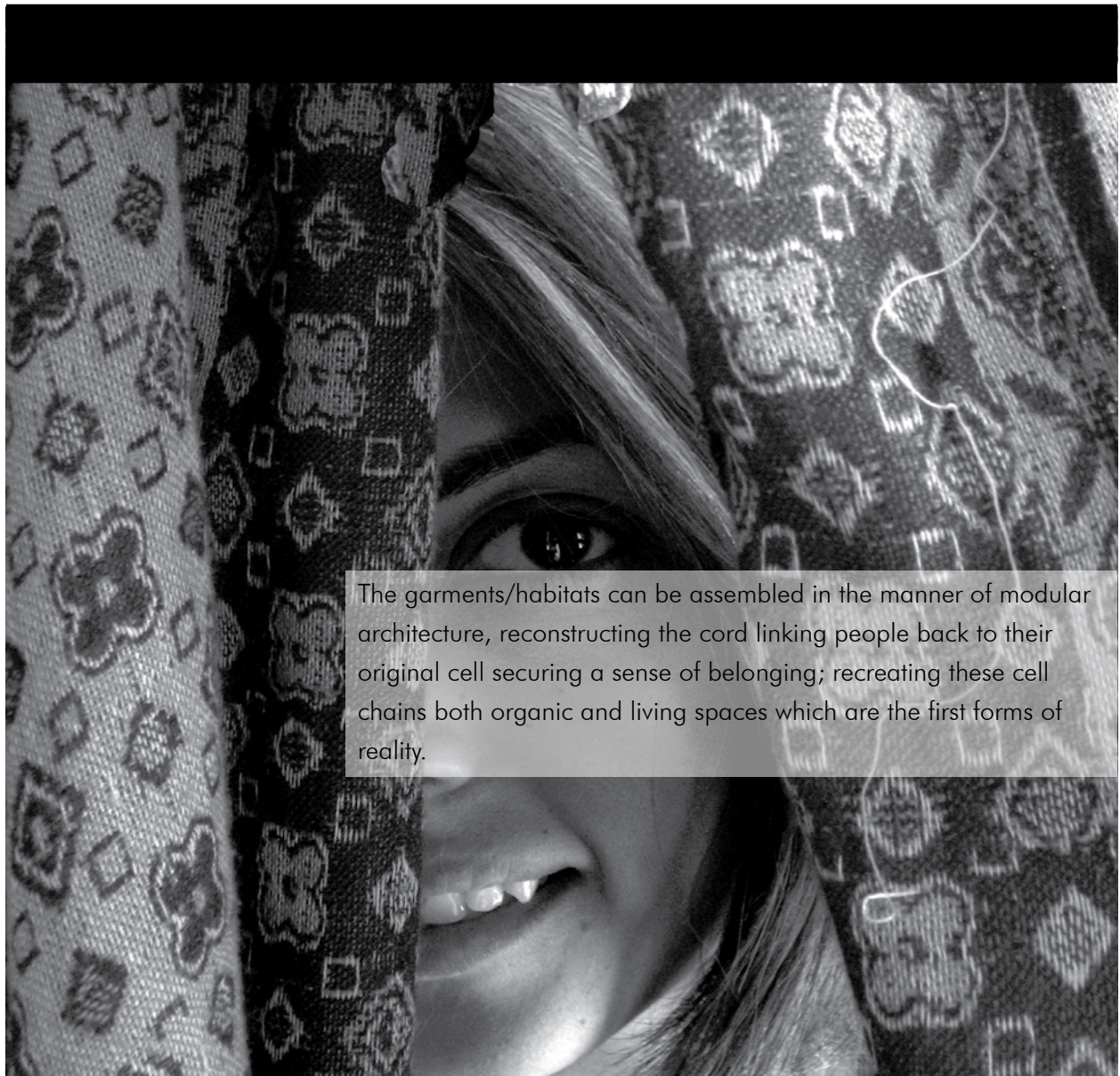
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Design Objective : Modular

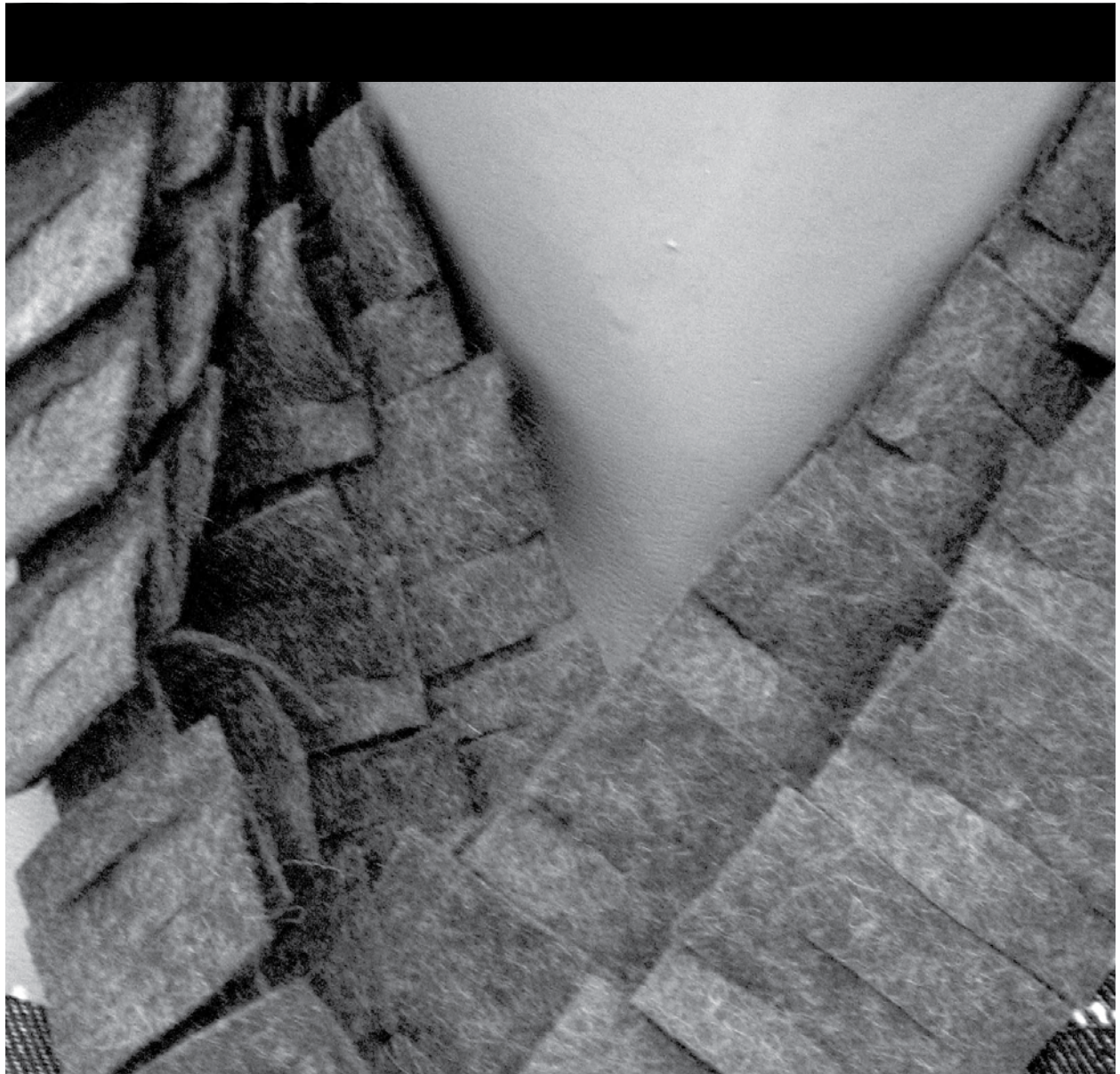


The concept of establishing a social network: clothe, shelter and protect the wearers while joining them together to form a single linked environment.

Resembling flexible components in their design, the units would merge into a larger shelter. Individuals could attach links to share and circulate body heat, or use the system of pockets and zippers to create a single survival system by fully integrating individual pieces.



The garments/habitats can be assembled in the manner of modular architecture, reconstructing the cord linking people back to their original cell securing a sense of belonging; recreating these cell chains both organic and living spaces which are the first forms of reality.

