# **Metamorphoric Fashion: A Transformative Practice**

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#### **Abstract**

Transformation is embedded in the growth of an organism, while fashion, highly responsive to changing social and physical environments, rides the current of flux like a dreamer wandering through darkness. Through my fashion practice, attempts are made to reflect upon, expand and make possible inroads into the translation of this creative movement, from inspiration to mixed garment and textile outcomes. This involves engaging the imagination of possible futures, new approaches, and unknown outcomes, through mixed material expressions. Translating the life cycle of an organism, which is highly adaptive, evolutionary and responsive, this work forms part of my PhD study, "Metamorphoric Fashion", being undertaken at RMIT University, Melbourne.

Using a practice-led research methodology, which draws upon mixed creative methods, my research attempts to engage with the uncovering of imaginative potentials of fashion and textile processes. The concept of transformation leads this investigation, and initially a study of butterfly metamorphosis was undertaken. This involved "fashion-designer-becoming-lepidopterist", and engaged a movement between the ordinarily disparate worlds of ecology and creative practice. Using mediums of photography and drawing, a series of transitions were recorded in which the organism underwent both transitional and metamorphic change. Through these methods, meditations on relationships between nature-culture become possible, as thinking about ecology enters the creative process. Through drawing, a series of stylizations developed which recorded the imaginative thinking time, line by line.

My particular fashion practice is in the process of transformation and diversification, reflecting the nature of the metamorphic phenomenon, and the particular interpretations of the butterfly study that an individual approach enables. Aiming to uncover the ways in which the practice is able to accommodate these transformations, forms part of this study. Why this might be important for fashion practice more generally perhaps, is because it identifies a type of practice that

attempts to evolve itself, to become something it does not yet know. The research aims to capture this state of becoming, and the perpetual sense of movement.

Keywords: metamorphosis, fashion practice research, transformation, imagination, creative process

#### Introduction

My fashion practice involves engaging the imagination of possible futures, new approaches, and unknown outcomes, through the production of experimental garments. This type of practice involves working productively with speculation, ambiguity and levels of complexity, in an active exploration, to enable the development of new garment structures. The processes involved make possible a way of practising where the outcomes cannot necessarily be known in advance. There is an orchestration involved, directly through the process of design itself, where multiple methods are combined to create the final outcomes. This practice is currently forming the basis for my PhD research, titled *Metamorphoric Fashion: A Transformative Practice*, which is being undertaken at RMIT University, Melbourne. At the time of writing, I am almost at the halfway point and in a stage of reflecting on what the practice is, how it has developed and transitioned, and what the outcomes of this investigation may mean in terms of significance for the field.

Taking an approach which is focused on developing experimental garment outcomes, techniques of abstraction, transfiguration, combination and analogy are used with the aim of developing new processes. These techniques are critical to an imaginative approach, which is speculative and exploratory. The way these processes are developed engages with exploring possibilities, and what is previously unknown. This approach is situated in practice, and uses insights based on a study of butterfly metamorphosis. The focus for the research is on the development of new garment structures. The aim is to develop an approach, which attempts to describe the way that design processes can developmentally evolve, through an imaginative engagement with their active and continual transformation, in order to create differentiated and evolving, garment outcomes.

#### **Transformation**

Using a practice-led research methodology, which draws upon mixed creative methods, my research attempts to engage with uncovering the imaginative potentials of fashion design processes. The concept of transformation leads this investigation, and initially a study of butterfly metamorphosis was undertaken through primary and secondary research methods. Transformation can be defined in a number of different ways; it is a word embedded with multiple interpretations. In the context of this research, an imaginative analogy is drawn between the activities of the fashion design process and the life of a living organism; transformation, therefore, is understood to refer to a change in the form or nature of something. The study of natural organisms is usually defined by the science of biology, understood as the science of life. Engaging with the idea of transformation, which is found within the life sciences, is a key method used within this research approach. Following the thinking of Elizabeth Grosz, biology is implicated with transformative potential and ongoing differentiation:

Biology is a system of (physical, chemical, organic) differences that engenders historical, social, cultural, and sexual differences. Biology does not limit social, political, and personal life: it not only makes them possible, it ensures that they endlessly transform themselves and thus stimulate biology into further self-transformation. (Grosz, 2004, p. 1)

The practice is modeled on an aim to develop differentiated and evolving outcomes, and to transform processes that are ordinarily used. This paper discusses a series of garment investigations that respond to the initial butterfly study and aim to demonstrate a transformative model of practice.

