

The Girl in the Wood Frock

by
Andrea Ling

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in Architecture

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Andrea Ling

Abstract

A GIRL, forced to marry her father after he sees her playing in his dead wife's wedding gown, runs away wearing five dresses. Four dresses are of silk and they are beautiful. The last dress is of wood. It is in this dress that the girl escapes, throwing herself into the river to float away. A prince saves the girl but treats her badly, for she wears an ugly wood frock. Her suffering is eased at night when the girl takes off the wood dress and dances in her silk ones. The prince discovers the girl in the silk dresses and falls in love. They live happily ever after.

This thesis is based on a fairy tale in which a girl's life is changed by what she wears. In *Fair Maiden Wood* clothing is a means to identity. Costume is what identifies this girl as her father's new bride, and it reveals to the shallow prince who his true love is. It is through clothing that we identify the fairy tale. But more significantly, it is through clothing that the girl experiences the outside world. The girl lives through her wood frock – it is the vessel by which she escapes the threat of incest, it is the prison that disguises her beauty from the prince; it is her armor, her cage, her temporary home.

The wood frock becomes the girl's first architecture, protecting and sheltering the girl in the most intimate manner, controlling her most immediate environment. But its role is not limited to enclosure; the wood dress also changes the girl's experience of her surroundings, extending her bodily influence while also constraining it. The wood dress dictates how the girl moves, how much space she needs, how others see her, and how they treat her. It is an environment, elusively defined by the dialogue between her moving body and the surface of the wood shell surrounding her, which changes the girl's quality of existence. In this in-between silhouette is a most potent, and poetic, form of architecture.

In my thesis I continue the story of the girl in the wood frock through the design of three of her five gowns. The gowns reference the work of designers such as Cristobal Balenciaga or Issey Miyake whose clothes, by virtue of their construction and materiality, affect wearer and observer in startling and profound fashion. Their garments show a symbiotic relationship between body and shell, where the shell is not simply a passive enclosure but a responsive and independent extension of the body. My dresses are made with this symbiosis in mind, and I use their (painstaking) construction in order to propose that in clothing is the potential to create spatial environments that change fundamental perceptions by filtering and extending the wearer's experience of the world and her effect on it. These dresses and the spaces they create are unique. They are not costumes of the everyday, used to suppress sensation in order to function; instead they are of the special day, when the girl seeks to be stimulated, enlightened, and also saved. They are dresses of heightened awareness, integrating both sense and action within their shifting boundaries, shaping a dynamic, albeit fleeting, architecture.

Acknowledgements

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Dedication

TO MY parents for all their support, despite their better judgement.

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A Story

ONCE UPON a time, there lived a man, a woman, and their beautiful daughter. For a time they were happy until one day, the woman fell ill. She was dying. The woman made her husband promise that upon her death he would re-marry, on the condition that his new wife must wear her wedding ring. The man searched for a new bride but none could be found that fit the ring. One day the beautiful daughter, in a game of dress-up, put on her dead mother's dress and slipped on the wedding ring; to her horror, the ring fit! Her father discovered her and, honouring his dead wife's wishes, ordered his daughter to marry him. On the day of her wedding, the father asked his distraught bride what she would like as a wedding gift. She asked for five dresses. Four dresses were to be silk, and the most beautiful dresses ever seen. The fifth dress was to be made of wood. When the dresses were completed, the girl put them on, hiding the silk under the wood. She threw herself in the river and floated away. A prince rescued the girl and made her his servant. But the prince was unkind; he treated her badly, for she wore an ugly wood frock. Her suffering was eased at night when the girl would take off the wood dress and dance, in secret, in her silk ones. The prince discovered the girl in the silk dresses and they fell in love, living happily ever after.



1 *The Girl in the Wood Frock*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



2 *The Girl in the Wood Frock*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



3 *Felt Dress*, August 2006. Pressed wool felt, silk and hemp yarn.



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10 *Felt Dress (jumping)*, August 2006. Pressed wool felt, silk and hemp yarn.



11 *Felt Dress (jumping)*, August 2006. Pressed wool felt, silk and hemp yarn.



12 *Rubber Dress*, August 2006. 1/16" Red rubber, douppioni silk, 1/16" pressed wool felt, rubber grommets, copper cable, waxed nylon thread.



13 *Rubber Dress*, August 2006. 1/16" Red rubber, douppioni silk, 1/16" pressed wool felt, rubber grommets, copper cable, waxed nylon thread.



14 *Rubber Dress*, August 2006. 1/16" Red rubber, douppioni silk, 1/16" pressed wool felt, rubber grommets, copper cable, waxed nylon thread.



15 *Rubber Dress*, August 2006. 1/16" Red rubber, douppioni silk, 1/16" pressed wool felt, rubber grommets, copper cable, waxed nylon thread.



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Rubber Dress (dancing), August 2006. 1/16" Red rubber, douppioni silk, 1/16" pressed wool felt, rubber grommets, copper cable, waxed nylon thread, 1" nylon webbing, acrylic buckles.

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Rubber Dress (dancing), August 2006. 1/16" Red rubber, douppioni silk, 1/16" pressed wool felt, rubber grommets, copper cable, waxed nylon thread, 1" nylon webbing, acrylic buckles.



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25



26 *Wood Dress*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



27 *Wood Dress*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



28 *Wood Dress*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



29 *Wood Dress*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



30 *Wood Dress*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



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Wood Dress (dancing), August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.



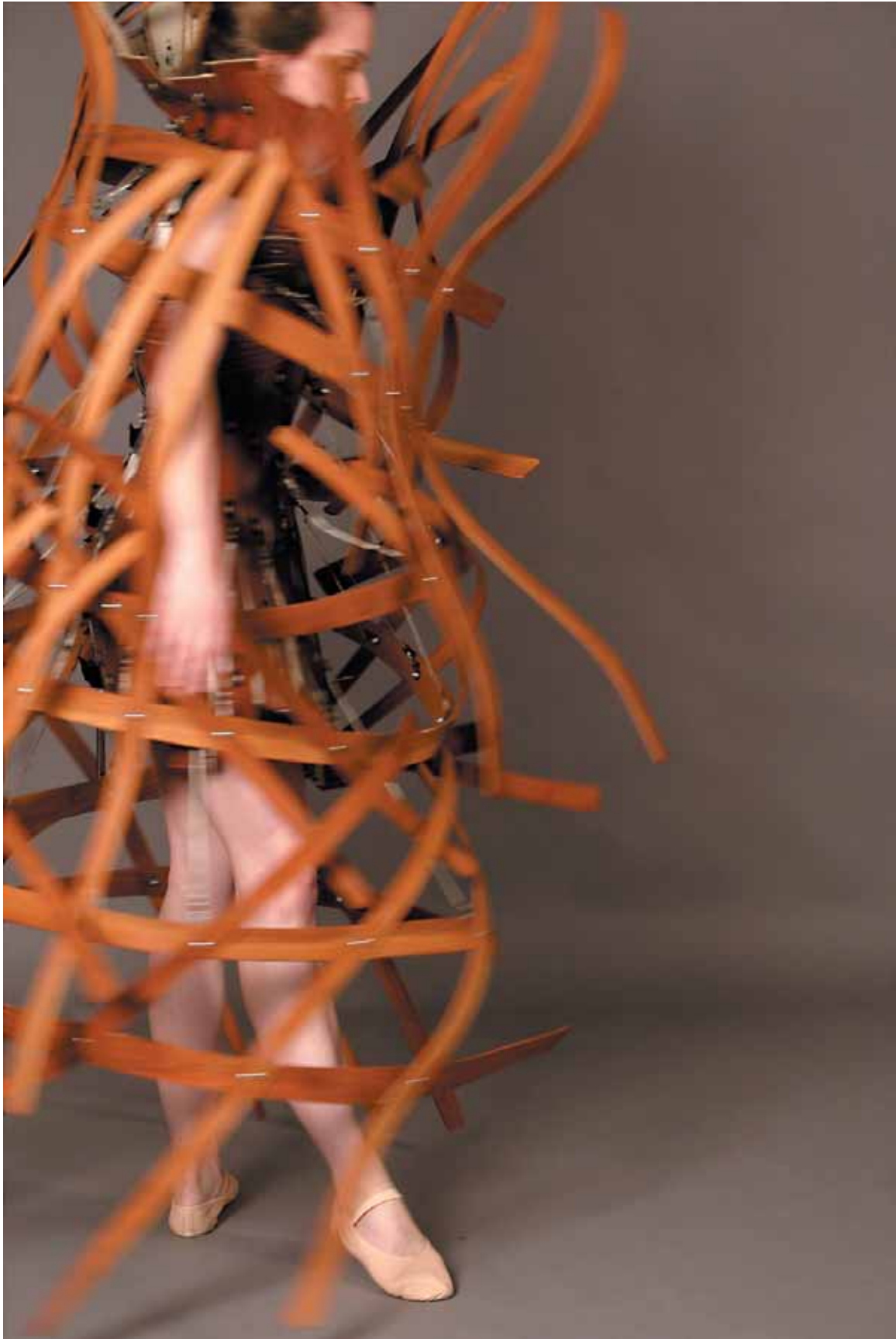
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Rubber Dress in Wood Field, August 2006.



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43 *Rubber Dress in Wood Field, August 2006.*



44 *The Girl in the Wood Frock*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.

The Spider, the Snail, and the Pause

UPON BIRTH, *Argiope aurantia*, the common yellow garden spider, climbs up a tall perch and tilts her spinnerets towards the warm wind for the very first time. She releases a cloud of fine silk that forms her first dragline; when it is long enough, it balloons and the baby spider releases her hold to float away in the air. When she lands, the young creature is faced with the challenge of catching her first supper. She has no tools save those found from her own body: silk protein secreted from her abdomen, spinnerets, and hairy legs.

Undaunted, the small weaver constructs her familiar circular web, starting with the first dragline she created. Dry radial lines spread from the dragline, close enough that the spider can cross over them with ease. Then the spider secretes its sticky silk in a single spiral line. She is careful to leave a safe spot in the middle for herself, where she sits in the dark, waiting and feeling. *Argiope aurantia* is cursed with small eyes and poor vision. To make up for this deficiency, she has been endowed with sensitive hair on her legs

that hear, smell, and detect movement for her. Vibrations and shifts in tension along the web indicate the presence of a potential mark, triggering the hunter to action. If the chemo-sensitive hairs on her legs deem the unfortunate victim consumable, the spider wraps him in more silk, injecting digestive enzymes into the bundle, liquefying the prey before drinking its remains. At the end of the night, with her resources replenished, the spider consumes her web, returning the silk protein to her body, and rests, before beginning the cycle again the next evening.

The little spider understands the whole world with only her body and its natural artefacts. Her web is a physical extension of herself, made from proteins of her own material. It is the place of her body's action and consciousness¹, a tangible manifestation of the creature's awareness of the physical environment, a thousand times greater in scope than the limits of her tiny body.

I suffer from occasional insomnia. During these periods of restlessness my body is hyper-aware of everything – the empty sound of moving air, the humidity of the room, the smell of bed linens, and the feel of an orange sun warming my eyeballs through the thin skin of my eyelids. I become uncomfortable in my own skin as it rests on my frame, taught for fear that the muscle, fat, and bone it envelopes will collapse into mush if relaxed. Sleep comes only with deprivation, with the aid of earplugs, an eye mask, and sleeping pills. When I wake, my arms tingle, the blood within their vessels tired from stirring too fast for too long. I am numb, as if the heightened sensitivity I experienced during the night is compensated for by a bodily dullness the next day.

Heightened consciousness is an uncomfortable state of being. The human body is incapable of maintaining such sensitivity

¹ Henri Bergson, *Creative Evolution* (Henry Holt and Company, New York, 1911) Bergsonian thought proposes that intellect and conscious understanding are convergent with action. Bergson asserts that one thinks by doing; true knowledge is gained by the body and the intellect resides as much in the muscles and bones of our bodies as it does in our minds.

“Our intellect is intended to secure the perfect fitting of our body to its environment, to represent the relations of exterior things among themselves, in short, to THINK matter.” (pp IX.)

Bergson develops this idea by suggesting that sensation is extensive (pp. 202-205), rather than localized; by feeling matter, we are able to project our bodies beyond our immediate locality through the presence of that matter. The example of the spider in her web actualizes this idea. The matter that is felt – the spider's web – is literally an extension of her body, made by components of that body.

for prolonged periods of time – it takes up too much energy and consumes too many resources. It is exhausting. In order to maintain her state of heightened awareness, *Argiope aurantia* is able to capture twice her own body weight in prey a night² before finally consuming her own web – her home and means of survival – in order to maintain her resources. Much easier is the life of *Cantarus aspersus*, the brown garden snail, whose dull body remains hidden, slow and soft underneath a protective shell that shelters the creature from a life of too much stimulus. In times of discomfort, the snail retreats, sealing the shell's entrance with a parchment-like barrier and, thus protected from sensory overload and other dangers, enters a state of suspended animation.³

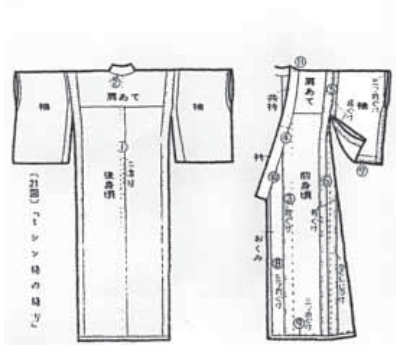
Between spider web and snail shell – this is how the human body uses its coverings to negotiate between the senses of the everyday and those of the special day. We understand the world through qualitative sensory experience – as a smell, taste, noise, quality of light, type of texture – even extending our sensual consciousness beyond the limits of our bodies through the power of kinaesthetic perception.⁴ Not only then do we feel, but we also anticipate perception, as well as remember it. The living body is always processing sense: past, present, and future. It is a wonder we are not numb. We cope by covering ourselves with layers to filter what our bodies feel, sometimes to suppress sensation, other times to accentuate. Such covers might protect the body from the harsh realities that surround it but they can also serve to express the body's activity, exaggerating or hiding its mutations, finding suitable time, space, and position for the body to truly feel.

In her essay “body, performance, boundary,” Tala Klink describes how traditional boundaries act as “*thresholds that divide one space*

2 George Hammond, 2002. *Argiope aurantia* (On-line), Animal Diversity Web, University of Michigan, Museum of Zoology. Accessed April 01, 2006 at http://animaldiversity.ummz.umich.edu/site/accounts/information/Argiope_aurantia.html

3 *Common Snail, garden snail, helix aspersa* (On-line), BBC, Science & Nature Wildfacts. Accessed April 1, 2006 at www.bbc.co.uk/nature/wildfacts/factfiles/415.shtml

4 Joy Malnar and Frank Vodvarka, *Sensory Building*, (Minneapolis, University of Minnesota Press, 2004), 146. The authors take note of the extending power of our kinaesthetic sense; whether it is our eye muscle that is focussing on a far-away object, or our leg muscle calibrating its strength to a specific rise in a staircase, it is through our muscles that we become aware of the proximity, speed, and size of things.



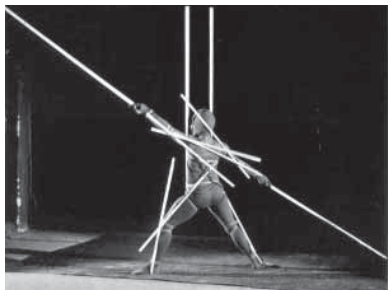
45 The Japanese kimono as worn since the Heian Period (794-1185).

from another”⁵, containing space in discrete bundles, separating public from private, inside from out. They are walls that restrict the flow of information between the body inside and the environment outside, limiting the sensation that the body experiences, sometimes numbing it within a monotonous enclosed environment. But there are boundaries that do more than simply suppress the exterior. Take for example, the envelope created by a kimono. A kimono comes in only one size, and is made of six standardized rectangles of fabric. Without the body underneath, the kimono is flat, uniform, perhaps even meaningless, without spatiality or form. When worn however, the kimono becomes an original space, no longer standard but instead unique, “shaped and choreographed by kinaesthetic response,”⁶ animated by the bodily activity within its shell.

“Our body is both an object among objects and that which sees and touches them.”⁷

Maurice Merleau-Ponty, *The Visible and The Invisible*

It is the nature of the kimono and other dynamic boundaries that they do not simply follow the body’s movements, copying its form; instead they build upon that form, transforming its activities into a type of physical expression that extends, amplifies, mutates, and suppresses bodily function. Sensation is the basis of this expression, as the perception of sense is translated by the enclosing boundary into a language of established actions and symbols, giving our senses cultural context and meaning.



46 “Slat Dance” by Oskar Schlemmer, 1927. Slats were strapped to the dancer in order to demarcate the geometric spaces occupied by the dancer’s body as well as to emphasize perspective for the audience.

Bauhaus artist-architect Oskar Schlemmer explores the transformative influence of the body on its sensitive boundaries in his costume design. Schlemmer believed that costume both expressed and masked the body’s nature and his costume designs simplified the forms and movements of the body.⁸ Schlemmer’s costumes are rigid

5 Tala Klinck, “body, performance, boundary”, in *immaterial/ultramaterial architecture, design, materials*, ed. Toshiko Mori (Cambridge, Harvard GSD, 2002), 93.

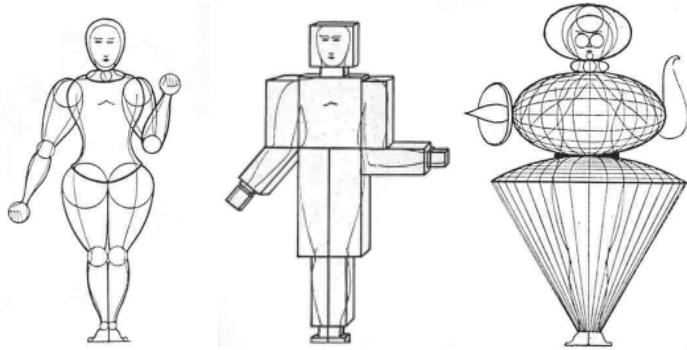
6 *ibid.*, 93.

7 Maurice Merleau-Ponty as quoted in Juhani Pallasma, *The eyes of the skin: architecture and the senses* (London: Academy Editions, 1996), 20.

8 Marcia Feuerstein, “Body and Building inside the Bauhaus’s Darker Side: On Oskar Schlemmer” in *Body and Building: essays on the changing relation of body and architecture*, ed. George Dodds, Robert Tavernor, Joseph Rykwert (Cambridge, MIT Press, 2002), 226-236.

Schlemmer designed his costumes based on a combination of several principles:

and uncomfortable, interacting with their inhabitants in disjointed and unstable ways, disrupting space as much as defining it. They force the body into movements that seem unnatural and repetitive, but they are successful in amplifying (and deforming) aspects of human function and extending the body's influence. Schlemmer saw his costumes as a type of ambulant architecture that did not contain the body, but instead extended it, becoming an “*aspect of the body transformed,*” filling, creating, and defining space.



47 Oskar Schlemmer sketches: *The Marionette*; *Ambulant Architecture*; *Technical Organism*, from “Means of Transforming the Human Body by the Use of Costume,” 1924.

Decades later, Issey Miyake’s costumes for the Frankfurt Ballet would seek a similar translation of bodily movement into material forms of perceptual extension and expression. Unlike Schlemmer, Miyake designed his costumes to be light and flexible, allowing the dancer complete range of movement. They were however, heavily pleated and constructed such that they maintain a degree of autonomy from the dancers’ bodies; the costumes did not merely mimic the body, but resisted, transformed, and recovered from its deformations. During each performance, both body and cloth sought to exert their singular independence while at the same time relying on each other for shape and response. “*The body animates the clothing which reshapes the body, which moves the clothes, and so on.*”¹⁰

“*Costume can be developed out of the inner organism, which is the body, and thus visibly express the invisible - the metaphysical anatomy; or it can be derived from the external appearance of the body’s configuration and, by refining the accidental and elevating it to the typical...costume can also be designed following the principles of space... [to] become a spatial structure. Or it can be derived from and developed according to movement.*” (Schlemmer as quoted by Feuerstein, 358.)

9 *ibid.*, 229.

10 Tala Klinck, “body, performance, boundary”, in *immaterial/ultramaterial architecture, design, materials*, Toshiko Mori (Cambridge, GSD, 2002), 93.



48 Frankfurt Ballet dancers wearing *Pleats* by Issey Miyake, 1991.

The clothed body expresses a symbiotic relationship between the human form and its enclosure. Kisho Kurokawa explains symbiosis in architecture as discontinuous unity – a relationship not of balance or harmony, or even accumulation, but rather, of opposition and transitory compromise.¹¹ Symbiosis is the result of two or more forces that do not necessarily agree, but come to a tacit understanding in an intermediary zone. These forces are given maximum individual expression (as long as such expression is consistent with the whole), but as an individual part, each is incomplete without its opposition. Only in the intermediary zone, where the parts come together, can the whole be understood. To build upon this with regards to the clothed body, because the symbiotic space between body and cover depends on a relationship of sensory stimulus and perceptual response, such space is ultimately sensate in nature.