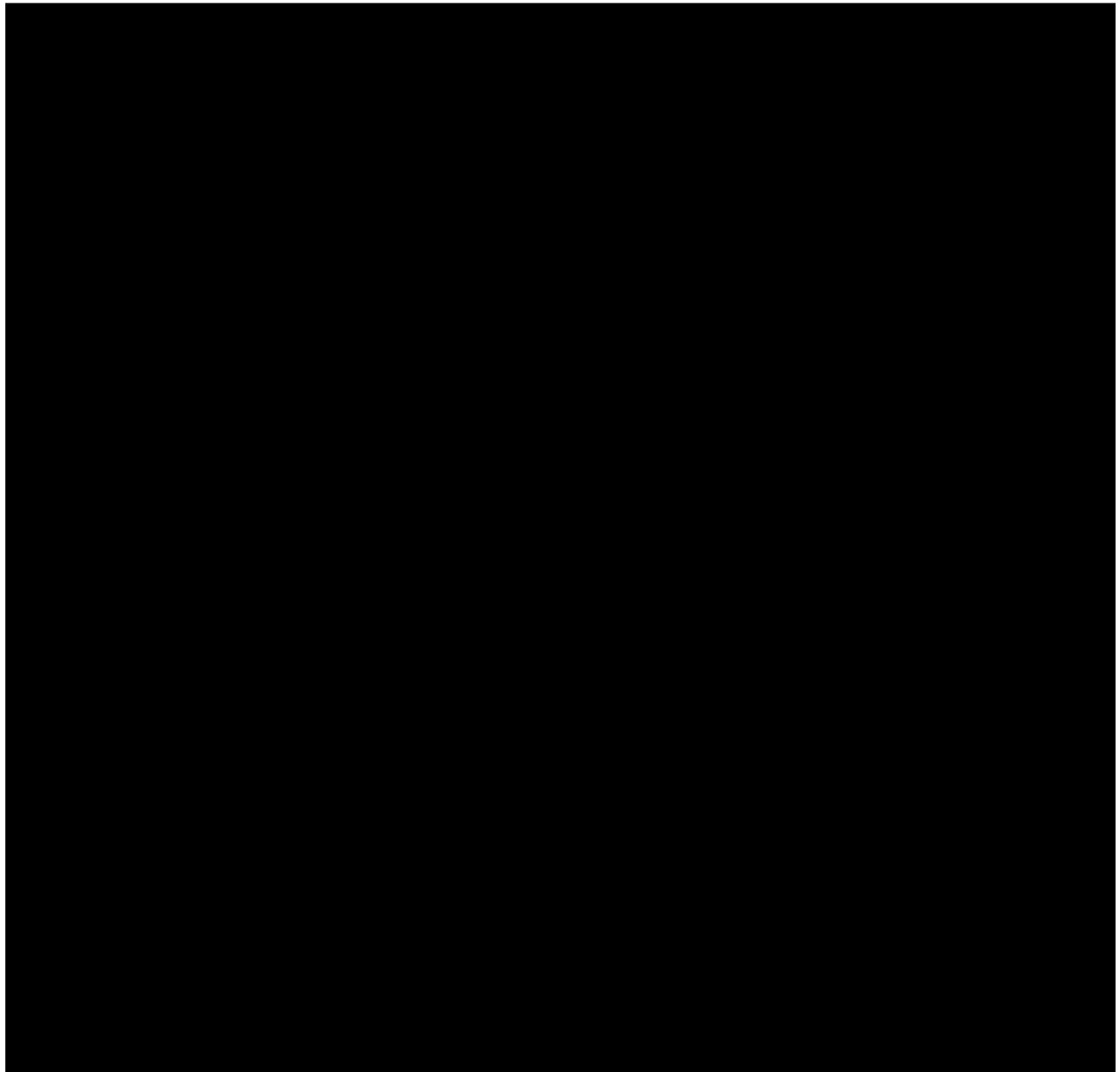




Before thinking about the “piece” as a whole I had been toying with the idea of “do it yourself” clothing that would require no sewing or stitching whatsoever. I had created tiny patterns in felt that could easily fit into one another and create multiple different configurations of wearables.











In my initial experiments I started with "a piece of cloth". A simple rectangular piece of cloth can be manipulated in many different ways. The piece itself is a part of the design manipulation and enters many phases of transformation.

When the thought of "singular" piece of fabric enters my mind, I immediately think about the Indian Saree. The Saree as defined by wikipedia is " a strip of unstitched cloth, ranging from four to nine meters in length that is draped over the body in various styles.



The most common style is for the sari to be wrapped around the waist, with one end then draped over the shoulder baring the midriff." To me there was nothing more inspiring then this definition as this means that this one piece of cloth would envelope the entire human body by the simple act of draping. My first set of design explorations were in this realm.

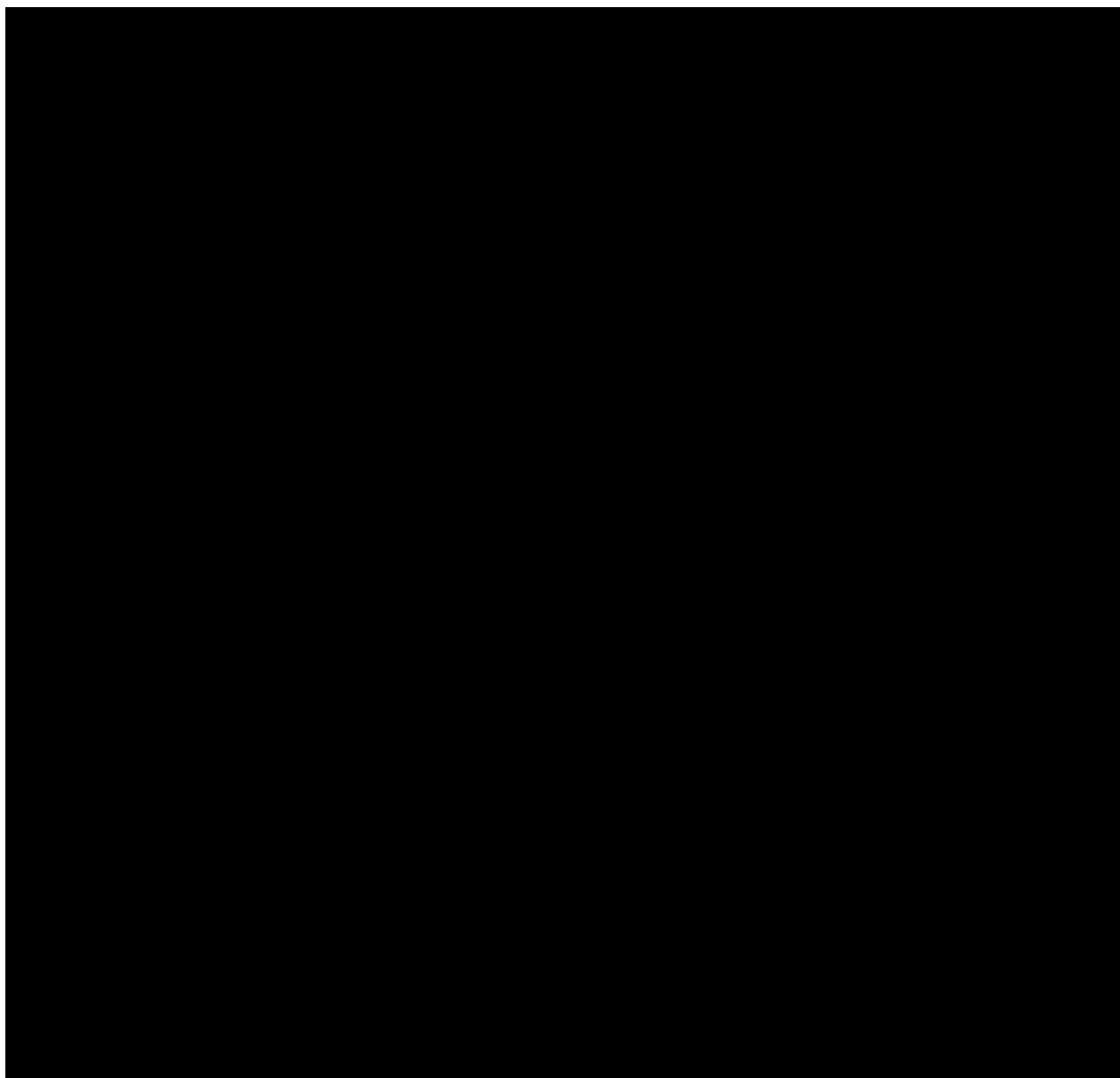














The basic square or rectangle, though the easiest pattern to work with, did not allow for more complex design initiatives. I realized that some degree of tweaking was needed for me to achieve the multifunctional goal of this project.