#### A transformative model

Based on developing a transformative model of practice, this approach suspends usage of the more familiar solution seeking methods previously used in my design practice, linked to prior undergraduate fashion education and commercial practice. By commercial practice I mean the creation of garments designed within fixed constraints relating to the market, which include, for example, particular price ranges,

target consumers, retail clients and turn-around times. Working within this approach often emphasizes economy of process and speed to market, and frequently utilizes a problem-solving model of design. Problem-solving theories in relation to design can be dated to the end of the nineteenth century (Sinha, 2002), and are also evident in the way that design is thought of more generally; "when people think of design, most believe it is about problem solving" (Dunne & Raby, 2013, p. 2). Contrary to this understanding of design, Donald Schön and others following, challenged the development of rules and a rationalized method shown to be linked to efforts to "scientise design" (Cross, 2001, p. 1), by developing a "reflective practice" (Schön, 1983) model of design. Schön characterized reflective practice as "an epistemology of practice implicit in the artistic, intuitive processes which some practitioners do bring to situations of uncertainty, instability, uniqueness, and value conflict" (Cross, 2001, p. 4).

#### **Fashion Design Practice Models**

The distinction between problem-solution focused models of design, and those complex situations arising from designers' practice, has significance for thinking about models of fashion design practice, which are very rarely included within the broader context of design theory and practice. Elizabeth Bye claims that "clothing and textile design has not been a visible part of the discourse on design as a discipline or design research" (Bye, 2010, p. 207). Together with this general invisibility, fashion design practice has only more recently been discussed from the perspective of fashion practitioners, and continues to evolve. Developing theories of fashion practice, and the way it can be situated in relation to the wider context of existing design theory and practice, is therefore critical and, as Clemens Thornquist demonstrates, there is a "fundamental importance of basic research in an art form" (Thornguist, 2014, p. 40) such as he describes fashion design, which from a logical and ontological perspective can assist to develop the field of research, "for the sake of the art itself" (Thornquist, 2014, p. 54). My research aims to contribute to developing accounts of fashion design from the perspective of a practitioner, in the field of fashion practice research.

Lars Hallnäs offers an insight on fashion design processes, which is critical of the problem-solution model of design in the context of fashion, and connects this to the application of industrial design models to fashion design:

Central to models and methodology in industrial design is the idea that we handle a problem in the design process; we solve a problem given in the brief. Creativity is basically about solving a problem and expressing a solution. (Hallnäs, 2010, p. 56)

Hallnäs claims that this approach does not exactly make sense in the context of fashion design where, "in fashion design there is never any question about what it is we design, there are no obvious problems to solve; we express people by dressing them" (Hallnäs, 2010, p. 60). Others who write of the contradictions involved in applying the problem-solution design model to fashion design include Pammi Sinha, who identifies that the goal of the fashion design process is constantly shifting, with the fashion design problem seen as a wicked one (Sinha, 2002).

Elizabeth Bye, following Steven Scrivener (2000), notes that there are two distinct approaches within design research in fashion; "problem solving and creative production" (Bye, 2010, p. 211). Bye argues that the problem-solution approach, which has been closely associated with government and military needs, has a privileged position, as it typically receives more funding; while the second type, the creative production design approach, has "less visibility with respect to both funding and publication" (Bye, 2010, p. 209). Critically, Bye notes that while practice within fashion and textiles is strong, there is overall limited support for research and few links between research and practice have been made (Bye, 2010). The context of my PhD research therefore aims to demonstrate an alternative model of fashion design practice, which builds on this argument for the existence and acknowledgement of creative models arising from designers' practice, which are by their nature complex.

#### Imaginative Processes

Within the projects which form the doctoral undertaking, I am working with methods aimed to develop and explore possibilities. In this type of approach, an active engagement with processes of imagination is made. Following Otto Von Busch, "... imagination deals with the possible and associative, or even virtual, visionary and holistic" (Von Busch, 2011, p. 2); it brings into existence that which has not yet come. Imaginative processes are developed through the creation of material outcomes, where ordinary techniques are challenged, expanded or explored differently.

