

Built for Niche: Rethinking the Role of Manufacturing in Developing Designer Fashion in New Zealand

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Abstract

The fashion system in New Zealand has strong ties to its northern hemispheric roots, largely due to its colonial past. As a result, local understandings of fashion and design have been derived from predominant British influences in terms of garment design, aesthetics, construction and manufacturing systems. This paper examines the appropriateness of continuing to follow these traditional systems as opposed to exploring more dynamic methods suited to the local environment and culture. Through a discussion of critical and theoretical contexts including Deleuze's theory of the 'production of difference' (Deleuze 1994), a global fashion economy and the disconnection of design from geography in the virtual marketplace, the authors proposed that there is a significant refocus which needs to happen for New Zealand fashion to reinvent itself as a dynamic and international industry. The rethinking of traditional methods of manufacturing and the way we use existing technology offer the best opportunity to drive innovative design both in terms of process and aesthetics.

Knitwear design in New Zealand is used as a case study to explore the differences and similarities between local design and manufacturing models compared to those in the United Kingdom. The argument is that adhering to traditional methods of manufacturing is connected to the on-going reproduction of a particular design aesthetic and has prevented more experimental use of new technology: in this case, the use of the seamless knitwear, whole garment machine in the local knitwear industry in anything other than a traditional mode. Similarly, the continued focus of traditional methods of garment construction could be limiting the development of more innovative fashion design. New Zealand does not need to manufacture more clothing but instead should focus on producing high end, distinctive product for an international niche market, a strategy that has proven successful for other New Zealand industries, particularly the premium wine and tourism industries.

Key Words: New Zealand, seamless knitwear, manufacturing, fashion, design.

Introduction

The design of fashion in New Zealand has, for the most part, relied on following fashion trends from the major fashion cities of Paris and London and re-interpreting them for a local market (Finn, 2008). This practice has been both observed, in a rather naïve manner, as the normal role of the “industrial designer” (Schwimmer, 1949) in New Zealand as well as criticised as an undesirable practice (Sterling, 1991). In either case, the way fashion design has developed over the past 150 years, has been different to the way in which the industry developed in the United Kingdom — through the Industrial Revolution, through the Arts & Craft period and supported by a substantial textiles & apparel manufacturing industry (Jones, R. M. 2006) — in that ideas have been imported and processes copied rather than evolving as a part of an on-going process. As a result, the concept of designer fashion, as fashion design which is developed conceptually and distinctly as New Zealand design, did not emerge until the 1980s and did not gain any international recognition as something worthy of attention until the early 2000s (Molloy, 2004).

The related aspect of copying fashion from other places, which is less often identified, is the subsequent copying of the way in which fashion is both designed and made from those places. Alongside the type of fashion which was imported, illicitly through the process of copying trends and styling, were the methods of making and the fabrications and internal structures of the garments themselves. In this way, through the ‘knocking off’ [copying] of existing fashion garments and by attempting to re-create them as identical copies, the New Zealand manufacturing industry taught itself how to make fashion garments. This knowledge transfer was supported by increased immigration of skilled workers, including dressmakers, from England under the Assisted Passage Scheme for potential English speaking migrants (colloquially known as *Ten Pound Poms*) offered by the Australian and New Zealand governments in the 1950s. The distance and isolation of New Zealand from the fashion centres allowed for the development of license agreements, most notably between local company *El-Jay NZ Ltd* and *The House of Dior* between 1958 and 1988 (Hammonds, 2010) which were instrumental in forming local understandings of designer fashion based on the French couture model. The methods of pattern cutting, grading and garment construction remain the same as those used in the countries of Great Britain and Europe for several centuries.

The mid-1990's until the present saw an opportunity for New Zealand designer fashion to develop for the first time. However sixteen years have passed since New Zealand fashion design emerged on the international stage, first at Mercedes Benz Australian Fashion Week in 1997 and 1998 and then at London Fashion Week in 1999 (Larner, 2007). In that time a flood of government attention at a national level has been given to the creative industries which filtered through to local government. In 2005, Auckland City Council launched a report *Snapshot: Auckland's creative industries* (Council, 2005) which recognized the importance of creativity and more specifically of creativity's economic power and ability to be a financial driver. The report suggested that by 2010 New Zealand will "be globally established as a 'hot' place to visit, to buy from and to get content from" and that New Zealand businesses will be able "to seek out what the world wants and [produce] products to meet these needs". The report went on to state that this result will be achieved by way of niche industries within niche markets and that NZTE will be "interested in sub-sectors that can be flagships in helping to portray and support a wider New Zealand brand (fashion ... [being] a prime example)". NZTE recognized at this time that the world wanted "high value *distinctive* products [and that] ...all export needs to be focused on having high-end value appear in top-end markets" [emphasis added] (Council, 2005).