In the case of the clothed body, the opposing forces are the presence and movement of the human body against the form and material qualities of the garment. The intermediary zone is the space between body and cloth – what Issey Miyake calls the “Ma.” Ma in Japanese means ‘space’ or ‘room.’ It also means ‘pause.’ It is a term used in Japanese architecture to describe the sacred space, and more importantly, the sacred time, the pause that occurs right before a deity arrives or departs¹², signified to the senses by an abrupt change in natural phenomena and a felt compression of time. Miyake’s

11 Kisho Kurokawa, “From the Age of the Machine Principle to the Age of Life Principle” in *Kisho Kurokawa: selected and current works*, (Victoria, Images Publishing Group Ltd), 9-17.

12 Kevin Nute, *Place, Time, and Being in Japanese Architecture*, (London, Routledge, 2004), 62.

Ma is the unique space between an original body and its cover, a space that is always changing, because both body and boundary are always shifting. In this fleeting and transitory space, a significant Ma is shaped only if the garment, despite its pliancy, retains enough independence that it does not completely surrender to the force of the body beneath it. “*Architecture exists only in that delay of flexibility*,”¹³ in the breath when the force of change is met with an equal force of resistance is the shape and space of the Ma.

In his essay “What Time is this Place?” Kevin Lynch contests that the most vital role of the sacred space is to “*strengthen and humanize [the] present image of time...the sense of ‘now’*.”¹⁴ The active integration of natural and human change - of perceptual change – to a spatial environment is what brings about the strongest sense of now and of its fleeting nature. It is the dynamic boundary that integrates phenomenal change into its enclosure, relying on such change for its form and function, transforming as long as its inhabitants maintain sense and response, and pausing in order to emphasize to these same inhabitants the passage of time.

Ma also means pause. There is a time of the everyday where one lives buffered from too much sensation, when perception is sometimes ignored in order to function. Then there is the time of the special, or sacred, day, where one seeks to be stimulated, impressed, enlightened, and aroused. This is the space and time of the Ma, a sensitive period of stasis where through the layers we cover ourselves with heightened awareness can occur; when in a mobile impression, an absolute understanding of a space can be attained, without draining the body of its resources. It is a pause before the body’s energy level returns to normal, the breath between acts. From snail to spider, and back again.



49 Garment by Issey Miyake, S/S 1989, photographed by Irving Penn.

13 William Braham and Paul Emmons, “Upright or Flexible? Exercising Posture in Modern Architecture” in *Body and Building: essays on the changing relation of body and architecture*, ed. George Dodds, Robert Tavernor, Joseph Rykwert (Cambridge, MIT Press, 2002), 303.

14 Kevin Lynch, as quoted in Kevin Nute, *Place, Time, and Being in Japanese Architecture*, (London, Routledge, 2004), 65.

Dress-making

a = neck circumference
b = bust circumference
c = waist circumference
d = hip circumference
e = bicep curve
f = elbow curve
g = wrist curve
h-i = shoulder circumference

1-2 = neck to waist, center front
2-3 = waist to hip, center front
3-4 = hip to hem, center front
5-6 = armpit to waist sideseam
6-7 = waist to hem sideseam
5-8 = underarm sideseam
9-10 = overarm sleeve length
11-12 = neck to waist, center back

Katrina, 5'8"

a = 13"
b = 32.5"
c = 26"
d = 32.25"
e = 9.5"
f = 9.75"
g = 6"
h-i = 38.5"

1-2 = 13.75"
2-3 = 4.75"
3-4 = 37.75"
5-6 = 10.5"
6-7 = 41"
5-8 = 20"
9-10 = 22.75"
11-12 = 16"



50 Katrina, June 2006.

"I want another dress, made of wood, so that I can conceal myself in it." And at once he had this wooden dress made. She was well pleased. She waited until one day her husband was out of sight, put on the wooden dress, and under it the four silk dresses, and went away to a certain river not far off, and threw herself in it. Instead of sinking and drowning, she floated, for the wooden dress kept her up.

The water carried her a long way, when she saw on the bank a gentleman, and began to cry, "Who wants the Fair Maria Wood?"

That gentleman who saw her on the water, and whom she addressed, called her and she came to the bank and saluted him.

"How is it that you are thus dressed in wood, and come floating on the water without drowning?"

She told him that she was a poor girl who had only that dress of wood and that she wanted to go out to service.

He took her to his house, where his mother was, and told her all that had happened, saying, "If you, dear mother, will take her as a servant, we can try her." In short, she took her and was pleased with this woman dressed in wood.

Thomas Frederick Crane,
"Fair Maria Wood,"
Italian Popular Tales



51 *Wood Dress over Silk Dresses*, June 2005. Graphite on vellum.



52 *Silk dresses under crinoline*, June 2005. Graphite on vellum.



53 *Silk dress under bustle*, June 2005. Graphite on vellum.

“What, you wish to go to the ball so badly dressed that they would drive you away as soon as they saw you!” Fair Maria Wood was silent and when the mistress was in bed, dressed herself in one of her silk dresses and became the most beautiful woman that was ever seen. She went to the ball, and it seemed as if the sun had entered the room; all were dazzled. She sat down near her master, who asked her to dance, and would dance with no one but her. She pleased him so much that he fell in love with her. She asked her who she was and where she came from...she said that she was of that country: “That when they speak of going to a ball, they are beaten on the head,” and said no more.

Thomas Frederick Crane, *“Fair Maria Wood,” Italian Popular Tales*



54 *Silk dress under farthingale*, June 2005. Graphite on vellum.

"I an the woman dressed in wood who was your servant. It is not true that I was a poor girl, but I had that dress to conceal myself in, for underneath it I was the same that I am now. I am a lady, and although you treated me so badly when I asked to go to the ball, I saw that you loved me, and now I have come to save you from death."

Thomas Frederick Crane, "*Fair Maria Wood*," *Italian Popular Tales*



55 *Silk dress under pannier*, June 2005. Graphite on vellum.

a = neck circumference
b = bust circumference
c = waist circumference
d = hip circumference
e = bicep curve
f = elbow curve
g = wrist curve
h-i = shoulder circumference

1-2 = neck to waist, center front
2-3 = waist to hip, center front
3-4 = hip to hem, center front
5-6 = armpit to waist sideseam
6-7 = waist to hem sideseam
5-8 = underarm sideseam
9-10 = overarm sleeve length
11-12 = neck to waist, center back

Adjustable Dress Form,
4'8" to top of neck

a = 12.5" to 15.5"
b = 28" to 35.5"
c = 22" to 30"
d = 30" to 38.5"
e = n/a
f = n/a
g = n/a
h-i = 13.5" to 15"

1-2 = 12.75"
2-3 = 8"
3-4 = n/a
5-6 = 7"
6-7 = n/a
5-8 = n/a
9-10 = n/a
11-12 = 12.5"



56 Dress Form, June 2006.



57
Arthropod Dress (details), July 2005. Grey padding board, acrylic yarn.



58



59 *Arthropod Dress*, July 2005. Grey padding board, acrylic yarn.



60
Eames' Splint Dress (details), March 2006. Grey padding board, cotton muslin.



61



62 *Eames' Splint Dress*, March 2006. Grey padding board, cotton muslin.

*“A dress is no longer a little, flat, closed thing,
But begins in the open sky and mingles with the courses
of the stars,
So that she who wears it, carries the world on her back.
The Universe is at Woman’s beck and call.”*

Joseph Delteil for Sonia Delanauy,
The coming fashion, 1923



63 *Samurai Tile Dress*, April 2006. Grey padding board, hemp yarn.



64
Samurai Tile Dress (details), April 2006. Grey padding board, hemp yarn.



65



66



67



68

Moulded Ply Pocket Dress, January 2006. Grey padding board, cotton muslin.



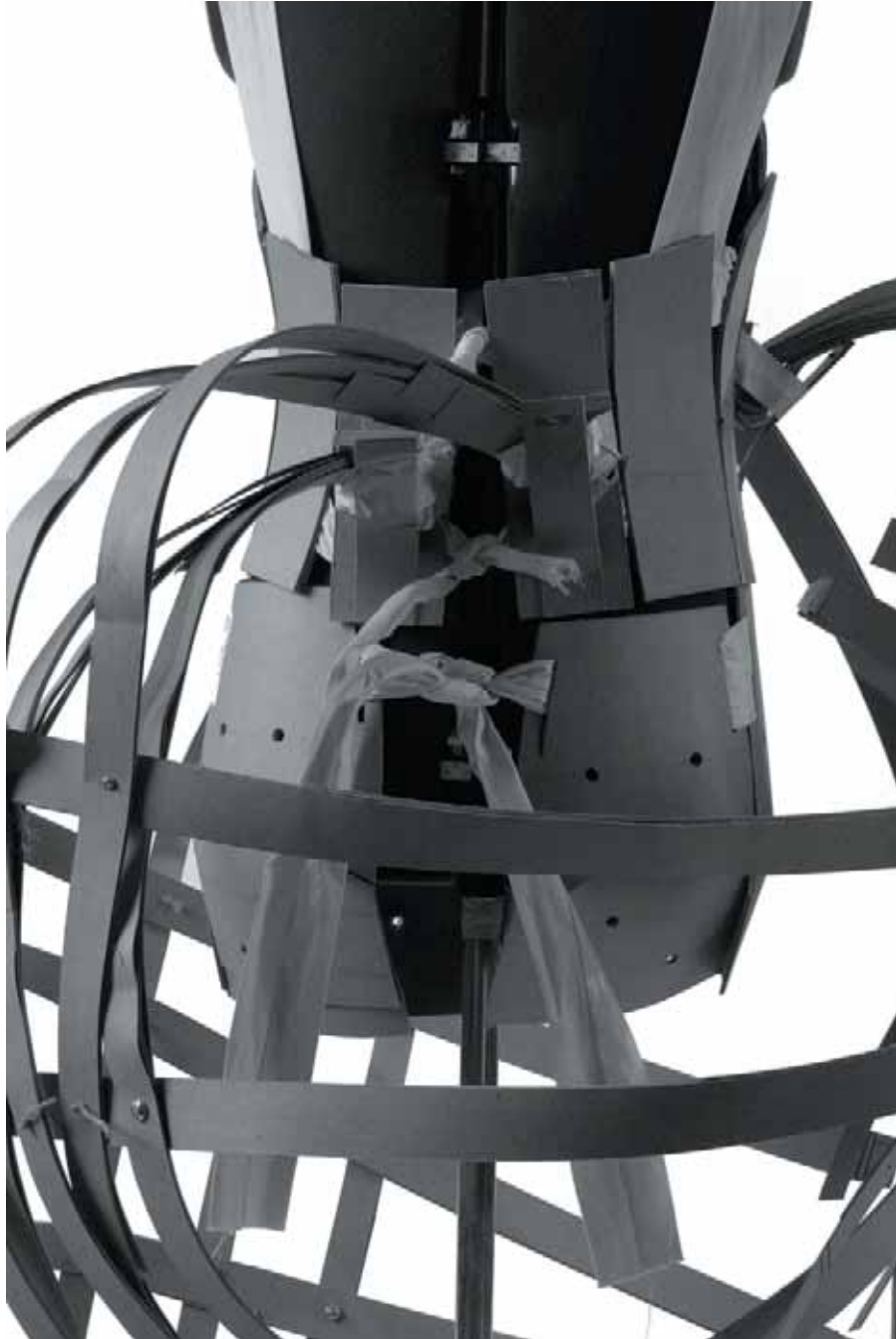
69



70 *Moulded Ply Pocket Dress*, January 2006. Grey padding board, cotton muslin.



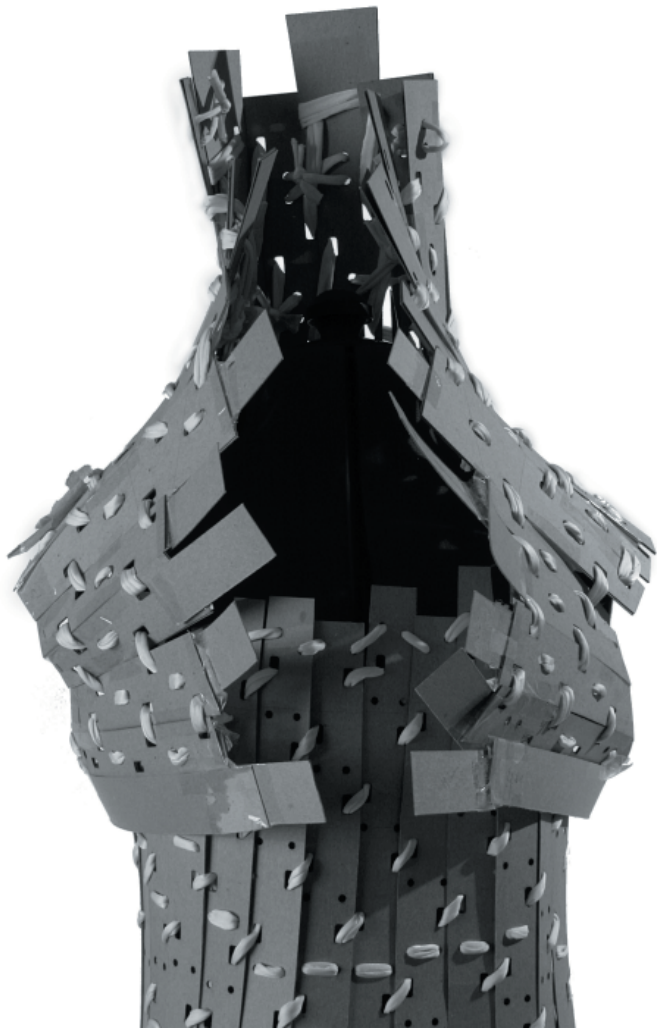
71 *Distorted Crinoline 1 on Moulded Ply Pocket Dress*, February 2006. Grey padding board, cotton muslin.



72 *Distorted Crinoline 1 on Moulded Ply Dress (detail)*, February 2006. Grey padding board, cotton muslin.



73 *Distorted Crinoline 1 on Moulded Ply Pocket Dress* (support detail), February 2006. Grey padding board, cotton muslin.



74
Strip Dress 1 (details), April 2006. Grey padding board, nylon lacing.



75



76 *Strip Dress 1*, April 2006. Grey padding board, nylon lacing.



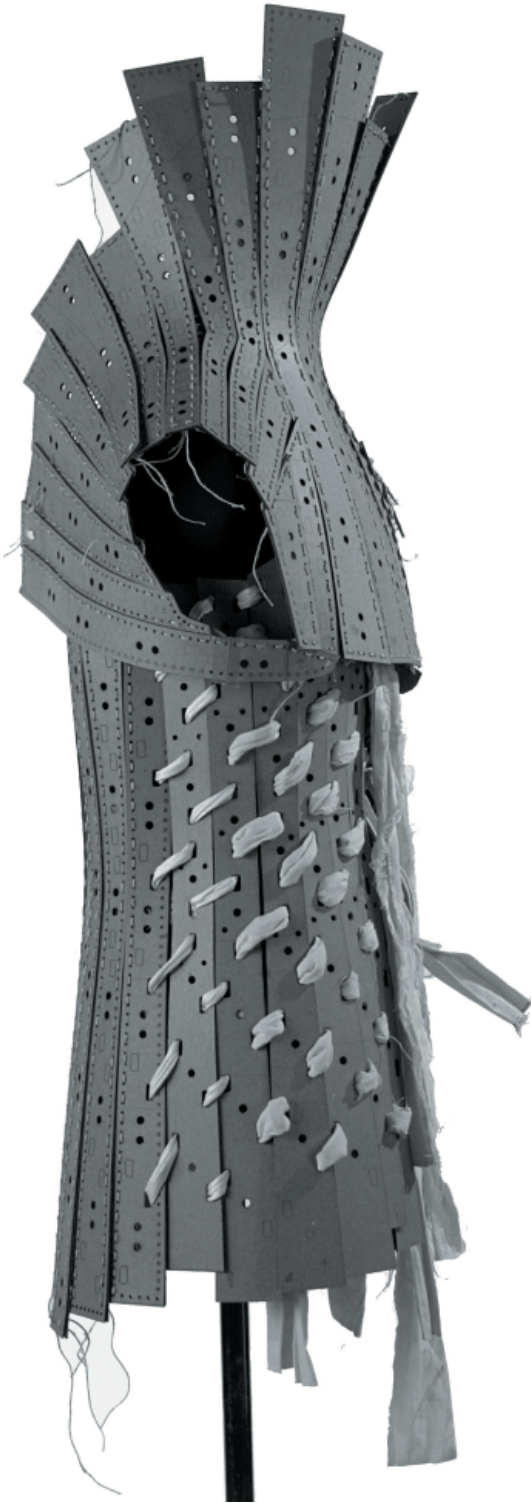
77 *Strip Dress 2*, May 2006. Grey padding board, cotton muslin, nylon lacing, hemp yarn.



78
Strip Dress 2 (inner sheath), May 2006. Grey padding board, cotton muslin, nylon lacing, hemp yarn.



79

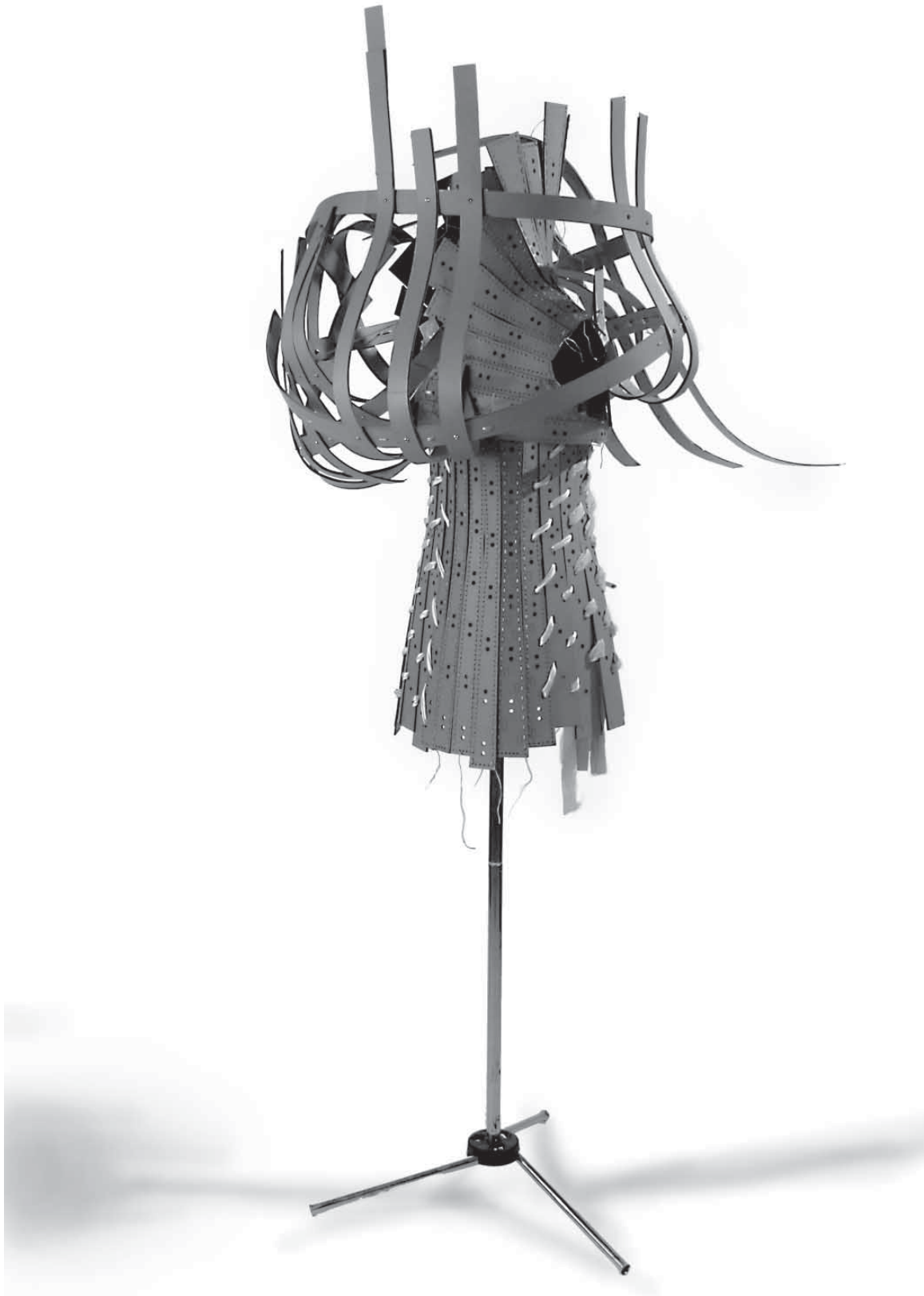


80 *Strip Dress 2*, May 2006. Grey padding board, cotton muslin, nylon lacing, hemp yarn.

