Fashion and Architecture: 
Thinking Outside the Body
A Discourse with Coco Chanel
and Roland Barthes

Josée Labelle

A thesis submitted to the Faculty of Graduate Studies and Research in potential fulfillment of the
requirements for the degree of
Master of Architecture (professional)

Azrieli School of Architecture and Urbanism
Carleton University, Ottawa, Canada

April, 2010

Josée Labelle © 2010
NOTICE:
The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

AVIS:
L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des theses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.
The Sweetest Thing on Earth

"THINKING OUTSIDE THE BODY"

"the modern architect is first and foremost a creature of dress"

Available at

E.B. EDDY PULP AND PAPER MILL

Gatineau, QC
The thesis will debut a body of work within the hybrid practice of fashion and architecture. In fashion, what architects do not acknowledge yet need to make cutting-edge lies in a system of rules revealing a hybrid language that instructs 'real-projects' which subsequently communicates methods.

Stop. Pose. Turn. Keep walking...

Very few avant-garde designers, such as Coco Chanel, have been successful in revolutionizing the world of fashion. Roland Barthes, author of *The Fashion System*, did not design clothing however he restructured our perception of fashion by introducing a system of rules and shifter allowing to transfer from one type of representation to another.

Stop. Pose. Smile. Keep walking...

This runway thesis implies material explorations, showing architectonic connections, which allows fashion to verbalize an existing building's values and functions, and re-mend itself to present urban fabric.

Stop. Pose. The Camera loves you! ...Work it!... Work it!

The thesis will outline a systematic set of rules, inspired by *The Fashion System*. These rules are the outcome of Barthes' overlooked fourth shifter: reciprocating elements between building and dress.

"I'm a model you know what I mean
And I do my little turn on the catwalk
Yeah on the catwalk on the catwalk yeah
I do my little turn on the catwalk"\(^1\)

---

\(^1\) Right Said Fred, *I'm Too Sexy*, Refrain, 1991

\(^2\) Ibid
Shift 1  Concerning Fashion ..........................................................14

Part A -  The F-Word .................................................................14
Part B -  Thinking Outside the Body ..............................................23
Part C -  Historical Overview of Fashion and Architecture .............30
  1.  First Period: Industrialization (1850-1890) .....................31
  2.  Second period: Art Nouveau (1890-1914) .........................36
  3.  Third period: Art Deco, De Stijl, and Bauhaus (1917-1939) ...42

Shift 2  Demonstrating the Principles of Fashion in Architecture using a Barthian Analysis ....49

Part A -  Mosti and Rivière, Lace and Fashion museum in Calais ..........49
Part B -  Penelope Stewart, Terminal, artwork installations ...........54
Part C -  Kei Kagami, The Good Old Days, spring/summer collection 2004 ..........58
Part D -  AquillAlberg, NEIL BARRETT, fashion show AW10, Milan, installation, autumn/winter 2010 ...........................................................63
Part E -  Zaha Hadid, NEIL BARRETT Flagship Store, Interior Design, Tokyo, 2008 ......67

People are talking about ................................................................72
Definitions: All words in bold text are defined in the Glossary, *The Vocabulary of Fashion*.

Definitions: For each of these words (in bold) a 'shifted' definition will be given (in grey) below the original fashion-definition.
First, I thank my thesis advisor Thomas Mical, for his continuous support in the Master's of Architecture program. I appreciate his availability and that he was always there to give advice. His travels between New York and Ottawa for our thesis meetings were very much appreciated and encouraged my persistence to accomplish any goal.

Thank you to Roger Connah, for lending a hand with so many unresolved issues, and all professors and fellow colleagues with whom I have crossed paths throughout my journey at the Azreili School of Architecture and Urbanism.

Special thanks go to Jonathan for his constant encouragement and belief in all my endeavours. Without him I might not have worked as hard, to play as hard. Je t'aime beaucoup!

Thanks to all my friends for their belief in me. They definitely gave me the strength to follow my dreams and fill my heart with fun and laughter. Ladies (J- E- MC- A- E- E- M- ME- MC), for that, I am forever grateful.

I thank Louise Cowley for her friendship, support, insightful comments and thorough review of my work. Lou and Ced, you will always be my Q's. I will never forget Team X who made Swiss living a blast!

Thanks to Keven who has been by my side throughout my 9 years of architectural studies and thanks to my undergrad friends (la gang de Montréal) for keeping in touch and encouraging my choice to transfer schools for graduate studies.
Last but not least, I thank my family: my parents, Dana Labelle and Michel Labelle, my god-parents, Mary-Jane Baird and James T. Baird, my grand-parents, Augustin and Germaine Labelle, as well as my aunts and uncles for their unconditional love and faith to pursue my interests. Furthermore, I thank my very special cousins (who are like brothers and sisters to me) that have literally been there for me since day 01, I love you all and you will always have a special place in my heart.

À vous tous, mille fois merci!
**IV AVANT-PROPOS**

Inspired by Plato's Dialogues (*Cratylus*)

*Personae:* Coco Chanel, Roland Barthes, Mademoiselle Labelle

Mademoiselle Labelle.
Suppose that we make Coco Chanel a party to the argument?

Roland Barthes.
If you please.

Coco Chanel.
I should explain to you, Mr Barthes, that correctness of fashion is a creative expression inspired by important moments in a designer's life.

RB.
Legendary fashion icon Coco Chanel, there is an ancient saying that "hard is the knowledge of the good." And the knowledge of fashion is a great part of knowledge.

CC.
Is that so?

RB.
Yes, and I should have been once able to answer your question about the correctness of fashion or at least the code and rules of a fashion-based language system, which I believe results from the study of fashionable components.

CC.
Ah but then you are not qualified Mr Barthes.

RB.
Indeed, Coco, I do not know the absolute truth about fashion but I will, however, gladly assist you and Mademoiselle Labelle in the investigation of it with the help of my work entitled *The Fashion System*.

CC.
Thank you. I have often talked over this matter, both with Mademoiselle Labelle and others, and cannot convince myself

---

3 [http://classics.mit.edu/Plato/cratylus.html](http://classics.mit.edu/Plato/cratylus.html)
that there is any principle of correctness in fashion other than convention and agreement...

RB.
Really?

CC.
Yes, any fashion which you give, in my opinion, should at least respect convention for that period in time in which the fashion is created – we frequently change fashions, and the newly-imposed fashion is as good as the old if it is justified somehow....

ML.
Perhaps I could say something here.

CC.
Certainly but you probably agree with me that there is no fashion given to anything by nature; all is convention and habit of the users; such is my view. In fact, I did significantly change the way women wear clothing by feminizing men’s garments. Women needed to be more comfortable in order to perform activities that only men seemed comfortable practicing. In this sense, I changed the convention of women’s attire to suit the habit of the users. But if I am mistaken I shall be happy to hear and learn from you Mademoiselle Labelle, or indeed from anyone else.

RB.
I dare say that you be right, Coco: let us see. I also attempted to establish a convention, or at least put some order into the significance of fashion and what it conveys. To do this I believed that the most pragmatic approach was to create a set of rules from which to base this significance upon. Does this seem logical to you?

CC.
It was certainly not my approach for I have not created any rules or system, yet I do agree with your method. What is your take on my assessment of fashion?

RB.
I do not disagree with your free-spirited visions on fashion however; I have to ask if you believe that fashion has a spatial complexity rooted in a rule based system?

CC.
If you mean that notions in fashion have the potential to become a rhetorical language with something of a much larger scale such as architecture, then my answer is yes!
RB.
What do you think of this Mile Labelle?

ML.
I would be honoured if you read what I have gathered on this subject for it explains my vision on this very matter.
In order to define the analogy between fashion and architecture, the word ‘fashion,’ as well as the discourse that it entails, must be clarified. Next, specific moments in fashion-related history must also be understood as an architectural narration. In general, the term ‘fashion’ seems to be used to extract the highest standards of what the bulk of society considers marvelous, a coveted level of taste. Considered irrelevant or rejected in academic spheres until recently, fashion is now perceived as an intellectual discourse that communicates a message about the bodies it covers. Now more than ever, this once taboo term seems to have taken a different direction: an organized and choreographed form of expression, based on constraints and rules. All divisions of our existence (artistic, political, cultural, etc) can be measured within the realm of a fashionable discourse. Evolution of fashion design, and how it permits to substantiate concepts in architecture, is a key indicator of today’s ideals. Fashion will be shown to represent a new architectural language.  

4 LOSCHECK Ingrid, When Clothes Become Fashion Design and Innovation Systems, Berg, Madison WI, 2009, page 7-12
The communicative manner in which fashion transfers conceptual information to architecture and architecture to viewer will inform the logic for the project of architecture. "This communication is not released in one direction but is based on reciprocal interaction between the designer, object and viewer." Fashion, like any other form of art, needs theory to validate the ideas it communicates. The designers' task, in addition to the theoretical underlay, is to fuel happiness and creative interest for themselves and others as well. Mihaly Csikszentmihalyi, psychology professor and health researcher, affirms that there is a "state in which people become completely absorbed in their activities" which he calls the 'flow effect.' This effect is generally brought upon by artistic and creative people and is manifested in such a way that "the self is forgotten" and "people experience a sense of merging with the environment followed by the opposite: an expansion of the self and personal satisfaction at having reached one's aim." The designer's mission, therefore, becomes far more complex than intuitive thinking; it becomes an interaction between people, milieu, and sentiment. In this sense, the interaction

---

6 ibid, page 38, paragraph 2
7 ibid
8 ibid
between a city's heritage infrastructure and its citizens is sought as the thesis of architecture.

What is fashion?

Fashion is simply, for Alexander McQueen "metaphorical thinking and creative associations."9 Viktor and Rolf state that fashion is "deviation, subversion and play."10 Hussein Chalayan believes that fashion is "lateral thinking in analogies and images," 11 whereas Ann Demeulemeester, gothic fashion designer, admits that fashion is a "discovery of cognitive order in chaos."12 Martin Margiela's approach to fashion is based on "autonomous cognitive decisions"13 and Walter Van Beirendonck thinks that fashion is about "competence in the strategy of realization."14 The revealed characterization of what 'fashion is' according to several designers, argues that the expression of fashion is unique to each designer and allows potential for ingenuity and uniqueness. Fashion needs a theory where "artistic-scientific research

---

10 Ibid, page 38, paragraph 2
11 Ibid, page 38, paragraph 2
12 Ibid, page 38, paragraph 2
13 Ibid, page 38, paragraph 2
14 Ibid, page 38, paragraph 2

Thinking Outside the Body /16
promises to develop a critical iconic model" 15 as a form of intellectual practice to reveal one's manifestation on the matter.

In architecture, Walter Gropius "offers his own set of fashion tips, suggesting that the 'surfaces' of architecture can be deployed in a way that produces the much needed stimulation."16 He goes on to explain that "these tips are the 'common denominators' of design, the basic 'language' with which the designer can organize the psychological effects of his creations at will."17 Therefore, fashion serves to inspire the language that stimulates our intellectual understanding of surface. This approach will be echoed in the project of architecture to generate the 'flow effect' of fashion.

Fashion today is confronted with many choices, or paths to follow, and therefore a system is required to guide its evolution. Roland

---

15 Ibid, page 7, paragraph 2
17 Ibid, page 103-104

Thinking Outside the Body /17
Barthes, author of *The Fashion System* (Système de la Mode, 1967), said that "by introducing an organized duration into the representation of the fashion garment, description institutes, so to speak, a protocol of unveiling: the garment is unveiled according to a certain order, and this order inevitably implies certain goals." These goals are the essential criteria to produce fashion designs that will stand the test of time. Without any historic values or linguistic references, fashion, and its followers, may get lost in a sea of unknown principles.

"Imagine, if possible, a woman dressed in an endless garment, one that is woven of everything the magazine of Fashion says, for this garment without end is proffered through a text which is itself unending. This total garment must be organized, i.e., cut up and divided into significant units, so that they can be compared with one another and in this way reconstitute the general signification of Fashion."  

Rules, such as the ones implemented in Barthes' system, are established to organize the practice of fashion. He explains that fashioned clothing is basically divided in two structures: image and language. In a fashion magazine, for example, the same reality is offered in two ways: the photograph (image structure) representing the spatial relation of the garment and the verbal description (language structure), representing a syntactic relation

---

19 Ibid, p. 42
20 Ibid, p. 4
to the garment. He further explains that there are three forms of garments: image-clothing (an iconic structure presented by photograph), written-clothing (a verbal structure presented through words) and real-clothing (a technological structure which is the "mother tongue" for both the written and image clothing).

Hence, what we usually see in fashion and architecture magazines is the iconic (image-clothing) and verbal (written-clothing) representations of the technological structure (real-clothing). Barthes also proposes "shifters" in his description. The shifters "serve to transpose one structure into another"21 and they also facilitate the passage from "one code to another code."22 The shifter that allows passing from real-clothing to image-clothing is the sewing pattern. This analytical reproduction is "intended to reveal the technical substratum of a look or an 'effect'."23 The second shifter, the transition from real-clothing to written-clothing, is the sewing program. The sewing program "is not given in the same kind of writing as the fashion commentary [...] it contains almost no nouns or adjectives, but mostly verbs and measurements."24 This shifter is a 'transitional language' that inform the development between 'making' and 'being'. The last

---

22 Ibid, p. 6
23 Ibid p. 6
24 Ibid, p. 6
shifter is the transition from image-clothing to written-clothing, which usually entails the ability (especially by magazines) to “deliver simultaneous messages derived from these two structures, […] by using elliptical shifters: […] the anaphorics of language, given either at the maximum degree (‘this’ tailored suit, ‘the’ shetland dress) or at degree zero (‘a rose stuck into a belt’).”

“The semiological project requires the constitution of a corpus reasonably saturated with all the possible differences in clothing signs. On the other hand, it matters far less that these differences are more or less often repeated, for it is difference that makes meaning, not repetition.”

The elements of language and semiotics in Barthes’ Fashion System constitute the corpus of possible variables in fashion that help organize the conception of design; to see fashion as a ‘narrative’. The narrative of fashion, in however form it may be, is present in current prestigious fashion magazines such as Vogue, Glamour, Elle, and Lou Lou, to name a few. In certain cases, both image and written representations of the ‘real-object’ are used to provoke a new trend or mindset, presented in The Fashion System, which is an essential asset in organizing thoughts and

---

26 Ibid, p. 11
expressing ways to create clothing designs. This is what Barthes refers to as 'the collective imaginary.'

Figure 3 Iconic (photograph on the left) and verbal (description on the right) representations in Vogue Fashion magazine

Barthes' rules structured the code-based practice of fashion, adding precision to the way we assemble and represent garments to create an 'ensemble'. The iconic symbol is better understood by the accessory written depiction, according to Barthes, because one gives meaning to the other.27 This narrative-based theory shall guide the conception of a tailored set of rules for an


Thinking Outside the Body /21
architecture creating a new hybrid fashion code, which will inform the Systematic Design Process of the thesis.
Definitions that apply to fashion also relate to architecture, if the signification is properly shifted. Fashion definitions will guide the thesis by shifting their original signification to clarify the narrative that is conveyed from fashion to the project of architecture. The project of architecture, resulting from the auxiliary language (narrative) and defined through the shifted definitions, will be termed *Thinking Outside the Body*, to summarize that the language of body fashion can move ‘outside’ and be applied to architectural form.