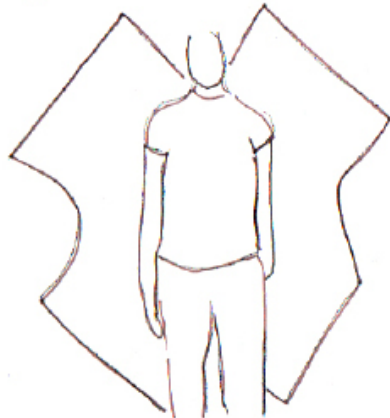
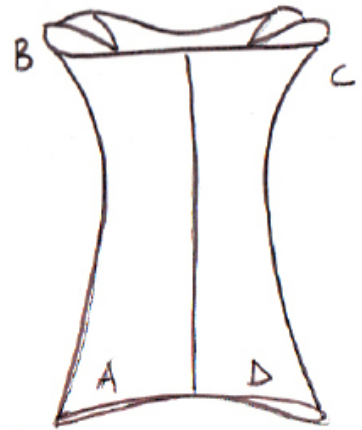
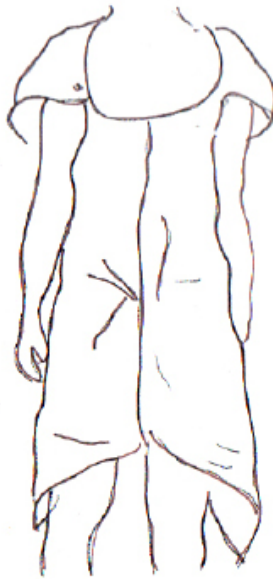
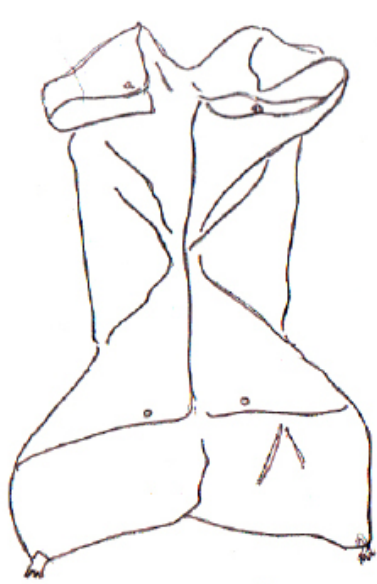
I revisited my original idea of having a garment that did not require any sewing and observed the pattern of one individual piece very carefully. Since the smaller pieces aren't practical for everyday use, I started to scale them up to see what kind of configurations I would be able to achieve.

While experimenting, I reached a point where one individual piece which was scaled and proportionate to the human body was the ideal pattern for the garment. With some simple folding and added fasteners, the garment would be able to transform into different wearables each time.