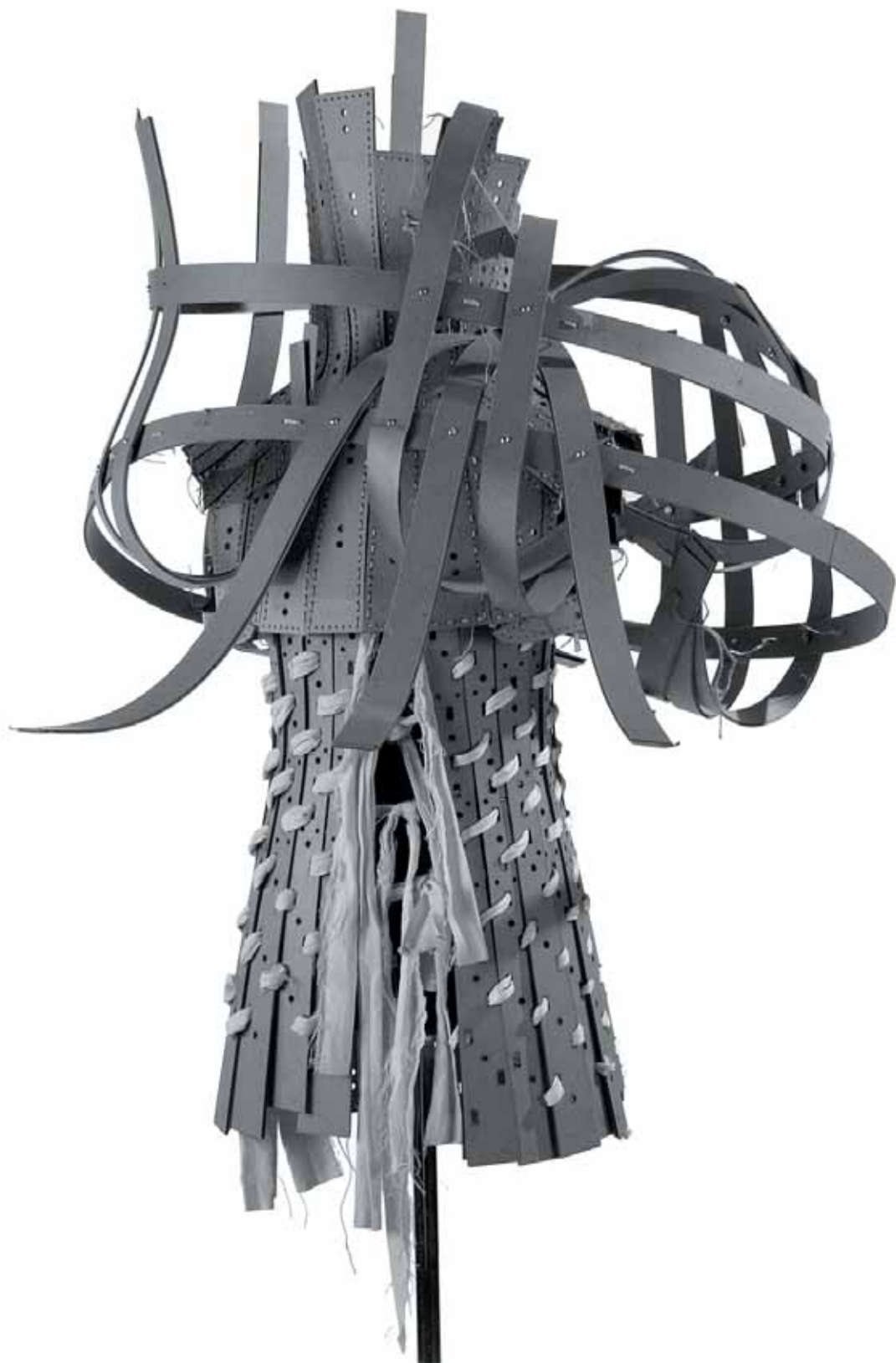
“After the Age of Revelation came the Age of Concealment. Sleeves flowed along forearms and closed tight at the wrist hems fell to the ankle, necklines rose above the collarbone... In his eagerly awaited spring / summer collection [Hyperion] proclaimed the final liberation of costume from the female body. The new dress completed the urge toward concealment by developing the bodice upward into a complete covering for the face and head...to use the area between collarbone and scalp as a transitional element, by expanding the idea of a dress upward to include the space above the height of the wearer...”

Commentators welcomed the enclosure dress but were divided over its merits. Some argued that it represented the ultimate defense of the female body against visual invasion, while others saw in it the final liberation of costume from its demeaning dependence on the body.”

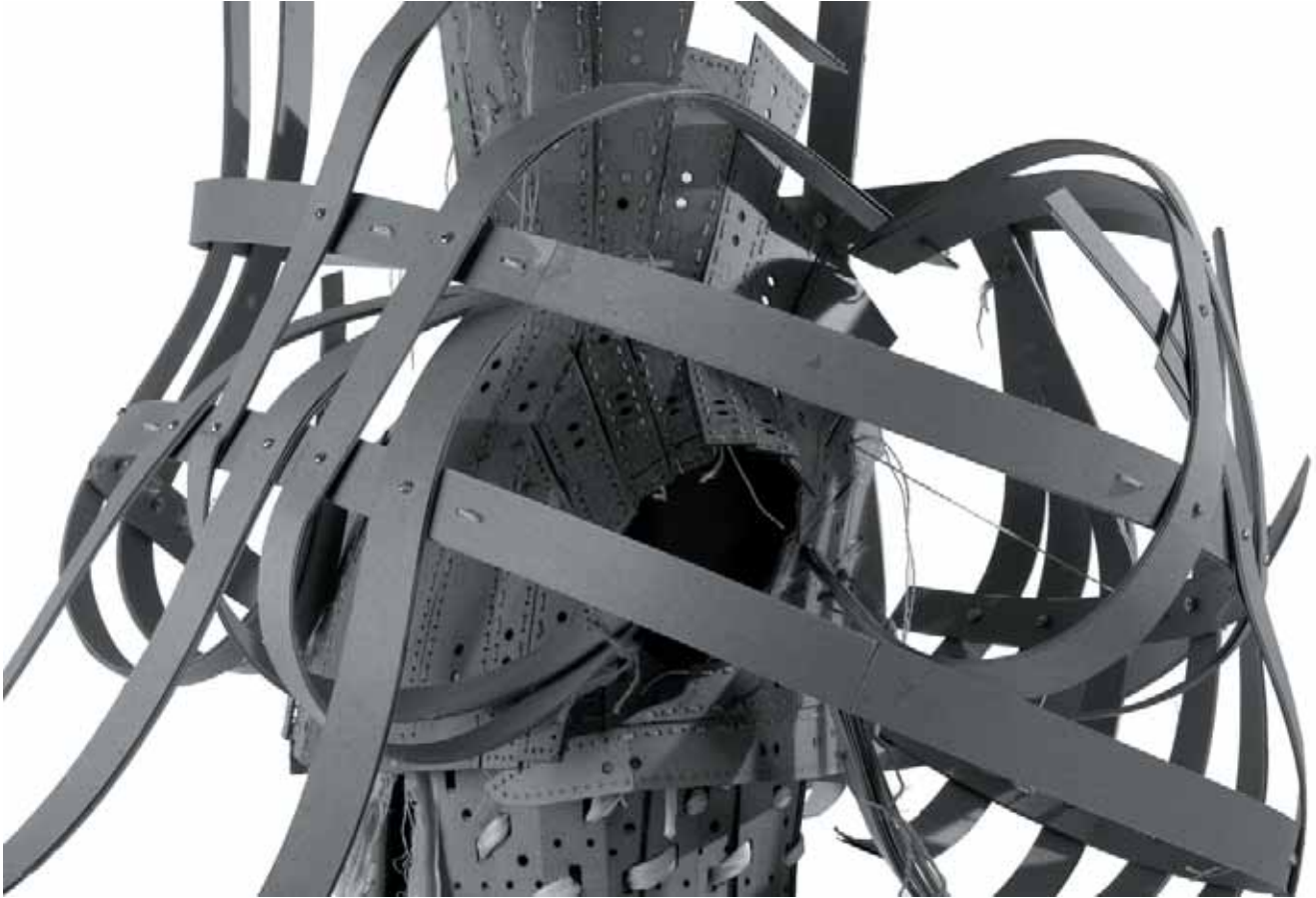
Steven Millhauser
“A Change in Fashion,”
Harper’s, May 2006



81 *Distorted Crinoline 2 on Strip Dress 2*, June 2006. Grey padding board, stainless steel hardware, cotton muslin, nylon lacing, hemp yarn.



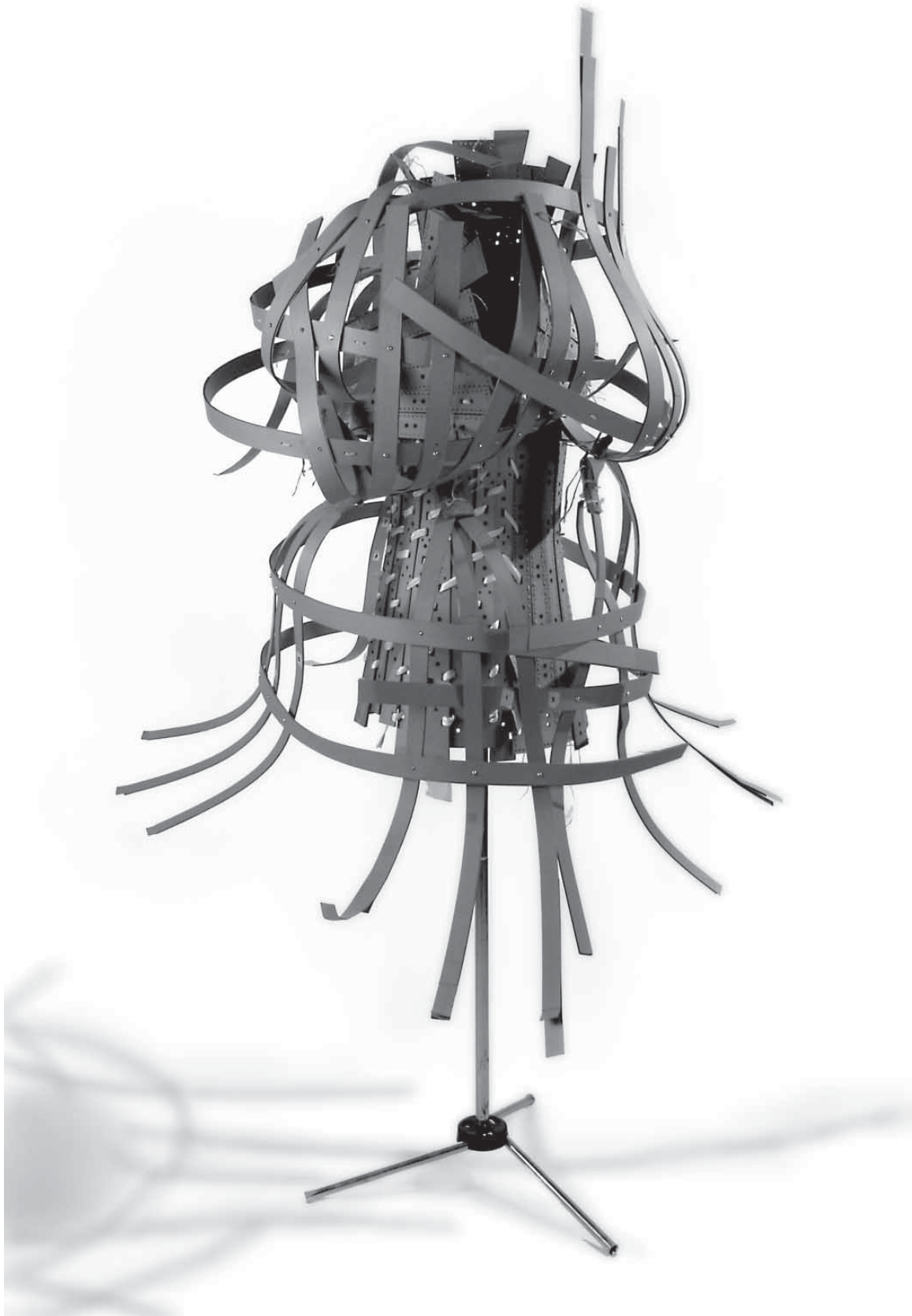
82 *Distorted Crinoline 2 on Strip Dress 2*, June 2006. Grey padding board, stainless steel hardware, cotton muslin, nylon lacing, hemp yarn.



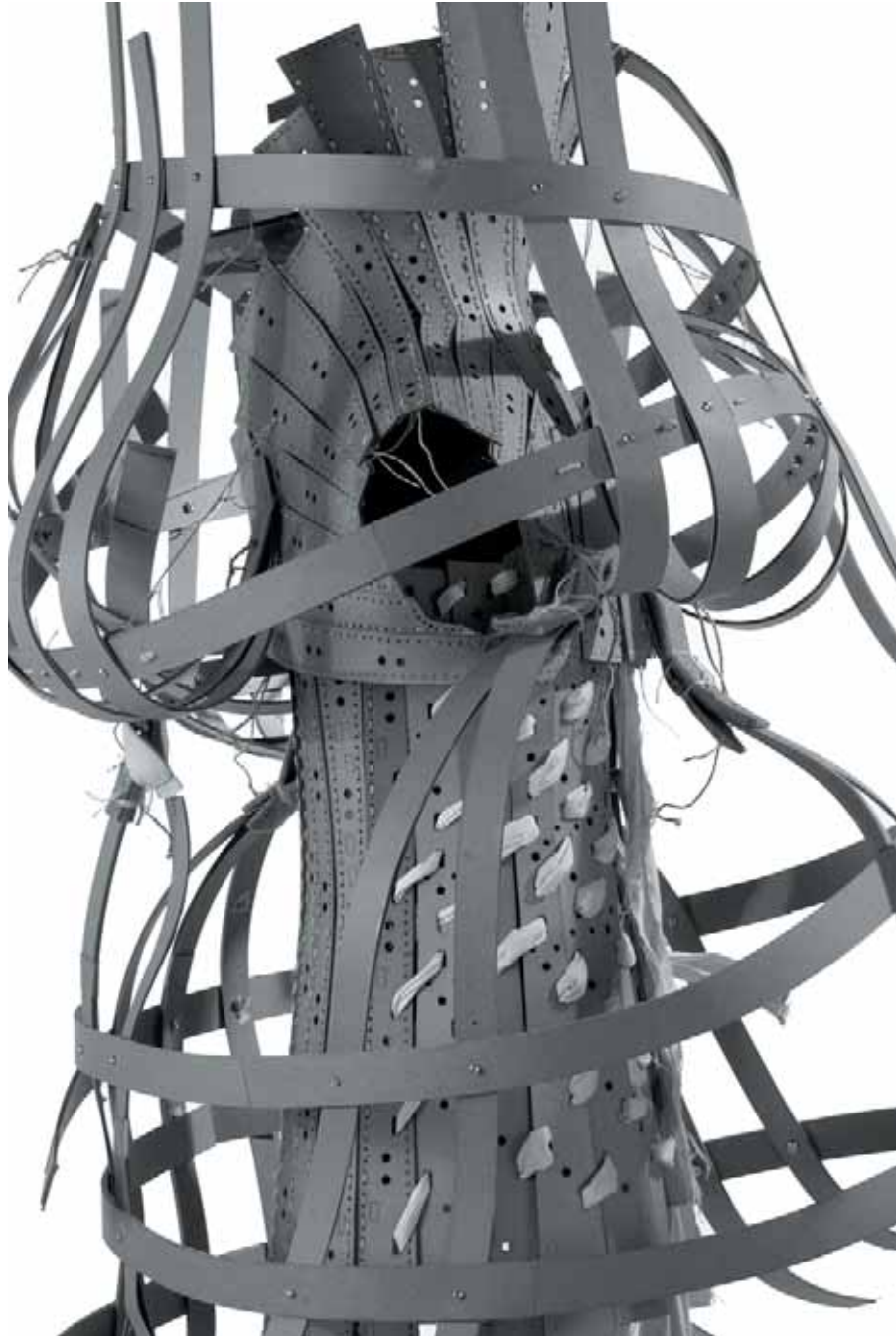
83 *Distorted Crinoline 2 on Strip Dress 2* (support detail), June 2006. Grey padding board, stainless steel hardware, cotton muslin, nylon lacing, hemp yarn.

*“Before I built a wall I’d ask to know
What I was walling in or walling out,
And to whom I was like to give offense.”*

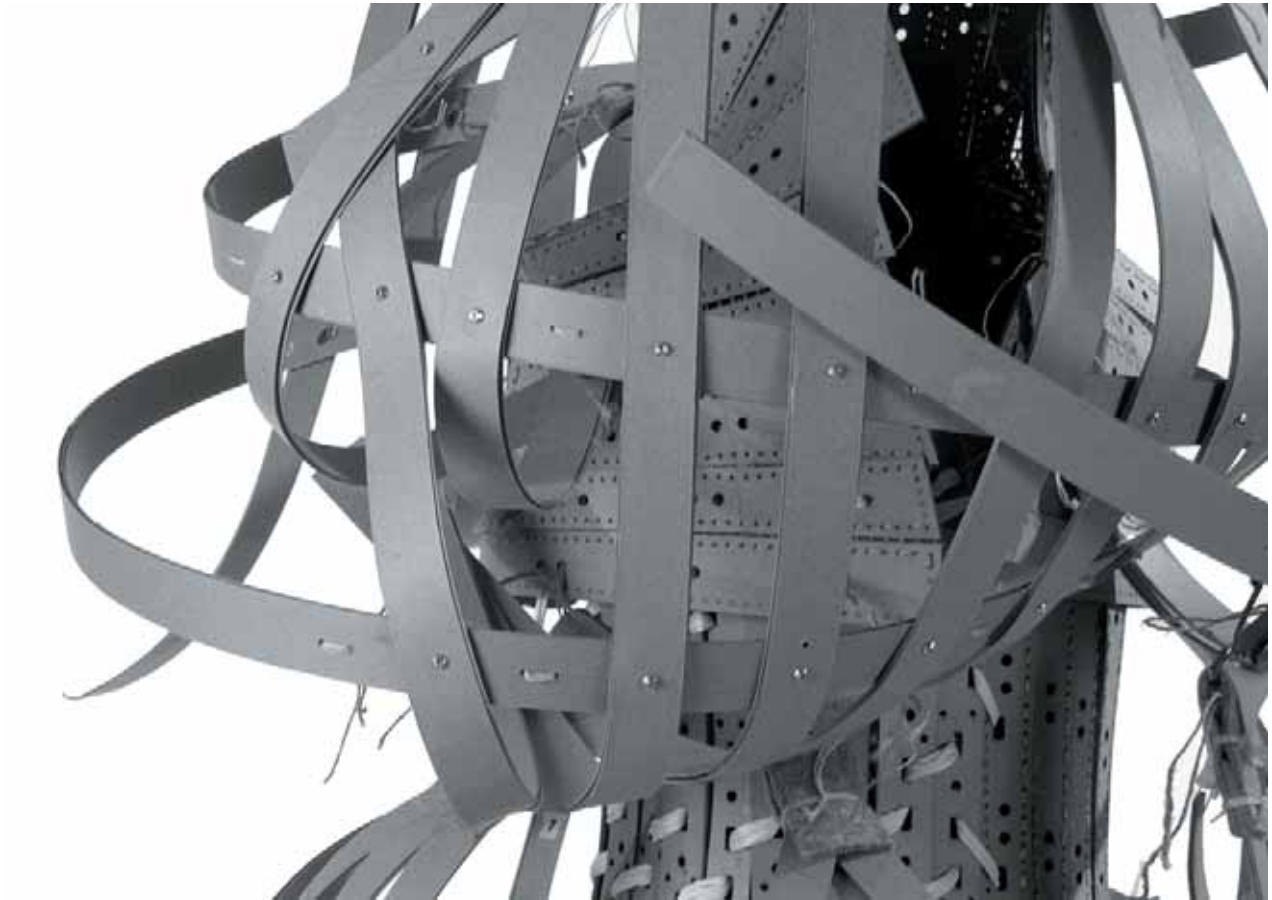
Robert Frost, *The Mending Wall*



84 *Distorted Crinoline 2&3 on Strip Dress 2*, June 2006. Grey padding board, stainless steel hardware, cotton muslin, nylon lacing, hemp yarn.