Taking inspiration from Roland Barthes' work, the custom-made set of rules will become the fashion-driven repertoire for the *Systematic Design Process*. This customized repertoire will help remodel some of Gatineau's distressed historical edifices: the E.B. Eddy Pulp and Paper Mill, Buildings 1-2-3-5-6, (1901).

The City of Gatineau has few surviving historically significant buildings to tell the city's narrative. Revealing the histories of these specific buildings, by refurbishing them from their neglected state, will help revitalize Gatineau's core and mend these dilapidated buildings back into the city's urban fabric. Gatineau has expanded quite rapidly over the past 20 years, without coherence. A key intention of the project is to weave this disused
space back into the city, rather than focusing on sprawl. These historical and architecturally significant buildings are situated in Gatineau's center-town area (Hull at the time construction). Therefore, the project of architecture, which serves to revitalize the existing body of architecture (E.B. Eddy Pulp and Paper Mill), will also be responsive to its existing urban fabric. This fashionable revitalization is of the essence, being that this architectural body's location is one of the first people see when crossing the province's border via the Chaudière Bridge, connecting Ottawa to Gatineau (in close proximity to the War Museum).

Just as fashion adorns the body, hiding and revealing its parts, the project of architecture for the thesis will attempt to follow a similar principle: clothing the figure. Therefore, rather than design for the human body, this architectural fashion will 'think outside the body' by reinterpreting clothing design (see Mannequin 01) to fit a different type of silhouette: the body of architecture. This idea implies that the given program for the thesis will formalize the existing architecture's interior, its structure, and finally its skin: the heritage stone façade (dilapidated condition).

---

28 The oldest bridge (in terms of street circulation) in the National Capital Region (the oldest bridge in the NCC region supporting a railroad system is the Prince of Whales bridge connect Ottawa to Gatineau)
Skin externalizes the internal health of the body and mind and therefore it could be stated that, “all thinking is a form of thinking through skin.” Alterations of the skin exemplify what is occurring inside the body. The resulting changes that emerge onto its surface form an instant message of inner intention, action, or lack thereof.

“If the skin is adored and idealized in many cultures, if the marked and decaying skin prompts the immemorial dream of its immaculacy, the skin is also made to bear the blame for guilt, time, history, death. Innocence is unthinkable without the thought of an unmarked skin. Since human beings have their skins on display, and since their skins display so openly and copiously the signs of their health or disease, it is no surprise that there are strong negative as well as positive feelings attaching to the visible condition of the skin.”

Steven Connor, Professor in Modern Literature and Theory at Birkbeck College in London, describes that phenomena happening within the body may be externalized through spots or marks that imply that skin is not simply a boundary or envelope. For this reason, the skin of the existing buildings 1-2-3-5 and 6 (the body of architecture), defined by their heritage stone walls and mortar, will be approached with the notion that complications may occur if the wrong intervention is applied, marking the skin’s surface

---

30 Ibid, page 9
31 Ibid, page 95

Thinking Outside the Body /25
permanently.\textsuperscript{32} In this sense, the existing architectural skin will be respected and carefully dressed to revitalize its appearance and role in the city, protecting its heritage features (see Shift 3). Consequently, the buildings that will be dressed for the thesis, using up-to-the-minute fashion rules, will be treated with fragility, as if the intervention implied direct contact on the skin of a human body.

Figure 4 Existing conditions: heritage Second Empire stone walls, protective mesh dress, and supporting columns

The overskirt (new layer), using appropriate garment inspired codes from Barthes' theory on fashion, will abide by a new set of fashion encoded rules (see Shift 4). The existing protective mesh (temporary mesh dress) and supporting columns (stitches) will remain because they exemplify the current condition of the skin.

The overskirt will wrap around the stone walls, temporary mesh dress, and stitches just as fashion garments wrap around the form of a body. The existing mesh dress will act as an underlining between the new intervention and the original body, creating a fashion-inspired interaction. The architectural body itself will be re-used to re-define the original architectural space (see Shift 4- Program). The overskirt will act as an outer layer to the newly fashioned dress, hiding and revealing specific heritage details and emphasizing crucial instances of Gatineau's history to its people (social surrounding).

The parts of the buildings that are not protected by a heritage designation or which do not add any aesthetic or sentimental value will be tailored. In this sense, these buildings will be re-fashioned as a contrasting ensemble of new fashion and existing skin. Re-activating this once dynamic site will help invoke visual memories of its architecture and stimulate the imagination through its afterlife. The objective of the thesis is for the original body of architecture to be protected and brought back to life by celebrating its past functional logic through fashion ideals. The use of a new intervention contrasts with the old buildings and their former program, which requires the viewer to think outside of the original body.
Roland Barthes' *The Fashion System* outlines a systematic set of rules that determine a method of communicating fashion based on the three structures (iconic, verbal and technological). The shifters, as explained previously, are meant to be used as a method of interpreting the three structures. The thesis examines what has been overlooked by Barthes' theory, especially the architectural potential of the shifters. His disregarded analysis between fashion and architecture engenders an untreated shifter in which the code that explains his image and language fashion is presented (see Shift 4 for explanation). This overlooked shifter will be termed 'the fourth shifter' (see Shift 4 for definition) and must enlighten the correspondence between building material and dress textile.

The design for the project of architecture's *ensemble* will be similar to the approach a clothing designer would take toward a *tailored* dress. Generally, a fashion designer studies the form of the body, customizes a design that is appropriate to this unique form, and selects the textiles or materials that are fitting to the design. The body of architecture's *overskirt* will become part of the tailor-made project of the thesis. A significant contingent pertaining to the project of architecture consists in assessing the 'existing body', 'temporary mesh dress,' and 'stitches' to enable the design of the *overskirt*. The intervention of the temporary

*Thinking Outside the Body* 128
mesh dress, stitches, and media reports have mostly focused on the buildings' state of disrepair, however while these intercessions have address the deterioration of the building, the thesis primarily seeks to revitalize the architectural body, through deployed surfaces that convey the 'flow effect'.

The subsequent Program (see Shift 4) describes the long connected spaces found on the first floor, that link buildings 1 to 6. These spaces were 'runway-like', because they are positioned in a long straight line and are the 'center of attention' in plan. Furthermore, just like a fashion show on the catwalk, the production of pulp and paper is organized and choreographed from the 'wet' area to the 'dry' area. This same logic of wet and dry will be applied to the catwalk organization, wet being the area that serves beverages, and dry the area that serves food and houses shopping activities. A shift from an industrial technological structure to a hybrid technological structure between fashion and architecture will be required to guide the program transition. The juxtaposed position of these buildings to one another will be developed in association to the rules of the 'fourth shifter' and will be predisposed to body-related artistic functions, transposing and shifting the new program's functions from inside to outside the architectural body.
Part C - Historical Overview of Fashion and Architecture

To determine which type of inspiration would be appropriate for the project's body of architecture, specific moments in the history of modern fashion and architecture are analyzed. Three marking periods will be presented to contextualize the influence of fashion and architecture on each other. Walter Benjamin argues that "for philosophers, the burning interest in fashion lies in its extraordinary anticipations" because fashion is always oriented toward the future, although its development necessarily looks at the past for the possibility of reconfiguration.

"When viewed as part of a historical continuum, both garments and buildings are invaluable anthropological artefacts that mark important cultural and economic conditions, stylistic preferences, and new developments in technology materials."

When defining of the idea of "style", Otto Wagner mentions in his book, Modern Architecture, 1988 that "each new style gradually emerged from the earlier one when new methods of construction, new materials, new human tasks and viewpoints demanded a

---

33 LOSCHECK Ingrid, When Clothes Become Fashion Design and Innovation Systems, Berg, Madison Wi, 2009, page 98, paragraph 2
34 HODGE Brooke and MEARS Patricia, Skin + Bones Parallel Practices in Fashion and Architecture, Thames & Hudson, Museum of Contemporary Art, Los Angeles, 2007, p. 3, paragraph 3

Thinking Outside the Body /30
change or reconstitution of existing forms.\textsuperscript{35} We will see, from important historical periods, how these task and viewpoints influence trends and conventions and how they are applied to architecture, fashion, art and use of everyday objects.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure5.png}
\caption{Mapping of three major periods in modernism (between fashion and architecture)}
\end{figure}

1. \textbf{FIRST PERIOD: INDUSTRIALIZATION (1850-1890)}

"A stylistic phase in architecture is a sort of broad base of shared motifs, modes of expression, and themes, from which a great variety of personal styles may emerge."\textsuperscript{36}

The first period of industrialization is discernible by unprecedented and innovative building techniques which favour the use of the

\textsuperscript{35} WAGNER Otto, Modern Architecture - a guidebook for his student to this field of arts, The Getty Center Publication Programs, Santa Monica, 1988, p.74, paragraph 3
\textsuperscript{36} CURTIS, William J.R., Modern Architecture Since 1900, Phaidon, New York, 1996, page 59, paragraph 4
newly invented iron and steel rather than traditional masonry. This rapid technological change would become one of the most powerful influences toward modernism. The Crystal Palace in London, built in 1851 by Joseph Paxton, demonstrates this new type of structural system using iron and glass. This revolutionary prefabricated structure used light and transparent glass skin and steel structure which was intended to be taken down and put back up easily. For this era, the Crystal Palace was an innovative type of architecture that created a new sense of space, one that is see-through, rapidly built, and enforced a new way of building architecture: favouring the use of machines.\textsuperscript{37} From that point on, structural frames became fashionable because of their potential to convey up-to-date forms that were architecturally diverse and conveyed innovation and technological advancement. Otto Wagner argues that "construction always precedes, for no art-form can arise without it, and the task of art, which is to idealize the existing, is impossible without the existence of the object."\textsuperscript{38}
In building the Crystal Palace, Paxton introduced a material palette that would revolutionize the way buildings, transportation systems and even fashion designs were conceived. The Crystal Palace took over traditional architecture and instilled a new tradition, iron technology, that was also used to build bridges, railway systems, and skyscrapers.

In fashion, Paxton also inspired designers to create garments such as the metal armature used in women's dresses that support their "dome shaped" skirts. These skirts house the crinoline frame, much like the iron structure supported the entire Crystal Palace's skin. The same type of fashion structure is found in women's whalebone style corsets. The direct reflection of the armature type system demonstrated in architecture as well as fashion, the general mentality in the nineteenth century and the use of new materials such as steel and glass to create new forms.

---


41 Ibid, page 179
42 Ibid, page 177-178
During this period another revolutionary invention was the sewing machine, and its association to the emergence of mass production and the industrial period.\textsuperscript{45} The sewing machine permitted tailors and designers to produce a larger amount of clothing since they did not have to sew every part of the garment by hand. Although this innovative tool was greatly accepted into the world of fashion, a part of the detailing was lost by the desire to produce a superior quantity of clothing. The loss of craft in architecture due to the capability of production by machines as well as the new types of materials that were available at the time brought about certain

\begin{flushright}
\footnotesize
\textsuperscript{43} Laver James, The Concise History of Costume and Fashion, Harry N. Abrams Inc, New York, page 187
\textsuperscript{44} Ibid, page 199
\textsuperscript{45} Hodge Brooke and Mears Patricia, Skin + Bones Parallel Practices in Fashion and Architecture, Thames & Hudson, Museum of Contemporary Art, Los Angeles, 2007, p.12, paragraph 3
\end{flushright}
issues regarding such a drastic change within a short period.

"Thus by the end of the decade, the crinoline-supported skirts were truly prodigious, until it was impossible for two women to enter the room together or sit on the same sofa, for the frills of one dress took up all available space."\(^{46}\) This kind of excess and overkill in fashion as well as the rapid production capabilities in architecture no doubt explains the emergence of new forms, details and artistic expression in the next period.

2. **SECOND PERIOD: ART NOUVEAU (1890-1914)**

"The whole basis of the views of architecture prevailing today must be displaced by the recognition that the only possible point of departure for our artistic creation is modern life."\(^{47}\)

Otto Wagner, 1895

The second period is guided by Art Nouveau which is one of the first modern movements to re-integrate artistic contemplation. This period is a response to the previous period's welcoming of technological progress and use of new materials. Art Nouveau is meant to be a language that conveys a new way of life where aesthetics and ethics guide its practices. The result was 'whiplash' curves and organic inspired ornaments characterized by

\(^{46}\) LAVER James, The Concise History of Costume and Fashion, Harry N. Abrams Inc, New York, page 179

\(^{47}\) CURTIS, William J.R., Modern Architecture Since 1900, Phaidon, New York, 1996, page 53, paragraph 1
vegetal and floral motifs. The 1890's as a whole was a period of changing values. The old rigid society-mould was visibly breaking up. Rather than using straightforward metal structures, Art Nouveau demonstrated that metal can be used creatively to construct organic structural forms and details, symbolizing "a new breath of freedom in the air."

The bustle, which appeared in the end of the last period, changed the form of the typical dome shaped dress silhouette focusing the attention toward the back of the dress (beginning of asymmetry) which is a direct influence of organic shapes in Fashion. The

---

50 Ibid, page 211
51 AUBRY Françoise, Le Musée Horta Saint-Gilles, Bruxelles, Ludion Guides, Bruxelles, 2001, page 22
52 Ibid, page 23

Thinking Outside the Body /37
bustle's influence began to bloom in the Art Nouveau period, introducing variety in the structure of feminine clothing, in the same way that the whiplash form changed the typical metallic structure.

Art Nouveau inspired many fields from architecture to furniture, fashion to making art part of everyday life. As for the clothing style of this period, it is apparent that women's dresses were much less restrictive than in the preceding period. The use of corsets were reduced and metal armature became less predominant in clothing fabrication. Instead, bustles were introduced to the world

Figure 13 Different bustles that arose during the influence of the Art Nouveau period


Thinking Outside the Body /38
of fashion to create asymmetrical and organic shapes that enhance certain parts of the body. The focus is not solely about creating organic structural forms but also about expressing artistic principles.

Designs were expressed by a high level of craftsmanship and stimulated by fine art, in the aspiration that everything could potentially become a work of art, even an outdoor balcony or an air ventilation detail. In this sense, the architectural accessories exhibit the idea of making shapes more sensuous and nature-like.

---

This form of expressionism is referred to as “la belle époque”, which marked the end of the great depression (1873-1896) with optimistic designs that displayed technical and artistic progress.\textsuperscript{60}
Art Nouveau influenced the beginning of other architectural movements such as Antonio Gaudi's organic architecture and a more sober expression of architecture, the English Arts and Crafts led by architects such as Charles Rennie Mackintosh.  

Art Nouveau's transformation of the straightforward metallic structure of the industrial period will direct the project of architecture's re-fashioning of the existing metallic columns (stitches) that tie the temporary mesh dress onto the architectural body.

---

62 Ibid, page 216  
65 Ibid, p.260
This decorative idiom was quickly abolished at the beginning of the twentieth century when function became more important than artistic expression and architectural movements such as the Bauhaus and International Style became leading styles of thinking.