Lewis, Larner and Le Heron (2007) explain this further:

...designer fashion became increasingly profiled by TNZ [Trade New Zealand] as a platform for selling other ('more serious') products. It was expected to glamorize and re-image New Zealand by adding sophisticated, urban, creative and cosmopolitan nuances to the dominant rural, rugged, colonial and green images used to sell tourism and agricultural products (Lewis, 2007).

During this decade of governmental support for what became known as "the New Zealand Designer Fashion Industry" (Blomfield, 2002) was considered an enabler for a greater New Zealand export strategy, where designers were promoted as becoming cast as cultural diplomats. However this relationship was discussed in a one-way communication model, and following a change in government there has been, in most cases, little evidence of how the designer fashion industry has capitalized on these perceived international perceptions of New Zealand to benefit their own brands (Smith, 2009). The ability for the New Zealand designer fashion industry to capitalise on these opportunities can be connected to a continuing

western fashion aesthetic that is neither new nor distinct and lacks excitement in terms of an international fashion marketplace.

In *Matter and Memory*, Bergson (1991) discusses that the new is not created in a vacuum but through a rearrangement of known elements. A break with habitual traits of design aesthetics and manufacturing models, which have developed through the New Zealand fashion industry's adoption of a western fashion system, needs to be stimulated for a distinct New Zealand fashion look to emerge. In other words, a break with habitual, western processes of design and manufacturing will allow for a 'difference in kind' to emerge.

So, the new here, is not about a simple recombination of matter, but involves a turning away from matter to a different realm (a realm that is different in kind) and a drawing on this source before returning to the world and allowing the journey to affect the world (O'Sullivan, 2008).

It is through a deep understanding of the histories that are embedded within current practices that the present can be understood to open up a space to create a future which is different. The adoption of new technologies and re-thinking the ways that fashion design has historically been approached, through the theories of Deleuze and the production of the new (O'Sullivan, 2008), reveals that methods of production could be a significant site of innovation in terms of developing distinctive New Zealand fashion in the future. This paper aims to show how connections to a colonial past continue to influence and promote a western fashion paradigm through New Zealand's adoption of western methods of manufacturing and their translation to a fashion design aesthetic that is distinctly western European in character. Rethinking what we know about how to manufacture garments creates an opportunity for the development of new aesthetics through new production methods which are reflective of a New Zealand ethos rather than variations on what is essentially a ubiquitous western silhouette.

Methodology

This research is the result of on-going practice based research conducted by the authors as a part of their individual design practice. A mixed methods approach utilising literature and contextual review, object analysis, fashion design practice,

industry mapping and reflective practice has been adopted for this research. Deleuze's readings of Bergson in *Bergsonism* (1991) and *Difference and Repetition* (1994) provide a theoretical underpinning for the discussion of the role of manufacturing as a site of innovation in terms of exploring a locally centred design process. The practical applied aspects of this research led to the discovery of new experiential and experimental approaches, generated new perspectives on established practices, and enabled a new subjectivity to be created to promote a production of difference rather than more of the same.

Background

The fashion industry in New Zealand has strong ties to the industry in the United Kingdom largely as a result of its colonial past. As a country it was colonised, along with countries like Canada and Australia, during the expansion of the British Empire during the 18th and 19th centuries. New Zealand, unlike many of its fellow commonwealth countries, was developed through a relatively peaceful process encouraged for the most part by the resident Maori population through their instinctive disposition for trade opportunities. Emigration to New Zealand was initiated by missionaries in the early 1800's, followed by further immigration mainly from the provinces of Great Britain and Ireland. Emigration accelerated after the signing of the Treaty of Waitangi on 6 February 1840 between representatives of the British Crown and Maori chiefs from all over the country. Though there were some conflicts between European migrants [Pakeha] and Maori, the largest of which was The Maori Wars between 1845 -1872, the majority of the population lived by mutually benefitting from each other.