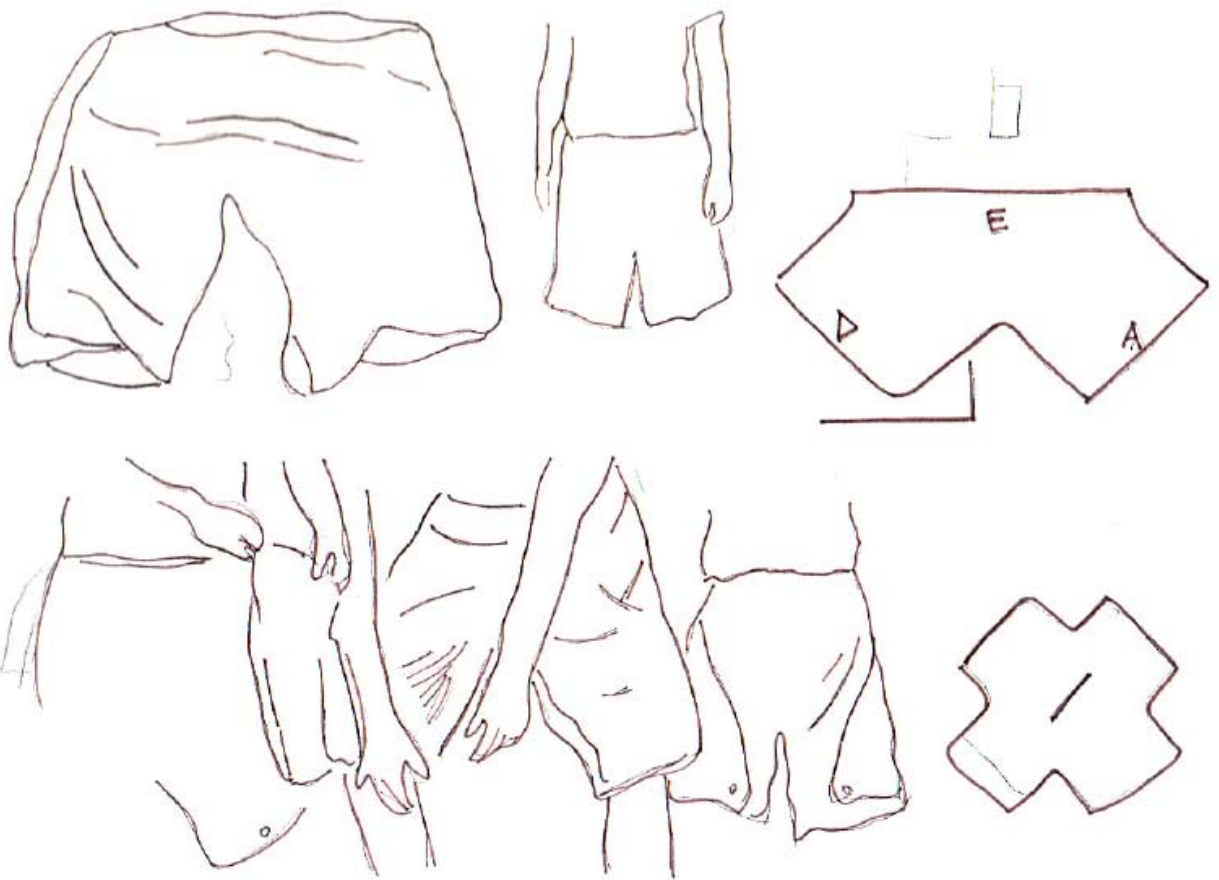
Vest Configuration



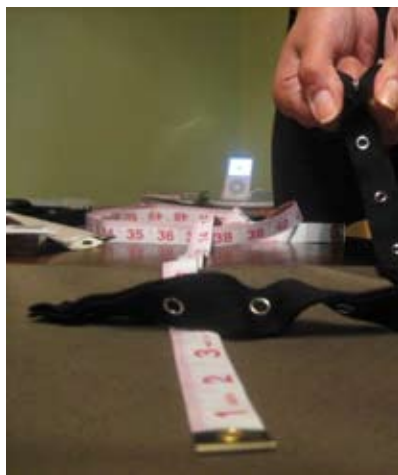
Dress Configuration

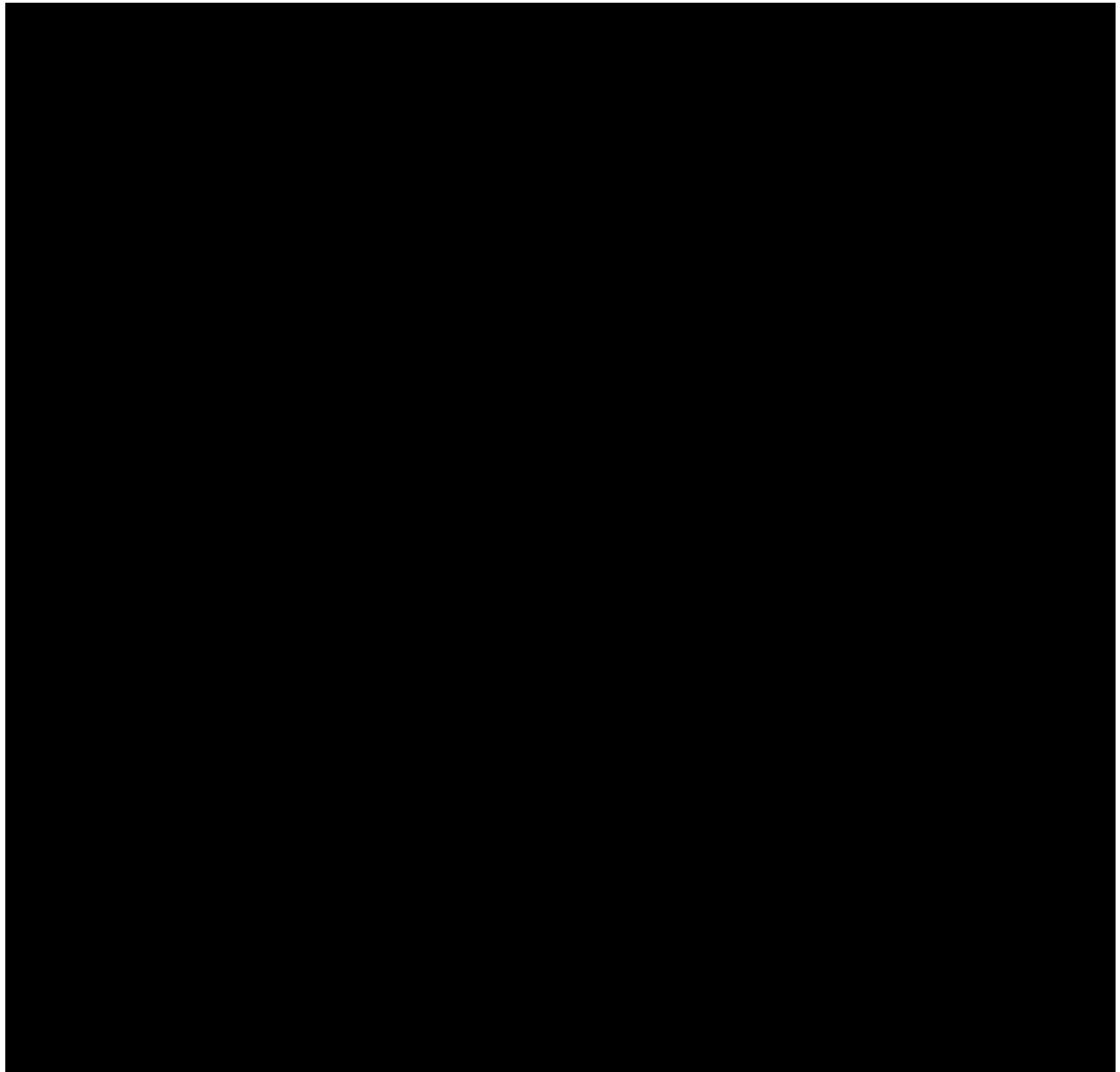


Shorts Configuration



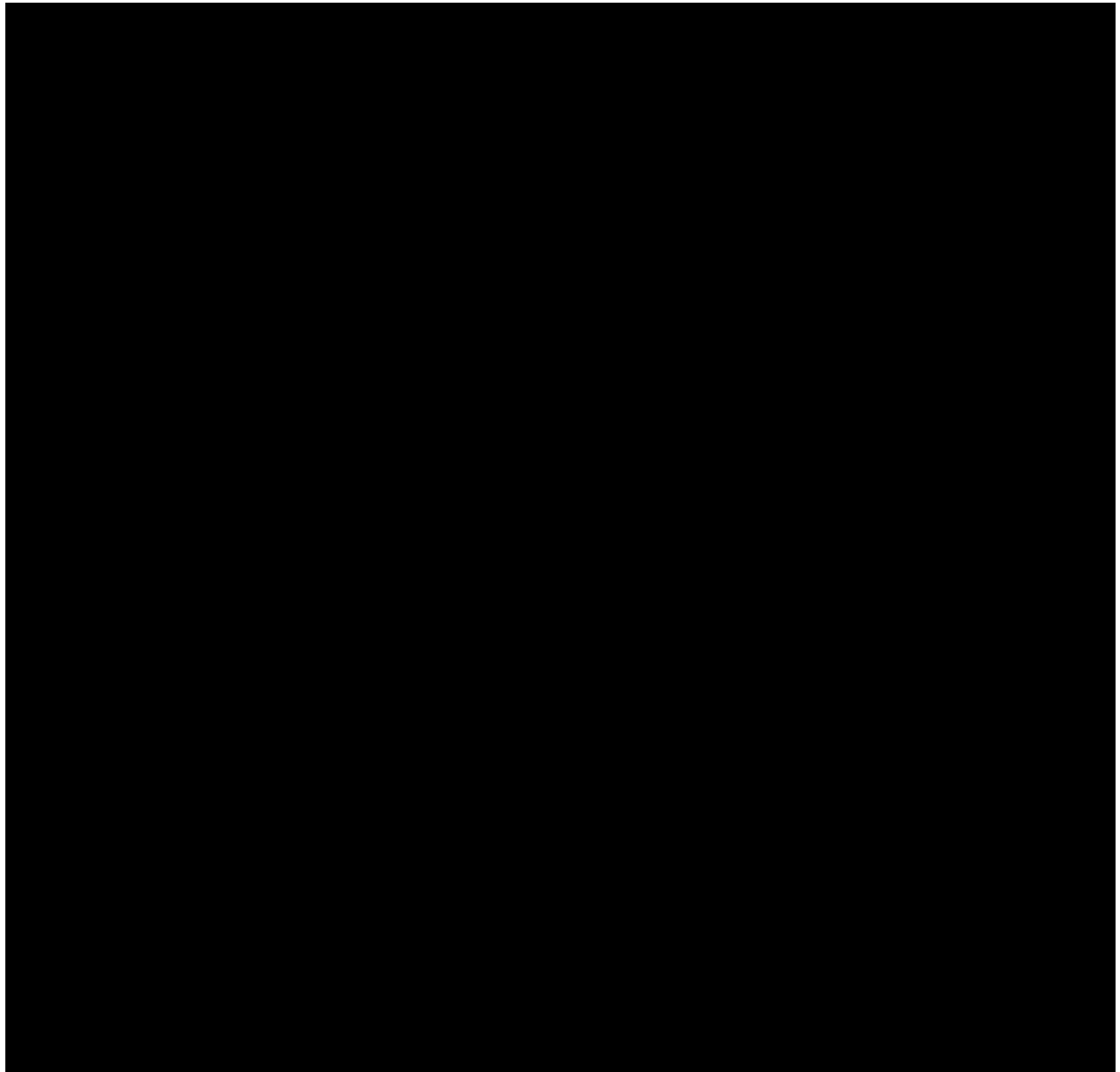




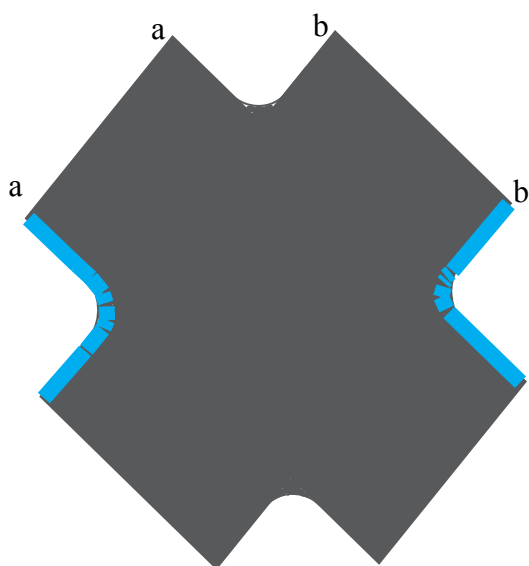




The actual pattern of the project is a cross - like piece of garment measuring 60" x 60". The basic shape is a square with the corners cut out. This pattern allows the user to wear the garment as