3. THIRD PERIOD: ART DECO, DE STIJL, AND BAUHAUS (1917-1939)

"Living architecture is that which faithfully expresses its time. We shall seek it in all domains of construction. We shall choose works that, strictly subordinated to their use and realized by the judicious use of material, attain beauty by the disposition and harmonious proportions of the necessary elements of which they are made up."66

Auguste Perret, 1923

The third period is marked by the return of basic geometric forms in response to the organic style of the previous decades. Avant-garde movements such as De Stijl, Art Deco, and Bauhaus (International Style) emerged as the predominant models that attempted to introduce a formal geometric structure, using reinforced concrete as the main material in response to the excess that was introduced in Art Nouveau, according to Adolf Loos.67

67 Ibid, page 73-82
It was quickly perceptible that reinforced concrete was useable in many forms. Experimentation with this new material illustrated great potential of formal expression. Concrete permitted greater spatial spans and moulding potential that would lead to curvilinear forms and low production costs. This discovery also directed the general mindset toward a liberated architecture that went on to influence an open-minded lifestyle.
This fashionable phenomenon demonstrated new methods of creating space and addressing the facade in architecture. These space-creating techniques allowed the introduction of movable wall divisions. For example, Gerrit Rietveld designed movable walls in the Schröder House, 1923-1924 that enabled the home owner to create several variation of the same space depending on the occasion. This cubist design allows the formation of a vast and uninterrupted space on the inside whereas the outside resembles the work of an abstract sculpture. These ideals, a long uninterrupted catwalk-like space as well as a liberated...
sculptural outer layer, are sought to refashion the E.B. Eddy buildings in the thesis.

This new found liberation in architecture and fashion was oriented toward function devoid of unnecessary ornament and went on to inspire clothing designers to create garments that focus on functionality rather than aesthetics. In the world of fashion, this influence is witnessed in the appearance of the 'Flapper' style. The Flappers, a group of young freethinking women, desired liberated clothing to reflect the new post-war liberalist mentality. They started to wear an unconventional style of clothing: skirts

---

73 Ibid, page 295
74 HODGE Brooke and MEARS Patricia, Skin + Bones Parallel Practices in Fashion and Architecture, Thames & Hudson, Museum of Contemporary Art, Los Angeles, 2007, p.14, paragraph 1

Thinking Outside the Body /45
became shorter, ornament vanished, and the sexual appeal in clothing fabrication and design emerged. This was all reflected in the Flapper activities such as dance (the Charleston), which was experienced to new jazz style music. The fresh and open-minded position that women claimed in society was demonstrated in the way they started to express themselves, particularly through clothing. At the time, this type of liberated expression was led by the iconic designer Coco Chanel (Gabrielle Chanel), 1883-1971.76

In the film Coco Avant Chanel, 2009 Gabrielle Chanel's life and design inspirations are described as a series of events. The avant-garde designer went through many life-changing experiences in a short period of time. The film serves to demonstrate how these important and personal moments inspired her unique and forward-thinking creations. Channel revolted against restricting corsets and superficial feather hat garnishing and instead used men's garments and textiles to create women's attire, including pants. Her iconic style, the feminization of men's clothing for women, becomes a marking moment in the history of fashion. Not long after Channel's appearance in the world of fashion did her influence spread, inspiring movements such as the

1920’s liberating Flapper society as well as drastic hair and clothing statements in gender subversion. The gender subversion that Coco Chanel initiated not only influenced fashion but it brought on an entirely new frame of mind.

Figure 28: Jersey Flapper Dress, by Coco Chanel, for everyday working women (1926)

Figure 29: Gender subversion becomes apparent through garment transformation (1926)

The liberated architecture in this period demonstrating new materials and methods of creating space, as well as Chanel’s liberalism toward Fashion, will inform the versatile spatial qualities of the catwalk circulation as well as the open-minded wrapping virtues of the project’s overskirt, both suitable for various social functions associated to the ensemble’s Program (see Shift 4).


Thinking Outside the Body /47
Thinking Outside the Body / 48

Demonstrating the Principles of Fashion in Architecture
Shift 2

DEMONSTRATING THE PRINCIPLES OF FASHION IN ARCHITECTURE USING A BARTHIAN ANALYSIS

Part A - MOATTI AND RIVIÈRE, LACE AND FASHION MUSEUM IN CALAIS

The Fashion and Lace Museum, situated in Calais (France), is an old lace-making factory with a new addition designed by Alain Moatti and Henry Rivière (2003-2008). The curves on the facade of the newly added structure of this project represent the origins of lace, a soft and delicate fabric, suggesting femininity. The qualities of lace, in this architectural addition to an existing building, are reinterpreted into a new pattern and transposed onto a glass facade supported by a curvilinear metallic structure. The old factory was recycled because the architects wanted to take "full advantage of the existing generous industrial spaces of the existing Boulard factory, preserving its identity but also transforming it," through a rejuvenated lace language and new material which generates a shift from the written structure (lace language) to the technological structure (new metallic facade instead of traditional thread-based fabric).

79 http://www.moatti-riviere.com/
80 http://www.wallpaper.com/gallery/architecture/fashion-and-lace-museum-calais/17051198/1932#nav

Thinking Outside the Body /49
Roland Barthes' three forms of garments are exposed in this project. The photography based iconic structure (image-clothing) appeared in MARK N°21, Aug/Sept 2009, page 58, an architecture magazine, and was expressed by an au-courant written version, explaining the use of a double facade that demonstrates a unique lace-inspired narrative. The architectural description bears a resemblance to the way Barthes describes image and verbal representations, combined to convey a specific code or trend, especially in French Fashion magazine.

http://www Wallpaper.com/architecture/fashion-and-lace-museum-calais/3505

Thinking Outside the Body /50
The verbal structure, however, is also demonstrated through the architects' re-interpretation of lace, an iconic textile language, which is re-interpreted to revive the old tradition, by etching it onto the addition's facade. The preservation of its original architecture, by wrapping a new and creative lace-inspired building garment around a portion of the factory's body, visually revives the entire site.
The new lace narrative rejuvenated an old language, lace-making, which became mainstream in the early 16th century, particularly on sleeves and collars. The new lace language is represented by "scrolling lace patterns" that cover the entire skin of the addition "in curves and counter-curves silkscreen-printed on glass." The architects, through their new language, wanted to reveal that the "play of hide-and-see evokes lace and the perforated cards once used on the Leaver looms," which can be communicated from an interior and exterior point-of-view.

Figure 33 Silkscreen printed on glass
Figure 34 Analysis of the curvilinear structure that supports the lace narrative

The technological structure (real-clothing), demonstrated by the fashionable narrative added onto the existing building's skin, conveys an up-to-the-minute language that is sought for the project of architecture. All three forms of garments expressed in

85 http://www.moatti-riviere.com/
86 Ibid
87 Ibid
88 Ibid
89 Ibid

Thinking Outside the Body 152
Barthes’ theory hold validity at an architectural scale, yet he fails to mention the prospect of altering fashion onto an entirely different type of body: the architectural silhouette.

The thesis seeks the reinterpretation of fashionable elements, such as Moatti and Rivière’s lace-inspired narrative, to act as an analytical factor that reveals the body of architecture’s most valuable and historically interesting parts. In this sense, the Fashion and Lace Museum’s contemporary addition to an existing factory will instigate the design of an overskirt for the E.B. Eddy Pulp and Paper factory to help revitalize its decaying body condition. In turn, the overskirt’s design will be narrated by Coco Chanel’s free-spirited and avant-garde design principles, supporting its composition and task to hide and reveal the body’s state.

http://www.moatti-riviere.com/
Ibid
Part B - Penelope Stewart, Terminal, artwork installations

Among this trans-disciplinary artist's work are three temporary architectural installations that apply principles of hide and reveal. Penelope Stewart's installations: Chora, Canopy, and Terminal, were created with the use of translucent fabric on which is printed a historical architectural image. This image, used for all three installations, is Stewart's matrix (starting point from which her installation projects originate) that demonstrates the layering of transient compositions onto old structures. The intervention "envelopes the space and binds to create a unity documenting presence while confirming absence."

The presence is confirmed by the revitalization of the installation area, only if for a short period, and documents absence by celebrating the past architecture denoted on the fabric.

"My concern is with simultaneity of what are usually seen as binary tensions: architecture and ornament, nature and culture, visible and invisible, absence and presence. By engaging space, materiality, the body and most importantly the sense — metaphors, blurs, overlays, and leeks emerge. These tensions are what I believe collectively give architecture its power."

Her most recent work, called Terminal, uses her trademark printed fabric and an abandoned train platform. Over 550 feet of this

[92 http://penelopestewart.ca/statements1.html]
[93 http://penelopestewart.ca/home.html]
fabric is woven between the columns and to flow in the wind, thus creating form by veiling the present and unveiling past memories with fabric-related architectural images.

Figure 37 Terminal installation without wind factor distortion

Barthes’ structures are established in Penelope Stewart’s *Terminal* installation. Weaving the historical image printed on fabric, or ‘mimetic cloth’ as Stewart calls it, through the derelict train terminal and columns creates interplay between building (body) and fabric (clothing), while ‘choreographing space’. The iconic structure is represented by the fabric (her matrix), a signifier of her method toward artwork. Furthermore, the written structure is verbalized by her installation statement, which explains why she

---

94 http://penelopestewart.ca/a_terminal.html

*Thinking Outside the Body* /55
chose the site, the described effect, and what is achieved by applying the cloth intervention to the abandoned site.

"The contradiction between materials, the organza and the iron coupled with the residue of abandonment create a tension, a destabilizing effect on our perceptions and expectations of the architectural site. Architecture transforms the history of our relationship to space. By clothing the platform the site is re-activated with a dynamic energy that invokes the chimeras of the imagination."95

The use of fashion (printed organza fabric), therefore, revitalizes the decaying site, giving it an entirely refreshed look. The technique of clothing and weaving through existing elements on site, brought into play by Penelope Stewart, will be made use of in the project of architecture to regenerate the Pulp and Paper Mill's architectural body.

The overskirt design (outer layer wrapping the body of architecture) will convey an invigorating appeal of the body's most invaluable heritage features. Its development will respect Barthes' systematic thought process all while utilizing a liberated Chanelian disposition throughout the configuration, particularly when shifting from fabric form to building form.

95 http://penelopesstewart.ca/statements1.html

Thinking Outside the Body /56
The intervention for the Pulp and Paper Mill in Gatineau, as opposed to the ephemeral quality of Terminal, will use fashion as a permanent installation, affecting as little as possible its original skin condition. The idea of tension in Stewart's work will be made use of in the thesis to signify the contrast between body (existing architecture) and dress (new intervention).

Stewart's technique of veiling the present and unveiling the past has definitely invigorated, even if only for a short period of time, the abandoned Terminal site. It demonstrates that change is not always made to alter the original surface (or skin) to create an innovative and marking impact.

---

http://penelopesstewart.ca/a_terminal.html

Thinking Outside the Body /57
Kei Kagami, designer, architect, and former assistant to Japanese architect Kenzo Tange, uses his fashion designs as a means of self-expression and a way to apply his knowledge as an architect. Kagami's spring/summer 2004 collection called, The Good Old Days, demonstrates that "there isn't much of a boundary between architecture and fashion" since "both deal with the space around the body." This designer avoided the use of computers to fabricate this collection, because he believed computers and new technology creates a great sense of frustration. Instead, he used mechanical devices inspired by the industrial era and its old machinery.
Barthes' structures are exposed in Kagami's intrinsic work process (no machines, just mechanisms). The book Xtreme Fashion (2005), page 138-141, and Kagami's website, both present image and written descriptions of The Good Old Days collection that manifest the "beauty of mechanical devices"\textsuperscript{101}, looking back into the industrial revolution period. Kagami's industrial-based scheme, which includes the use of existing industrial mechanisms, serves as inspiration for the conceptual dress design Mannequin.
(see Shift 4) and will inform the project of architecture (originally built for industrial paper making purposes).

The verbal structure also elucidated, in Xtreme Fashion, that soft fabric (fine wool) was used for these out-of-the-ordinary dresses to create balance, and "soften the impact of the machinery's hard image." The language conveyed in his designs explains Kagami's background and his fascination with machinery, which makes apparent the origins of this assortment. The written narrative that describes Kagami's collection confirms what the images are projecting: a combination of architectural elements, machine mechanisms, and fashionable fabric. This combination of fluidity and machinery will serve to enlighten the overskirt design and its link with the interior catwalk circulation. In this
sense, the combination of ‘old’ mechanism and ‘new’ materials create a contrasting effect that revitalizes the perception of the ‘old.’ The existing architectural body (Pulp and Paper Mill) will be brought back to life with new materials in the design of its overskirt.

The technological structure, like Penelope Stewart’s Terminal installation, is ephemeral, due to the short-lived nature of the fashion show (a partial analysis of the real garment). In this case, the garments created for the catwalk still exist yet they are no longer shown by human bodies, as they were during their runway debut. The presence of these hybrid garments on human bodies is essential to demonstrate the manipulation of structural elements (industrial mechanisms) and their shifted functionality as body enhancing garment accessories (rather than their original machine operating purpose). The mechanisms, serving as hide and reveal techniques, are designed to lift, unroll or swivel pieces of fabric on the dresses. This implies that the garment is manoeuvred to focus on specific portions of the body, through the application of winding mechanisms, jacks, bicycles chains and gear wheels,
wires, hooks, levers, and other components [...] used to alter the position of the clothing in relation to the body.\textsuperscript{104}

The relation between industrial/mechanical details and raw fabrics from Kagami's collection stimulated the location of the catwalk above the old industrial production line as well as the connection details in the design of the conceptual dress (demonstrated in the cross section - shift 4). In turn, the dress will inform the type of connections used to support the suspended catwalk and wrapping overskirt structure in the project of architecture.

\textsuperscript{104} SMITH Courtney and TOPHAM Sean, Xtreme Fashion, Prestel Publishing Ltd, London, 2005, page 139
\textsuperscript{105} http://keikagami.com/english/home.html

\textit{Thinking Outside the Body} 162
Neil Barrett's AW10 fashion collection (2010) was framed by AquiliAlberg's sculptural installation pieces. AquiliAlberg, a Milan based architectural firm, fashioned innovative space forming sculptures to configure the catwalk and accentuate Barrett's hybrid style that meshes clothing fabrication and architectural detailing principles such as geometric forms, complex patterns, mesh and transparency. Barrett's garment collection elucidates that architecture persuades clothing design through vertical cuts in material, asymmetrical detailing, and the shift in opacity between fabric and detail as part of his spatial perception of the garment.

Figure 43: Men's clothing designs demonstrating geometry, and original jacket layout and patterns\textsuperscript{106}

Figure 44: Use of mesh in men's garment to create transparency\textsuperscript{107}

\textsuperscript{106} http://www.male-mode.com/2010_01_01_archive.html

\textsuperscript{107} Ibid

Thinking Outside the Body /63
Aquili Alberg studio’s designs are open to different interpretations. A series of sliced surfaces generate a complex, yet controlled volume, [...] gives the sculpture character, and wrap-around lines create multi-faceted volume individual perception of the space, which has a kaleidoscope feel [...]108. The search for spatiality in this project was influenced by both the fashion design and the architectural firm to create an equilibrated balance within this hybrid practice. The project of architecture will apply the transition metaphor between center stage catwalk (demonstrating the latest trend for the body) and backstage preparation (preparation of the body to be demonstrated) in the configuration of its circulation.

Figure 45: Catwalk circulation and sculptural installation by Aquili Alberg, situated between backstage and front stage109


Thinking Outside the Body /64
Both facets of the AW10 development can be explained by a common language metaphor that finds its roots in Barthes' fashion theory relative to the structures (iconic, written and technological). This hybrid project's iconic structure is represented by images of AquiliAlberg's sculptural transition between catwalk and backstage as well as images of the clothed models on the catwalk.

The verbal structure, on the other hand, applies to the narration of the fashion show as well as the plans, sections, and elevations of AquiliAlberg's sculptural installation (a form of written architectural language). The iconic and verbal structure help both the fashion and architectural aspects of this project to inform one another, much like the fashion magazine's written commentary evokes what the image has made an effort to express.