The methods of designing and manufacturing fashion were introduced to the country from the mid-1800s alongside European settlement. From that time until the 1980s manufacturing systems in New Zealand developed as a mirror to developments which occurred elsewhere in the British Empire. The development of New Zealand fashion, in terms of an international market presence, came much later in the early 2000s (see Molloy, 2004), and was dominated by a distinctly colonial aesthetic that reflected this British colonialism. Hamon observes the desirability for a British fashion aesthetic survived "well into the 20th century" and that "the overwhelming predominance of people of British descent ensured that being 'British' remained the

dominant cultural identification of Pakeha [New Zealanders of European heritage]” (2007). This remains the case in the second decade of the 21st century and will continue to be the case unless action is taken to break away from this expected New Zealand fashion look.

In addition to the importation of methods of designing and manufacturing fashion from the northern hemisphere, the historical references for the New Zealand fashion designer are the same as those for designers in Paris, London and New York. As a result the problems which are a part of the system in the Northern Hemisphere are replicated in New Zealand, notably the move to off shore manufacturing, the separation of design from production but also other serious problems surrounding un-sustainable design and consumption models, unethical labour practices and importantly, fashion which is commodity first. The development of post 1980s off shore production models of manufacturing opened the market to more imported fashion (not designed for the local market) but also significantly changed as technology and communication of fashion ideas through online media and communication methods have become more widely available. This is more significant in countries such as New Zealand where approx. 80% of the population can access the internet from their own home and 50% of the population made an online purchase within twelve months of the census data being collected (Statistics NZ, 2013). These developments have revealed an increasing practice of internet shopping which has the appeal of convenience but also offers a wider range of purchasing opportunities for the local consumer.

The negative impact of these changes on the New Zealand fashion industry, become more obvious when employment statistics are analysed. There were 36, 221 women recorded as being employed within the apparel industry in 1966.

The 1966 census records that nearly twenty thousand women were employed as “tailors, cutters, furriers and related workers”; nearly nine thousand as “clothing machinists”; over six thousand in the “manufacture of clothing” (figures not included elsewhere); and one thousand, two hundred and twenty-one in “dressmaking, sewing” (Hamon, 2007).

By 2007 an industry expert was quoted as estimating that this number had reduced to 8,400 employed across the whole of the apparel industry (Tollemache cited in Hamon, 2007). Given that during this time period the population of New Zealand has risen, from 2.5 million to approx 3.75 million, this is a significant decline in apparel employees.

There is a need for fashion in New Zealand to reinvent itself to respond to local factors such as declining employment and a changing international marketplace in order to be competitive and to stimulate the fashion economy. Not enough import has been placed on how the methods of manufacturing are directly connected to the aesthetics of design outcomes and an expected approach to cutting and making a fashion garment will deliver an expected look and feel to the final garment. For example: the method of tailoring results in a tailored aesthetic and the method of draping results in a draped aesthetic. Although these are both trivial examples, the role of manufacturing methods in restricting the design aesthetics is not often discussed as a significant factor in conversations about the current state of design within the local fashion market where the dynamism and spontaneity of the past appears to have become lost (Finn, 2008). This is especially the case for knitwear design where the use of knit technology plays an even greater role in pre-determining design outcomes.

A Case Study the Knitwear Industry in New Zealand

The knitwear industry in New Zealand was established in the 1840's when the first European explorers arrived in larger numbers from Britain. On arrival it was quickly decided that the terrain was suitable for the rearing and sustaining of sheep, initially introduced by Captain Cook as early as 1773. However it wasn't until permanent settlers arrived in New Zealand, following the 1840s signing of The Treaty of Waitangi, that sheep became established in large numbers. Early settlers brought with them spinning, weaving and knitting equipment enabling the basic provision of woollen fabrics and garments for their families. As the population grew so did the number of sheep and therefore the establishment of a wool industry. As early as 1879 there was an advertisement for knitting machines in the *Grey River Argus* a local newspaper in Greymouth, in the South Island (Figure 1). It was published on

16th January 1879 and promoted the purchase of a knitting machine as “An easy means of support to any industrious woman. Will knit plain stockings as well as fancy work” (Unknown, 1879).