a pair of shorts, a vest, a skirt, a dress and finally a one man tent via different fastened combinations.







The pattern is turned to its side and the blue highlighted corners are zipped together. This forms the actual dress.

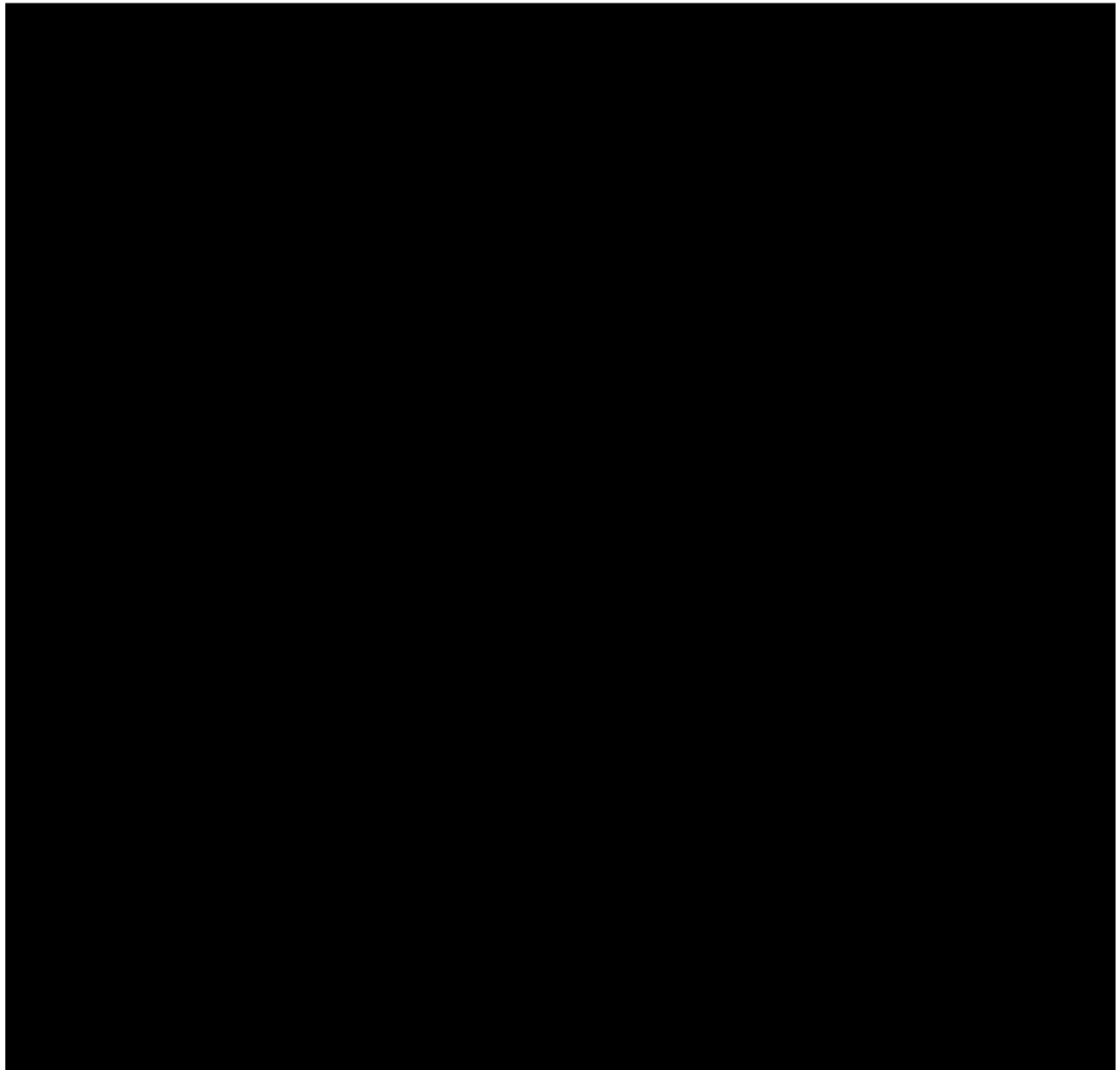
"A" corners are clipped together and so are the "B" corners around the arm of the individual which form sleeves. The bottom is left as is. The dress is simple, comfortable and allows for ease of movement.