The technological structure, nonetheless, can be experienced by looking at it and walking through it (architectural sculpture by AquiliAlberg) or by wearing it (fashioned clothing by Neil Barrett). The thesis catwalk circulation, therefore, will be structured by technological, iconic, and verbal areas that instruct its progression from building 6 to building 1 as well as the functions that surround it. The iconic area within the catwalk will apply a transition between backstage (technological functions) and front stage (social, or verbal, functions). AquiliAlberg’s AW10 installation serves to inform the interior catwalk portion of the thesis’ ensemble.

In this architectural project by Zaha Hadid, Neil Barrett’s clothing designs are accentuated by the architectural design that portrays the same “design parameters of fixed points, folding, pleating and cut outs” used in his creations. The Flagship store in Tokyo displays his overall mindset, whereas the aforementioned project, AW10 Fashion Show catwalk design, portrays only a specific season’s collection of his work.

The display area in Barrett's flagship store is the central focus of the design, not only because of its central position within the space but also because of the contrasting effect between its curvilinear and sculptural nature, reminiscent of Art Nouveau’s aesthetic whiplash signature in relation to the rather orthogonal and rigid materials of its surrounding space, indicative of Art Deco’s clean lines. The spatial contrast in Barrett’s flagship store will be transposed into the thesis by contrasting the orthogonal lines of the existing industrial buildings with the playful curves brought upon by the programmatic functions.

http://www.yatzer.com/1310_neil_barrett_flagship_store_by_zaha_hadid_architects_in_tokyo

Thinking Outside the Body /67
The verbal structure aspect of Barthes' system, as described by Zaha Hadid, is:

"The concept of the store plays with the complementary characteristics and the related dualism between male and female. This is echoed in the furniture design on both floors through the formal language and tactile quality of the materials used. The furniture piece on the ground floor is designed as a strong, masculine and dynamic form whilst the piece on the first floor enunciates femininity through more fluid contour lines. The first floor is designed in a more playful manner creating different zones that maintain the perspective view between them."

A Barthian analysis of this boutique demonstrates that the iconic structure, represented by photograph of the interior space, communicates the concept of Deco rigidity and Nouveau fluidity to the viewer.

Figure 48: Perspective of orthogonal space vs. curvilinear sculptural forms

The concepts used in the confectioning of Barrett’s clothing are reinterpreted in the architectural 'présentoir'. This display area is divided by two main architectural components that architect Zaha Hadid refers to as 'sculptural architecture.' “In two formal elements the design shifts between architecture and sculpture, where a compact mass of surface layers unravel and fold to form the shelving display and seating.”115 The space resulting from this centrally positioned sculptural architecture shifts from ample to tapered, important element in Barrett’s clothing design, which changes the spatial feeling within the store, contrasting between

114 Ibid
115 http://www.yatzer.com/1310_neil_barrett_flagship_store_by_zaha_hadid_architects_in_tokyo

Thinking Outside the Body /69
rigid and fluid. This contrast is felt in the architecture by a change in materiality, varying from a natural concrete to a white Corian finish, and from reflective to opaque (using different materiality and colors) in architecture, creating an 'effect' comparable to the transparent/opaque effect apparent in his previous AW10 clothing collection. The design for the sculptural space was generated from 3D modeling (digital) and CNC programming, demonstrating up-to-the-minute constructions techniques to achieve their spatial configurations.116

Figure 51 View of the centrally located sculptural intervention in plan117

The feminized technological structure of Hadid’s sculptural installation will inspire the feminine curvilinear overskirt design and iconic intervention on the catwalk circulation, throughout the project of architecture. The long and narrow existing condition of

117 Ibid

Thinking Outside the Body 170
the E.B. Eddy buildings as well as the body's overskirt will be shown through 3D modelling (analog), representing a Chanelian approach toward design (similar to the way a designer configures garments on a 3D mannequin).


Seeing how fashion and ephemeral installations can help mend and revive existing sites, either abandoned or dilapidated, the thesis encompasses the use of an existing 'body of architecture' for the hybrid fashionable/architectural intervention. The idea behind the use of existing architecture accentuates that changing the way a body is dressed can help rejuvenate its appearance, hence re-integrating this body back into a socialite context. This approach toward architecture is not possible with a new construction from top to bottom; therefore the search for an impending body of architecture is needed.

The dilapidated body of the E.B. Eddy Pulp and Paper Mill is an ideal site to attempt to rejuvenate and re-introduce back into its social surrounding environment. The existing temporary mesh dress is what many historians, city planners, media, and citizens are talking about. Its central position within the city of Gatineau, its proximity to Ottawa, and its neighbouring governmental and industrial buildings support the need for a collective metropolitan district filled with artistic and fashionable customs, suggesting a trendy way of life. This district is a means of distraction, offering a fantasy lifestyle to its visitors even for short lunchtime breaks.

---

116 Vogue, October 2009 issue, table of contents
What is needed here is a makeover, making this site attractive to onlookers and visitors. The refashioning of an overskirt will help attract people inside its long and slender catwalk-like fashionista program. The fact that these 5 chosen buildings are adjacent to one another, linking the former pulp and paper production line, had accentuated the desire to create a catwalk circulation that celebrates its former lifestyle. In this sense, these buildings were a model choice of existing architecture (body) for the thesis.
Zra Butler Eddy, founder of the E.B. Eddy factories, moved to Hull in 1851. He initially started a handmade match factory, and not long after, he started a pulp and paper mill on the edge of the Outaouais River. This infrastructure is spread over both the Ontario and the Quebec side of his 45 acre land. The infrastructures that will be examined in this thesis are Buildings 1-2-3-5 and 6. These buildings (body of architecture) relating to the thesis are situated entirely on the Quebec side. They were built in 1883 and finished in 1890, when the first paper machine was installed, and were later ravaged by the great fire in Hull of April 1900. The fire was allegedly started in a residential chimney nearby and because of strong east-bound winds the flames ravaged everything around this site and all the way to Dow's lake.¹¹⁹

¹¹⁹ This picture, PA-135438, from the National Archives, shows the first Canadian Pacific Union Station a day or so after the fire of 26 April 1900. It is taken from Wellington Street, just west of Broad Street, looking towards [...] two damaged stone walls which were the partitions in a row of three one-storey storehouses owned by E.B. Eddy, just west of Broad Street. The [...] E.B. Eddy site

Guided visit with Mark Brennan, engineer for Domtar
shown here was to be redeveloped over the next few months as the new CPR second Broad Street Union Station.**

Union station (replaced in the photograph by a temporary white tent) and its surrounding tracks were re-built from July 1900 to January 1901.

![Image of Union Station](http://www.railways.incanada.net/circle/findings.htm#eddy)

**Figure 52** Photograph of the E.B. Eddy Pulp and Paper Mill ruins after the April 1900 fire.

After the fire, the factory buildings were nothing but a pile of rubbish, except for the stone foundation walls. These remaining footings were the only indicator as to where the buildings were originally situated. Eddy then decided to build new, modern factories in these same locations and recycle the old.

---

120 http://www.railways.incanada.net/circle/findings.htm#eddy
121 http://www.railways.incanada.net/circle/findings.htm#eddy
foundations. Even today, when looking at a site map, the locations of the buildings are exactly the same as their locations on a site map from 1901. The main difference is the infill building #5, added between the original buildings at a later date.

Figure 53 Site map from 1901 that shows the newly re-built factories, without building #5 (infill)

Production was brought to a halt in 1992, which signifies that these industrial buildings served more than one hundred years in the pulp and paper industry and thus greatly contributing to Gatineau's economic development.

122 http://www.patrimoinecultural.gouv.qc.ca/RPCQ/detailBien.do?methode=consulter&bienId=63485&contenuOngletId=detailPopup
123 Guided visit with Mark Brennan, engineer for Domtar
125 Courtesy of Domtar
Figure 54 Building #1

Figure 55 Building #2

Figure 56 Building #3

Figure 57 Building #5

Figure 58 Building #6 (3 stories), with mansard roof and dormers
The Domtar factory buildings 1, 2, 3 and 6 have since been recognized, in 2001, by the Ministry of Quebec Culture, Communications and Feminine Conditions (MCCCF) as historical monuments for their important part of the city's economic development in the late 1800's. Buildings 1, 2 and 3 were built in 1883, with flat or gabled roofs, rectangular plan, and are all between 1 or 2 stories high. Building 6 was built in 1890 with a mansard roof and dormers and is three stories high. All four buildings are of stone, and are of Second Empire style, a type of architectural construction that was normally used in institutional or high end residential projects. Furthermore, building 5 was added later, around 1938, as per a mill valuation drawing of that same year, between buildings 3 and 6.125

Typically, industrial projects similar to the E.B. Eddy Pulp and Paper Factories, were built in a more rational style, of brick, basic steel structure and flat or gabled roofs. The great fire at the turn of the 20th century, the scars it left behind, and the style of construction, including the use of stone rather than brick, make this body of architecture (buildings 1-2-3-5-6) worthy of heritage recognition. This already out-of-the-ordinary construction style encompasses an unconventional clustered position situated on the

125 http://www.patrimoineculturel.gouv.qc.ca/RPCQ/detailBien.do?method=consulter&bienId=110634#
borders of the Outaouais River and boulevard Alexandre Taché (a main artery within the city of Gatineau), making these buildings unique and prominent within the city.\textsuperscript{127} Taking their important location and heritage value into consideration, these now abandoned buildings should be revitalized, by clothing the damaged skin and scars that were left on their dilapidated body, illustrating a new facet of hybrid, fashion-related, architecture.

The historical value of these buildings is partially owing to their age in relation to the rest of the city's built infrastructure. The four E.B. Eddy factory buildings are categorized as 'Industrial Heritage'. Since 1998 there have been many discussions with the National Capital Commission (NCC), the Ontario and Quebec governments as well as independent historical parties to avoid demolishing these dilapidated, yet historically important, constructions.\textsuperscript{128}

\textsuperscript{127}http://www.patrimoineculturel.gouv.qc.ca/RPCQ/detailBien.do?methode=consulter&bienId=110634#

\textsuperscript{128}Ibid
Their exterior stone, or skin, has been in a state of deterioration for some time. The mortar between the stones is crumbling, making the walls unsafe and in danger of falling. Authorities have since protected the walls of Building 1 and 2 with wire mesh, 'the temporary mesh dress', to avoid accidents or further deterioration of the site. During a visit to this factory, Mark Brennan, engineer on site, also pointed out the deterioration of the mortar on Buildings 3 and 6, which have yet to be protected with the same wire mesh. The main issue is that the Pulp and Paper Mill company, Domtar, owner of the Buildings, does not want to invest any money for their restoration.129 The NCC awaits acquisition (projected between 2010 and 2011) of specific portions of Domtar's land and infrastructure, including Buildings 1-2-3-5-6.

129 Information revealed during a visit to the site guided by Mark Brennan, engineer for Domtar (November 2009)
They have yet to firmly propose a function for the abandoned body of architecture.¹³⁰

The Museum of Science and Technology, however, could potentially move to the Domtar site across the street (Eddy) from Building #1.¹³¹ In regards to the circulation around the body of architecture, its proximity to several important artistic infrastructures such as The War Museum, The National Gallery of Canada, The Museum of Civilization, and The Canadian Museum of Contemporary Photography justify the attraction and constant traffic surrounding this area. The program would benefit, therefore, from a social-based environment that enhances its circulation potential.

The thesis will encompass all five of these buildings as their juxtaposed relationship, connected to one another inside and out, forms what is termed “the body of architecture”. The interior connection runs from Building 1 to Building 6, on the ground floor level, signifying the continuous production line when the Pulp and Paper Mill was still in operation. This adjunction was never broken and is still apparent today. This ‘flow’ that runs through each building, composing the body of architecture, will become a

¹³⁰ Information revealed during a second visit to the site guided by Mark Brennan, engineer for Domtar (March 2010)
¹³¹ Ibid
catwalk installation, reminiscent of the old production line, permitting the visitor to circulate in a fashionable, yet systematic manner.

Figure 61 The thesis site (red) showing the proximity to the Ottawa River and its surrounding circulation arteries\textsuperscript{132}

Furthermore, the abandoned train tracks that lead directly into the body of architecture, are aligned with the Pulp and Paper production line and hence the catwalk circulation. Regarding the ground floor in relation to the train tracks of building 6, the recessed concrete pit running down the center of this building is a rail line, used until 1997, that facilitated the unloading of rail tank cars filled with slurries, such as clay and latex, additives in the production of coated paper.\textsuperscript{133} These tracks also link a passage toward Chelsea, an old town with tourist-related activities such as

\textsuperscript{132} Courtesy of the Carleton school library
\textsuperscript{133} Information revealed via e-mail by Mark Brennan, engineer for Domtar (February 2010)

Thinking Outside the Body /83
a golf course (Dunderosa), restaurants, boutiques, and a
Scandinavian spa (Le Nordik) to name a few. Additionally, these
same tracks are linked to the O-train route through the Prince of
Whales Bridge, crossing from Gatineau to Ottawa territory.
Historically this railway system served an extended purpose to the
E.B. Eddy Pulp and Paper Mill seeing as the car freight arrived
directly into building #6 to unload stock into it's the former
warehouse.\textsuperscript{134}

\textsuperscript{134} http://www.railways.incanada.net/circle/findings.htm#eddy
The buildings have had the same layout for over one hundred years. The major differences are the addition of infill Building #5, the modification on the roof detailing on Building #2 and the wrapping of Buildings #1 and 2 in their protective mesh garment.
This temporary mesh dress, added in 1998, has become part of the everyday view that composes this site. The structural engineers, Manhire Associates Ltd., did not plan this shielding addition as a short lived intervention, however no other solution has been found. The noticeable metal structure (HP 8x36 beams), and cross bracing (3/8" diameter aircraft cable in tension) are holding up the interlocking 9 Ga. chain link fencing that serves to protect the building's original body and make the site safe for pedestrians.

It is supposed that the 'temporary dress' intervention was not necessarily meant to be short lived since the beams are fastened into the concrete floors of building 1 and 2 with the use of 1 ½" in

---

Thinking Outside the Body /86
diameter metal rods, filled in with grout, and braced on an angle with 16" x 16" (3/4 thick) metal plates, indicating permanence.\textsuperscript{135}

Figure 67
Temporary mesh dress elevation with metal wire cross-bracing, a written structure, by structural engineers Manhure Associates Ltd.\textsuperscript{136}

Since the exterior stone facade is part of the heritage designation, the majority of the beams pass through the existing windows, to minimize damage or further deterioration of the buildings’ skin. However, these windows are also part of the heritage designation. To further comprehend the fourth shifter and its ability to transition from building to dress or vice versa, a section on the body was drawn to generate the analogy with the existing wall section.

\textsuperscript{135} Technical information found on historic plans of the Buildings furnished on site by Mark Brennan, engineer at Domtar
\textsuperscript{136} Courtesy of Domtar
The project will work around the temporary mesh dress and column intervention of these buildings, highlighting it as part of the evolution of their history. To do so, the existing layers must not be discarded. For that reason, a section of the body and dress is created to enlighten the conceptual dress design, which will inform the design (overskirt) that wraps the existing architecture (see Shift 4). The previous photos and plans of the temporary mesh dress intervention help visualize its purpose and condition as seen on site today. Taking the E.B. Eddy building wall section and

---

137 Courtesy of Domtar
constructing the analogy with a modern dress composition confirms how Barthes' fashionable theory has a 'fourth shifter'.