<p>LAMB'S FAMILY KNITTING MACHINES.</p> <p>An easy means of support to any industrious woman. Will knit plain stockings as well as fancy work. Active Agents Wanted. ANDRESEN and RAKED,</p>	<p>An ART UNION of a Magnificent COLLECTION of PICTURES, will take place shortly.</p> <p>150 Members at One Guinea Each:</p> <p>SIXTY PRIZES.</p> <p>TICKETS may be obtained from the undersigned,—</p> <p>J. W. Parkinson, Bookseller J. B. Roche, do J. M'Davitt, Clothier F. C. Dupre, Jeweller And ROBERT WILSON, Secretary.</p>
<p>KAIKORAI FLANNELS.</p> <p>The MOSGIEL WOOLLEN FACTORY COMPANY, of Otago, are now SOLE AGENTS for the sale of the above Celebrated Flannels. WILLIAMSON, URE, and CO,</p>	

Figure 1: Advertisement for Knitting Machine sales in New Zealand (1879)

From its humble beginnings the knitwear industry grew to its largest in New Zealand during the 1970's and early 80's but the phased reductions in import tariffs from 1987 onwards and the removal of import quotas in 1992, had an impact on the size and structure of this industry. From this date to the present many of the knitwear companies have closed down or moved their manufacturing component off-shore while maintaining a design and management centre in New Zealand. The following graph (Figure 2) is from Statistics New Zealand and shows the increase in volume of imported fashion and textiles products since 1980 through to 2012 (Government, 2012).

The graph shown in Figure 2 indicates the extent of the growth in imports of fashion and textiles products that resulted in a parallel decline in the employment statistics within the fashion and knitwear industry in New Zealand. The report from Statistics New Zealand released in 2012 states that the graph:

...shows the volume of clothing and footwear imported to New Zealand has increased six-fold since 1989. In contrast, the number of New Zealand enterprises in the clothing and knitted product manufacturing industry has declined. From February 2000 to February 2011, the number fell nearly 25 per cent – from 1,157 to 862. Further, the number of jobs filled by paid employees in the clothing and knitted product manufacturing industry fell nearly 60 per cent – from 9,550 to 4,120 (Government, 2012).

The following case study is reflective in nature and looks at the current position of the knitwear industry in New Zealand. It questions the status quo from a production and design perspective and offers some alternative approaches that could be adopted to establish a new aesthetic and way of working with current technologies that shifts New Zealand knitwear from being a follower to being a leader (Smith, 2013).

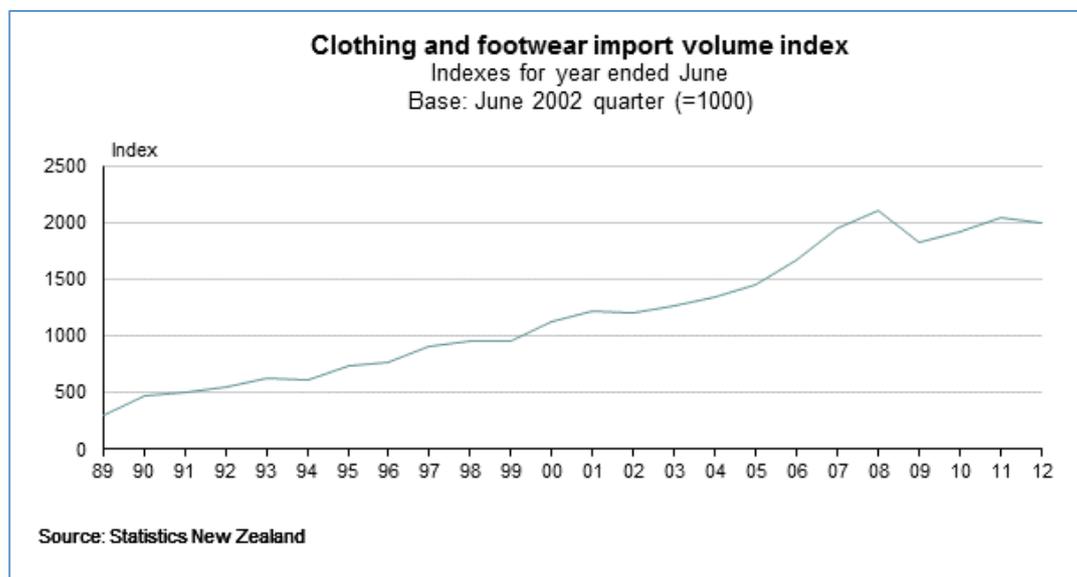


Figure 2: Graph showing the increase in imports of fashion and textiles between 1989 and 2012