85 *Distorted Crinoline 2&3 on Strip Dress 2*, June 2006. Grey padding board, stainless steel hardware, cotton muslin, nylon lacing, hemp yarn.



86 *Distorted Crinoline 2&3 on Strip Dress 2*, June 2006. Grey padding board, stainless steel hardware, cotton muslin, nylon lacing, hemp yarn.

Wood Dress



87 Cherry wood laminate and hardware samples, July 2006. 1/16" Black cherry veneer, stainless steel hardware, nylon cord.



88 Aluminium jig (telescoping and pivoting arms), November 2005.

The jig was based on a tool design by Steve Foley, an American woodsmith who specializes in bent wood forms. Wood (or padding board) strips are clamped into place on the jig to hold bent forms during the laminating process. The bent forms can be any shape the wood allows, as the jig is designed to be completely adjustable. Clamps that hold the jig arms in place can slide to any height along the center pole and the telescoping arms of the jig permit the wood to be bent at various distances around that pole, allowing for an infinite range of bending radii. Finally, the pivoting arms and heads twist and bend wood at any angle. One flaw of this jig is that because these mechanisms depend on friction from screws or clamps to hold things in place, the aluminum arms cannot carry loads that are greater than the resisting friction. This was a minor problem during lamination, when long wood strips (up to 9' in length) would require numerous (heavy) clamps hold them together when the glue was drying. The weight of the clamps would sometimes distort the bend of the wood, however this was a minor problem since the final form of the wood dress is fairly free, and the laminated wood strips still retain some flexibility.

The model's measurements were incorporated into the jig by placing properly sized rings at the height of her hips, waist, bust, shoulders, neck, and forehead in order to ensure that the wood forms would not interfere with the model's body. The jig is also collapsible for easy transport.



89 Aluminium jig, November 2005.



90 1/16" Black cherry veneer

Black cherry veneer was used for the *Wood Dress*. Initially, African Padauk was considered for its vivid red colour, smooth texture and beautiful sheen but the wood was very dense and brittle and does not steam bend. Black cherry held bent forms well, and its steam bending properties are comparable to ash. It was chosen for its rich, warm colour, fine texture and beautiful grain which came out when treated with tung oil.

Wood Properties

Black cherry (*Prunus serotina*) is a quality hardwood used in fine furniture. It is indigenous to eastern Canada and the north-eastern United States. It is moderately hard, strong, and is a closed grain wood with fine texture and a satin lustre. It has good steam bending properties, comparable to ash or beech when bending. It is more expensive than beech and ash, but cheaper than walnut and oak.

Northern white cedar (*Thuja occidentalis*) is a common softwood used in exterior applications. It is indigenous to eastern North America. It is a light and soft wood with a straight and even grain and fine texture. It is low strength but highly decay resistant. It has poor steam bending properties and average machining properties. It is highly aromatic and cheap.

White ash (*Frazinus americana*) is a common hardwood used in furniture and structural frames. It is indigenous to eastern North America. It is a heavy, soft, and porous wood, with a prominent, open grain and coarse texture. It has good steam bending properties and is one of the cheapest hardwoods available.

Birch aircraft plywood is used for vintage aircrafts, hobby planes, and moulded ply furniture. Silver birch (*Betula pendula*) grows in Europe and is a dense wood, with a straight grain and fine texture. It has good stability and excellent shock resistance. Aircraft plywood is extremely flexible and able to curve along two dimensions. Because each ply of the sheet is laminated with its grain perpendicular to the grain of the next ply, aircraft plywood is extremely strong and resilient despite being so thin. Aircraft ply is very expensive.

Hard maple (*Acer saccharum*) is a quality hardwood used in furniture, cabinetry, and instruments. It is indigenous to eastern North America. It is a heavy, hard, and stiff wood, with a straight, close grain and even texture. It has high strength, low decay resistance and satisfactory steam bending properties. Maple is more expensive than cherry and ash, but cheaper than walnut and oak.

(Source: *Wood Properties and Uses*, <http://www.woodbin.com/ref/wood/index.htm>. All wood is from A&M Specialty Wood, Cambridge, Ontario.)



91 1/12" Planed northern cedar strip
Planed cedar strips were considered for the *Distorted Crinolines* series. While the material had a lovely smell, it was dismissed because of its poor steam bending properties and it was difficult to plane at such thin thicknesses consistently.



92 1/16" White ash veneer (3 layers)
Ash veneer was considered for the *Distorted Crinolines* series. While the material held bent forms very well and was very inexpensive, its coarse texture was unpleasant to touch and it had a bland colour which stained inconsistently because of its open grain.



93 1/16" White ash veneer (2 layers sandwiching 1/16" pressed wool felt)
The composite of ash veneer and industrial felt was considered for the *Distorted Crinolines* series. The result was very resilient and flexible but did not hold tight curves as well as hoped for. Also, the dense felt it heavy and using it throughout the entire wood dress would be costly.



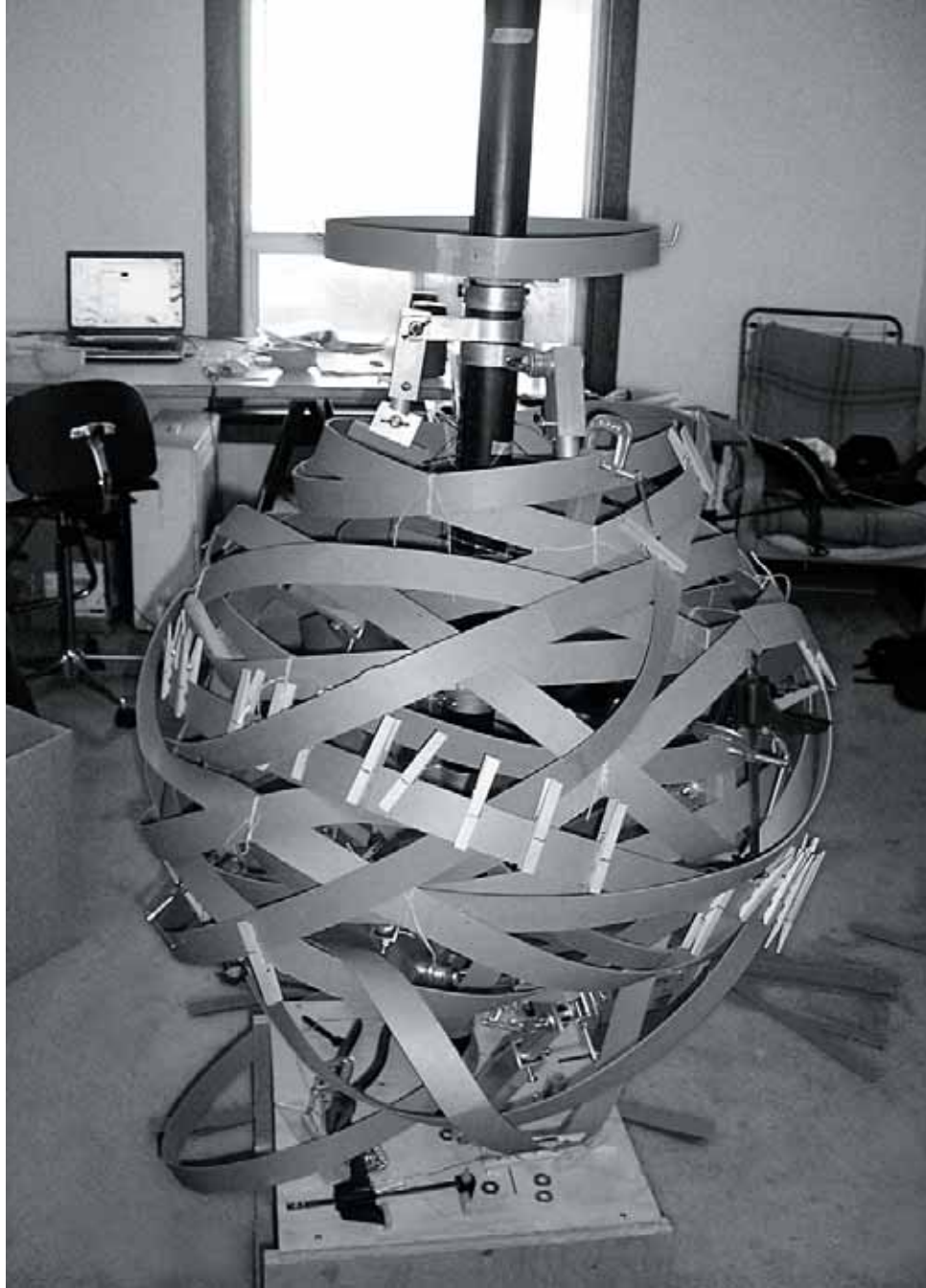
94 1/32" Birch aircraft plywood (2 layers)
Aircraft ply was considered for the *Arthropod Dress* and the *Eames' Splint Dress*, as both prototypes demanded the material's flexibility and resilience.



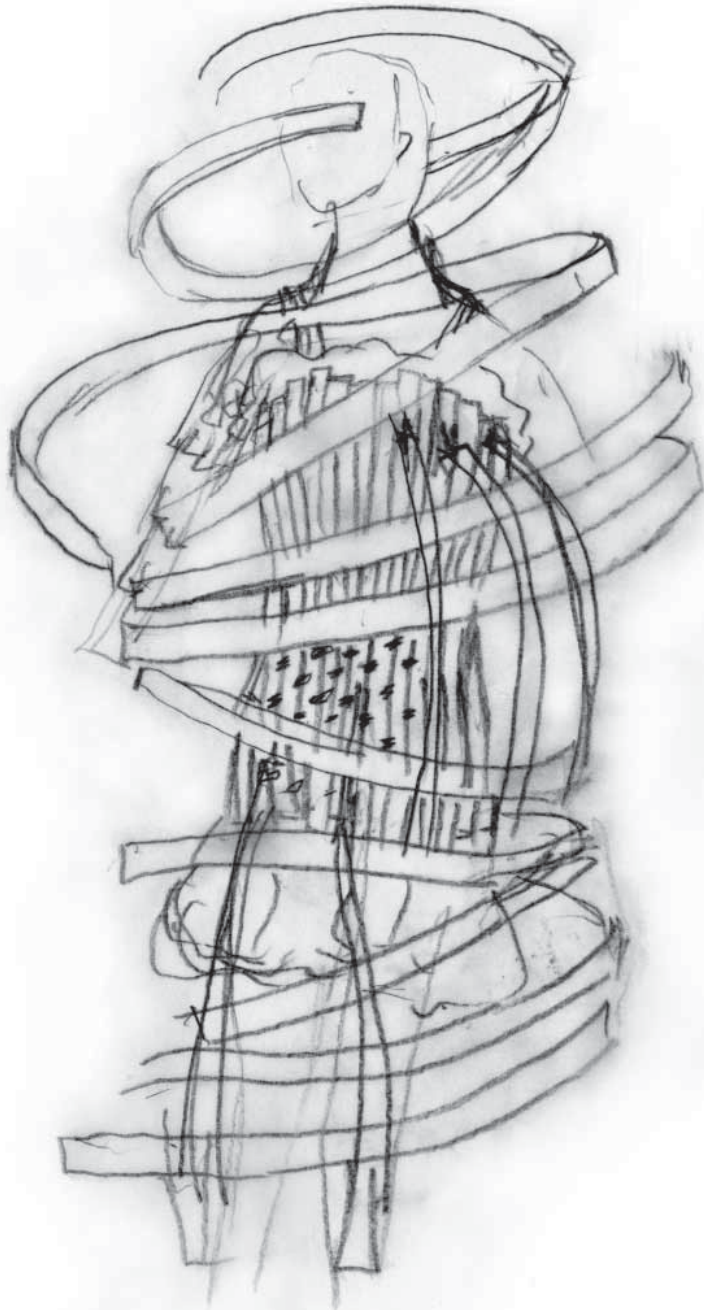
95 1/32" Hard maple veneer
Sugar maple veneer was considered for the *Moulded Pocket Ply Dress*. The veneer was very strong and held its laminated shapes very well while maintaining some flexibility, although not as much as the aircraft ply.



96 *Swallow's Nest Dress*, October 2005. Graphite on vellum.



97 *Swallow's Nest Dress* (in progress), November 2005. Grey padding board.



98 *Ribcage Dress*, May, 2006. Graphite on vellum.



99 *Ribcage Dress* (in progress), December 2005. Grey padding board.

“But in addition to the images of form so often used by psychologists of the imagination, there are...images of matter, direct images of matter. Vision names them, but the hand knows them. A dynamic joy touches them, kneads them, makes them lighter. One dreams these images of matter substantially, intimately, rejecting forms - perishable forms and vain images, and the becoming of surfaces. They have weight, they are a heart.”

Gaston Bachelard,
On Poetic Imagination and Reverie



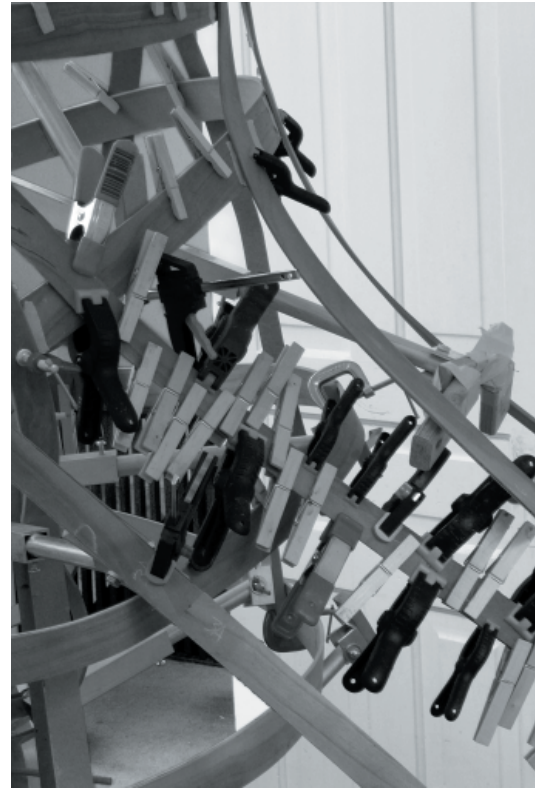
100 *Wood Dress* (in progress), June 2006. 1/16" Black cherry veneer. Drying, gluing, and clamping ribs during the lamination process. Each rib is 3 ply for a total thickness of 3/16".



101 *Wood Dress* (in progress), June 2006. 1/16" Black cherry veneer.



102



103



104

Wood Dress (in progress), July 2006. 1/16" Black cherry veneer.
After the ribs are steam bent and laminated together, the thinner vertical members are formed. Like the ribs, each member is 3 ply thick for a total thickness of 3/16". After members were sanded smooth, tung oil was applied.



105

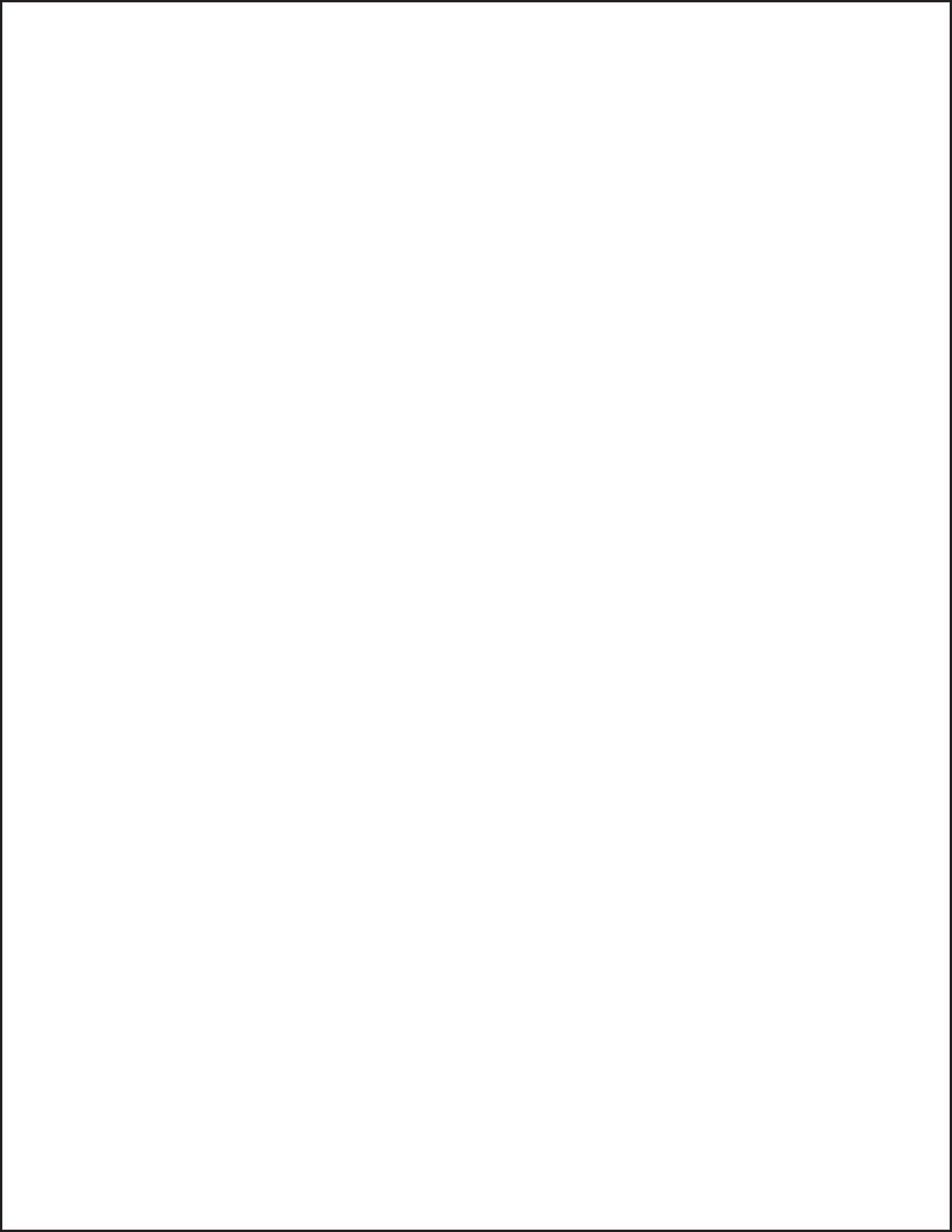
106



107 *Wood Dress - Sticks*, August 2006. 1/16" Black cherry veneer.



108 *Wood Dress - Ribs*, August 2006. 1/16" Black cherry veneer.



Rubber Dress



109 Rubber composite strips, August 2006. 1/16" Red rubber, 1/16" pressed wool felt, rubber grommets, copper cable.

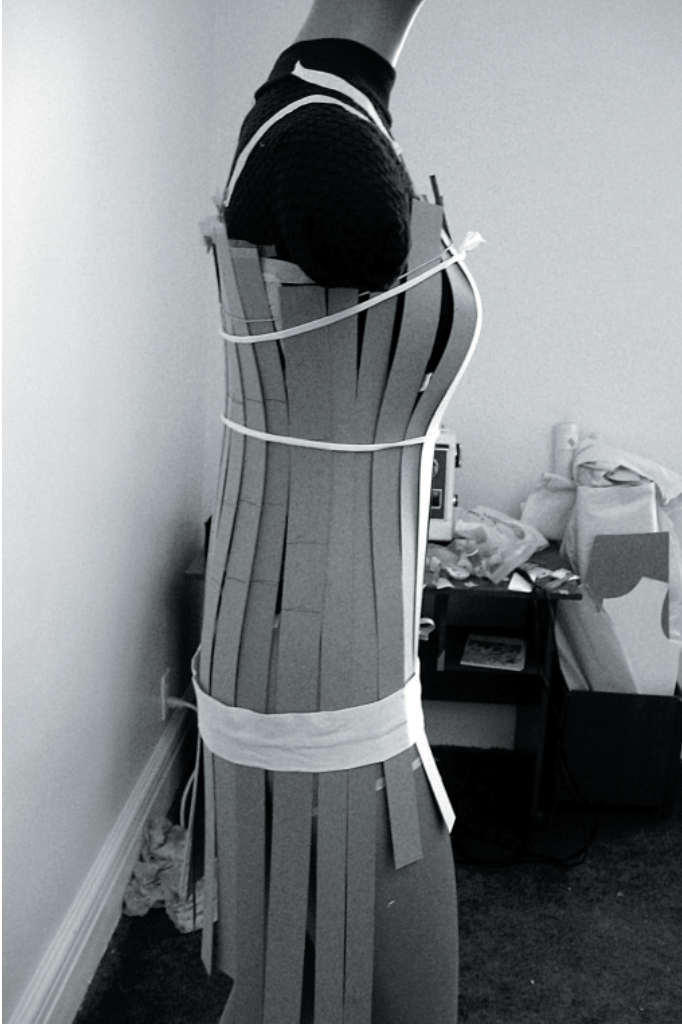
“We have the make a true chair, a true jacket, a true shirt. I have to maybe teach my assistant, what is the cutting of a true shoulder, what is the cutting of the sleeves? Where is the point of shrink of shirt, the basic point of entrance to a shirt? You can spend 100 hours to enjoy this type of feeling, [this intersection]. You cannot do this in the fashion business, so maybe sometimes I am shouting in my mind, I am not a fashion designer, I am a dress-maker.”