Figure 70 Column bracing plan through existing dilapidated skin (stone walls) via the windows

The added column structure, that shifts from inside to outside of the building, will be preserved and carefully re-fashioned to suit the body's new program, maintaining the layers of its history.

138 Courtesy of Domtar
ML.
Well, now, let me take a moment; suppose that I call architecture fashion or fashion architecture, is it possible to say that architecture will be rightly called fashion by me individually, and rightly called architecture by the rest of the world; and fashion again would be rightly called architecture by me and fashion by the world?

CC.
Yes, according to my view.

ML.
Coco, I can conceive no correctness of fashion, or architecture for that matter, other than this: you give one fashion, and I another, and in different cities and countries there are different fashions for the same things. At the moment I am interested in exploring how fashion can apply to dilapidated industrial architecture in the city of Gatineau, five adjacent buildings in particular.

RB.
You will need a system to support your ideas.

CC.
That is true. How do you suggest coming about this system?

ML.
Indeed I must determine a system before approaching the fashion-based design. Having examined your system, Mr. Barthes, I
believe you have overlooked a shifter in your theory, The Fashion System, which I will create and determine a set of rules for.

RB.
What shifter could I have possibly disregarded?

ML.
Your modern analysis of Fashion, Mr. Barthes, should also deal with its analogy to modern architecture. This forgotten shifter I speak of should establish a code that enlightens the conversion between building fabric and dress fabric, through materiality and techniques, not to mention runway specifications and traditions; all while abiding by your conventional iconic, written, and technological structure.

RB.
Very True. Nevertheless, I would like to clarify that I have not 'forgotten' any shifter in my system but rather I chose not to include it within my fashion based theory since it implicated the development of a hybrid language. I am glad to hear, however, that you, Mademoiselle Labelle, have chosen to investigate this matter further.

CC.
I agree

ML.
Very well, with the use of the fourth shifter, I shall illustrate my systematic design process.
Translating Fashion to Architecture: Intent Becomes Reality

Thinking Outside the Body 192
The systematic design process will be guided by Barthes' Fashion System, which uncovers a detailed set of rules that inform the Fashion language. In *The Fashion System*, Roland Barthes clearly introduces a method that studies the 'translation' from clothing to language and vice versa.

"This unavoidable presence of human speech is clearly not an innocent one. Why does Fashion utter clothing so abundantly? Why does it interpose, between the object and its user, such a luxury of words (not to mention images), such a network of meaning?"\(^\text{139}\)

His method demystifies the sociological meaning within fashion and explains how it comes to be a narrative, a language. This social-based language, proven through a Barthian semantic analysis, suggests itself on denotative and connotative levels.

"It is perhaps the transitivity of language which is in fact the real criterion of denotation; and it is the intransitivity of language which is the mark of connotation; there is a poetic mutation as soon as we shift from real function to spectacle, even when the spectacle disguises itself under the appearance of a function."\(^\text{140}\)

---


*Thinking Outside the Body* /93
This description of denotation (wordy domain filled with terminological nomenclature to construct the garment) and connotation (analogical relation essentially composed of rhetorical value), as per Barthes' view, becomes the written socio-cultural model that indicates advancement in fashion, represented through ‘image-repertoire’. These levels of written fashion help develop the potential of technological garments, dividing the basic garment structure into various significations that make up The Fashion System. This system enlightens that fashion is not only a utilitarian source but also a semantic one, allowing the once trivial sense of fashion to correspond to our psyche.

Chanel’s avant-garde garment transformations and free-thinking spirit (see her twelve commandments) as well as Barthes' systematic Fashion enlightenment substantiate how fashion can potentially be transposed into architectural language. Determining indispensable criterion for the thesis, like Barthes did for fashion, will assist in developing the unforeseen shifter which in turn creates a way to shift from one practice to another. Theses Barthian stimulated rules and Channelian laissez-faire attitude will guide the thesis project’s logic.

---

TVe/ve

Commandements for Women:

1-Since women do not know themselves, they should try to do so.

2-A woman who buys an expensive dress and changes it, often with disastrous results, is extravagant and foolish.

3-Two women (and men) are color-blind. They should ask for suggestions.

4-Memember, 20 percent of women have confidence, 20 percent have illusions, 1 percent have inferiority complexes, and 1 percent have illusions of superiority.

5-At first we are afraid of being conspicuous, fearing what people will say. If they buy a gray suit, they should dress to be different.

6-Women should dress and ask for respect.

Figure 71 Coco Chanel's twelve commandments

This parallel language between fashion and architecture symbolizes that the language of body fashion can be applied to architectural form if a precise system is establish to clarify this transition. If we are to create a language that signifies present times, we can only attempt to establish the elements of this


Thinking Outside the Body
language, for its totality can only be resolute through the eyes of tomorrow.

In this sense, the rules determined by Barthes in *The Fashion System* help to demystify the signifying essence of fashion. The system is:

![Barthes' Fashion System](image)

Figure 72 Roland Barthes' *The Fashion System* (break down)

---

What is overlooked in Barthes' systematic theory is the shift between building elements and clothing elements. Barthes does, after all, address The Fashion System as a social theory. The industry of fashion is directly linked to the field of architecture because change in either one, explained previously, has a direct incidence in the other. In Barthes' Translation of Structures (iconic, verbal and technological) he creates operators that he calls shifters which contribute in organizing fashion related elements. These shifters are:

The First shifter, technological garment to ionic garment, happens through the use of a sewing pattern which reveals the desired "effect" that clothing should have on the body.

The second shifter, technological garment to written garment, is possible through the use of a sewing program, containing precise commands and measurements. This shifter should be situated between the process of making the garment and the final product. The Vocabulary of Fashion is also included within this shifter for it contains verbal information that is applied in the sewing commands.

The third shifter, iconic garment to written garment, is a photograph translated into a clear description of the represented
garment, using an anaphoric language to describe the snap taken of the garment.

A fourth shifter, however, must be added to the system's composition, explaining the code that fuels the transition from dress to building.

![Mademoiselle Labelle's Fashion System](image)

**Figure 73** Mademoiselle Labelle's Hybrid System (break down)

**The fourth shifter**, technological garment to building garment, is the newly added shifter, which is a material based transition that allows clothing garment to exist on the scale of architecture. The
shift between technological garment and building garment is possible through 3d models and 2d patterns (iconic, verbal or technological layout) of the hybrid design. The shifted definitions in the Vocabulary of Fashion are also an integral part of this fourth shifter. A new set of rules, for the exterior and interior of the existing body of architecture and its intervention, will be established to enable the use of this shifter.
To subsist, however, this up-to-the-minute shifter must first be determined by a specific set of rules, without which, it cannot be qualified as the 'fourth shifter'. Barthes' artificial (or artistic) language acts as an auxiliary language composed of simulated rules that are exerted as additional messaging. This language is implemented as a secondary mode of communication to enhance our understanding of information conveyed with the help of everyday language.

This type of language advocates the coalescing of diverse artistic professions. It demystifies 'the jargon of art'. Without a predetermined artistic language, image-objects and written-objects would not communicate the same idea about real-objects as would argue Roland Barthes. Therefore, he believes that ideas must be organized, cut up, and divided into significant units, which is stated in his system. This is how a successful language is created and applied. Barthes' theory is directed toward fashion yet it perpetuates through architecture as well. When creating a garment, the ultimate outcome is the finished product, the real-garment. In turn, the real-garment (or technological garment) informs the process of communication, either image or written. As Barthes mentions, the real-clothing is the 'mother tongue' which we can safely assume is the indispensible language of an
ensemble of ideas. Therefore, the configuration of real-fashion, or real-architecture (technological garment), is in actual fact the configuration of an artistic, auxiliary language.

To be fair and abide by the Barthian structure, the newly created shifter will resolutely from codes, following his conventions, to create a set of rules which are:

- The exterior of new types must take full advantage of the body's anatomy, conditions, and state.
- The exterior design resulting from the interior shifter cannot be transformed into a conversational space, embodying the progressive of art lives.
- The preservation of original body parts.
- Understanding elements that comprise the body of a shifter should improve the design, creating a sense of appropriate for the personality through preservation of self onBlur.
- The shifter's (latter) of technological structure must be created.
- The interior space must remain partially visible as a result of the hide, not desired due to hide.
- The least amount of body parts will be treated.
- A body part that can be unadorned, improve the (part of the body) integration status "heritage" or enhance until those body parts are in complete role of harmony.
- The body's new status and program is required to comply with the related 'consideration' (the architecture-related rules) and regulatory parts (2).

Figure 74 Rules that apply to the exterior overskirt design

Thinking Outside the Body /101
These hybrid rules will guide the design for the project of architecture.

Figure 7.5 Rules that apply to the interior catwalk circulation
Part C - 3D Material Studies (Technological Structure)

The material studies serve to guide textile choices for the design of the Mannequin 01 dress (see part E) and the material choice for the project overskirt. These studies examine the possibility of hiding and revealing specific areas of the body, inspired by materials on site (existing mesh dress, architectural wire and grommets). Textiles were added to the equation, to integrate a more fluid and cloth-like personae. Different variations of the material assembly were fabricated to inspire the project of architecture's overskirt concept.

"The textile is used as a cover and as delimitation, whether of the human body, products or spaces. Fabric is the medium for the tailor, and the medium of clothing is thus its substance."144

144 LOSCHECK Ingrid, When Clothes Become Fashion Design and Innovation Systems, Berg, Madison WI, 2009, page 15, paragraph 1

Thinking Outside the Body /103
Mesh 01 represents a complete interaction with the existing mesh dress by weaving fabric through its grid to create contrast between hide and reveal to inform presence and absence of the body’s parts.

Figure 77: Mesh 02: creation of movable layers that are woven onto an architectural wire that hooks onto the existing mesh dress.
Mesh 02 uses a minimal intervention with the grid using architectural wire and grommets. The fabric is sewn in a manner where the pieces are moveable within a specific line created by the architectural wire and can be placed to personalize what should be hidden and revealed on the body of architecture.

![Mesh 02 Grid](image)

Figure 78 Mesh 03: addition of an existing translucent layer that veils the existing mesh dress

In this study, Mesh 03, the mesh grid is covered through uniformity of a translucent fabric to neither hide nor reveal but rather partially mask the body of architecture in a way that its composition reveals the process of making, and addition of layers along the years.
Figure 79: The hooks are designed to enable the creation of different 'looks' for the body of architecture by moving the attachments onto different areas of the existing mesh dress.

The overskirt for the Mesh 04 grid is created by sewing the fabric in a hem-like fashion around the architectural wire which allows flexibility of movement within the wire line, manipulating the look of the facade (interaction with the body’s skin appearance).
Figure 81 Example of how the fabric can be modified, by hooking it on a different position within the mesh grid, to create a diverse effect.

The distinctive looks that are possible for the body of architecture, within this study, represent the different allures a human would make use of to change their body's appearance.

These material studies (particularly Mesh 04) applied the 'fourth shifter', generating a transition from the existing body of architecture (building structure) to 3D models of material studies (technological structure), developing a conceptual hybrid basis for the following illustrated dress designs.
Part D - 2D Dress Design Studies (written structure)

The techniques used in the Mesh 04 material study inspired several dress design drawings. These drawn designs (written structure) sparked the creativity for the Mannequin 01 dress design, which is confectioned with fabric and architectural details, such as chicken wire, architectural (structural) wire, architectural hooks (grommets) and expanding mechanisms. Just like the Material Studies, the resources and techniques used in the drawn dress designs were stimulated by the body of architecture’s existing mesh dress and the structural elements it entails.

Figure 82: Dress design 01: preliminary dress design (graphite on paper)

This first drawing elucidates the idea of wrapping the human body with wire mesh just like the body of architecture is wrapped with the existing mesh dress. The side view incorporates the layering
of a different material over the mesh as well as a structural element on the back of the dress, allowing it to lift the bottom portion of the garment to reveal the back of the legs.

Figure 83: Dress design 02: integrating a metallic louver system with a flowing fabric dress (graphite on paper)  

This design is a contrast between heavy (metal louver) and light (flowing fabric) elements and the integration of mechanical movement creating, once again, the hide and reveal effect.
The harness represents a structural element that is added onto the body (as a layer) and is garnished with hooks that permit the grommets to be placed in different areas of the body’s surface.
The use of an organic shaped structure, inspired by organic representations of Art Nouveau, demonstrates a more fluid and personalized layer of the body’s overskirt, leaving place to some creative design within the pre-determined rules.
This drawing conveys the possibility of using architectural wire, such as the one used on site as cross-bracing, or in Mesh 04 to position the textile differently around the body, revealing various effects.
This dress design encompasses an underlining structural layer, an interlining layer and the overskirt layer. The garment concept is asymmetrical and is positioned differently all around to celebrate certain parts of the body or accentuate them with the deformation of these added layers. The asymmetrical top portion, for example, reveals one shoulder of the body and the underlining structural layer is positioned to lift or pull the overskirt layer in specific areas. The metallic structural layer is made of chicken wire and allows the fabric of the other layers to be woven or hooked into its grid-like composition for extra support.

The concept for this dress design used the ‘second shifter’ to create a transition from materials studies (technological structure) to drawn clothing studies (written structure), developing a concept for the Mannequin 01 design. This drawn 2D format was essentially meant to inform the 3D model of the conceptual dress.
(Mannequin 01) and illustrate the "effect" of the three layers. It is difficult, however, to demonstrate the grommet connections and distortion of the material which was much clearer in the Mesh 04 photograph (3D representation) of the material studies. In this sense, the 2D pattern, or drawing, will be translated into the 3D representation through the construction of a conceptual dress.
Part E - 3D Design on Mannequin 01 (Technological Structure)

To begin the 3D observation on a body-like mannequin, a conceptual dress is designed, inspired by the fourth shifter's detailed fashion rules and Chanel's free-spirited garment creations. This dress guides the design for the buildings' overskirts, which enhances parts of the distinct industrial architectural body, informing the project of architecture's layout. The materials used in the design of the dress create several layers, representing certain layers that currently envelop the existing body of architecture.

"If the human body is seen as a spatial form, the skin represents the demarcation line between the inside and the outside. Clothing then becomes an extension of this corporal space boundary and the interface between a person's corporal space and the external space of the environment. This extension may be realised with several layers of protective fabric, and by means of physical apparatus creating distance such as the crinoline or brassiere."

The mannequin conceptually represents the body of architecture and its skin. The use of metallic wire was motivated by the temporary mesh dress wrapped around the existing architectural skin, providing underlining for the dress. The crinoline and fabric were used to represent the layers that cover the underlining, which

---

145 LOSCHECK Ingrid, When Clothes Become Fashion Design and Innovation Systems, Berg, Madison WI, 2009, page 17, paragraph 1

Thinking Outside the Body /115
are the mounting and the interlining, of the overskirt. These layers are applied on Mannequin 01 as contrasting elements with the existing conditions of the body to signify that clothing is used as a form to notify spatial qualities for the thesis.
Figure 89 Side view of Mannequin 01

Figure 90 Bodice detail, including architectural grommets and structural wire that ties the fabric together

Figure 91 Material assembly details (materials used in the dress fabrication)

Thinking Outside the Body /117
The idea behind this model was to bring the layers of the dress onto the building and use the principles of the conceptual dress as support to either hide or reveal certain parts of the body of architecture by lifting strategic areas of its custom-made overskirt. The draping properties of the fabric, the underlining of the crinoline and the flexibility of the metal support are all elements that should be translated into the thesis to enable the tension of contrasting elements such as hide-and-reveal.
Figure 95 Top view of the conceptual model designed to inform interior conditions.
This model demonstrates the idea of the catwalk, which will be situated over the old production and rail track line. The fluidity of garments, however, should be represented by a more sculptural, fluid, movement, rather than an orthogonal one. For that reason, the fraying and weaving of materials create unique spatial qualities that generate public and private areas within one big space, the chic industrial setting within the body of architecture.