Mads Nygaard Folkmann offers a way to conceptualize the workings of imaginative processes in terms of designed outcomes. His conception is highly relevant to the practice of fashion design, yet this perspective is missing from his overview, and has rarely been explored in detail elsewhere. Folkmann states that "the structure of imagination is that of letting transformation take place in and through a specific medium—in this context, the medium of design" (Folkmann, 2013, p. 80). This statement is highly relevant to the projects I am undertaking which form the practice component of the PhD. Through the project work, transformation of processes is occurring, which assist to demonstrate how this imaginative work is materialized. Richard Gray suggests that:

The true inventions of the imagination are not things, but relations and connections among things. Imagination does not entail, in other words, the invention of the hitherto unknown; rather it permits us to reshape what is familiar and known by placing these things into differing configurations. (Gray, 2011, p. 6)

To engage an imaginative way of working, initially I sought to create a relationship between two fields in a way that was previously unexplored in my practice. I chose to study butterflies to initiate imaginative transformation in my practice, by enabling the possibilities for linkages between this biological-ecological subject, and the design process to be explored.

#### Metamorphoric Fashion

The concept of *Metamorphoric Fashion* is proposed, which aims to combine the sense of transformation developed from the study of metamorphosis, with an approach that uses metaphoric analogy to translate and develop outcomes between the different disciplines involved in the practice. Applying concepts derived from a biological study for the purpose of designing garments involves a translation beyond the literal sense, and as such it involves imaginative thinking. *Metamorphoric Fashion* aims to describe this sense of transformation of process in a way that emphasizes the imaginative; it combines both the *metamorphic* and the *metaphorical*. Metamorphosis is a natural phenomenon occurring in butterflies and other animals, through which an organism undergoes a complete change in form. Metamorphosis, from the Greek *meta* means after, combined with *morphe* which means form (Ryan, 2011, p. xiv). Metaphor involves the use of analogy, where one thing is considered as representative or symbolic of something else. As such, the use of metaphor involves ambiguity because "analogy preserves ambiguity by simultaneously embodying similarity and difference" (Harpur, 2002, p. 68).

# The Butterfly Studies

In the butterfly we might find a correspondence between things, a bridge between the sciences and the humanities, a biological organism as well as a cultural symbol in which reason intersects and overlaps with imagination, until it becomes difficult to disentangle the two. (MacRae, 2007, p. 20)

The subjects of butterflies and metamorphosis are not limited to biological fields of study. They cross between fields of science and fields of cultural production. Historically, butterfly metamorphosis is a potent subject area, with multilayered levels of complex interpretation, across many disciplines, making it a truly interdisciplinary and ambiguous subject. Butterflies have an abundantly rich history of cultural symbolism, and their representation can be traced to the times of human prehistory or late Paleolithic Age (MacRae, 2007, p. 13).

Taking an approach in which I aimed to develop first-hand knowledge of butterflies, I started to research ways of gaining close proximity. Primary research involved visiting butterfly enclosures and then establishing a way to grow butterflies in my own home. Rather than study specimens, I aimed to experience the creatures alive, in order to understand them in the context of the ecology of their life cycle. I grew two species, *Hypolimnas bolina* (Common Eggfly or Varied Eggfly) and *Danaus plexippus* (Wanderer) in order that I may conduct detailed, observational studies throughout their life cycle. My observational methods involved recording daily changes through photography, drawing and reflective note-taking, and documenting a daily photographic record in my blog,

<a href="http://www.becomingalepidopterist.tumblr.com">http://www.becomingalepidopterist.tumblr.com</a>. What follows is a brief overview of the primary observations, including examples of some drawings.