Yohji Yamamoto,
A Notebook on Cities and Clothes

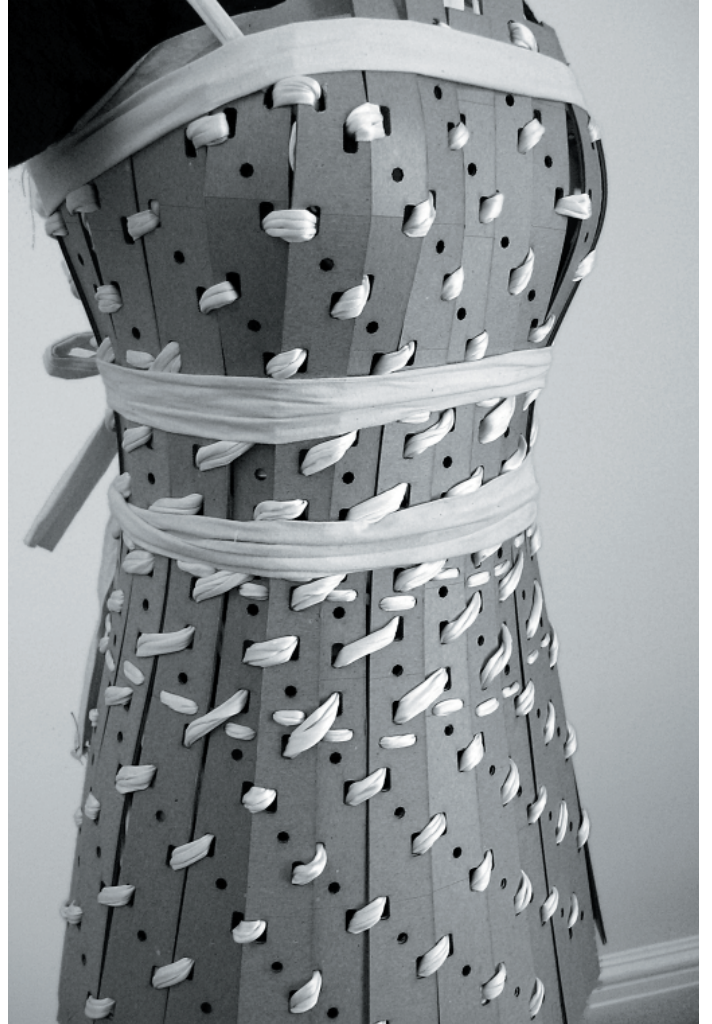


110

Strip Dress (in progress), April 2006. Grey padding board, nylon lacing, rubber bands.



111



112



113 1/16" Red Rubber Sheet (smooth finish).

Red rubber sheet was used for the *Rubber Dress*. It is one of the lightest and most rigid options that was considered for the dress, and is capable of holding the dress collar's form fairly well, even at 1/16" thick. The smooth finish is susceptible to marking. The 1/16" thickness cut well under the laser cutter at 74% power, 3.1% speed, and 78 ppi (pulses per inch). The laser cutter leaves black ashy residue which should be cleaned off.

Material Properties

Red rubber (*styrene butadiene rubber*) sheet is a low cost rubber used in low applications such as washers and gaskets for the heating and plumbing trades as it easily conforms to uneven surfaces. It has poor resistance to oil but ages well and has moderate abrasion resistance. It comes in smooth finish or textured finish. Durometer Shore (hardness) $\pm 5 = 75$. Tensile Strength = 400 PSI. Temperature Range = -20°F to 180°F. Average Weight (lb/sq. yd., 1/16") = 3.0.

Vegetable tanned leather at 7-9 oz. weight (1/8" thick) is typically used for belts or shoe soles. It has exceptional embossing and tooling qualities and oils and dyes evenly. It is excellent for moulding and will retain its new shape. While vegetable tanned leather is breathable and can hold a large amount of water vapour, it is not stable when immersed in water; it tends to discolor, and if left to soak and then dry it will shrink and become less supple and harder.

Pure gum rubber is a full-floating, natural rubber. It is very soft and stretchy and thus excellent for applications requiring high tensile and elongation characteristics or when requiring a soft rubber seal as it conforms to irregular surfaces easily. It has superior abrasion resistance and is resistant to most organic salts, acids, alkalis, and ammonia. Non-marking with a smooth finish. Durometer Shore (hardness) $\pm 5 = >40$. Tensile Strength = 3000 PSI. Elongation = 600%. Temperature Range = -20°F to 140°F. Average Weight (lb/sq. yd., 1/16") = 3.2.

Neoprene blend is a heavy and stable rubber which provides moderate resistance to oil and ozone. It is used in bumpers, pads, and sealing in general gasket and flange applications. Durometer Shore (hardness) $\pm 5 = 60$. Tensile Strength = 800 PSI. Temperature Range = -20°F to 170°F. Average Weight (lb/sq. yd., 1/16") = 5.5.

Red silicone rubber has excellent heat resistance, low temperature flexibility, and resistance to compression. It is also resistant to ozone, aging, sunlight and many common fuels, oils and chemicals. Durometer shore (hardness) $\pm 5 = 70$. Tensile Strength = 700 PSI. Elongation = 250%. Temperature Range = -80°F to 425°F. Average Weight (lb/sq. yd., 1/16") = 3.0.

(Source: *Rubber Product Descriptions*, <http://www.smallparts.com/materials/>. All rubber was supplied by All Custom Gasket and Materials Ltd., Mississauga, Ontario. Leather supplies are from Tandy Leather, www.tandy.com.)



114 1/8" Vegetable Tanned Leather
This leather had a lovely finish and texture, as well as excellent rigidity, allowing it to hold the form of the dress collar. At 1/8" thickness, the leather was very difficult to cut with laser. The highest power setting caused too much flare up while multiple passes ended up charring the leather beyond use. Thinner thicknesses were available however they were dismissed as leather was one of the most expensive options, second to red silicone.



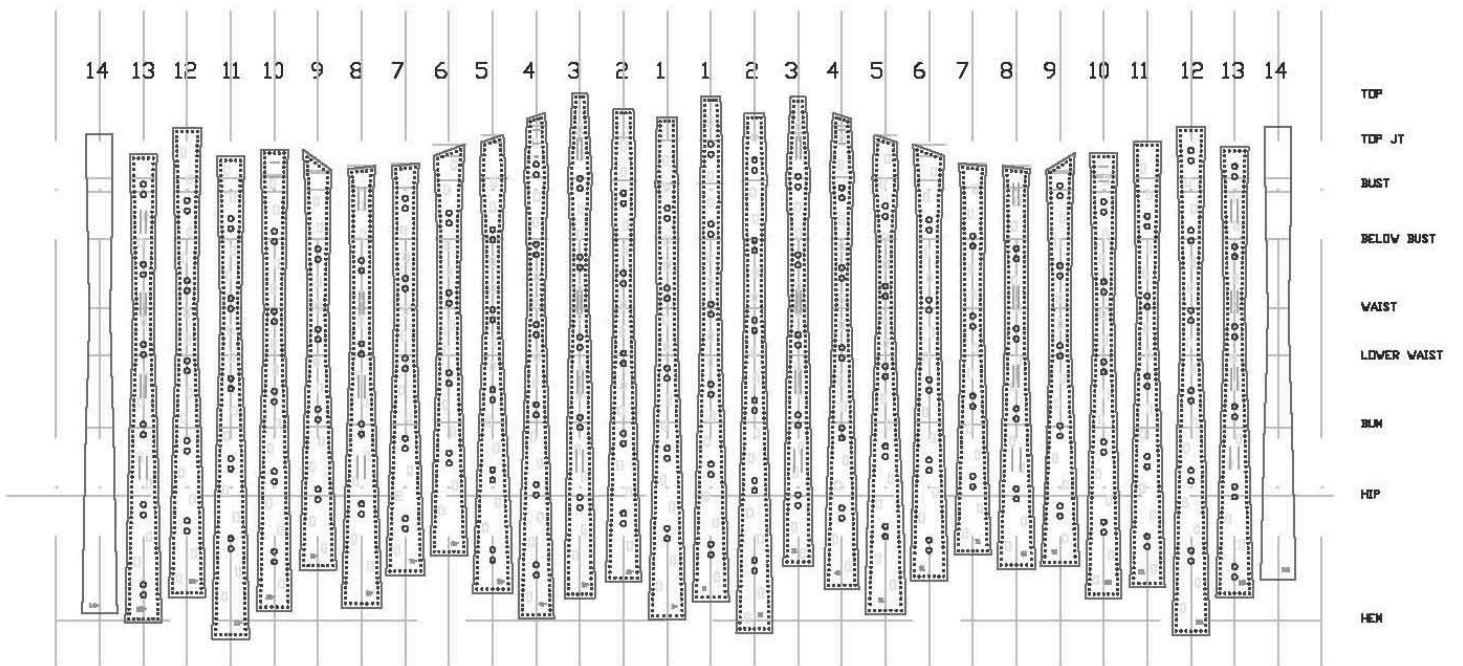
115 1/8" Pure Gum Rubber Sheet
Pure gum rubber was very difficult to cut under the laser cutter. At the laser's highest setting, the thickness was still not cut through and was also causing constant flare-ups as well as melting the rubber. At lower power settings, the ridges of the laser cuts became very noticeable. Because pure gum rubber is very soft and pliant it would not have held the shape of the dress collar very well, even at greater thicknesses. It also dirties very easily. It is the cheapest option.



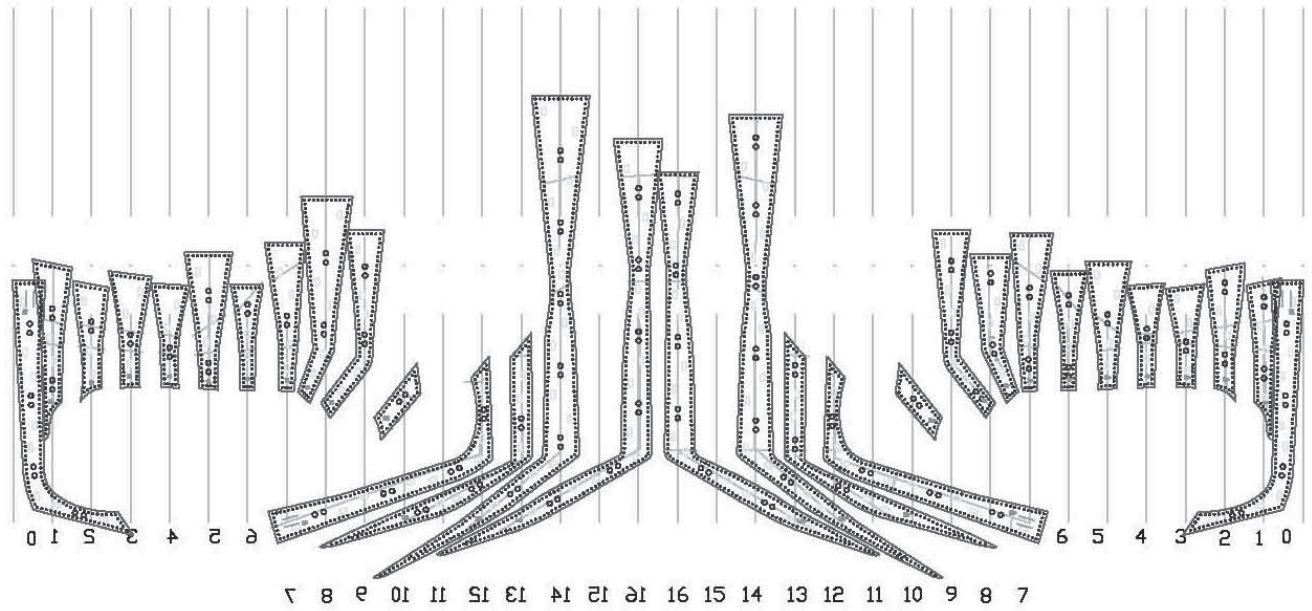
116 1/8" Neoprene Sheet
Neoprene is not as rigid as the red rubber sheet and more expensive. At 1/8" thick, it etched well under the laser cutter with little flare up, however, it could not be cut through, even at the highest laser setting. It is also very heavy.



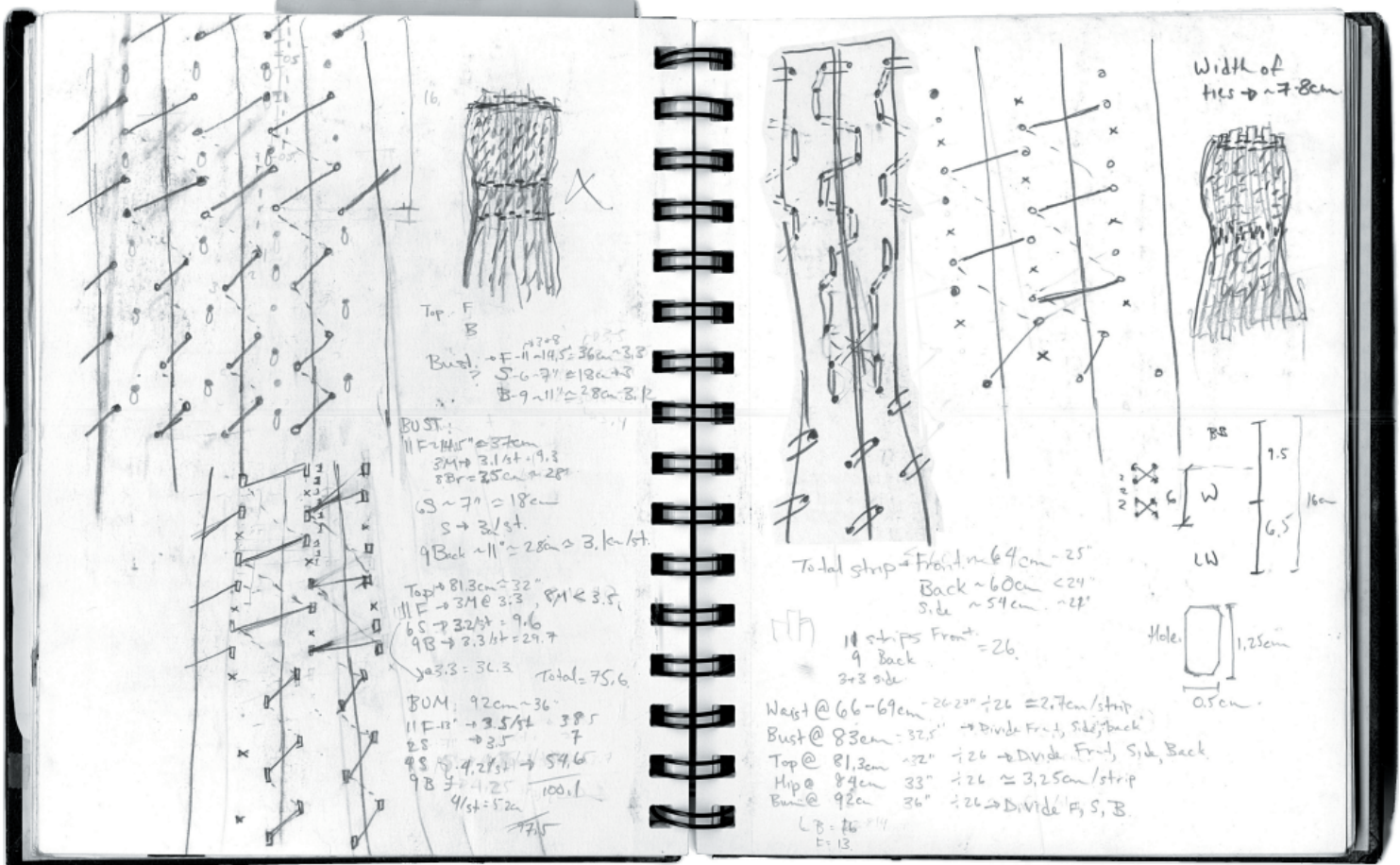
117 1/8" Red Silicone Sheet
Red silicone sheet has a lovely sheen and smooth finish and was the most resistant to marking. Its rigidity and weight are comparable to that of red rubber, however it is four times as expensive. At 1/8" thick, it etched well under the laser cutter but could not be cut through. Thinner thicknesses were not locally available.



118 CAD drawings for *Red Rubber Dress* (inner sheath), August 2006.



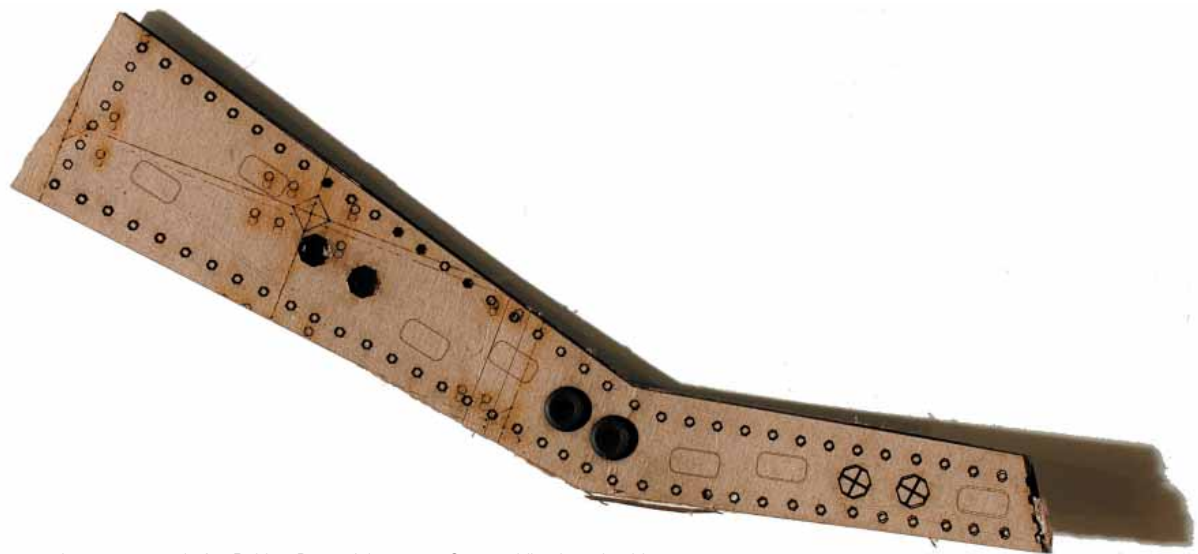
119 CAD drawings for *Red Rubber Dress* (shoulder shrug), August 2006.



120 Rubber Dress Sketches, June 2006. Possible stitching patterns and strip dimensions.



121 Stitching sample for *Rubber Dress*, July 2006. Grey padding board, 1/16" rawhide leather, hemp thread. The sample was made to determine what materials would hold the dress collar form and to practice stitching.



122 Laser cut sample for *Rubber Dress*, July 2006. Grey padding board, rubber grommets. The sample was made to determine grommet sizing and position.



123 Rubber strip sample for *Rubber Dress*, August 2006.

1/16" red rubber and 1/16" pressed wool felt are laser cut into identical strips. Rubber grommets are inserted, attaching the rubber to its felt backing. Copper grounding cable is then threaded through the grommets and sandwiched in between the rubber exterior and felt lining so that the cable will not irritate the wearer. The strips are stitched together using douppioni silk strips that are inserted between the rubber and felt to connect each strip to its neighbour. The stitching is done by hand in waxed nylon thread.