Part H - 3D Model, Iconic Architecture 03

Figure 96: Section model demonstrating the idea of a suspended catwalk over the former production line.
The icon of the existing industrial buildings as the body of architecture has respected, as much as possible, the proportions of the human female body, ready to be clothed with a revitalizing garment. The body proportions informed, in several instances, the shift that needed to be taken between dress and building.

Figure 97 Body proportions in relation to building proportions

Thinking Outside the Body /121
Figure 98: Photographs of detailed model showing Eddy street perspective (top), Tache boulevard perspective (middle), and top view of building #6 with existing train tracks leading into the building (bottom).
Figure 99: Plan of catwalk passing through buildings 1 (top) to 6 (bottom)
The series of volumes (artist ateliers) are slide beneath the 'skin' of the metallic alley facade of building #6 and act as stretchable surfaces, absorbing the programmatic alterations. When finalized, these volumes become the surface representation of varying body shapes and sizes. It is in these volumes that the non-invasive body modifications occur.

The structural grid of the body of architecture became the new conceptual grid, shaping the body-like volumes to accommodate the new program. These body alteration pods shift from inside to outside the body of architecture, creating the condition that was termed earlier as: Thinking Outside the Body. This new skin condition is a fashion-inspired response to the existing industrial warehouse space of building #6. The pod's metallic cladding, a material that absorbs and reflects light, emphasize the fact that fashionable trends have a tendency to appear, and disappear over time. Furthermore, a typical body-like pod would have its own electricity, water system, and ventilation, inflicting the idea that they each become an independent life support. Each volume is also equipped with a sink, counter, bar space, fridge, lounging bench, and washroom. The free adjacent space to each pod is ready to be tailored by the inhabiting artist.
Figure 100 Plan of artist's body-like pods inhabiting building #8. To the right the pods are positioned in a manner that they stretch the surface's skin.
Figure 101  Shift in circulation, inside infill building #5

Figure 102  Observation area (above the former beater machines), at the end of the catwalk in Building #1
Figure 103  Entrance to the fashion district (Building #6) via the catwalk elevated above the existing train tracks, which continues onto the former production line
Part K - 2D ELEVATIONS, WRITTEN ARCHITECTURE 02

The following elevations demonstrate the position of the overskirt on the longitudinal facades of the existing body of architecture.

Figure 104  Tache boulevard elevation with overskirt wrapping building 1, 2, 3, and 5

Figure 105  Alley elevation, view of overskirt (building 1, 2, 3, and 5) and pods that stretch the surface of the metallic skin on building 6

Part L - 2D SECTIONS, WRITTEN ARCHITECTURE 02

Just as Art Nouveau seeks to embellish the overall lifestyle of that era, the overskirt and columns covers aspire to revamp the body of architecture. The systematic column curve design is strategically positioned to cover the slash that was left from the temporary mesh dress intervention (rusted columns that pass through the broken heritage window pane). The new column design is tailored to fit directly onto the old column (stitches), using minimalist joints and wrapping techniques. The notions of the

Thinking Outside the Body /128
column design will consist of three parts, inspired by *Mannequin 01*, which are the underlining, interlining, and outer layer. Furthermore, the old columns are used as backing for the new covers.

**Figure 106** Cross section into catwalk circulation, demonstrating the adjacencies with the fashionista pleasing functions (building #2)

**Figure 107** Hybrid notions demonstrating the shift between the conceptual dress section (sketch on right) and the building section through the existing body and overskirt.
This final model serves to demonstrate the overskirt's flexible properties. This garment inspired addition wraps the existing body of architecture by applying the principles of a retractable roof system. This new system, as drawn in the written architecture, is held onto the existing body with the use of a structural underlining, boning, interlining and grommets. These notions, all applicable in the fashion industry, are shifted (see definitions) and used to form the hybrid architectural overskirt. These new hybrid terms inform the morphing ideology of the existing body's new protective garment which is movable to suit climate change, new trends, or even to hide more of the body if its skin were to deteriorate further.

Figure 108 Diagram demonstrating the retractable potential of the overskirt

Thinking Outside the Body /130
The idea of dressing and undressing the building also opens the idea of inhabitable interspaces around the body of architecture. This technique of layering hybrid garments around the building creates an effect of architecturally layered spaces as well. Since the project is designed to be retractable at will, a major gesture highlighting the architectural skin as well as the interior space, this project could potentially expand through the interspaces to experience the buildings' body differently, by getting closer to it, not merely hiding its deteriorated characteristics.

Figure 109  Eddy street perspective

The 3D perspective allows comprehending how the overskirt is positioned in relation to the existing body of architecture. Its flexible and flowing garment-like characteristics are sought through this image. The following technical model demonstrates how the garment is held onto its fragile body, with minimal interventions.
Figure 110  Different looks for the body of architecture, achieved with the flexible overskirt (double roof system)

Figure 111  Inside view of the retractable roof (closed on left and open on right) above the glass roof insertion (directly in the middle)
Figure 112. Perspectives of the various overskirt wrapping possibilities around the body of architecture.

Thinking Outside the Body /133
The foregoing analysis shows the advantage of weaving both architecture and fashion concepts to clothe the body of architecture. This hybrid practice, along with its new language and rules, will serve to revitalize this neglected body and re-integrate it back into its social surroundings (the Gatineau community). The recycling of urban wasteland, such as the E.B. Eddy Pulp and Paper Mill Buildings, will occur by creating a collective metropolitan district of art and fashionable culture.

The thesis seeks the 'flow effect', earlier described by Mihaly Csikszentmihalyi, which is brought upon by artistic and creative people that will encourage a sense of 'merging with the environment' and 'personal satisfaction'. The interaction with people and environment becomes a crucial part of the re-fashioning mission.

The chic restoration of the body of architecture will generate areas associated with creativeness and expression to accommodate an assortment of social gatherings, with the aim of familiarizing the visitor with their milieu. The program will contribute in the re-birth of the body of architecture to endorse an upscale ambiance of the modern cocktail party. This historic space, with its original stone walls, will create both an industrial chic setting and a rather
intimate orchestration through the miscellaneous promenades that feed off of the central runway circulation. The diversity of modishly artistic spaces occasions the 'flow effect' and permits the visitor to be 'completely absorbed in their activities.' Among this grandiose space are artist pods that offer non-invasive body alterations, avant-garde public and private areas, designer washrooms, and wheelchair accessibility. Furthermore, a prestigious outdoor waterfront lounging space is available for people to enjoy the Nation's Capital picturesque view as well as the architectural body's overskirt design.

"'Fashionista's' simply look at Fashion as an Art, their own bodies as the canvas, and the sense of style they develop along the way is simply the masterpiece."  

The circulation will respect the progression within a typical fashion-show catwalk to flaunt the prominent fashionista's penchant for shopping and stylish trends. Among the boutiques, speciality foods, and other all-the-rage functions, the architectural focal point is the elevated central walkway made-up of a backstage area (technological structure), a shift in circulation (iconic structure), a front stage area (verbal structure), and after-party observation lounges, toward the end of the catwalk. The catwalk, situated inside the body of architecture, is defined


Thinking Outside the Body /135
through the Barthian structure of iconic, verbal, and technological representations.

Figure 113 Barthian structure inside the body of architecture

The initiative is to expose new fashions, whether they are edible, drinkable or wearable, along the architectural catwalk, allowing the fashionistas to perform their stride across the runway, reminiscent of a fashion model displaying the latest trends in fashion related to the body. Gatineau's collective artistic developments will characterize the City's culture and success, along with the refurbishing of an overskirt, for this once economically and culturally significant body to display its ambition. This ensemble uses Chanelian principles to guide the overskirt design.

Figure 114 Chanelian structure outside the body of architecture

Thinking Outside the Body /136
The ground level within the body of architecture is the space that will be intervened with for the thesis. This industrial setting will be filled with artistic functions that will engage visitors in a high-end lifestyle of caviar and teeth whitening all while parading along the catwalk. To commemorate the former industrial function, the walkway will be suspended over the historic paper mill production lines in Buildings #2 and #3 as well as above the rail track line that crosses Building #6, to exemplify their former use.

Small circulation paths will branch off toward the fashionista functions via the main catwalk. These paths will be positioned in such a manner that the 'stop-pause-turn' (described in the hybrid rules) engages the fashion-lover toward the stylish boutiques, cafés, lounges and bistros. This compels the onlooker to slow down near the arrival of the crossed path, turn to embark on it, keep walking, pause in front of the kiosque, order, pay, turn once again, keep walking, and continue to frolic down the walkway.

The circulation is a crucial part of this revitalized project and will respect the circulation that once ruled its industrial function. The backstage area is situated in buildings #6, the starting point for the project. The existing garage door entrance in building #6 allows the visitor to observe the link between the interior circulation and its prolongation onto the abandoned train track. The beginning of the catwalk is discernible by the artist's work pods, situated on
each side of the rail car line. When arrived at building #5 (the infill building) a more dramatic intervention will play up the walkway, creating an intermediate area between backstage (private) and front stage (public). This is the iconic area. From this vicinity the visiting fashionista can continue their catwalk séance toward the social portion of the trendy industrial setting, situated within buildings #2 and #3. Finally, the guest can relax at the end of the runway, into the lounge situated in building #1, overlooking the view of Parliament Hill. The playful activities that one can seek during a visit to the reinstated industrial buildings are:
"Modifications of the body transform a person’s natural appearance into a social one." The program, in this sense, transforms the body of architecture to re-integrate it with its social

atmosphere by catering to the citizen's refinement and appreciation of excellence, or lack thereof. The same occurrence is aspired for the human body, modifying it to suit the socialite's lifestyle. These body transformations imply that the site's condition will also be transformed, whether it be short term (revitalizing the dilapidated architecture) or long term (connecting the architecture with the abandoned train tracks linking Ottawa to Gatineau, a potential O-train route, and linking Gatineau to Chelsea). Rejuvenating the body of architecture's skin will also contribute to re-integrate this dilapidated site back into a lively state, portraying a more desirable look and seeming less dangerous to walk around. The fashioning of a new silhouette and trendy catwalk circulation, that shifts from inside to outside, will make these building appear well again making it possible to aspire that people will experience a sense of reconciliation with the environment to create the 'flow effect'. The project of architecture's aim, therefore, is to generate a social interaction between citizens of Gatineau and Ottawa, the province-linking waterfront heritage site, and their passion to discover trendy ways of life.
Shift 5  CONCLUSION

Fashion exhibits personality through the expression of language; a parallel practice is also witnessed in architecture. Barthes' systematic enlightenment and the thesis' new set of rules substantiate how the linguistics of fashion is transposed into architectural language. By applying fashion principles to building designs, an attempt is made to create a sense of belonging by catching the eye with a human scale factor which "is the best form of iconography we have to express individual identity"\textsuperscript{148}.

Figure 116  The eye is an important factor in the perception of space, encouraging a sense of belonging and the 'flow effect'.

The 'flow effect' was fashioned by tending to the body of architecture's exterior skin and overskirt. A sociological code, as seen through Barthes' Fashion System, fuelled the creation of 3D

\textsuperscript{148} THOMAS Pauline Weston, Theory of Fashion Clothing, Fashion-Era, paragraph 2, (http://www.fashion-era.com/sociology_semiotics.htm)
conceptual material studies and models for the thesis project (overskirt, lining, underlining and catwalk) and through the fourth shifter, it was transferred to the existing body of architecture.

The parallel language between fashion and architecture symbolizes that the language of body fashion can be applied to architectural form if a precise system is establish to clarify this transition. Past movements in architecture have also uncovered common threads through professional ideologies, establishing common languages. Innovation in building techniques, in the period of Industrialism for example, favoured the use of new materials such as iron and steel rather than traditional masonry. Buildings that appeared from this period, such as the Crystal Palace (a new type of structural system made of prefabricated pieces of iron and glass), unveiled a material that would not only revolutionize the way architects conceived freestanding buildings but how fashion designers created metal armatures for their 'dome shaped' skirts as well. This innovative method of construction instilled a pioneering tradition, a new language of the time.

"We can say that it is the expression of esthetic and ethic tendencies, but for its realization it needs the intervention of technique. Therefore, costume seems to be a natural bridge between technology and culture. It has a great ethic value..."
because it represents the esthetic shape that humanity finds in the

time, and it can be considered a confession of man to history.\textsuperscript{149}

In this sense, a combination of Barthes' code, Chanel’s free-

thinking creativity, the Vocabulary of Fashion and the Construction

Terminology informed the new systematic set of rules, resulting in

a cross-language, or hybrid-language, that used the practice of

Fashion to inform the practice of architecture. Without this

language, the outcome of the technological structure could not

have existed. Moreover, without the technological structure, the

shift from building to garment could not have existed. In this

sense, it is language that is the primary source of information

within this methodical creation. It is the method that informs the

‘confession’, or narrative, which leaves the trace of the latest

technology behind.

A basic set of rules were determined in the thesis, like Barthes did

for fashion, to help weave specific ideologies within fashion to

those of architecture. As a result, today we are graced with a new

language that narrates the presence of fashion concepts within

architectural forms as well as the notion of building elements

within garments. Therefore, the use of language is crucial to the

formation of a hybrid practice between architecture and fashion

\textsuperscript{149} PISTOLESE Rosana, HORSTING Ruth, The History of Fashions, John


Thinking Outside the Body /144
given that the new language instructed ‘real-architecture’, or technological structure, which subsequently communicated the method used in the systematic design process.

The analogy of the E.B. Eddy Pulp and Paper Mill as the body of architecture helped communicate the idea that the dilapidated buildings were in need of a new architectural intervention. It is the hybrid language and rules created within the thesis that fashioned the well-versed project of architecture. In this sense, the interaction between Gatineau's heritage infrastructure and its citizens was created and fashion served to inspire the design, which stimulated our rational perception of its surface.

Although playful, this hybrid architecture is backed with technological frameworks that preserve the existing body, rather than intervene directly onto its skin. Economically speaking, private developers would also be interested in the available space inside building #6, level 2 and 3, above the ground floor level. Ideally, a fashion design school could be implemented in this free space to complement the catwalk amenities. The existing and abandoned body of architecture, therefore, can be entirely exploited economically, socially, and fashionably. The overskirt acts on this former pulp and paper mill as layering on women's clothing. The idea of layering in the fashion sense conveys the idea of keeping the body warm for the winter and cool for the
summer. The considerations of Canadian seasons along with the idea of changing the buildings' look are key components in the fabrication of this new intervention.

These adjacent buildings are surrounded with governmental activities, industrial functions, museums, and small commerce which justify the need for extra restaurants, shopping and light-hearted entertainment, to serve the working force and inhabitants in and around this specific area. The existing amenities in this area are often full during weekdays or unable to provide service for a large number of clients. For the most part, they are closed on weekends because of the lack of working citizens to visit them. Restoring the rundown buildings will attract more weekend clientele in this area and allow additional leisurely activities.
The rush has come to a halt, the final design is finished, and the construction of the thesis project is well on its way. Yet, even with the assignment not yet completed, in this fast paced world of fashion and architecture, we cannot help but wonder... "What's next?"\textsuperscript{150}

\textsuperscript{150} The exact words of Anna Wintour at the end of her documentary: The September Issue
vii APRÈS-PROPOS

ML.
There have been times, Mr. Barthes, when I have been driven in
my perplexity about the trueness of fashion. Your system,
however, led me to believe that this practice is, in fact, a complex
and intellectual field in which I have found great inspiration to
revive a decaying body of architecture.