## Observational thinking and drawing

#### Hypolimnas bolina

Initially my methods focused on drawing directly from life, observing the caterpillars as they ate, slept, or otherwise existed, and sketched and recorded reflective notes, while taking photographs. Increasingly I started to rely more and more upon the photographs that I took with the assistance of a macro lens, which was much better equipped than my own eyes to see the detail of the tiny creatures. Figure 1 shows a scan from my drawing journal (Sgro, 2011-2013) which documents on day 11 the appearance of a caterpillar using the help of a macro lens, while day 12 shows the attempt to capture my live observation of the movement of a caterpillar molting. It soon became apparent that many changes were happening every day and these organisms, through the very nature of their growth, were transforming daily. The caterpillar undergoes four stages of molting, where it sheds its exoskeleton before the fifth final shedding where the caterpillar becomes the chrysalis. During molting, the body of the caterpillar physically splits itself to shed its exoskeleton. Puffing up its body and wriggling out of its skin, the caterpillar temporarily becomes a watery fluid creature before its new exoskeleton hardens and darkens. When the chrysalis formed, I had an intense feeling suddenly of waiting and imagining. There was something happening within the chrysalis which could not be seen.

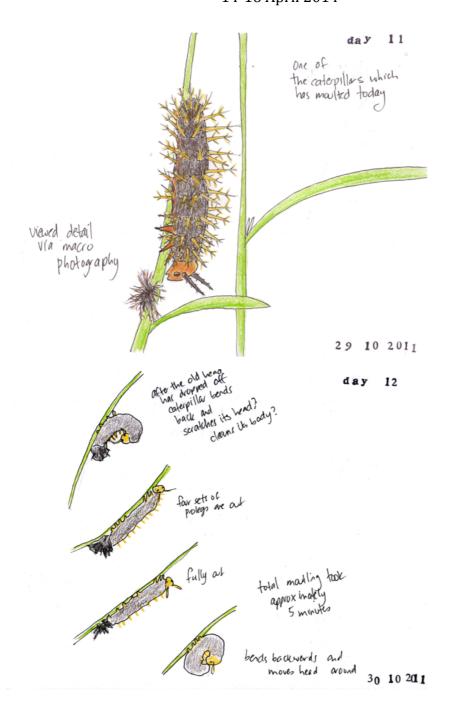


Figure 1. Initial observational butterfly drawings – *Hypolimnas bolina* (Sgro, 2011-2013)

#### Danaus plexippus

During this process I develop an understanding of the plasticity of the body form of the insect and the sense that it is never stable or identical to itself from one moment to the next. Through drawing I feel like I am coming to know something that I did not otherwise; it makes me look closer and closer and discover details previously not noticed. The chrysalis itself, and its fluid formation, was particularly striking in its shifting form; before it can become stable or fixed, it makes a series of rapid shape changes as the organism undergoes this stage of transition. There was an observable sense of ambiguity, where the creature was neither caterpillar nor butterfly, but this in between stage, full of the potential of both, and constantly shape-shifting; "it was fully itself, and something new" (Todd, 2007, p. 15). Once the chrysalis was formed, it hardened and changed to a brilliant green, with tiny bumps of gold. It seemed to hold a secret very quietly.

### Fashion-designer-becoming-lepidopterist

Lepidopterist is a word used to describe people who study the Order Lepidoptera — which includes butterflies and moths. The word also describes hobbyists who have an interest in catching, collecting, growing or observing these insects. Based on the way I intimately came to experience this butterfly world, I considered myself to have become a lepidopterist. However, as I aimed to discover insights which could be translated through to fashion design outcomes, I experienced a hybridization of thinking, in terms of identifying with being a fashion designer and becoming a lepidopterist, and considered how to combine these two seemingly disparate practices. There was a constant back and forth between new knowledge that was being generated in this observational insect research, and the potential methods of design translation through to garment outcomes. I looked for elements through which I felt there could be a correspondence.

The idea of form or structure became important throughout the initial observational stage, as it seemed that the metamorphosis was most observable as a change in form of the insect itself, and I could relate this principle to garment development by focusing on structure. As a result of the observational studies and associated secondary research, I came to understand that the insects undergo not only the dramatic transformative stage of the metamorphosis, but also transform throughout the caterpillar stage due to molting. The transitions that occur as a result of these changes therefore can be quite dramatic but also subtle. There are "moment-by-

moment shifts" (Todd, 2007, p. 130) in the butterfly life cycle which cannot be observed in any other way than by studying them live.