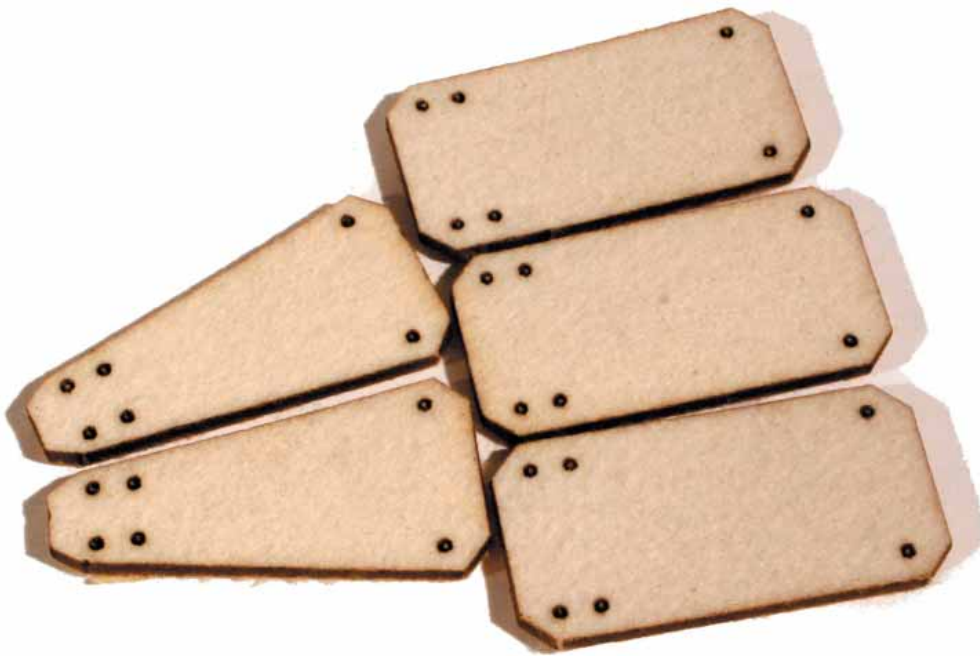


124 *Rubber Dress* (in progress), August 2006. 1/16" Red rubber, douppioni silk, 1/16" pressed wool felt, rubber grommets, copper cable, waxed nylon thread, 1" nylon webbing, acrylic buckles.

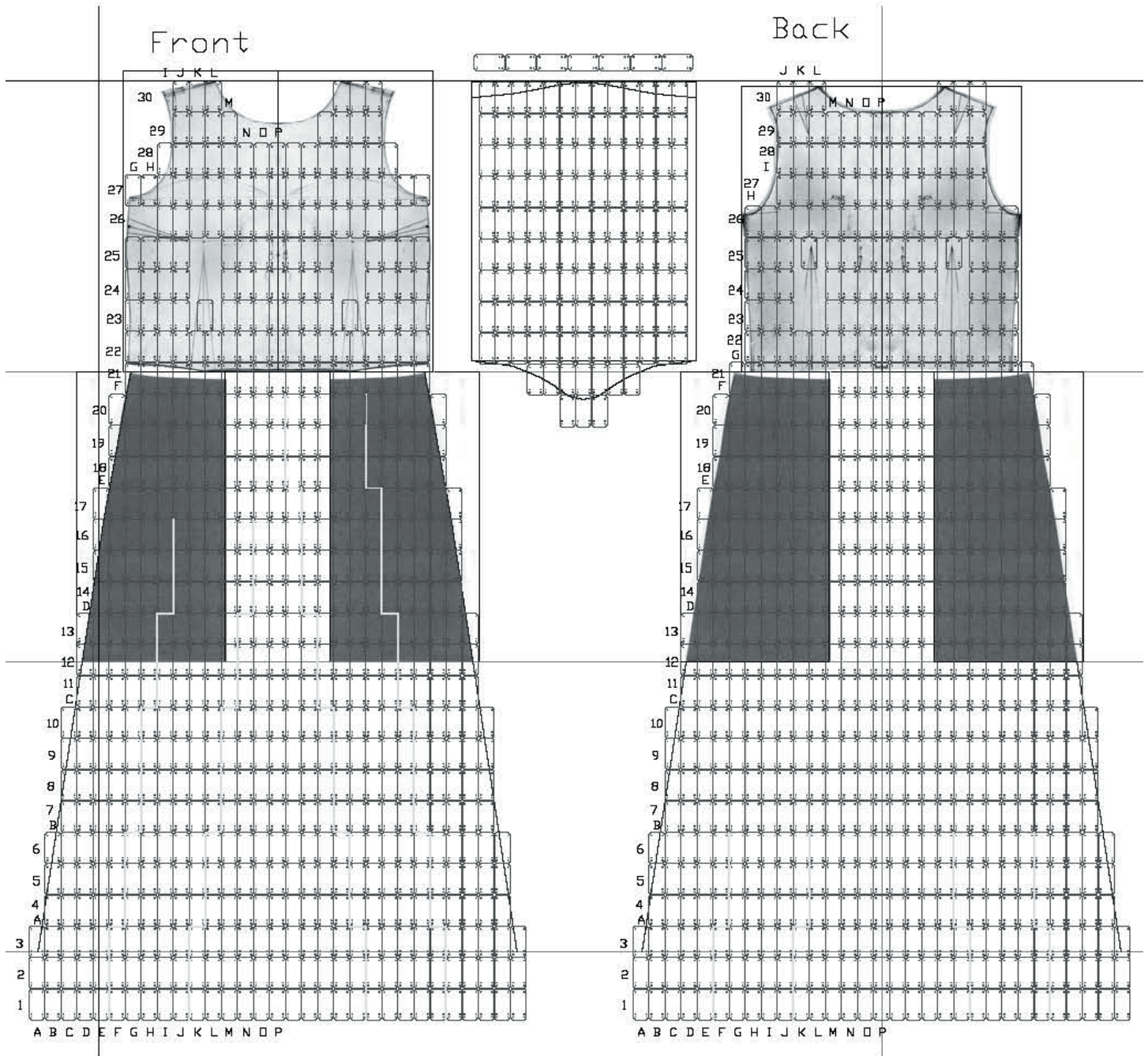
Felt Dress

"I start with fabric, material, touch. Then I go to the forms because...I don't know, which is supporting which? Maybe forms require certain material, or certain material requires the real form for them, I don't know which is first, which is next. But maybe for me, the touch comes first. And after that I work with material, I start to imagine the shape on it, by it."

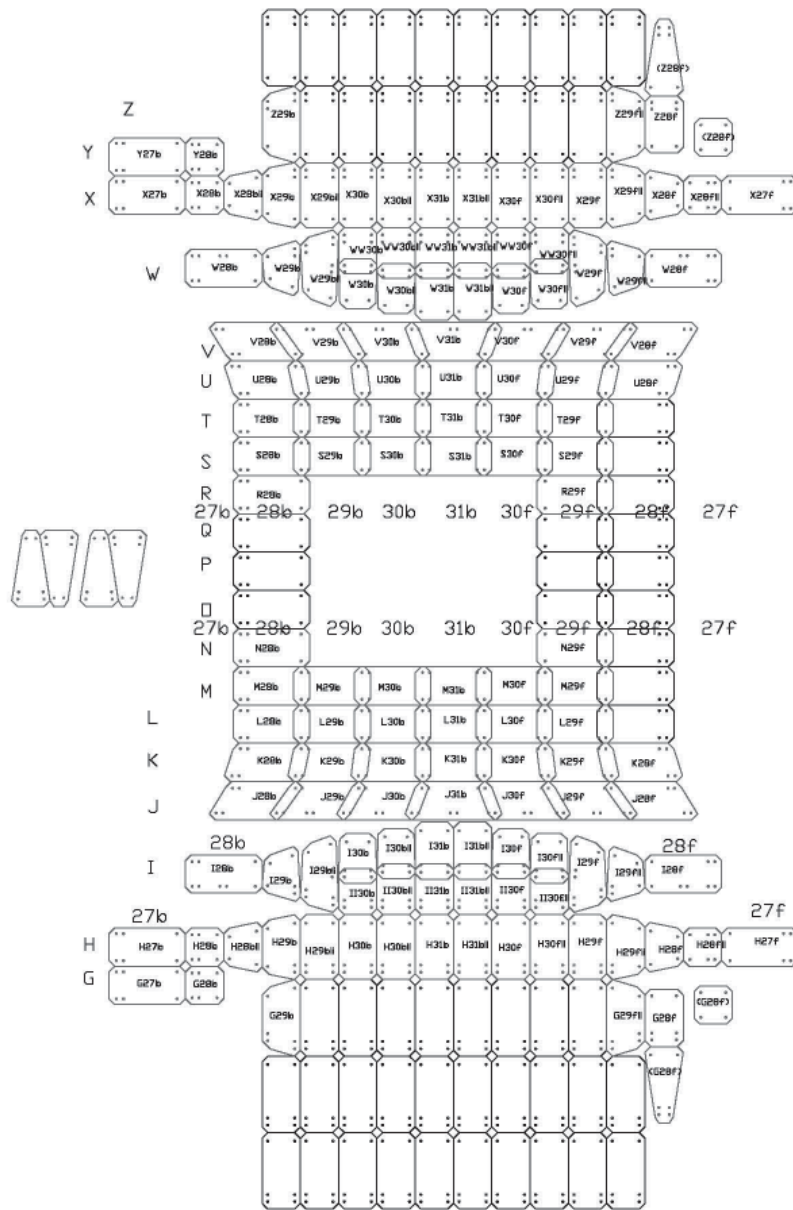
Yohji Yamamoto,
A Notebook on Cities and Clothes



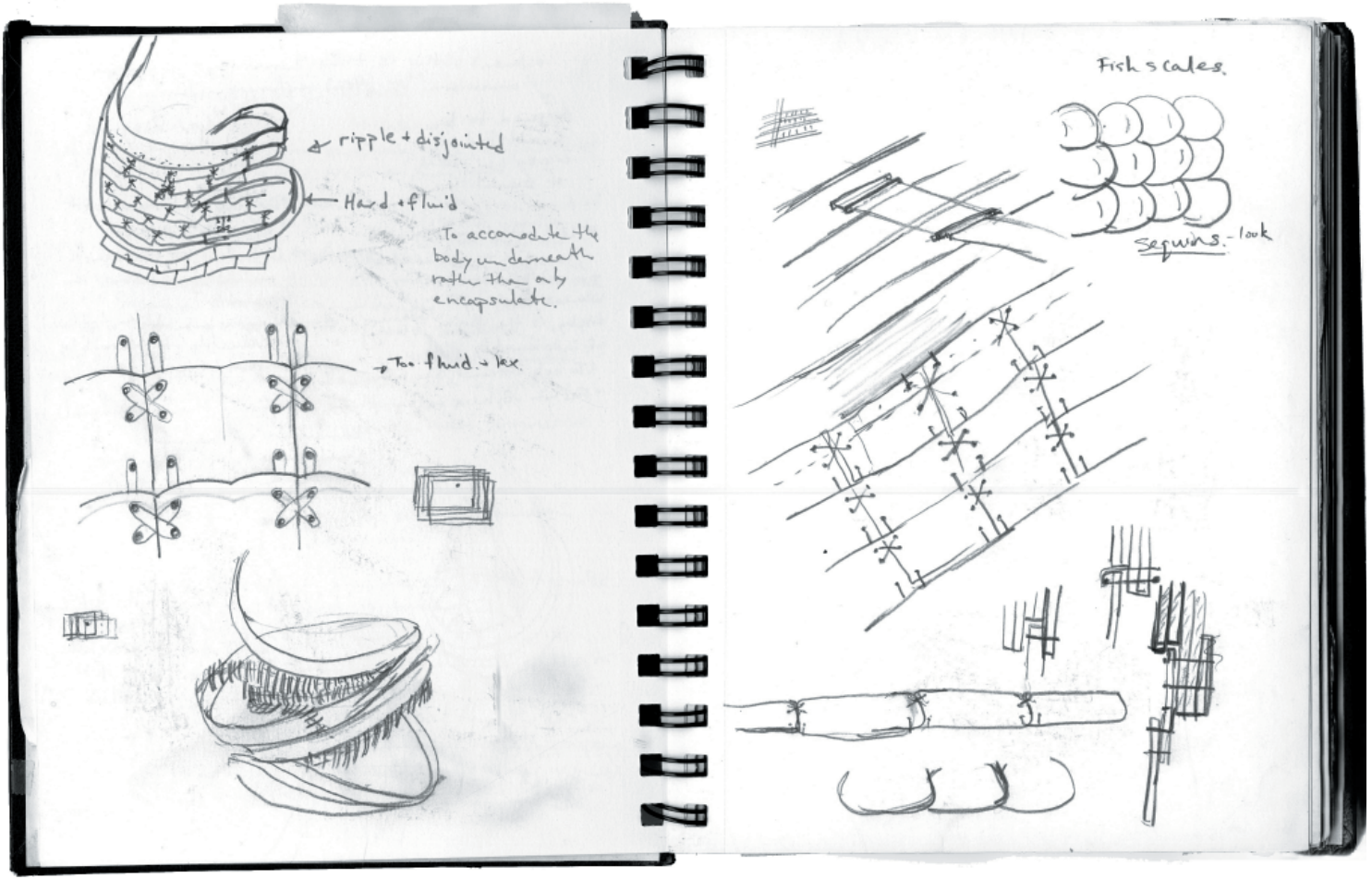
125 *Wonderbread*, laser cut felt tiles, June 2006. 3/32" pressed wool felt.



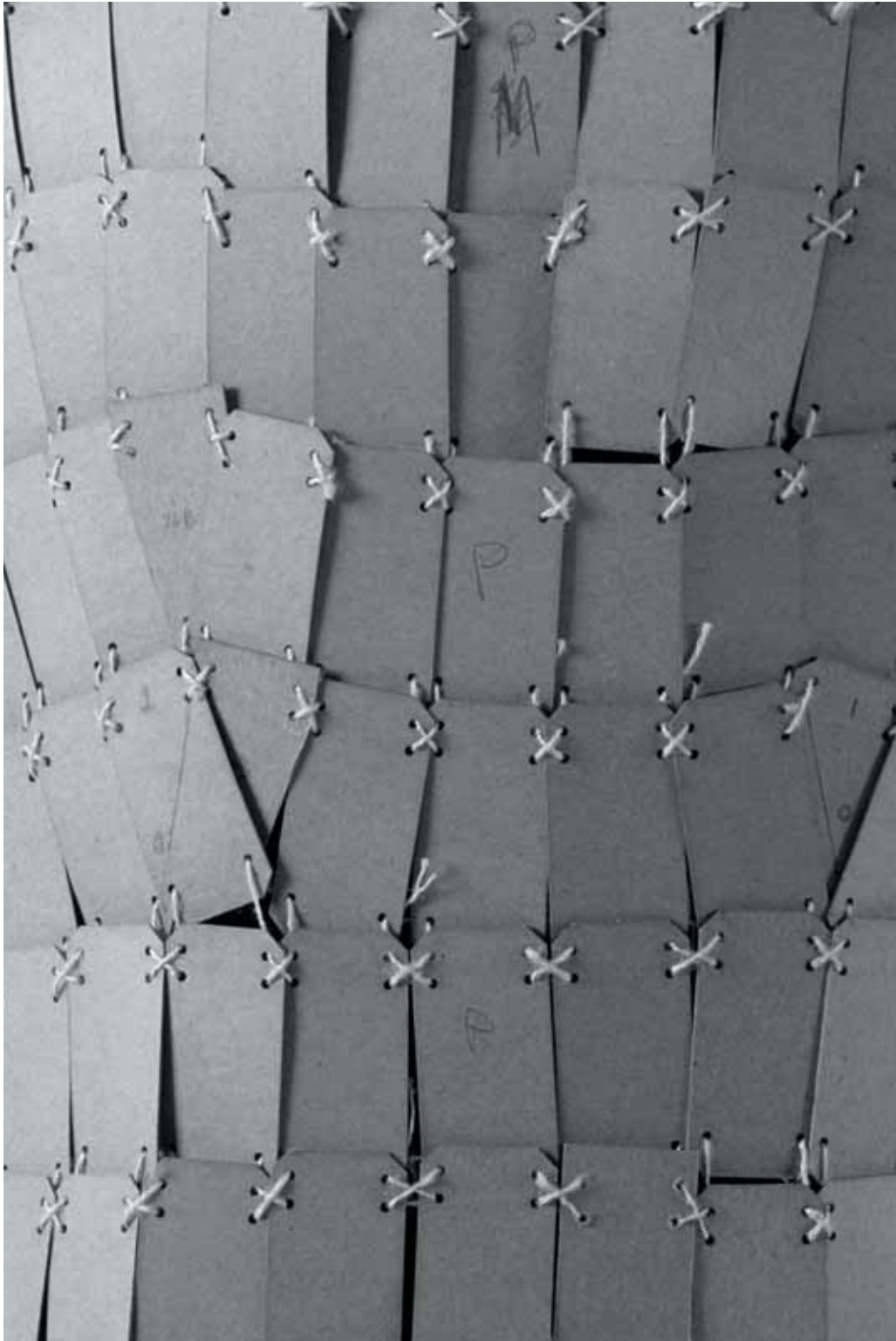
126 CAD drawings for *Felt Dress* - body and sleeves, June 2006.



127 CAD drawings for *Felt Dress* - collar and shoulders, June 2006.



128 *Felt Dress Sketches*, February 2006. Possible stitching patterns based on a pattern used for samurai armour.



129 Stitching and darting sample, April 2006. Grey padding board, hemp yarn. Tiles are triangulated in order to accommodate the curve of the back.

Felt Properties

High quality firm pressed wool felt is typically used in printing presses, filters, and padding applications. It is 100% wool and very dense and heavy; the 3/32" thickness weighs 1.4 lbs/sq yd. It cuts very easily and quickly under the laser cutter, with minimal flare up. Setting the laser pulse to a low setting (below 40) reduces charring, however, burnt edges cannot be avoided and the smell of the laser cut wool is very strong and is prevalent in the finished dress.

(Source: *Rumpel Product Guide, Industrial*, <http://www.rumpelfelt.com/>. All felt was supplied by Rumpel Felt Co. Ltd., Kitchener, Ontario.)

All of the dress tiles are coded according to a grid. For areas around the shoulders, breasts, and hips, the coding ensures that specially sized tiles will be stitched into the proper positions. For areas where the stitching becomes tighter or areas that carry more load, thicker felt (1/8" thick) was used for the tiles. All stitching was done by hand in a mixture of hemp and silk yarns.



129 *Felt Dress* (shoulder detail), July 2006. 1/8" Pressed wool felt, silk and hemp yarn.



130 Shoulder detail sample, June 2006. Grey padding board, hemp yarn.



131 Felt Dress (breast detail), July 2006. 3/32" Pressed wool felt, silk and hemp yarn.

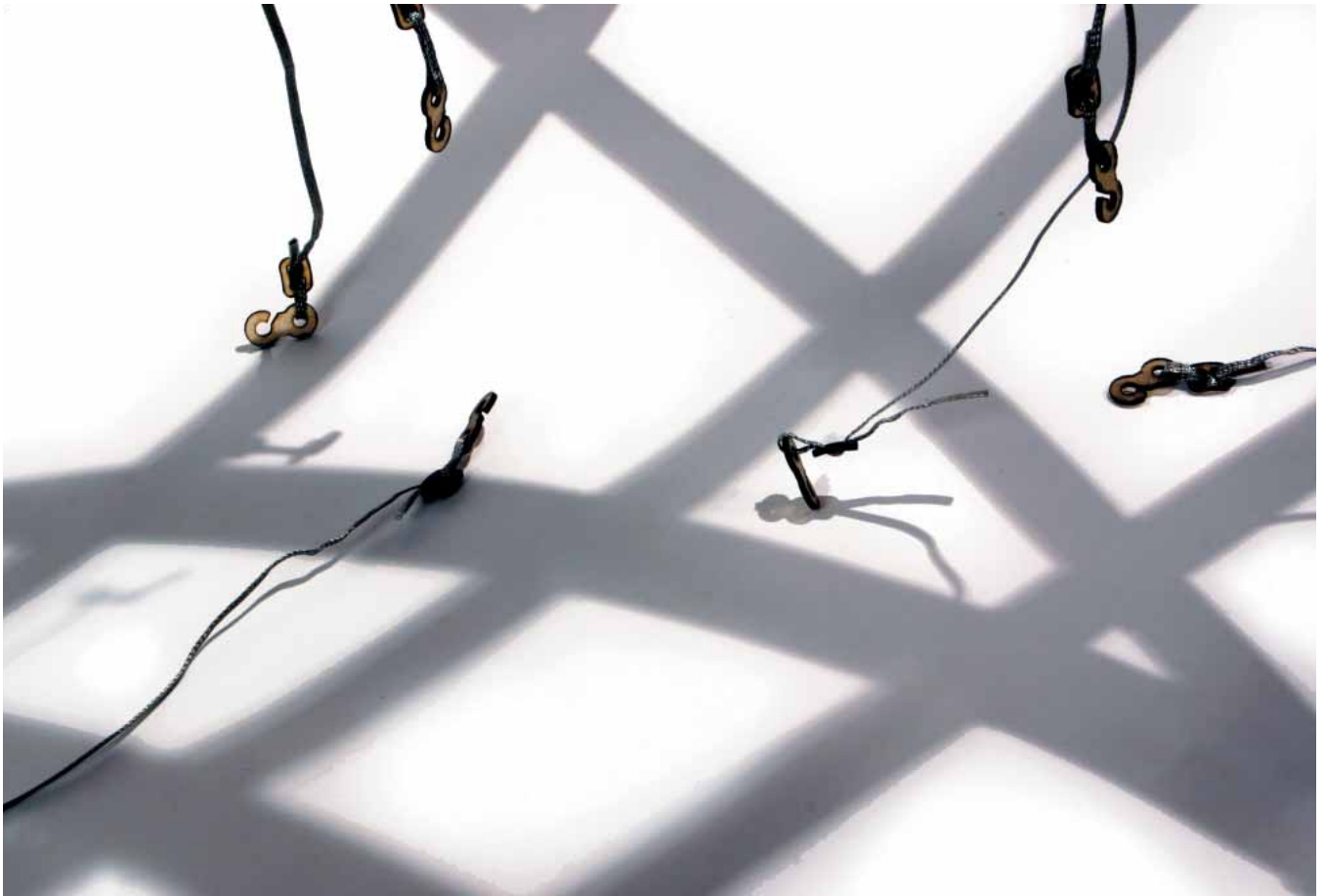


132 *Samurai Tile Dress* (in progress), April 2006. Grey padding board, hemp yarn.