RB.
Now I understand that the fourth shifter is essential to the hybrid
practice between fashion and architecture. The fourth shifter and
the rules it entails indicate how the ‘shift’ from bust to building is
possible. Wouldn’t you agree Coco?

CC.
I have found, in my carrier, a great deal of inspiration in
architectural trends and everyday-life activities, which often called
for logic and convention. It seemed natural to follow the existing
principles from my source of inspiration to create clothing designs.
In this sense, I certainly agree with the fourth shifter and its
capability of guiding the shift between garment and architecture.

RB.
Indeed, Mademoiselle Labelle, you have made a surprising
discovery through the review of my work.

ML.
Surely, we could not leave off until we resolved a way to shift from
dress to building.

RB.
That is true.

CC.
I quite agree with you.

RB.
I do believe that the fourth shifter was essential and helped evoke
an auxiliary language (hybrid) that served to engage in a transition
between two immeasurable professions such as fashion and
architecture. Without the new shifter, its language, and rules,
there would have been no systematic design process.

Thinking Outside the Body /148
CC.
I think, Mr. Barthes, that you have said the truth. The conceptual design would have been completely different if Mademoiselle Labelle did not use *The Fashion System* as a basis for her theory.

ML.
To be sure; and I shall be grateful to you for listening.

CC.
Thank you, too, for telling us.
Glossary
« A knowledgeable and conversational use of the words listed here will certainly increase your fashion confidence. »

**Note:** The definitions in black communicate the significance of the words applicable to Fashion and the words in gray correspond to the shifted definition relevant to the thesis.

**A-line:** Dress or skirt resembling the shape of an A.

**Accessories:** Articles of apparel that complete a costume, shoes, jewelry, etc.

**Asymmetrical:** One-sided, not geometrically balanced.

**Asymmetrical:** The architectural intervention should follow the form of the existing body (not asymmetrical to begin with) and use it as starting point for design. Bodies are not perfectly symmetrical; therefore the architectural intervention should not be perfectly symmetrical either.

**Backing:** Fabric joined to wrong side of garment area, typically for reinforcement.

**Backing:** Reinforcement of composition by using a structural layer (typically hidden under other architectural layers) and folding it over all added layer to partially reveal the configuration. This also enhances the idea of revealing parts of the architectural body.

**Band:** Strip used to hold, ornament, or complete any part of garment accessory.

**Band:** Strip of building material used to cover an architectural joint or seam.

111 PERRY Patricia (Editor), The Vogue Sewing Book, Vogue Patterns, New York, 1975, p. 454-458

112 PERRY Patricia (Editor), The Vogue Sewing Book, Vogue Patterns, New York, 1975, p. 454, paragraph 1

*Thinking Outside the Body*/151
Bias: Diagonal direction of fabric. True bias is a 45° angle to grainlines.

Bias: Diagonal direction of building material. The biases used in the thesis comply with the angle of the existing architectural body and site.

Binding: Strip encasing edges as finish or trim.

Binding: Finishing touch in regards to the detailing of the architectural overskirt using a strip of building material to cover rough edges.

Blind hem: Sewing hem invisibly with hand stitches.

Blouson: Bloused effect of fullness gathered in and falling over a seam, typically bodice over a skirt.

Bodice: Portion of garment above the waist.

Bodice: Portion of garment wrapped with existing mesh dress and columns (stitches). Portion of architectural body between the infill building and Eddy street.

Boning: Flexible strips used to stiffen seams or edges.

Boning: Reinforcement strips used to stiffen or hold up edges of building layers that compose the overskirt.

Cape: Sleeveless outer garment hanging loosely from shoulders, covering back and arms.

Cartridge pleat: Rounded pleat which extends out rather than lying flat.

Chevron: V-shaped stripes.

Clip: Cut in fabric to allow ease on curves or corners.

Clip: Cut in building material (layers of overskirt) to allow ease on corners or shift in direction.

Closure: That which opens or closes a garment (buttons, etc), or area on which they are placed.
<table>
<thead>
<tr>
<th><strong>Closure:</strong></th>
<th>Area of the overskirt on which there are opening to allow passage from inside to outside the architectural body.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coatdress:</strong></td>
<td>Dress with coat-like lines and front closing.</td>
</tr>
<tr>
<td><strong>Contrasting:</strong></td>
<td>Opposing; showing off differences of color, fabric, shading, etc.</td>
</tr>
<tr>
<td><strong>Contrasting:</strong></td>
<td>Showing off differences between existing architectural body, intermediate intervention, and overskirt design.</td>
</tr>
<tr>
<td><strong>Convertible:</strong></td>
<td>Notched collar which can be worn either buttoned at neck or open with lapels.</td>
</tr>
<tr>
<td><strong>Cowl:</strong></td>
<td>Soft drape of fabric at neckline.</td>
</tr>
<tr>
<td><strong>Cowl:</strong></td>
<td>Effect of overskirt wrapped around the end of the architectural body (Building 1 - corner of Eddy Street and Boulevard Taché)</td>
</tr>
<tr>
<td><strong>Cut-in-one:</strong></td>
<td>Two or more sections cut in one piece, such as sleeve and bodice.</td>
</tr>
<tr>
<td><strong>Dickey:</strong></td>
<td>Detachable skirt front.</td>
</tr>
<tr>
<td><strong>Dirndl:</strong></td>
<td>Garment with full gathered skirt.</td>
</tr>
<tr>
<td><strong>Dressmaking:</strong></td>
<td>Sewing technique involving fine hand details.</td>
</tr>
<tr>
<td><strong>Drum lining:</strong></td>
<td>Lining not sewn into garment seams.</td>
</tr>
<tr>
<td><strong>Edgestitch:</strong></td>
<td>Topstitching placed very close to finished edge.</td>
</tr>
<tr>
<td><strong>Edwardian:</strong></td>
<td>Style of 1901-1910. Edward VII was king of England.</td>
</tr>
</tbody>
</table>

*Edwardian:* Period of architecture that was in force during the time of construction of the architectural body (after the fire). |

| **Empire:** | Style of French empire period; high waistline, décolleté, loose, strait skirt. |
| **Enclosed seams:** | Concealed by two garment layers. |

*Thinking Outside the Body* /153
**Enclosed seams**: Seam of building material that is covered by two building layers that compose the overskirt.

**Ensemble**: Entire costume. Usually, dress and coat.

**Ensemble**: Entire architectural intervention for the thesis (overskirt, catwalk, etc)

**Eyelet**: Small, round finished hole in garment or fabric.

**Face**: To finish an edge by applying a fitted piece of fabric, binding, etc. Also, the right side of the fabric.

**Face**: The right side of the building material (overskirt).

**Fancy work**: Hand embroidery and needlework.

**Favoring**: Rolling one garment section slightly over another at the edge to conceal the seam.

**Finish**: Any means of completing raw garment edge

**Finish**: Completion of building material edge

**Flap**: Shaped garment piece attached by only one edge.

**Flare**: Portion of garment that spreads out or widens.

**Flare**: Portion of overskirt that spreads out or widens (from building to waterfront edge).

**Fly**: Fabric used as lap to conceal opening in garment.

**Full-fashioned**: Garments knitted flat and shaped by dropping stitches, in contrast to circular knits which are shaped by seams.

**Funnel collar**: Flaring outward at the top.

**Godet**: Triangular piece of cloth set into a garment for fullness or decoration.

**Gore**: Tapered section of garment; wider at lower edge.
Grommet: Large metal eyelet.

Grommet: Architectural hook made of metal, to position parts of the overskirt in place.

Grosgrain: Fabric or, most commonly, ribbon having heavy crosswise ribs.

Inset: Fabric section or trim inserted within garment for fit or decoration.

Interlining: Layer of fabric between lining and underlining for warmth.

Interlining: Layer of building material between overskirt (outer layer) and underlining structural layer.

Keyhole: Round neckline with inverted wedge-shaped opening at front.

Kick pleat: Pleat used for ease in a narrow skirt; may be a knife, inverted, or box pleat.

Lap: Any edge which extends over another edge, as on a placket.

Layout: Cutting chart on instruction sheet showing placement of pattern pieces.

Layout: Instruction sheet showing placement of pattern pieces on the architectural body. These pieces compose the overskirt and ensemble.

Line: Style, outline, or effect given by the cut and construction of the garment.

Line: Style, outline, or effect given by the cut and construction of the overskirt.

Marking: Transfer of construction symbols from paper patterns to fabric.

Marking: Transfer of construction symbols from paper patterns to building material.
**Martingale:** A half belt or strap, generally placed on back of garment.

**Miter:** Diagonal seaming at a corner.

**Motif:** Unit of design; used as decoration or pattern.

**Mounting:** Term sometimes used for underlining. Two layers of fabric are basted together and sewn as one.

**Mounting:** Two or more layer of building material that are joined as one layer (to create a connection at the other end where layers are not joined)

**Nap:** Soft surface with fibers which lie smoothly in one direction.

**Notch:** Cutting wedges from seam allowances. Pattern symbol transferred to fabrics to indicate matching points.

**Notions:** Items other than fabric or pattern required to complete garment.

**Notions:** Items or information other than building patterns required to complete the overskirt construction.

**Opening:** Synonymous with closure; also, Fashion showing of apparel for season.

**Opening:** see "closure" definition

**Overskirt:** Decorative skirt worn over another garment.

**Overskirt:** Design composed of construction patterns that make up the layer that wraps the existing architectural body, its temporary dress and stitched columns.

**Peplum:** Small flounce or extension of garment around hips, usually from bodice.

**Piece:** Specified length of goods as rolled from loom.

**Piece goods:** Fabric sold in pieces of fixed length or by the yard.
Pin basting: Pinning seams before stitching.

Pinafore: Sleeveless apron-like Fashion worn over another garment.


Pre-fold: Folding and pressing garment section or binding before applying to garment.

Pre-fold: Folding pieces of construction patterns before applying them onto the exiting architectural body (to create effects or hide parts of the architectural body that are dilapidated)

Pre-shape: Shaping fabric into curves like those of area to which it will be applied; done with steam before stitching to garment.

Pre-shrink: Contracting fabric before construction.

Raw edge: Unfinished edge of fabric.

Raw-edge: Unfinished edge of building material.

Right side: Finished side of fabric, outside of garment.

Right-side: Finished side of building material (outer layer) – or overskirt.

Rip: Removing stitches improperly placed; also tearing fabric along straight grain.

Roll: Desired curve and fold; shaping established by pressing, pad stitching, etc.

Sash: Ornamental band or scarf worn around the body.

Scalloped: Cut into semi-circles at edge or border.

Seam allowance: Width of fabric beyond seamline, not including garment area.
Seam binding: Ribbon-like tape used to finish edges.

Secure: Fasten permanently by means of knot, backstitching, etc.

Self: Of same material as rest of garment.

Selvage: Lengthwise finished edges on all woven fabrics.

Semi-fitted: Fitted to conform partly, but not too closely, to shape of figure.

Semi-fitted: Fitted to conform partly to the existing architectural body and partly to the extended, outdoor intervention (including train and waterfront areas)

Sheer: Transparent fabric; comes in varying weights.

Shift: Loose fitting dress.

Shrinking: Contracting fabric with steam or water to eliminate excess in specific areas.

Silhouette: Outline or contour of figure garment.

Silhouette: Outline or contour of existing architectural body figure and its intermediate intervention (temporary mesh dress and stitched columns)

Slash: Cut taken in fabric to facilitate construction.

Slash: Cut taken into existing architectural body elements (such as cut in existing windows to place outer columns) to facilitate construction techniques.

Slit: Long, narrow opening; also to cut lengthwise.

Soft suit: Dressy suit with a minimum of inner construction, also dressmaker suit.

Stay: Mean of maintaining shape of garment area.
Tab: Small flap or loop attached at one end

Tack: Joining two garment layers with small, loose handstitches or thread loop.

Tailoring: Construction technique requiring special hand sewing and pressing to mold fabric into finished garment.

Taper: Cutting or stitching at slight diagonal, generally to make gradually smaller.

Tension: Amount of pull on thread or fabric during construction.

Transfer pattern: Commercial pattern having design stamped on paper, usually transferred to fabric by iron.

Trim: To cut away excess fabric.

Trimming: Feature added to garment for ornamentation.

Turnover: A garment section, usually collar or cuff, which folds back upon itself.

Twill tape: Firmly woven tape.

Underlining: Fabric joined in garment seams to give inner shape or support.

Vent: Faced or lined slash in garment for ease.

Welt: Strip of material stitched to seam border, or edge.
**Wrap-around:** Garment or part of a garment wrapped around a body.

**Wrong side:** Side of fabric on inside of garment.

**Yardage block:** Guide on back of pattern envelope; includes garment description, measurement, yardage, notions, etc.

**Yoke:** Fitted portion of garment, usually at shoulders or hips, designed to support rest of garment hanging from it.
Part B - FRENCH FASHION TERMS

Aiguille: Needle.

Allonger: To lengthen, to give a longer appearance.

Amincir: To make thin; to give a slender look.

Appliqué: Motif applied to cloth or garment.

Atelier: Dressmaking establishment; work room or studio.

Atelier: Studio space inside existing architectural body that is dedicated to artist that perform body-altering art.

Au courant: Up to the moment; to know all about it.

Avant-garde: Ahead of Fashion; of trend.

Bon goût: Good taste.

Border: To finish an edge with self-fabric or commercial trimming.

Boutique: A small retail store in which accessories and miscellaneous Fashion items are sold. Often part of a couture house.

Boutonnière: Buttonhole.

Broder: To embroider, embellish.

Chemise: Blouse or style with manshirt details.

Chez: At home, shop of; as chez Dior, Lanvin, etc.

Chic: Originality and style in dress.
Collection: All apparel exhibited at Fashion showing. Spring and fall are the two major periods each year when collections are shown to trade and clientèle (customers).

Confection: Ready to wear.

Corsage: Dress bodice.

Coudre: To sew, to stitch.

Cousu à la main: Hand stitched.

Couture: Sewing or needle work. Product of a seamstress; seam.

Couturier: Male dressmaker; designer; head of dressmaking house.

Couturière: Woman dressmaker designer.

Dé: Thimble.

Décolleté: Cut low at neckline, exposing neck and back or cleavage of bosom as in formal evening dress.

Démodé: Old fashioned, out-of-style, unfashionable.

Denteler: To notch, to serrate.

Dernier cri: Latest fashion; the last word.

Élegance: Quality of being elegant; tasteful luxury.

Étoffe: Fabric, cloth, goods, material; also quality, worth.

Façon: Make, shape, fashion cut.

Fermeture: Closing, clasp, fastener.
Feston: Button hole stitch, especially as used on decorated or scalloped edge.

Fleur de lis: Lily flower; heraldic emblem of former French royalty. Used as design in fabric, embroidery, jewelry, etc.

Fourreau: Fitted or semi-fitted sheath-like dress.

Froncer: To gather or pucker.

Garni: Trimmed, garnished.

Garniture: Ornamental trimming.

Gaufré: Fluted.