# **Imaginative Drawing**

The drawings assisted me to think, and to observe carefully; as each observation becomes a particular line on the page directed by my hand, I connect more closely to the insects in a way that is quite intimate. Figure 2 represents a dramatic change in my drawing style, documented in my drawing journal (Sgro, 2011-2013). During the observational drawings, there was a moment where the style evolved.

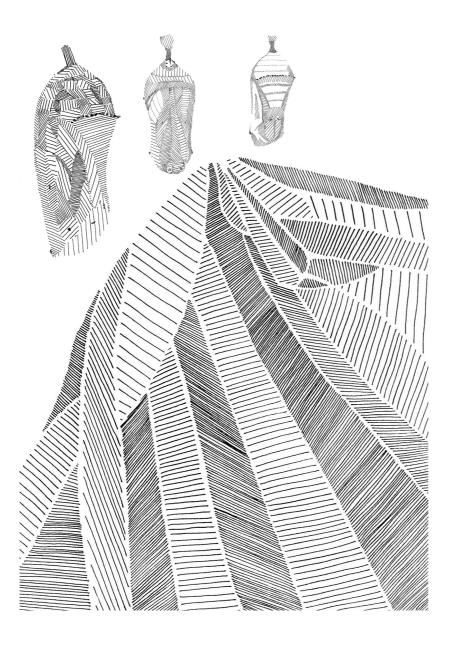


Figure 2. Butterfly line drawings - *Danaus plexippus* (Sgro, 2011-2013)

This is the moment where, upon reflection, I think I started to develop imaginative thinking about the insects. Rather than the observational thinking that I experienced to this point, something changed; my thinking became more speculative, as I started to think forward in terms of how I could possibly translate what I had discovered through the observations. This was enabled, particularly, once the insect had changed into the chrysalis, and I experienced a period of waiting. Working by drawing lines allowed me to start to abstract my thinking, rather than produce a literal reproduction of what was observed. This technique allowed me time to think reflectively and internally, rather than to express in words what I was observing and imagining. It reveals a process of conceptual internalization. Through the repetitive action of creating lines I could meditate on creative potentials.

## Project: Materializing Change

For Darwin, life is essentially linked to the movement of time. He transformed the concept of life, ... from a static quality into a dynamic process. In his writings, being is transformed into becoming, essence into existence, and the past and the present are rendered provisional in light of the force of the future. Life is construed as a confrontation with the accidental as well as the expected, a consequence of the random as well as the predictable. (Grosz, 2004, p. 7)

The projects, which have started to evolve, involve the creation of garments, and are crystallizing around three main proposed themes: *Visualizing Growth*, *Materializing Change* and *Relational Environments*. These projects are supported by the development of concepts, which have evolved from the butterfly studies, and include ambiguity, transformation, metamorphosis, observation, the relational and ecology. The translation from organism to garment is metaphoric; it proceeds by analogy and makes use of these concepts imaginatively rather than literally. All projects are currently in simultaneous development, and incomplete. In this article, I would like to introduce and discuss some of the work, which contributes to the *Materializing Change* project.

Materializing Change is about making actions with material techniques to create physical manifestations of ideas that are evolving from the subject area, and to use these ideas to transform the material techniques I use. These garment experiments are about introducing a change, then reflecting upon, and analyzing what develops from this. The garment experiments in this project all seek to challenge my usual design approach by introducing a difference in technique to activate transformation. In order to transform, unpredictable divergences are introduced, usual practices are challenged, and unknown paths trodden. Confrontation is sought between the expected or what I know how to do already, and the accidental, or what I do not yet know or anticipate, in order to bring forth shifts in practice. By introducing a change, a technique of destabilization is employed, where the outcomes of such a change cannot be known in advance. Disruptions in the usual ways of making can be subtle or can be dramatic, but ultimately serve to encourage shifts in practice to occur beyond the present and into the future, which for the moment, remains unseen. So in effect, they are speculative disruptions.