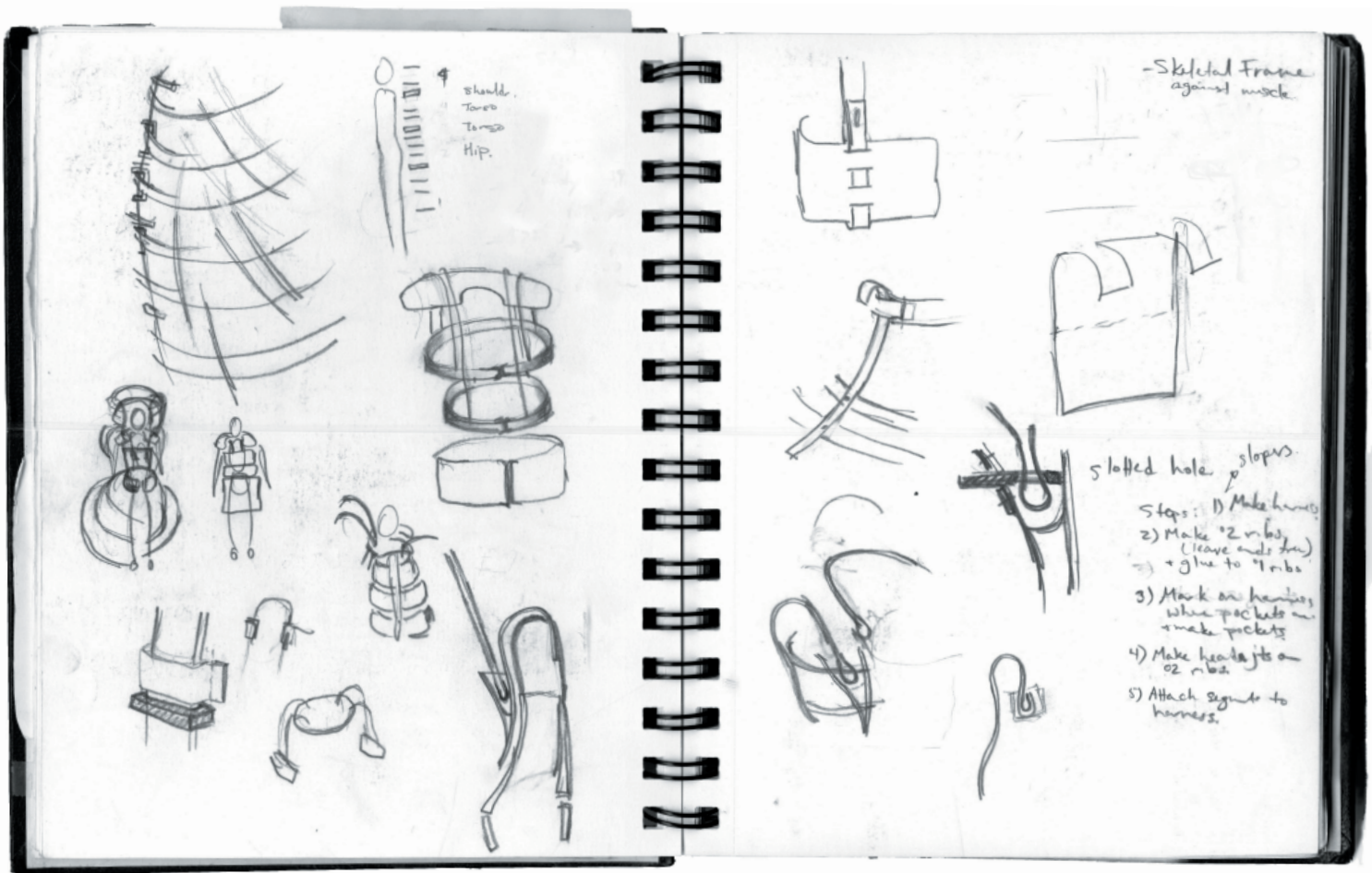


133 *Felt Dress* (in progress), July 2006. Pressed wool felt, hemp and silk yarn.

Attaching Dress



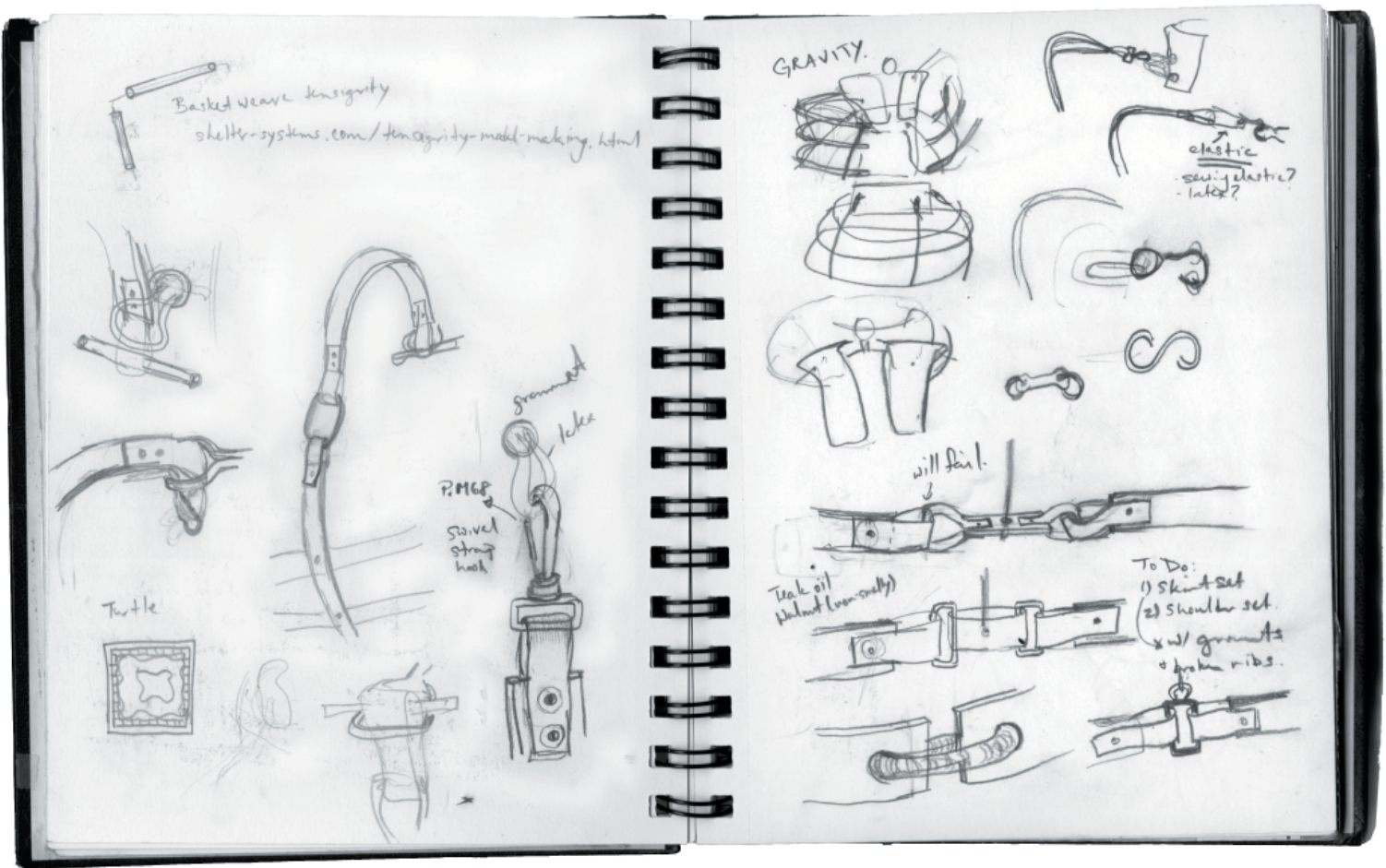
134 *Wood Dress - Attachments*, August 2006. Copper cable, acrylic plastic.



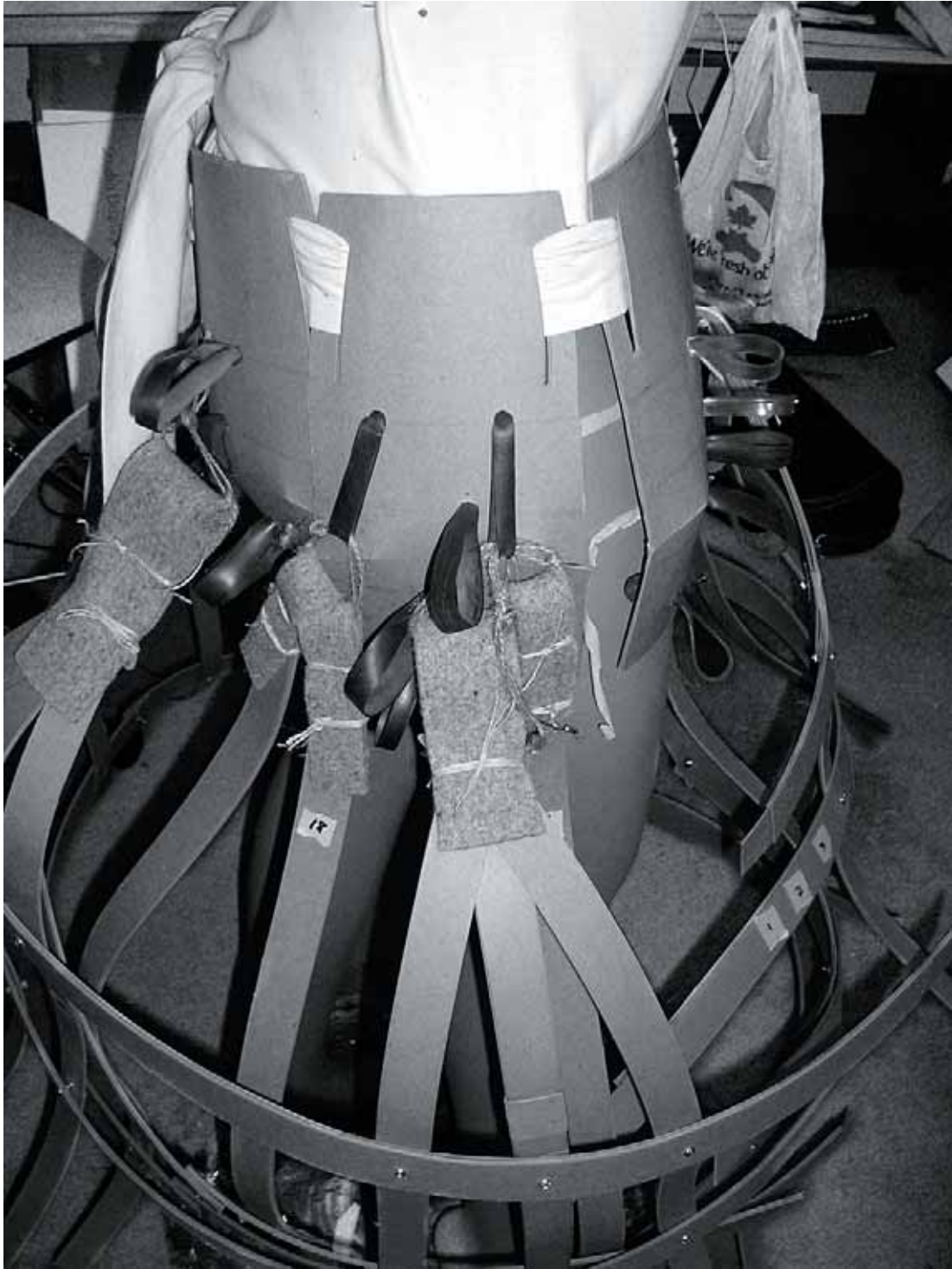
135 Attachment Detail Sketches, February 2006. The inside dress acts as a harness with moulded ply pockets into which the outer dress rings are inserted and locked into place.



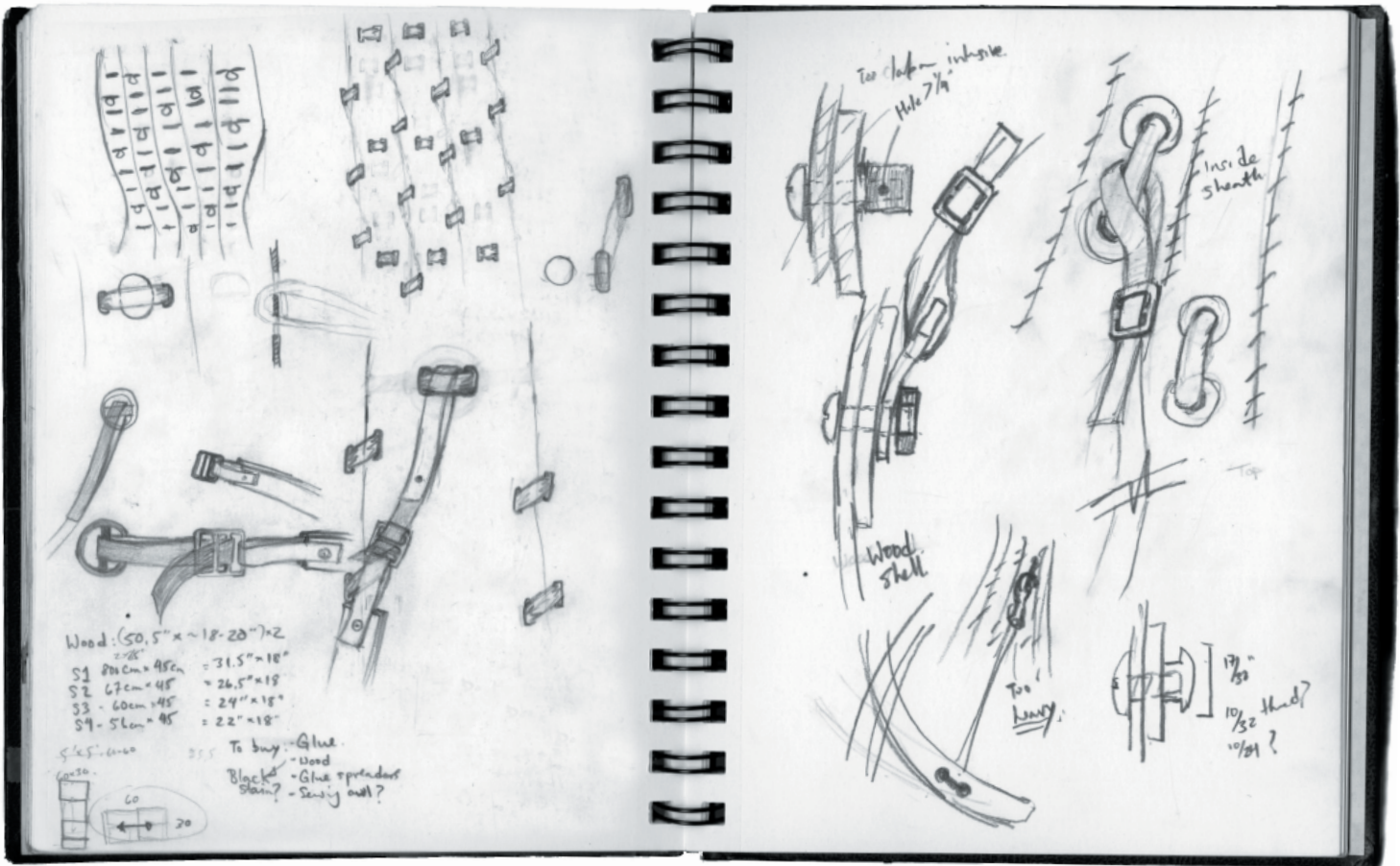
136 *Distorted Crinoline 1* in *Moulded Ply Pocket Dress* (in progress) - support detail, February 2006. Grey padding board, cotton muslin, stainless steel hardware.



137 Attachment Detail Sketches, March 2006. The inside dress has a series of resilient rubber loops from which outer dress rings can be hung using hooks and small loops of webbing.



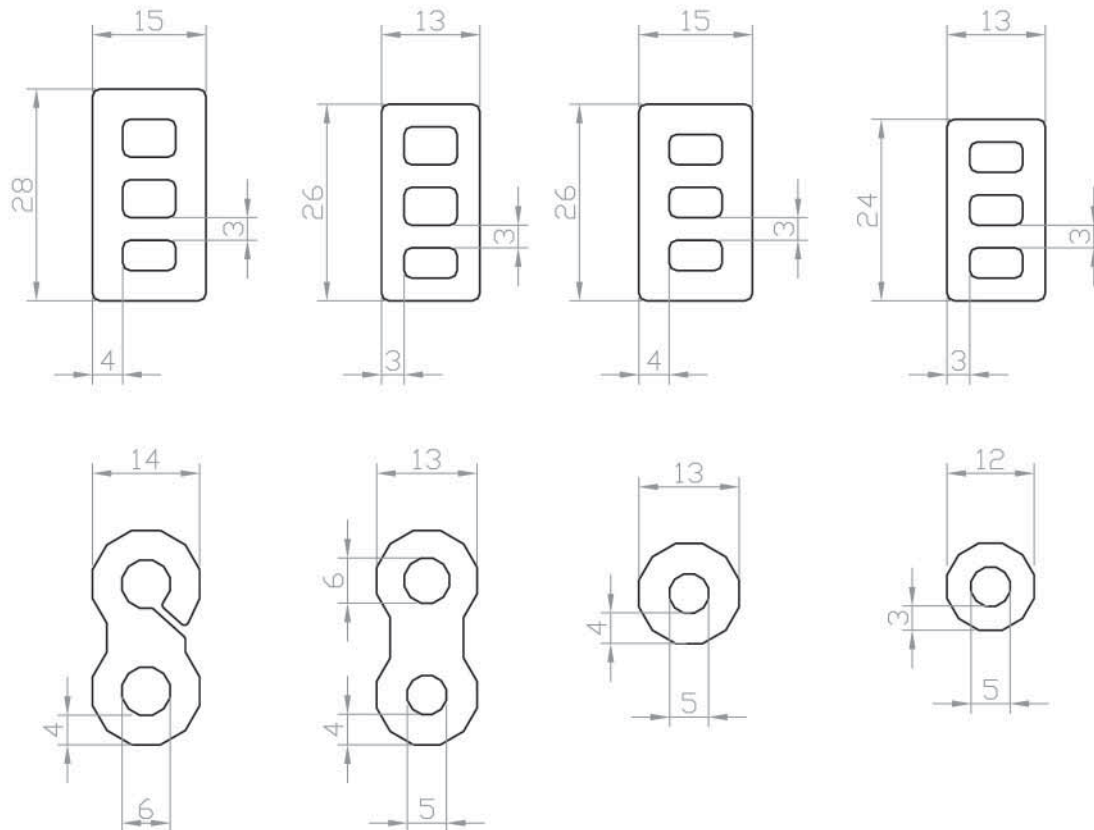
138 *Distorted Crinoline 2 in Moulded Ply Skirt (in progress)* - support detail, March 2006. Grey padding board, stainless steel hardware, cotton muslin, rubber looping, pressed wool felt, hemp yarn.