The New Zealand knitwear industry had developed following western patterns of employment and production organisation, mimicking “Fordist then post-Fordist” (Jessop & Sum, 2006) structures, as both machinery and expertise were imported

from Europe. This was the same for most of the southern hemisphere including Japan, where the company Shima Seiki Manufacturing [Shima Seiki], went on to develop one of the most sophisticated knitting technologies; the WHOLEGARMENT® knitting machine in 1995. It is the use of this technology within the New Zealand knitwear environment that this study has focussed on. The knitting technology itself has replicated a binary production system inherited from a western paradigm, which sees the technical and the design as two separate functions. Seamless knitwear is produced using a CAD system called the 'Design system' which is divided into two functions, one for the technician the Knitpaint™ system and one for the designer the Design™ system (Underwood, 2009; Eckert, 1994; Choi, 2005; Smith, 2013). New Zealand's knitwear industry started to import seamless technologies from the early 2000's, with an increase of use, to the point of being recognised by Shima Seiki as having the highest rate of purchase per capita in the world in 2008/2009 (Smith, 2013).

When seamless knitwear designs produced in New Zealand were analysed it was found that they conformed to a traditional design silhouette, such as those previously produced using flat pattern making techniques of a cut and sew production model. The emphasis of seamless knitwear production has been used to improve production waste, to reduce manufacturing costs (through reduction in makeup plant) and improve comfort due to their very seamlessness. However, there has been no progression in design output shape or silhouette, even though the technology had been promoted as having three dimensional design possibilities. The replicated thought patterns for producing cut and sew knitwear design had been embedded within the very CAD design and production systems of seamless knitwear, resulting in "more of the same" (Smith, 2013). Thus New Zealand manufacturers were producing identical silhouettes to those of any manufacturer in the world using seamless technology. New Zealand knitwear companies cannot compete on production economies of scale and shouldn't be trying to, but they are ideally placed to be operating at a niche designer end of the knitwear market, given their ability to be flexible, do small runs and have well trained knitwear designers available to them. Despite the desire to develop distinct design, seamless knit garments are being produced from the use of pre-installed style shapes, where texture and colour are being added, with little being gained than if they had been made using traditional cut

and sew methods as inherited from traditional British design and production models. This case study highlights the creative potential of knitwear outputs which can be achieved by rethinking how a designer interacts with seamless technology, through creative design practice. It specifically focuses on what knitwear designers need to change about design processes that they have traditionally used, to enable them to be creative within this new technological framework.

The design of seamless knitwear follows a linear development process as prescribed by an either/or selection continuum. To prevent design repetitions of the same, and to invent the new, a means to create an opening or space needs to be triggered. Habitual processes need to be recognized and broken down, allowing for new ways to encounter matter and a recombination of material elements (Smith, 2013).

A knitwear designer with tacit knitwear knowledge, but no CAD technical training, has an opportunity to design in an innovative space considering the lack of any habitual processes. In other words, the designer who lacks technical CAD training holds no previous knowledge of how to approach designing for knitwear using the seamless knitwear CAD design system. The separation of the technical from the design of fashion knitwear is further disabled by the design of the Shima Seiki System® which does not provide a point of entry to seamless knitwear for the designer (in the design system) so the designer interested in any level of innovation has to proceed using the technician system (Knitpaint™), thus removing the design process even further from a known knowledge base. As a part of the Shima Seiki™ version of the design process a designer has to work with pre-installed style shapes which is much the same way as the knitwear manufacturing industry does. By approaching the design thinking of the garments, with a three dimensionality in mind rather than the traditional two dimensional cut and sew approach, past knitwear knowledge of wale to course movement – methods which give knitwear distinct and individual garment shapes – can be evoked and returned to the design process.

Figures 3 & 4 are examples of some of the first garments that were developed as a part of a larger doctoral study (Smith, 2013) which focused on exploring the idea of creating a twist to the basic pre-installed shapes with the design premise that movement would be created around the body and drape increased within the garment form. By introducing a 'wedge' shape (Figure 3) to the basic pre-installed shapes, fabric was taken away from the rectangular form in designated areas of the

garment body. The wedges work much like adding darts into a fabric garment, but could be programmed into the garment during the development process when using Knitpaint™. These garments were successful in creating three dimensional movement (Figure 4) and instigated further design iterations. As the garment designs progressed technical computer ‘designer packages’ which created internal design movement were developed to be able to be added to the pre-installed ‘style’ shapes within the seamless knitwear system. The development of these further packages opened up multiple design options across a range of garment shapes which as a designer with no CAD technical training allowed creative design results which moved beyond the ‘normal’ pre-programmed shapes. As new knowledge has encountered old, breaking habits of practice and thought, new ways of seeing and reading have been triggered.