At first I analyzed my current practice intuitively more than consciously, because there were some ways of working that felt limiting to me creatively, and that I wanted to challenge. Initially, I aimed to develop a way to work differently with the body and the mannequin, as I felt that automatically, I would cut in towards the body as I designed garments, shaping the garments in a tailored way, and relying on the use of standard garment shapes. I felt this was also the case when designing on paper. Almost automatically, the garments would follow the contours of the body template, or the mannequin. There was no sense of space between the body and the garment, as a result of this approach. As a consequence, fit was always restricted to a particular type of body and shape. As a design approach, I felt I had developed a habitual way of working which created a limited type of outcome. I aimed to suspend this approach, to see what could result from a change in technique.

# Materializing Change: Exploring Flatness

In the first experiments, "Exploring Flatness", I chose to study flat garment cutting techniques as demonstrated by Miranda Tsui in *Flatness Folded* (Tsui, 2008), in order to initiate a change in approach and to see what could result from this. I chose

this method as I understood that there was a sense of ambiguity involved enabled by a perceptible difference in appearance between how the garment looks as a flat shape and how the garment looks when worn on the body. Initially, this seemed to relate somewhat analogously to how I was thinking about the changes in the butterfly's body as a result of the metamorphosis, when it would transform from one physical form (caterpillar) into another (butterfly). I had not previously worked with flat garment techniques. I saw potential in exploring a technique that I did not have any experience with, to develop possible insights in relation to garment making I had no way of anticipating, and to activate imaginative thinking. Therefore, in order to disrupt the usual process, I initiated a change, and would see what could result from this.

Traditional Chinese garment making techniques include "two-dimensional shapes with no use of darting" (Tsui, 2008, p. 10) enabling a space to be formed between the garment and the body.

... many designs are geared towards variability and flexibility. How a certain piece of clothing will be worn is no longer dictated by the designer since the garment itself becomes part of 'the act of wearing'. (Tsui, 2008, p. 11)

This is very different to my ordinary approach, which often included the extensive use of shaping with darts or panels, techniques which resulted in garments largely contoured to the body, fixed and stable. The examples in *Flatness Folded* are contemporary interpretations of traditional Chinese methods. Additional to the Chinese methods, flat garment methods have been developed in various ethnic cultures in different ways, often involving little or no cutting of the fabric, or development from rectangular pieces of cloth (Linqvist, 2013). It is recognized that rectilinear cutting historically was linked to the specific width of localized looms (Burnham, 1973). In the context of this research, the nature of flat garments enabled an understanding of space within the garment-body relationship that is very different to the approach I was accustomed to using, which relied on western pattern cutting systems.

The relationship between the garment and the body has been interrogated by the Japanese designers, including Issey Miyake, Rei Kawakubo and Yohji Yamamoto, who are all said to "insist that the underlying influence of the kimono in their work is profound" (English, 2011, p. 72) and "agree that it is the space between the fabric and the body that is most important" (English, 2011, p. 72). Unworn, the kimono is flat (Fukai, 2010). However, when it is worn, the garment comes into contact with the body only in certain places, opening up a sense of space between the cloth and the body (English, 2011; Hiramitsu, 2005), which shifts and changes. In Japanese, this space is understood as energized, dynamic and generative, it is not an absence but active and creative: "... the superfluous 'space' between the garment and the body, referred to as *ma* (original emphasis), is more than simply a void: it is a rich space that possesses incalculable energy" (Fukai, 2010, p. 16).

There is therefore a sense of ambiguity, which I saw to be analogous to my initial research in the flat garment outcomes. There is much more that can be said about flat techniques and the space between the body and the garment. However, what I was interested to explore by using the flat garment technique, was how it could enable a sense of transformation in my approach to making garments, by engaging with an approach I had not previously explored first hand, and seeing what could result from this. The initial study involved replicating several styles in the *Flatness Folded* book, in order to develop a basic understanding of the technique.

# Materializing Change: Collage + Flat

The flat garment approach developed once I started to combine the technique with a collage process. The method involved photocopying, cutting and pasting some of my butterfly line drawings, and using the various shapes to develop new shapes for garments. Collage enables the creation of unpredictable shapes, by creating new combinations. Because the "exploring flatness" series works with a 2D method, initiated in the paper patternmaking process, this is a technique which can easily be combined with collage, which also uses 2D paper methods. By working with collage I can develop a sense of change in the way I approach shape generation for garments because I start to work with an unpredictable element, which continues to be removed from the usual starting points including the garment blocks and the

mannequin. I can use instead the aesthetic and visual sense of how the shapes look when combined on the page, to develop new shapes for the garments. Figure 3 shows one of the resulting garments, unworn and worn. When assessing the garment on the body, what becomes interesting is how the relationship of the garment to the body cannot exactly be controlled, but can drape and hang with a particularly loose quality that becomes sculptural.