139 Attachment Detail Sketches, June 2006. The inside dress has a pattern of loops from which the outer wood rings can be hung using buckles and long lengths of webbing. The webbing acts as an intermediate "buffer" layer between the inner sheath and outside wood and the buckles ensure that webbing lengths are adjustable. Ideally, the webbing would be some type of rubber or latex, so that this buffer layer would have some stretch and resilience.



140 *Distorted Crinoline 2 on Strip Dress 2* - support detail, June 2006. Grey padding board, stainless steel hardware, nylon lacing, hemp yarn.



141 CAD drawings of the buckles, hooks, and washers used to attach the *Wood Dress* to the *Rubber Dress*, August 2006.

Material Properties

Braided copper cable is typically used for signal propagation or as grounding cable. Thin lengths of tinned copper are braided into hollow tubes that are easily compressed and highly flexible. The cable is very easily cut, however the cut ends should be covered in plastic shrink wrap in order to prevent fraying. Although the cable is very flexible, it retains memory of former shapes which meant that every time the cable lengths were adjusted on the dress, previous buckle positions could always be seen.

Acrylic Chairmat plastic is used in offices to provide office chairs with a rollable surface. Chairmat plastic is typically clear and impact and weather resistant. It is somewhat flexible and resilient, although it is prone to scratching. The 4mm thickness cut well under the laser cutter at 80% power, 3% speed, and 400 ppi (pulses per inch), however the resulting pieces are left coated in a black oily residue which should be washed off. All the hooks, buckles, and washers that attach the *Wood Dress* to the *Rubber Dress* are made of acrylic chairmat plastic.

Stainless steel hardware is used to assemble the *Wood Dress*. It is corrosion resistant and was chosen for its polished and smooth texture and subtle sheen.

(All stainless steel hardware was supplied by Spaenaur in Kitchener, Ontario. Copper cable was sourced from Active Surplus Machinery Ltd, Toronto, Ontario. Acrylic chairmat can be found at Staples, www.staples.com.)



142 *Wood Dress - Attachment Detail*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper grounding cable, acrylic plastic.

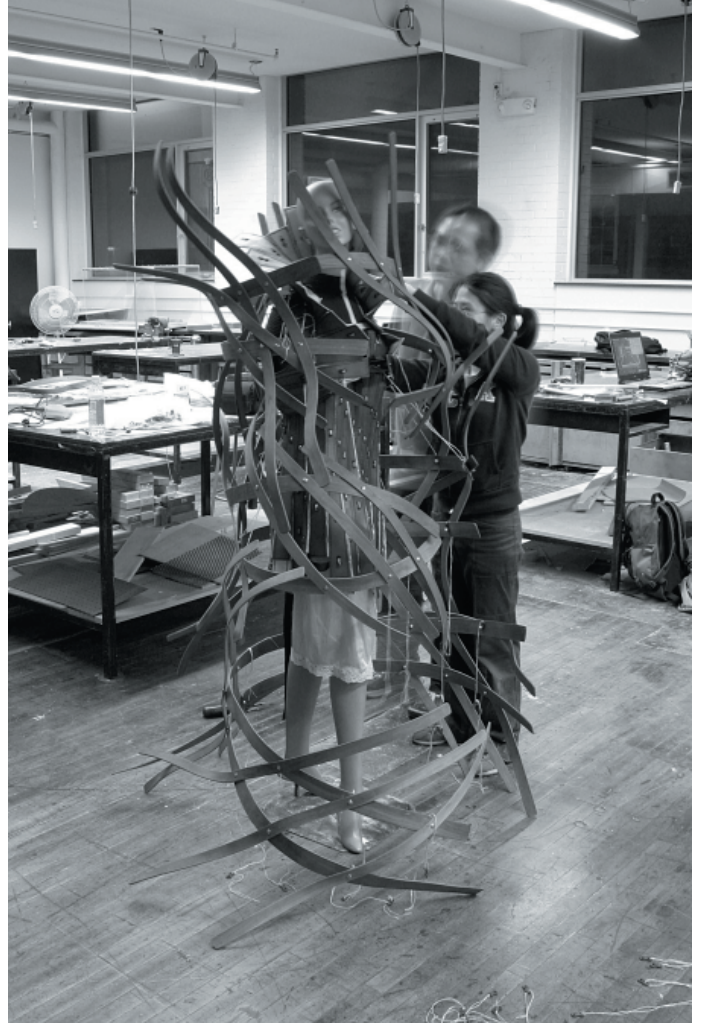


143

Assembly, August 2006. Wood Dress was assembled in three segments.



144



145



146 *Dressing*, August 2006.



147 *Dressing*, August 2006.



148 *Wood Dress*, August 2006. 1/16" Black cherry veneer, stainless steel hardware, copper cable, acrylic plastic.

Fair Maria Wood

IN FAIR Maria Wood, clothing is a means to identity. Costume is what identifies this girl as her father's new bride, and it also reveals to the shallow prince who his true love is. It is through clothing that we identify the fairy tale. But more significantly, at least for this thesis, it is through clothing that the girl encounters the outside world. The girl lives through her wood frock – it is the vessel by which she escapes the threat of incest, it is the prison that hides her beauty from the prince; it is her armor, her cage, her temporary home.

The wood frock becomes the girl's first architecture, protecting and sheltering the girl in the most intimate manner, controlling her most immediate environment. It is a site of spatial memory, demarcating within its shell a place that is special and unique, containing the only possessions – her body and her four silk dresses – the girl finds meaningful enough to protect. Its role is not limited to enclosure; the wood dress changes the girl's experience of her surroundings, extending her bodily influence while also constraining it, affecting how much space she takes and how much



149 *Wooden Fan Jacket and Crinoline*, Alexander McQueen for Givenchy Haute Couture, S/S 1998. Model: Aimee Mullins.



150 *Plastic Body Corset*, Issey Miyake, A/W 1980.

freedom she has. This space, elusively defined by the dialogue between her moving body and the surface of the wood shell surrounding her, changes the girl's quality of existence. In this in-between silhouette is a most potent form of architecture.

Unlike other buildings, this form of architecture is carried on the girl's body. Her body is both the frame that supports the enclosure as well as the force that stresses it, distorting the enclosure while being distorted. Through this mutating, transparent space the outside world recognizes the girl, understanding her person only through the filter of a wood dress.

*"The percept of the body and the image of the world turn into one single continuous existential experience; there is no body separate from its domicile in space, and there is no space unrelated to the unconscious image of the perceiving self."*¹

Juhani Pallasma, *The Eyes of the Skin*

In *Seeing Through Clothes*, Anne Hollander discusses how dress affects both the perception of the body and the physicality of the body itself. For Hollander, dress and body are integrated in such a way that the clothing not only changes the body's shape and form, it changes the body's behaviour. A corset molds its wearer, regardless of her true body shape, into an hourglass figure. But its influence goes beyond form making, since the corset will also change the wearer's posture, breathing, and carriage, as well as her associations with other people. By conforming to its shape, the corset aligns its wearer with similarly like-minded women, dictating the physical and social activities the wearer can partake in, and the way she interacts with her surroundings.

*"Clothes make, not the man, but the image of the man."*²

Anne Hollander, *Seeing Through Clothes*

It is in a similar fashion that the wood frock colours Fair Maria Wood's experience of the world. By integrating her body into its type of line, texture, and movement, the wood frock controls what she can see and feel, how she can move, and how people perceive her. By asking for such a strange dress, the girl self-consciously molds a new 'image' with which she can face her life. This image is not necessarily an honest and comprehensive portrait of the girl, but it

1 Juhani Pallasma, *The Eyes of the Skin: Architecture and the Senses* (John Wiley & Sons, 2005), 40.

2 Anne Hollander, *Seeing Through Clothes* (Viking Press, 1968), xv.

is representative of some fragment of her, urgent at that moment in order to survive. Nor is the image one Fair Maria happily seeks; instead it is one she must assume in order to hide her body (and its resemblance to her mother) from the prying eyes of her father. She is to become ugly, so that her father may be repulsed and seek the image of his bride elsewhere. Instead, the girl disguises her beauty from the prince, trapping her into an “*unwanted aspect of eccentricity*”³ that the bizarrely dressed and other social deviants are relegated with. In the prince’s eye, this girl cannot possibly go to the ball, for then all society would see how inadequate she looks and therefore is.

“*What, you wish to go to the ball so badly dressed that they would drive you away as soon as they saw you!*”⁴

The mistress in *Fair Maiden Wood*

The wood frock is in many respects the anti-thesis of fashion, taking on qualities of what architect and culture critic Adolf Loos describes as ‘*Tracht*’ or representative clothing.⁵ *Tracht* usually refers to folk costume, however Loos uses the term to describe both ceremonial dress (like that of tribes, clergymen, or royalty) and over-ornamented women’s fashion. Such garments worn out of obligation and not desire, signals of dependence on the higher power that the costume represents. *Tracht* may be fashionable, but it is not unique, as it subsumes the individual and his right to self-determination under its pretty cover. Thus the girl is dependent on an exterior power, as embodied by the wood frock to protect her body, and she wears it, if not out of obligation, then out of dire need. However, this dress is not the manifestation of societal intentions; instead it is the external representation of the colluded inner intentions of its wearer, viewer, and designer. What differentiates this dress from *Tracht* is that, in the end, Fair Maria chooses to wear it and by choosing, she declares both her break from obligation and her right to decide her own fate. She is beaten for such presumption.

Deciding what to wear is an individual’s first projection of her conscious self into the material world, the first physical link between her “*private self-awareness and social being.*”⁶ Dress is both a means

3 *ibid.*, 451.

4 Thomas Frederick Crane, *Italian Popular Tales* (Mifflin and Company, 1885), no. 10.

5 Adolf Loos, “Ladies’ Fashion,” in *Loos, Ornament and Crime, Selected Essays* (Ariadne Press, 1998), 106-111.

6 Anne Hollander, *Seeing Through Clothes* (Viking Press, 1968), 448.



151 *Tulle Bustle Coat*, Yohji Yamamoto, AW 1986.



152 *Black Taffetta Harem Dress and Cape*, Cristobal Balenciaga, 1950.



153 *Hoop Dress*, Yohji Yamamoto, A/W 1983.

of self-confirmation and social communication, linking the observer to the recollected myths, ideas, and events the wearer wishes to represent.

“When you’ve lived as long as I you’ll see that every human being has his shell and that you must take the shell into account. By the shell I mean the whole envelope of circumstances. There’s no such thing as an isolated man or woman; we’re each made up of some cluster of appurtenances. What shall we call our ‘self’? Where does it begin? Where does it end? It overflows into everything that belongs to us—and then it flows back again. I know a large part of myself is in the clothes I choose to wear. I’ve a great respect for things! One’s self—for other people—is one’s expression of one’s self; and one’s house, one’s furniture, one’s garments, the books one reads, the company one keeps—these things are all expressive.”

Mme Merle in *Portrait of a Lady* by Henry James

*“Through the artifice of apparel, the less than perfect can camouflage perceived deficiencies and in some instances project an appeal beyond those gifted with characteristics accepted as ideal in their culture and time.”*⁸

Harold Koda, *Extreme Beauty*

Through dress, the ordinary can inhabit qualities of the extra-ordinary, and vice versa, compressing personal experience and aspiration, memory and dream, into material form, all within the boundary of personal space.

*“Clothes [are] the space of living...thus my clothes are like rooms for the body...the room of my body must adjust to the changing needs of my body - and not the other way around.”*⁹

Christa de Carouge, *Habit-Habitat*

Unlike buildings or art, dress is malleable, able to switch between displaying the body to disguising it with either a costume change or even merely a shift in step or gesture; it is with ease that dress is able to arrange itself according to the *“ambiguous demands of human consciousness.”*¹⁰ The dynamism and mutability of the body’s

7 Henry James, *Portrait of a Lady*, (Library of America, 1985), chapter 19, 397-398.

8 Harold Koda, *Extreme Beauty: The Body Transformed*, (Metropolitan Museum of Art, 2001), 8.

9 Werner Blaser & Lars Muller, eds. *Habit-Habitat: Christa de Carouge*, (Lars Muller Publishers, 2006), 68.



154 *The Girl in the Wood Frock*, December 2005. Conte and graphite on paper.

first cover reveals an ambiguous relationship with the body beneath, one where the wearer wavers between materially exerting and hiding her (self-) consciousness. Fair Maria Wood is a story about five dresses, not just one wood frock. The girl might be saved by the wood dress, but it is the silk ones that she is protecting. Despite her actions to differentiate herself, there is also an underlying desire to shed the bizarre in favour of the beautiful, a wish to navigate her life by means other than hiding within a wood cage. So, after she removes the wood dress and puts on a silk one, proving that she does belong in proper society, the girl can live happily ever after. But then again, without the wood dress she is no more special than any other fairytale princess, and there is no more story to tell.

*"I'm obsessed with the quality of life, and you have a much better life if you wear impressive clothes. I strongly believe that."*¹¹

Vivienne Westwood, *I-D August 1987*

10 Martin Pawley, "The Time House," in Charles Jencks and George Baird, eds. *Meaning in Architecture*, (New York, George Braziller, 1970), 123.

11 Jones, "Royal Flush," *I-D, August 1987*, (F & W Publications), 59.

Bibliography

FICTION

- Crane, Thomas Frederick, "*Fair Maria Wood*" in *Italian Popular Tales*. Boston and New York: Houghton, Mifflin, and Company, 1885.
- Grimm, Jacob and Wilhelm, "*Three Little Men in the Wood*" from *Household Tales. Vol. XVII, Part 2*. The Harvard Classics. New York: P.F. Collier & Son, 1909–14; Bartleby.com, 2001. www.bartleby.com/17/2/.
- James, Henry, *Portrait of a Lady*. New York: Library of America, 1985.
- Maguire, Gregory, *Confessions of An Ugly Stepsister: A Novel*. New York: Regan Books, 2000.
- Millhauser, Steven, "A Change in Fashion," *Harper's*. May 2006, 75-77.

TECHNIQUE

Ein, Claudia, *How to design your own clothes and make your own patterns*. Garden City: Doubleday, 1975.

Emery, Irene, *The Primary Structures of Fabrics, an Illustrated Classification*. New York: The Textile Museum, 1966.

Foley, Steve, "Bending with the help of steel hands." *Fine Woodworking*, no. 39 (Mar/Apr 1983): 63.

Hoadley, R., *Understanding Wood, A Craftsman's Guide to Wood Technology*. Newtown Connecticut: Tauton Press, 1980.

Stem, Seth, "Letting the wood bend its own way, a flexible method for laminating compound curves." *Fine Woodworking*, no. 39 (Mar/Apr 1983): 58-61.

FASHION HISTORY AND THEORY

A Notebook on Cities and Clothes, A film by Wim Wenders with Yohji Yamamoto. DVD. Directed by Wim Wenders. 1990; Toronto: Vid Canada, 1999.

Callaway, Nicholas (ed.), *Isey Miyake, Photographs by Irving Penn*. New York: Miyake Design Studio and Callaway Editions, 1988.

Healy, Robin, *Balenciaga: Masterpieces of Fashion Design*. Melbourne: National Gallery of Victoria, 1992.

Hollander, Anne *Seeing Through Clothes*. New York: Viking Press, 1978.

Jouve, Marie-Andree, *Balenciaga*. London: Thames and Hudson, 1997.

Koda, Harold, *Extreme Beauty*. New York: Metropolitan Museum of Art, 2001.

Loos, Adolf, "Footwear," "Building Materials," "The Principle of Cladding," "Men's Fashion," "Ladies' Fashion,"

“Underclothes” from *Spoken into the Void, Collected Essays, 1897-1900*. Cambridge: MIT Press, 1982.

Miyake, Issey, *Making Things*. Paris: Fondation Cartier pour l’art contemporain, 1998.

Miyake, Issey, Dai Fujiwara, *A-POC Making, Issey Miyake and Dai Fujiwara*. Weil-am-Rhein: Vitra Design Stiftung and Miyake Design Studio, 2001.

Miyake, Issey, Irving Penn, Midori Kitamura, and Mark Holborn, *Irving Penn regards the work of Issey Miyake, photographs 1975-1998*. New York: Bulfinch Press, 1999.

Muller, Lars, Werner Blaser (eds.), *Habit-Habitat: Christa de Carouge*. Baden: Lars Müller Publishers, 2000.

Stewart, Janet, *Fashioning Vienna, Adolf Loos’s Cultural Criticism*. London: Routledge, 2000.

Vreeland, Diana, *The world of Balenciaga*. Exhibition Catalogue. New York: Metropolitan Museum of Art, 1973.

Waugh, Noah, *Corsets and Crinolines*. New York: Theatre Art Books, 1970.

Wilcox, Claire, *Vivienne Westwood*. London: V&A Publications, 2004.

Wilcox, Claire (ed.), *Radical Fashion*. London: V&A Publications, 2001

Yamamoto, Yohji, Kiyokazu Wahida, *Talking to Myself*. Milan: Carlo Sozzani Editore srl, Yohji Yamamoto Inc., 2002.

DESIGN THEORY AND PHILOSOPHY

Albers, Anni, “Work with Material,” “The Pliable Plane: Textiles in Architecture,” “Tactile Sensibility,” “Material as Metaphor,” from *Selected Writings on Design*, edited by Brenda Danilowitz, Hanover: University Press of New England, 2000.

Bachelard, Gaston, *On Poetic Imagination and Reverie: Selections from Gaston Bachelard*. Translated with an introduction by Colette Gaudin. Indianapolis: Bobbs Merrill, 1971.

Bergson, Henri, *Creative Evolution*. Translated by Arthur Mitchell. New York: Henry Holt and Company, 1911.

---, *Memory and Matter*. Translated by N. M. Paul and W. S. Palmer. New York: Zone Books, 1988.

Braham, William W., Paul Emmons, "Upright or Flexible? Exercising Posture in Modern Architecture" in *Body and Building: essays on the changing relation of body and architecture*, edited by George Dodds, Robert Tavernor, Joseph Rykwert, 290-303. Cambridge: MIT Press, 2002.

Constantine, Mildred, Laurel Reuter, *Whole Cloth*. New York: The Monacelli Press Inc, 1997.

Frampton, Kenneth, "Corporeal Experience in the Architecture of Tadao Ando" in *Body and Building: essays on the changing relation of body and architecture*, edited by George Dodds, Robert Tavernor, Joseph Rykwert, 304-318. Cambridge: MIT Press, 2002.

Feuerstein, Marcia F., "Body and Building inside the Bauhaus's Darker Side: On Oskar Schlemmer in *Body and Building: essays on the changing relation of body and architecture*, edited by George Dodds, Robert Tavernor, Joseph Rykwert, 226-236. Cambridge: MIT Press, 2002.

Kurokawa, Kisho, "From the Age of the Machine Principle to the Age of Life Principle" in *Kisho Kurokawa: selected and current works*, 9-17. Translated by Jeffrey Hunter. Victoria, Australia: The Images Publishing Group Ltd, 1995.

---, "Metabolism in Architecture," in *Theories and Manifestoes of Contemporary Architecture*, edited by Charles Jencks and Karl Kropf, 68-70. Chichester, England: Academy Group Ltd, 1997.

---, "The Philosophy of Symbiosis," in *Theories and Manifestoes of Contemporary Architecture*, edited by Charles Jencks and Karl Kropf, 106-108. Chichester, England: Academy Group Ltd, 1997.

---, "The Universe and Abstract Geometry" in *Kisbo Kurokawa: abstract symbolism*, 13–28. Beverly: Rockport Publishers, 1997.

Lehman, Arnold L., Brenda Richardson (ed.), *Oskar Schlemmer*. Baltimore: The Baltimore Museum of Art, 1986.

Lynn, Greg, "Architectural Curvilinearity: The Folded, the Pliant, and the Supple," in *Theories and Manifestoes of Contemporary Architecture*, edited by Charles Jencks and Karl Kropf, 125-127. Chichester, England: Academy Group Ltd, 1997.

Malnar, Joy Monice, Frank Vodvarka, *Sensory Design*. St. Paul: University of Minnesota Press, 2004.

Mori, Toshiko, *Immaterial/Ultramaterial : architecture, design, and materials*. Cambridge: Harvard Design School Press, 2002.

Neuhart, John , Marilyn Neuhart, Ray Eames, *Eames Design, The Work of the Office of Charles and Ray Eames*. New York: Harry N. Abrams Inc, 1989.

Nute, Kevin, *Place, Time, and Being in Japanese Architecture*. London: Routledge, 2004.

Pallasmaa, Juhani, *The Eyes of the Skin: Architecture and the Senses*. Seattle: Academy Press, 2005.

Quinn, Bradley, *The Fashion of Architecture*. Oxford: Berg Publishers, 2003.

Zumthor, Peter, *Thinking Architecture*. Baden: Lars Muller, 1998.