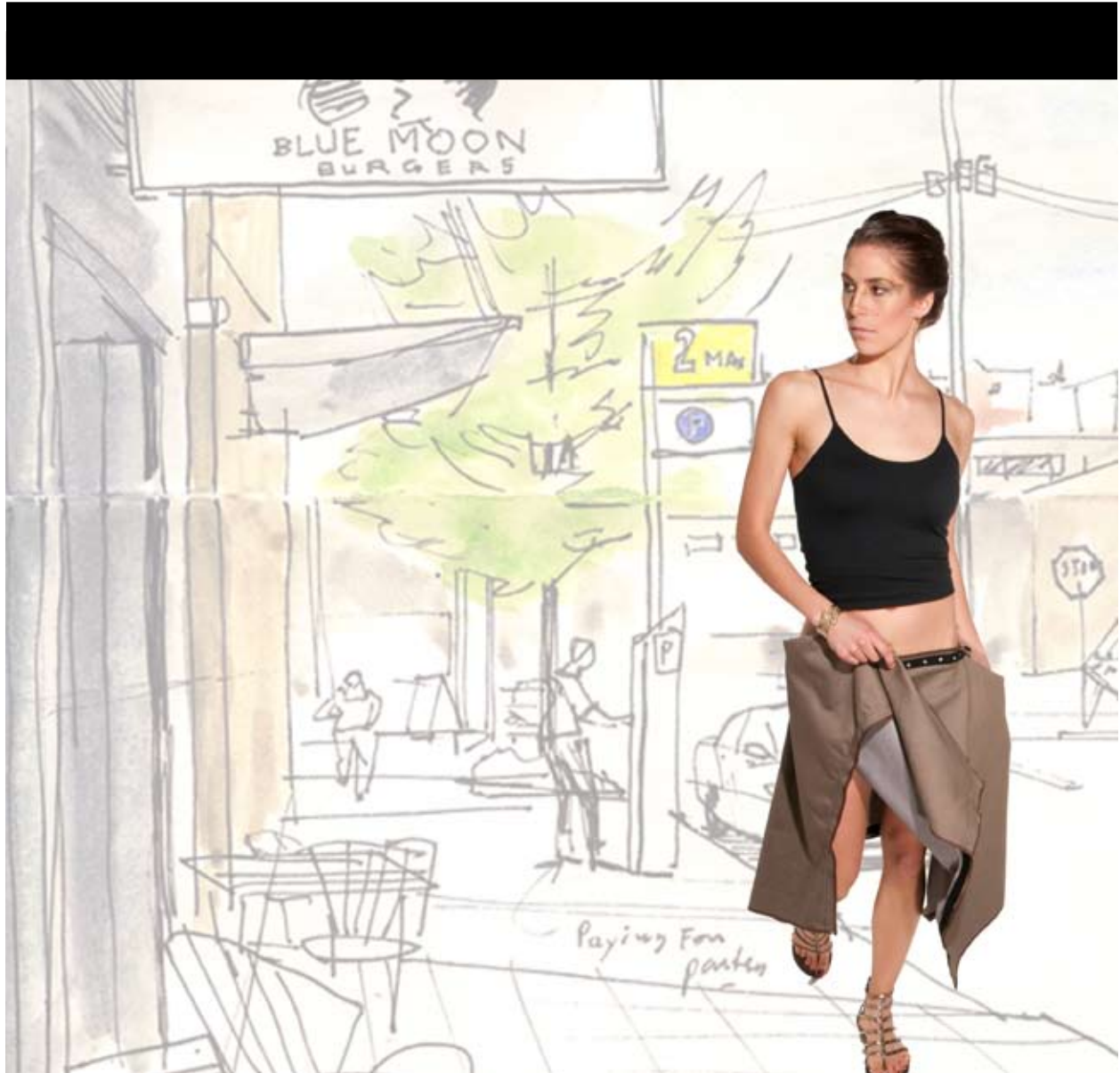


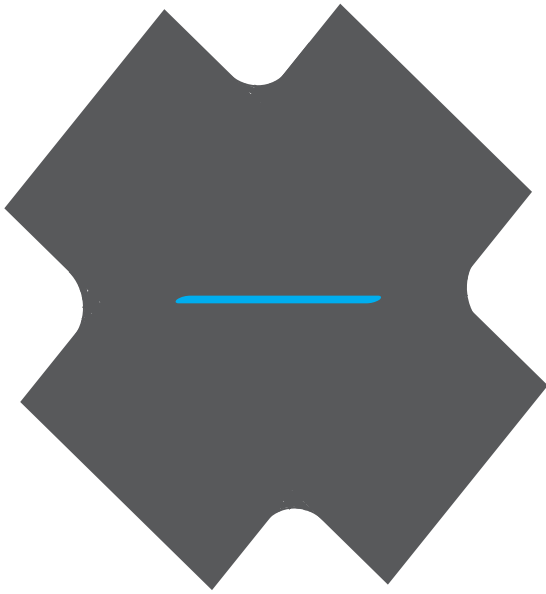










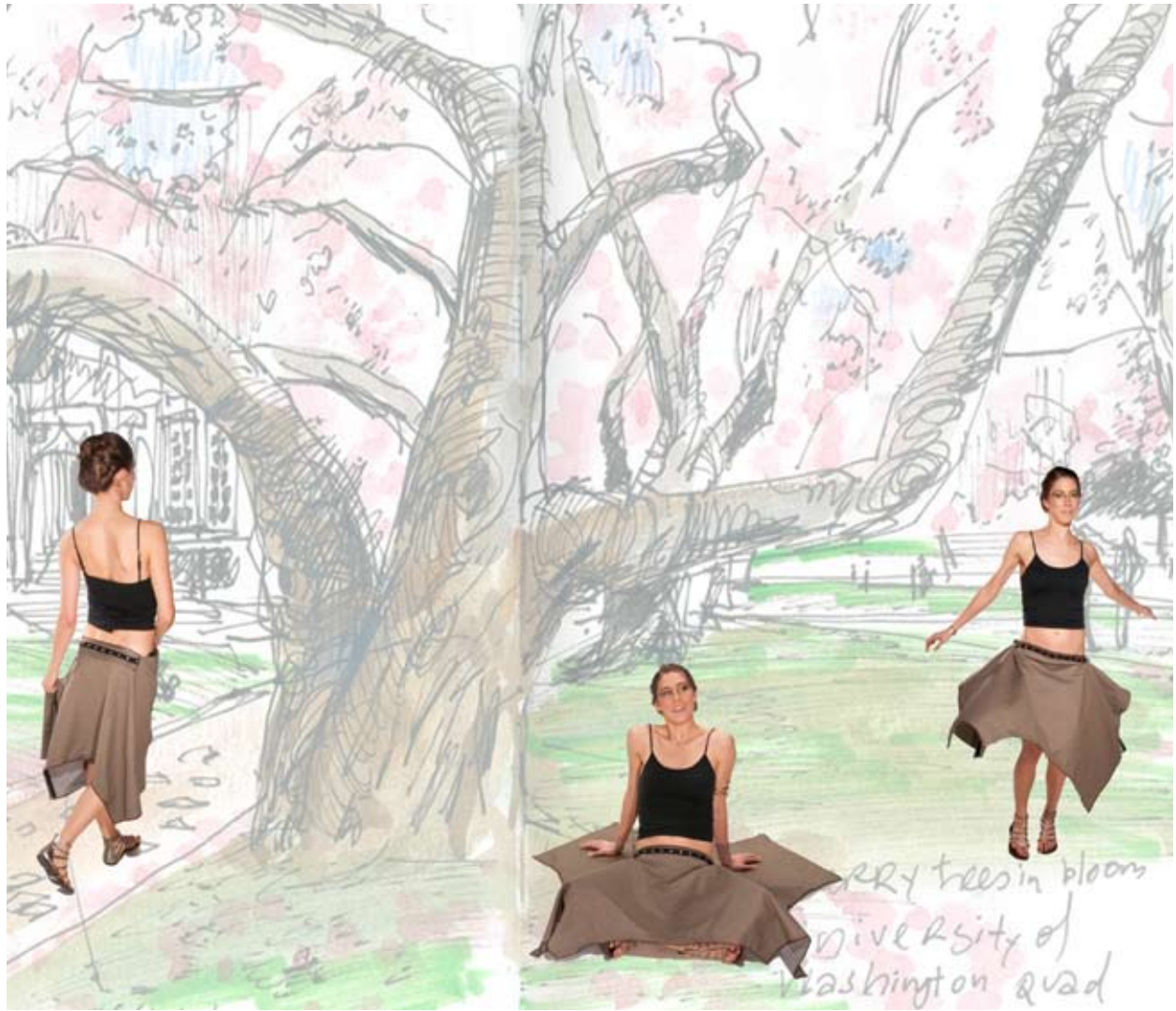


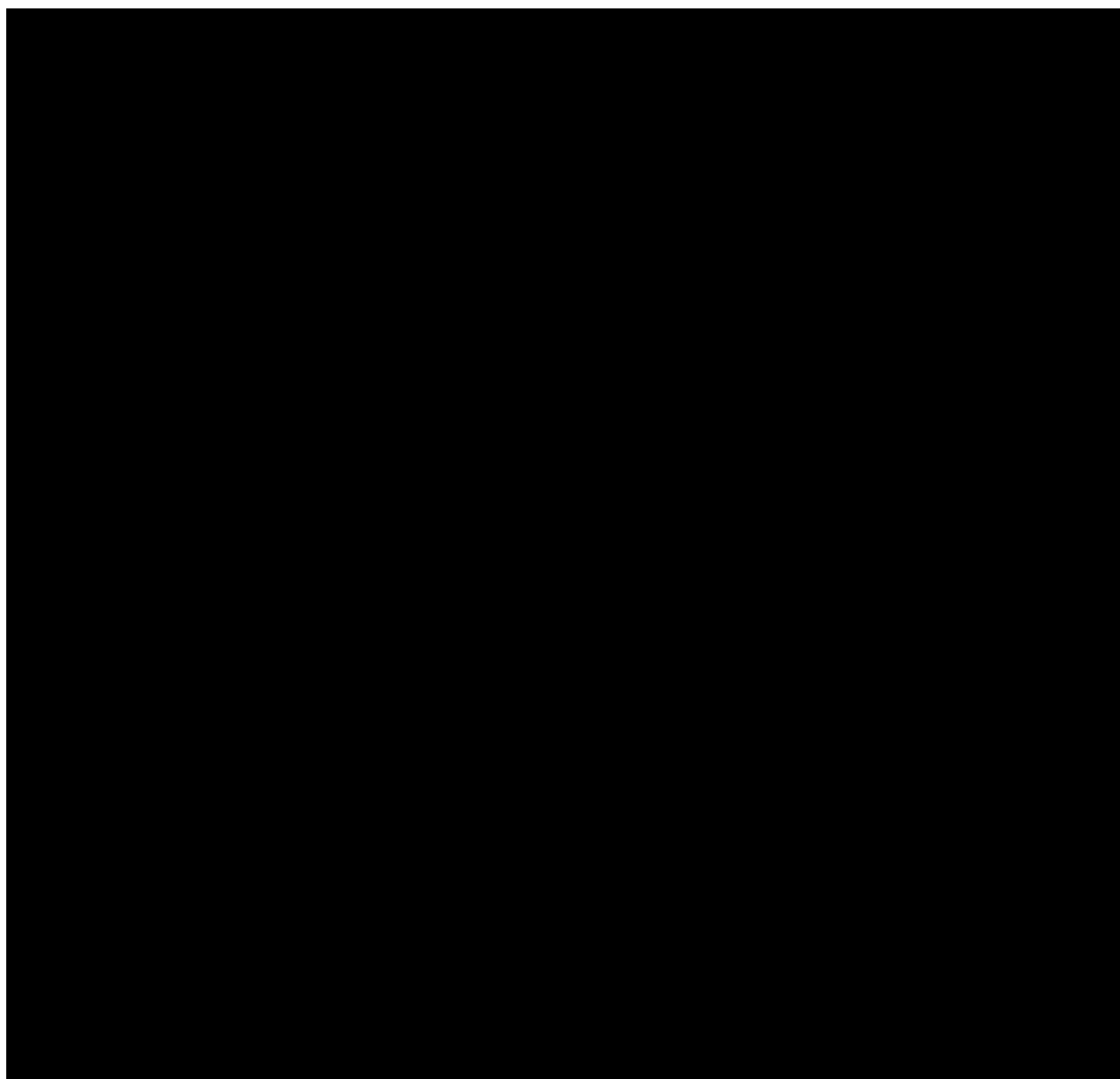
The blue line indicates the opening in the pattern that serves as the waist for the skirt and the neckline for the vest.

For the skirt transformation, the user simply puts her legs through the opening and buttons the opening to fit her waist appropriately.