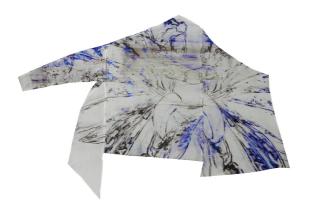




Figure 3. Flat garment and worn garment. Textile print by Armando Chant.

Upon further reflection, what I realize the 2D method has allowed me to gain insight into is the way in which the garment, in this way of working, can become interesting as a transformative entity in itself, in a graphic and structural sense through the creation of the pattern.

#### Materializing Change: Constructing a collaboration

I start working collaboratively when planning how to present this new series of garments I am developing. Again I seek to introduce a disruptive element, which will challenge my usual approach. Ordinarily the presentation of my garments would be made in a commercial context; through their distribution into stores, or into a catwalk presentation. I decide to work on a way to exhibit them in a gallery, which allows me to focus on their formal elements as visual and spatial objects, rather than necessarily focusing on their aspects of wear. The disruption involves initially shifting the focus from the body or mannequin as the usual context of display for the garments. Instead a decision is made to experiment with displaying the garments in some other way, in order to potentially reveal another aspect of their form. Working with two other collaborators, one a textile designer, Armando Chant, the other a spatial designer, Olivier Solente, enables new relationships to be explored in the context of disrupting my usual practice.

Working with the spatial designer, a process was initiated where two of my flat garments were remade into 3D sculptures to be exhibited in that way. Figure 4 shows one of the original garments and the resulting sculptural form. The process involved the spatial designer translating my garment pattern into the 3D software program, Rhino OSX™, and then us working together at full scale to replicate the new 3D pattern into a hybrid sculptural form made in calico and the material Corflute, which is lightweight plastic sheeting.



Figure 4. Garment transition to sculpture. Sculptural collaboration with Olivier Solente, print by Armando Chant.

What this process enabled me to understand was a new insight about the potential to develop garment patterns through the use of such software combined with spatial design expertise. Following this experience, I produced two new garments for the next series of work in which I developed a process for translating the Rhino OSX<sup>™</sup> template pattern back into a wearable garment, by transforming the flattened 3D Rhino OSX<sup>™</sup> template into a garment pattern. Figure 5 shows the transitions of one of these two garments, from original garment, through to sculpture, then through to new garment, with intermediary patterns made along the way.



Figure 5. Translating the original garment through pattern to sculpture then to new garment. Sculptural collaboration with Olivier Solente, print by Armando Chant.

Upon reflective analysis, the resulting garment seems to convey more of a sense of ambiguity than the original garments did, and a sense of shifting structure has been materialized in the resulting garment. This has been directly influenced by a change in my approach to the process of making garments, initiated by disrupting usual processes, and exploring alternatives and possibilities within the design process. Figure 6 emphasizes the two different forms of the garments, after the pattern transformations.



Figure 6. Garment transition to new garment. Print by Armando Chant.

# Some conclusions and ongoing work

Insights from the butterfly study have enabled garment outcomes to materialize the sense of flux and shape-shifting of the metamorphic state. This is uncovering a proposal for unstable garment structures, which are still in the process of being defined and developed, and are created using mixed methods and techniques, sometimes individual and sometimes collaborative. The projects are complex and multifaceted and are taking time to process and unravel. As a fashion practitioner new to research, part of this process involves becoming aware of my own practice, and developing and using reflective insights in a way that is new. While this doctoral project is still in development, the aim is to continue to investigate further methods for transforming the garment structures in an evolving and generative way, by responding to possibilities enabled by disrupting ordinary processes. An important development in this research has been to identify an imaginative way of working that enables new combinations of processes to be explored and expanded.

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Artistic collaborators: Armando Chant, Olivier Solente.

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