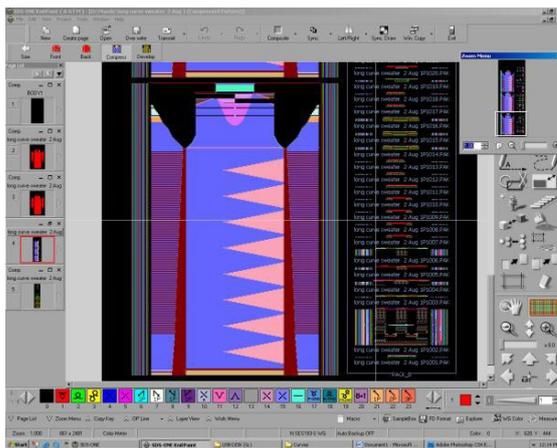


Figure 3: (Above) Knitpaint™ screenshot showing 'wedges' introduced to a basic template with the use of a “designer package” (Smith, 2013).



Figure 4: (Right) Knitted garment which resulted from the addition of the “designer package” demonstrating 3D movement around the body (Smith, 2013).

Habitual design behaviour, as seen through the products produced by seamless knitwear technologies in New Zealand, ritualizes a mechanized reductivism, which can inhibit design thinking and produce a series of similar linear steps. The introduction and use of “a rhizomatic connectiveness” in design acts as a means for a “recalibrating of practices” (Teal, 2010). This practice uses both the standardized pre-installed software and additionally developed “designer packages” (Smith, 2013)

as a means of re-establishing the nuance of the artisan-prospecter into design thinking and the mass-production processes of designing seamless knitwear.

The collective of garments, through their unique design elements provide evidence that it is possible to adapt a commercial design and production system developed for mass production and cost efficiency into one which becomes a creative design process with original, nuanced qualities and aesthetics (Smith, 2013).

This promotes a new way of thinking which could stimulate a new design quality which emanates a unique New Zealand aesthetic.

Local vs. global fashion systems

The problem, from an intellectual perspective, is one of continuing to focus on the needs and desires of markets within the Northern hemisphere without focusing on local perspectives which may have more relevance than continuing the known methods of the past. In other words, the focus should be on developing non-western fashion systems that are more responsive to the needs of local communities. The continuation of imported practices, through copying designs and subsequently copying manufacturing models from the Northern hemisphere, perpetuates a continuation of a shared global understanding of fashion and the fashion system. This is one approach, and has been successful for the past two and a half centuries in terms of economic gain. However, sustainable fashion research has shown us that, in terms of environment and social sustainability, this western consumerist model must change. The method of manufacturing, as a factory system which exists as bricks and mortar — in the form of plant and machinery — and focuses on producing a minimum number of units per day/week/month, is one that belongs in the past. The designer fashion market in New Zealand could become more innovative by focusing on developing methods of manufacturing that are not reliant on economies of scale, are flexible, accommodate shorter production lead times and minimise off-shore manufacturing and imported components. It follows that an alternate approach to manufacturing offers the best opportunity for alternate design aesthetics, potentially designer fashion which has a distinctly non-western design aesthetic, becomes an increased possibility (Finn, 2008).

Conclusions and further research

This paper proposes that there is a space between understandings of fashion as a western system and developing models that respond to the needs of the local fashion context. The argument presented is that following trends and practices from the Northern hemisphere is shaping our ways of designing and making new fashion without attention to the advantages of a local system. The continuation of these methods may be impeding the development of distinct design aesthetics that are innovative alongside systems which are more flexible, responsive and suited to long term social and environmental sustainability. The current use of advanced knit technology allows designers to replicate and renew through materials and surface detail, and eases manufacturing processes, but does not allow for distinct design aesthetics to emerge. In the same way, the adherence to traditional systems of pattern cutting and making, such as tailoring and draping, provide a similar known quantity in terms of manufacturing but also result in an expected design aesthetic. In both cases, the design is beginning with a 2D structure which is the result of a template-like approach rather than one where the possibilities of a design, from its inception, are limitless. The opportunity for emergent designer fashion in New Zealand is to rethink the space between what we know about designing and making fashion, within a northern hemispheric context, and the possibilities of change that could lead to new ideas and new design aesthetic to emerge through a rethinking of the design and manufacturing process.

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