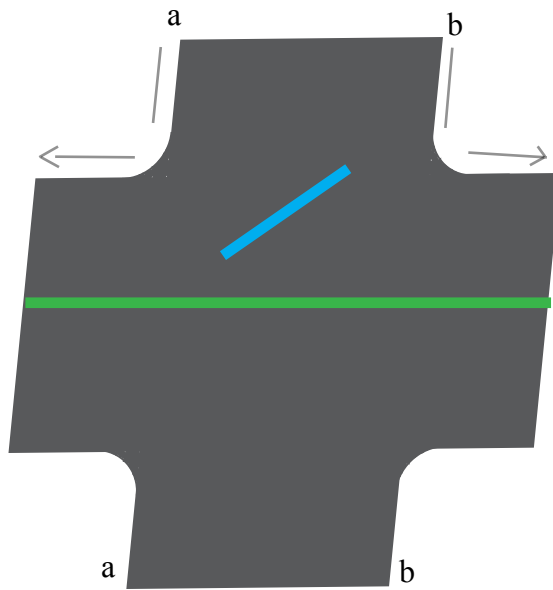










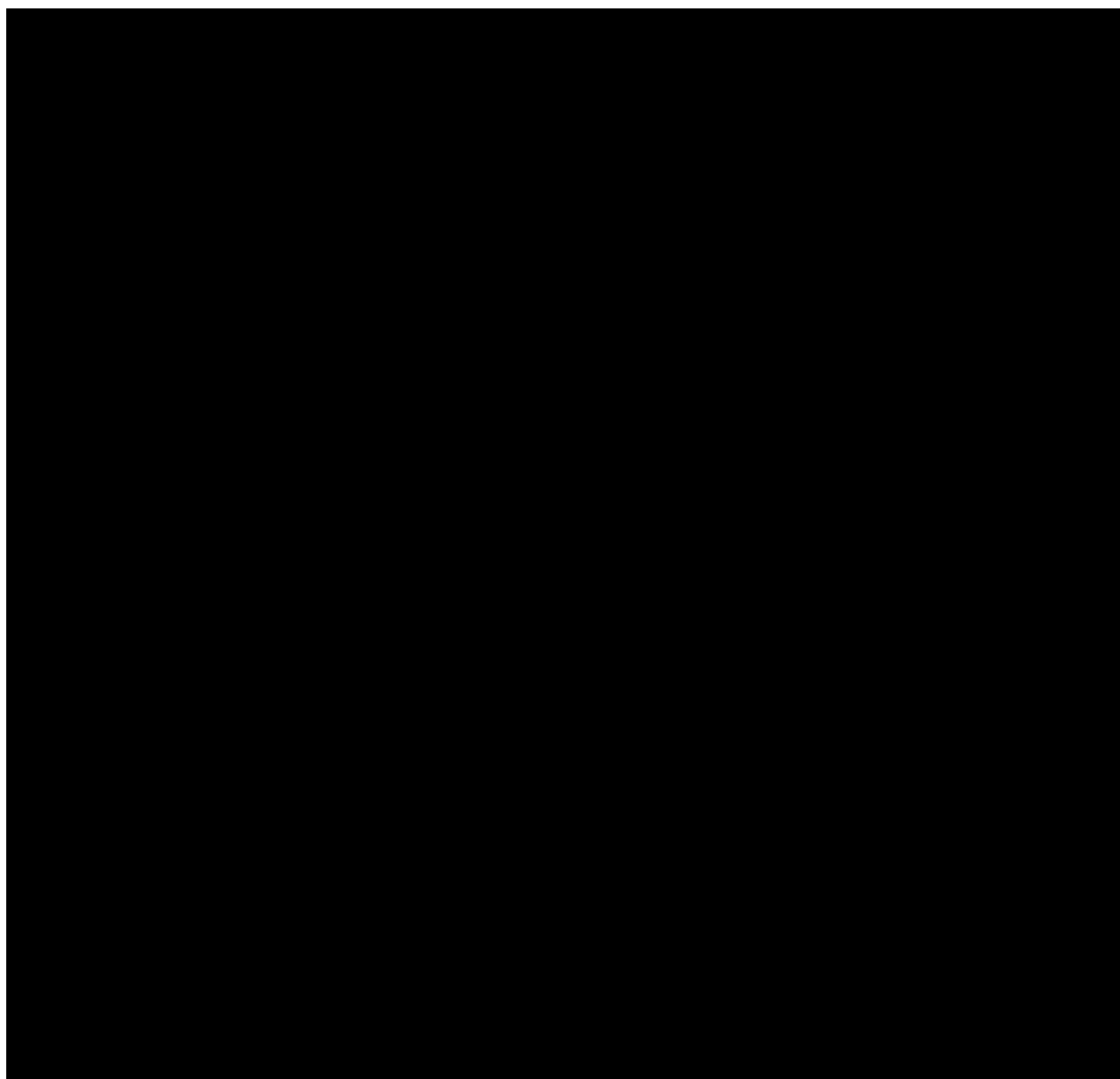


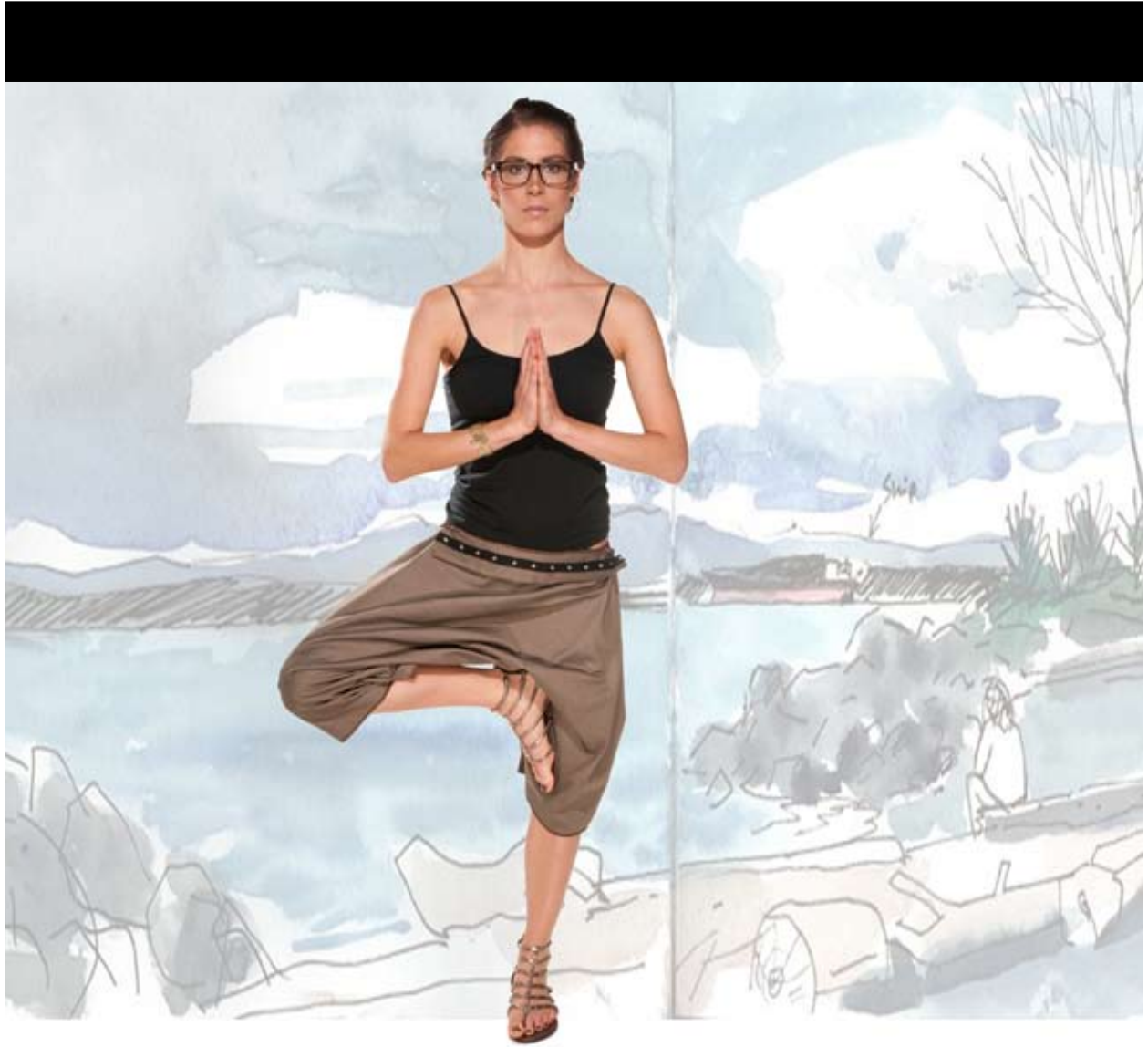
In the vest transformation, the user pulls the garment over their head through the opening (teal line). Then the garment is folded across the green lines while matching points "a" and "b". The sides are then zipped together forming a simple yet functional vest or coat.

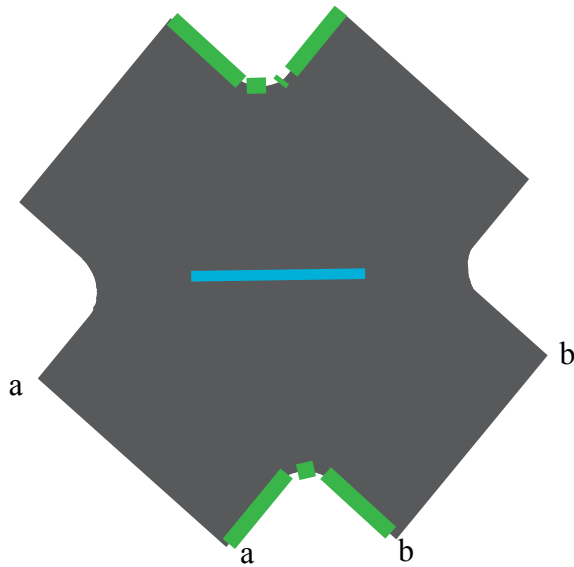










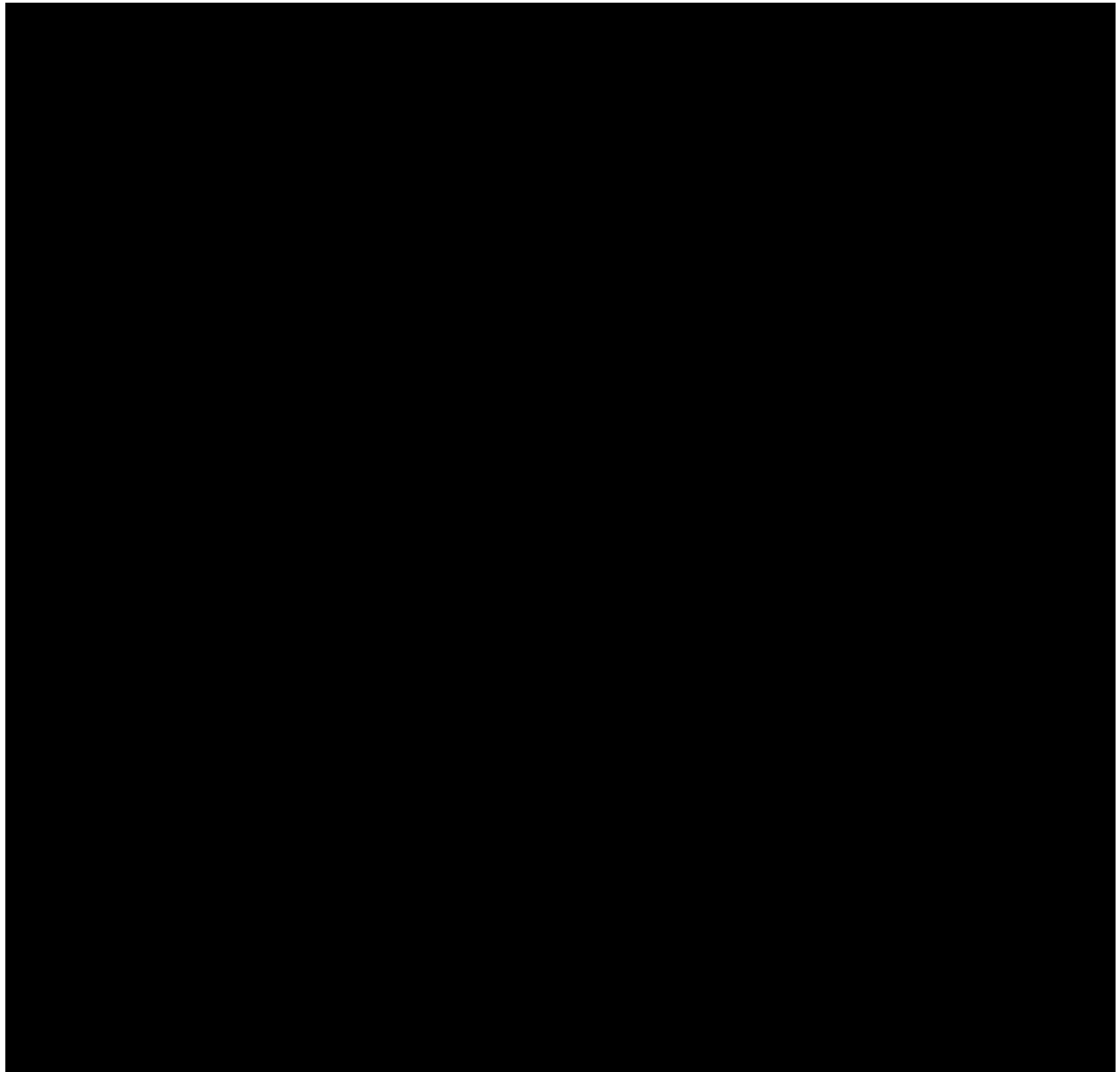


The shorts transformation is the most complex of the four transformations.