Haute couture: High fashion, creative fashion design. Couturier houses as group.

Idée flèche: Idea that gets ahead, leads.

Jupe: Skirt.

Maison de couture: Dressmaking establishment.

Manchette: Cuff or waistband. (bouton de manchette - cuff-link).

Mannequin: Dressmaker form, dummy. Person wearing new clothes to present at fashion show or collection.

Matelasser: To pad or cushion.

Mode: Fashion, manner, vogue.

Modèle: Model to be copied; style of dress.

Modelliste: A dress designer attached to a fashion house; one whose designs are shown under the name of the house.
Ouvrage à l'aiguille: Needle work, hand sewing.

Passementerie: Trimming, particularly heavy embroideries or edgings.

Patte: Flap, tab or strap both decorative and functional.

Patron: Male boss; dress pattern.

Plissé: Pleated cotton with puckered stripes or pattern.

Première: Experienced dressmaker in charge of the seamstresses of a dress making establishment.

Prêt à porter: Ready to wear; more current than 'confection'.

Répertoire: Collection of works by a designer.

Soigné: Well-groomed, highly finished, carefully done.

Soutache: Narrow braid trim.

Taille: Size, waist.

Tissu: Textile, fabric; texture.

Toile: Linen or cotton cloth. Muslin copy f a design, purchased by firms who wish to copy original models. Sometimes made by dressmakers to show customers garments that they are prepared to copy.

Vendeuse: Saleswoman. In Paris dressmaking houses, the saleswoman is an important staff member.

Volant: Flounce.
Shift 7  BIBLIOGRAPHICAL REFERENCES

Part A - PRIMARY BIBLIOGRAPHY

AUFRY Françoise, Le Musée Horta Saint-Gilles, Bruxelles, Ludion Guides, Bruxelles, 2001, 80 pages


Thinking Outside the Body /167


QUINN Bradley, *Textile Designers at the Cutting Edge*, Laurence King, London, 32 pages


WAGNER Otto, *Modern Architecture – a guidebook for his student to this field of arts*, The Getty Center Publication Programs, Santa Monica, 1988, 185 pages

*Thinking Outside the Body* /168
Part B - Secondary Bibliography


KLEIN, Naomi, No Logo, Taking Aim at the Brand Bullies, Vintage

LESSIG Lawrence, Free Culture – The Nature and Future of

NEGROPONTE Nicholas, Being Digital, Vintage - 1st edition, 1996,
272 pages

SCHWARTZ Barry, The Paradox of Choice, Why More is Less,

WRIGHT Ronald, An Illustrated SHORT HISTORY OF
PROGRESS, House of Anansi Press Inc., 2006, 190 pages
COSTELLO Emilii, Future fashion: science gets stylish when designers create clothing from new high-tech fibers, October 1997, paragraph 4


HEYER Paul, American Architecture: Ideas and Ideologies in the Late Twentieth Century, pp. 228-230


SUBOTINIC Natalija, Theater of the City, JAE, Fall 1989, 43/1, pp. 35-44
Part D - FILMS, INTERNATIONAL/NATIONAL MOVIES

CUTLER, R.J. (director), 16 January 2009 (premiere), 28 August 2009 (NYC Theatrical premiere), 11 September 2009 (U.S. Theatrical premiere) [release dates], The September Issue, Anna Wintour and the Making of Vogue, United States of America (country of origin), Actual Reality pictures (production companies)

FONTAINE, Anne (director), 22 April 2009 (release date), Coco Avant Chanel, France (country of origin), Haut et Court & Warner Bros. Entertainment (production companies)

REEVE Douglas (director), 11 August 1995 (release date), Unzipped, United States of America (country of origin), IMDbPro (production company)
Part E - INTERNET REFERENCES

http://www.railways.incanada.net/


http://penelopestewart.ca/home.html


http://www.yatzer.com/1310_neil_barrett_flagship_store_by_zaha_hadid_architects_in_tokyo

http://www.patrimoineculturel.gouv.qc.ca/RPCQ/detailBien.do?node=consulter&bienId=93460&contenuOngletId=detailPopup

http://www.fashion-era.com/sociology_semiotics.htm
List of Figures
## Shift 8  LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Dress by Hussein Chalayan</td>
</tr>
<tr>
<td>Figure 2</td>
<td>The Curtain Wall House by Shigeru Ban</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Iconic (photograph on the left) and verbal (description on the right) representations in Vogue Fashion magazine</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Existing conditions: heritage Second Empire stone walls, protective mesh dress, and supporting columns</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Mapping of three major periods in modernism (between fashion and architecture)</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Photo of the Crystal Palace by Joseph Paxton (1851)</td>
</tr>
<tr>
<td>Figure 7</td>
<td>Dress style before metal armature crinoline with multiple textile layers (1850)</td>
</tr>
<tr>
<td>Figure 8</td>
<td>Dress style after Paxton's introduction of metal armature, creating dome effect (1860)</td>
</tr>
<tr>
<td>Figure 9</td>
<td>The form of the crinoline begins to shift toward the back of the dress (1864)</td>
</tr>
<tr>
<td>Figure 10</td>
<td>The bustle becomes predominant in evening dress and radically changes the perceived form of the silhouette (1884)</td>
</tr>
<tr>
<td>Figure 11</td>
<td>Balcony structure on the exterior of the Horta House, Art Nouveau (1898)</td>
</tr>
<tr>
<td>Figure 12</td>
<td>Detail of the Horta House facade, composed of metal and concrete, signifying the rupture of metal and industrial architecture</td>
</tr>
<tr>
<td>Figure 13</td>
<td>Different bustles that arose during the influence of the Art Nouveau period</td>
</tr>
<tr>
<td>Figure 14</td>
<td>Dress from 'La Belle Époque' (1912)</td>
</tr>
<tr>
<td>Figure 15</td>
<td>Textile designs from Art Nouveau period</td>
</tr>
<tr>
<td>Figure 16</td>
<td>The Kiss, a painting by Gustave Klimpt (1907-1908) in the Art Nouveau style</td>
</tr>
<tr>
<td>Figure 17</td>
<td>Art Nouveau cabinet by Eugène Gaillard, 1900</td>
</tr>
</tbody>
</table>

*Thinking Outside the Body* /176
Figure 18  Art Nouveau cabinet by Louis Majorelle                      .............................................. 40
Figure 19  Autumn walking dress (1895) .......................................................... 40
Figure 20  Spring dresses trimmed with lace (1900) ............................................ 40
Figure 21  Sagrada Familia, Antonio Gaudi, organic architecture ......................... 41
Figure 22  Glasgow School of Art, library, 1907, Charles Rennie Mackintosh, English Arts and Crafts 41
Figure 23  Schröder House by Gerrit Rietveld (1924) built with the typical De Stijl principals of horizontal and vertical forms that compose the overall geometry .............................................. 43
Figure 24  Painting by Piet Mondrian (Composition with Yellow, Blue, and Red, 1937) signifying the predisposition toward geometric shapes rather than organic ones .............................................. 43
Figure 25  Flapper poster from the 1920’s expressing that “the straight line is always favourable” 44
Figure 26  Representation of the liberated and fashionable Flapper girls, through manner and the influence of new-found shapes in geometry .......................................................... 45
Figure 27  The Flapper’s style of dress to dance the Charleston ................................. 45
Figure 28  Jersey Flapper Dress, by Coco Chanel, for everyday working women (1926) ........ 47
Figure 29  Gender subversion becomes apparent through garment transformation (1926) ........ 47
Figure 30  Daytime view of the museum’s addition, showing the lace facade ................. 50
Figure 31  Twilight view of the lace-narrative ........................................................... 51
Figure 32  Section through the Boulard Factory and the new addition .......................... 51
Figure 33  Silkscreen printed on glass ...................................................................... 52
Figure 34  Analysis of the curvilinear structure that supports the lace narrative ............... 52
Figure 35  3D Skeleton of the new addition (building assembly) ................................. 53
Figure 36  Portion of the built skeleton (holding glass facade) ..................................... 53
Figure 37  Terminal installation without wind factor distortion ........................................... 55
Figure 38  Terminal installation with changing form due to wind factor .............................. 57
Figure 39  Dress from Kagami's collection which uses mechanical devices to convey old industrial mechanism effects ................................................................. 59
Figure 40  His dresses are inspired by the industrial era and the machines that were operated at that time 59
Figure 41  Image and written representations in the book Xtreme Fashion ............................ 60
Figure 42  Ephemeral nature of the garments presented during a fashion show ..................... 62
Figure 43  Men's clothing designs demonstrating geometry, and original jacket layout and patterns 63
Figure 44  Use of mesh in men's garment to create transparency ........................................ 63
Figure 45  Catwalk circulation and sculptural installation by AquiliAlberg, situated between backstage and front stage ...................................................................................... 64
Figure 46  Catwalk elevation demonstrating the sculptural intervention's central position between public and private ....................................................................................... 65
Figure 47  Plan of the catwalk (front and back) en rapport with AquiliAlberg's sculpture .......... 66
Figure 48  Perspective of orthogonal space vs. curvilinear sculptural forms .......................... 68
Figure 49  Folds within the curved sculptural form that serve as the 'présentoir' ..................... 69
Figure 50  Example of Neil Barrett's clothing design that demonstrates the shift from ample to tapered 69
Figure 51  View of the centrally located sculptural intervention in plan ................................. 70
Figure 52  Photograph of the E.B.Eddy Pulp and Paper Mill ruins after the April 1900 fire ....... 76
Figure 53  Site map from 1901 that shows the newly re-built factories, without building #5 (infill)77
Figure 54  Building #1 .............................................................................................................. 78
Figure 55  Building #2 ........................................................................................................78
Figure 56  Building #3 ........................................................................................................78
Figure 57  Building #5 ........................................................................................................78
Figure 58  Building #6 (3 stories), with mansard roof and dormers ........................................78
Figure 59  Interior view inside building #1 and #2 (No 2 Paper machine footings) .................81
Figure 60  Interior view of Building #6 and rail track line ......................................................81
Figure 61  The thesis site (red) showing the proximity to the Ottawa River and its surrounding circulation arteries .................................................................83
Figure 62  Façade seen from the Taché facade of the site overlooking a view toward the Parliament buildings .................................................................85
Figure 63  Temporary mesh dress ........................................................................................85
Figure 64  Column supporting the mesh dress (stitches) .........................................................85
Figure 65  Grommet that hooks the architectural wire cross-bracing between columns ..........86
Figure 66  Permanent footing for exterior column structure, displaying its permanent (rather than temporary) character .................................................................86
Figure 67  Temporary mesh dress elevation with metal wire cross-bracing, a written structure, by structural engineers Manhire Associates Ltd ........................................87
Figure 68  Existing wall section and column bracing ...............................................................88
Figure 69  Conceptual drawing of the body and dress section demonstrating the underlining, lining, and overskirt ..............................................................................88
Figure 70  Column bracing plan through existing dilapidated skin (stone walls) via the windows 89
Figure 71  Coco Chanel’s twelve commandments .................................................................95
Figure 72  Roland Barthes’ The Fashion System (break down) .............................................96
Figure 73  Mademoiselle Labelle’s Hybrid System (break down) ...........................................98

Thinking Outside the Body /179
Figure 74  Rules that apply to the exterior overskirt design ........................................................ 101
Figure 75  Rules that apply to the interior catwalk circulation ......................................................... 102
Figure 76  Mesh 01: layering and weaving through the existing mesh dress ........................................ 104
Figure 77  Mesh 02: creation of movable layers that are woven onto an architectural wire that hooks onto the existing mesh dress .............................................................................. 104
Figure 78  Mesh 03: addition of an existing translucent layer that veils the existing mesh dress .......... 105
Figure 79  The hooks are designed to enable the creation of different 'looks' for the body of architecture by moving the attachments onto different areas of the existing mesh dress .......... 106
Figure 80  Mesh 04: using an opaque fabric layer .............................................................................. 106
Figure 81  Example of how the fabric can be modified, by hooking it on a different position within the mesh grid, to create a diverse effect .............................................................................. 107
Figure 82  Dress design 01: preliminary dress design (graphite on paper) ................................. 108
Figure 83  Dress design 02: integrating a metallic louver system with a flowing fabric dress (graphite on paper) ........................................................................................................ 109
Figure 84  Dress design 03: Fashioning a harness for the body and its proportions (graphite on paper) .... 110
Figure 85  Dress design 04: organic harness (Art Nouveau inspired) and hook for grommet attachment (graphite on paper) .................................................................................. 111
Figure 86  Dress design 05: use of architectural wire and grommets to hook portions of the dress onto belt area to change the initial form (graphite on paper) ......................................... 112
Figure 87  Dress design 06, the final dress drawing (graphite on paper) ..................................... 113
Figure 88  Front view of Mannequin 01 .............................................................................. 116
Figure 89  Side view of Mannequin 01 .................................................................................. 117
Figure 90  Bodice detail, including architectural grommets and structural wire that ties the fabric together 117

Figure 91  Material assembly details (materials used in the dress fabrication) 117

Figure 92  Top view of conceptual model, using a direct shift from conceptual dress Mannequin 01 to building Model 01, to inform exterior conditions 118

Figure 93  Flipped overskirt revealing the corner portion of the body on Building #6 118

Figure 94  Covered portion of overskirt hiding the infill, Building #5 118

Figure 95  Top view of the conceptual model designed to inform interior conditions 119

Figure 96  Section model demonstrating the idea of a suspended catwalk over the former production line 120

Figure 97  Body proportions in relation to building proportions 121

Figure 98  Photographs of detailed model showing Eddy street perspective (top), Taché boulevard perspective (middle), and top view of building #6 with existing train tracks leading into the building (bottom) 122

Figure 99  Plan of catwalk passing through buildings 1 (top) to 6 (bottom) 123

Figure 100  Plan of artist's body-like pods inhabiting building #6, to the right the pods are positioned in a manner that they stretch the surface's skin 125

Figure 101  Shift in circulation, inside infill building #5 126

Figure 102  Observation area (above the former beater machines), at the end of the catwalk in Building #1 126

Figure 103  Entrance to the fashion district (Building #6) via the catwalk elevated above the existing train tracks, which continues onto the former production line 127

Figure 104  Taché boulevard elevation with overskirt wrapping building 1, 2, 3, and 5 128
Figure 105  Alley elevation, view of overskirt (building 1,2,3, and 5) and pods that stretch the surface of the metallic skin on building 6. .................................................................128

Figure 106  Cross section into catwalk circulation, demonstrating the adjacencies with the fashionista pleasing functions (building #2). ........................................................................129

Figure 107  Hybrid notions demonstrating the shift between the conceptual dress section (sketch on right) and the building section through the existing body and overskirt. ..............129

Figure 108  Diagram demonstrating the retractable potential of the overskirt ..................130

Figure 109  Eddy street perspective ..............................................................................131

Figure 110  Different looks for the body of architecture, achieved with the flexible overskirt (double roof system) ................................................................................132

Figure 111  Inside view of the retractable roof (closed on left and open on right) above the glass roof insertion (directly in the middle) .................................................................132

Figure 112  Perspectives of the various overskirt wrapping possibilities around the body of architecture 133

Figure 113  Barthian structure inside the body of architecture ........................................136

Figure 114  Chanelian structure outside the body of architecture .....................................136

Figure 115  Visitor’s Activity Guide for the new catwalk program ..................................139

Figure 116  The eye is an important factor in the perception of space, encouraging a sense of belonging and the ‘flow effect’. ..............................................................142

Thinking Outside the Body /182