The user wears the garment like a skirt and tightens the fasteners at the waist. The green lines indicate the two edges that are zipped together. One zipper is in the front side of the wearer and the other is on the back. The fastening is done between the legs forming the enclosed area below the waist. Points "a" and "b" are wrapped and buckled in the backside to giving the shorts their final shape as illustrated in the photos.







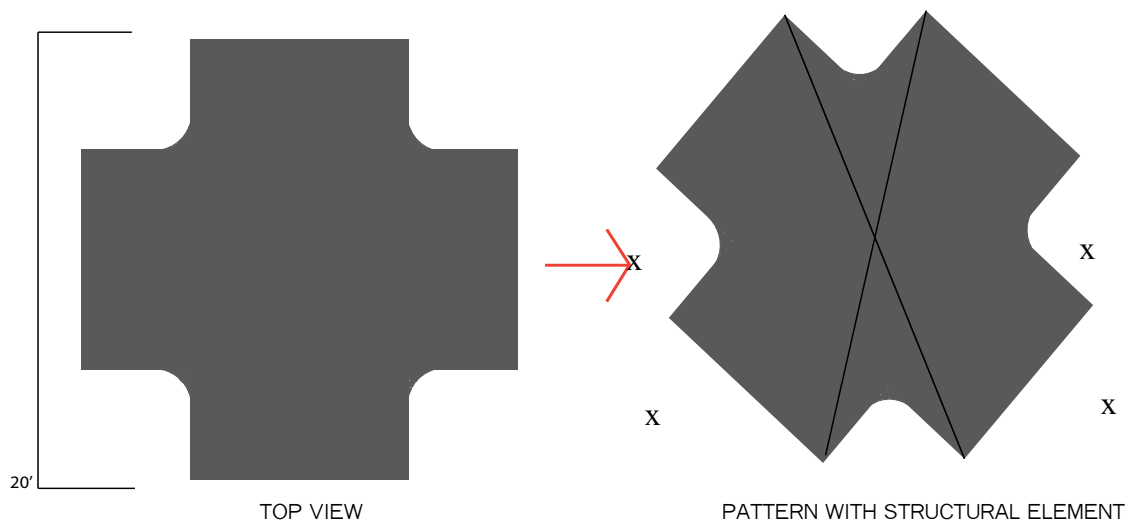




Outer Shell



Inner Shell



The final stage of the transformation process is the shelter. This garment also converts to a one man tent with the use of collapsible tent poles.

The poles slide through loops on the outer shell of the garment and can be pitched into the ground. The "x" points have loops that can be pulled taut and pitched into the ground as well giving it a finished tent structure. The outer shell has mesh vents that allow for air circulation. Both shells are water-proof.





Shelter in use

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The notion of identity and belonging have all shifted since we live in a world that's moving faster than our ability to keep up with ever changing technology and globalization. This thesis focused on the idea of 'home' and merging it with nomadism. The result was home that's portable and available to everyone almost everywhere.

The initial work in the thesis was inspired by architects and designers like Archigram, Lucy Orta and Hussein Chalayan. I asked questions like what if you stripped yourself to the bare minimum and carried just what you needed, or what if one could travel through unknown lands without thinking about booking hotel rooms or pitching intricate tent structures.

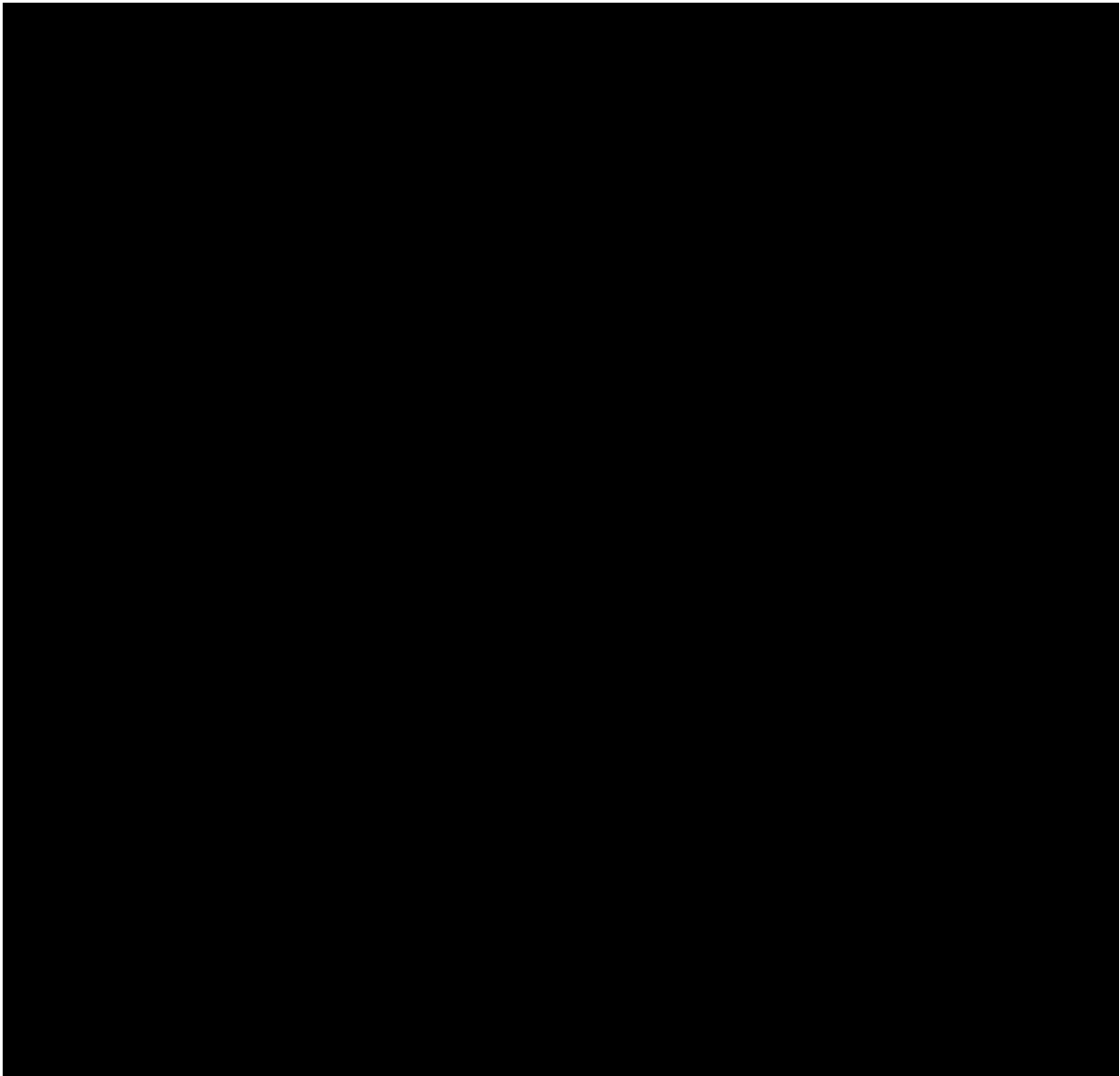
The semester's exploration lead to multiple studies which strived to transform the scale of architecture to that of clothing. The end result was a multifunctional garment that can become a dress, vest, shorts, skirt and a one man tent all through simple folding and fasteners. Although not a completely practical solution to sleep in, the intent was to re-think the concept of living and urban nomadism.



In many ways I also attempted to have a garment that was more than clothing for just survival. It is a vehicle to protect against ones anonymity. Through the illustrations in the scenarios I attempted to tell a story rather than just a garment that fulfills practical needs.

At the present time I continue working on the modular aspect of this project. I am attempting to tweak the design so that two patterns can be joined together to form a community of shelters. I am also focusing on manufacturing aspects of the design so that it could be packaged and sold to multiple clients like the Red Cross, REI and Urban Outfitters.





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