A Synergy of Crafts within Fashion Design Education at Art Schools in the Netherlands

# RE-CRAFT-ING CRAFT

GRADUATION THESIS
Piet Zwart Institute — Master Education in Arts
Mascha Van Zijverden, 17 June 2016

Christian Dior, *Bar Suit* (1947)

Photography: Willy Maywald
[http://www.dior.com/couture/en_us/the-house-of-dior/the-story-of-dior/the-new-look-revolution]
THE FASHION INDUSTRY IN FLUX, p. 26-27

Photography: Louise Te Poele
[http://www.louisetepoele.nl/site/fashion-work?page=2]

Annette Duburg & Rixt Van Der Tol,
*Christian Dior 1950* (2007)

Photography: Jean-Baptiste Mondino
[http://www.irisvanherpen.com/couture#wilderness-embodied-couture]

Iris Van Herpen,
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Key-Words:
Fashion
Craft
Education
Learning by Doing
Sustainability
Digital Fabrication

## Summary

In today's fashion industry a multitude of crucial aspects of its global supply chain have come under severe scrutiny. What are clothes made of? How, where and by whom are they produced? And how can they be disposed? These questions pertain to the design and making of textiles and clothes, as well as to the position and role of crafts in the overall process. The research project on *Recrafting Craft* concentrates on the interactions between fashion and advanced fashion education. Where these two worlds intersect, various ongoing changes in the notions of crafts and craftsmanship arise.

The main objective of this research project is to re-tailor the meaning of craft as an essential vehicle for fashion education. As such, this project is based on the vision that experimenting with new materials, sustainable textiles and digital production is necessary to create innovative designs and new business models. The argument presented proposes an answer to the question: how can traditional and future crafts be merged and create synergy in fashion workshops and fashion curricula at art schools in the Netherlands, in order to give fashion students new professional perspectives to adapt to the changes within the global fashion industry? Key to this question is an analysis of a broken fashion system and a close examination of fashion design workshops as an exemplary educational model. Special attention is given to practices at the Royal Academy of Art (The Hague) and Central Saint Martins (London).

Attention is also paid to a special education project with various students and experts in a newly formulated stakeholders' network, organized together with Waag Society, aimed at closing the gap between education and industry. Starting from notions and ideas developed by sociologist Richard Sennett, trend forecaster Lidewij Edelkoort and fashion professor José Teunissen, this research develops a framework for the development of a joint vision on the issues involved. Regarding students as agents for change, *Recrafting Craft* argues for a synergy of crafts within fashion workshops, while also presenting a set of challenging scenarios for the future of advanced fashion education.

## Acknowledgements

My intrinsic interest in traditional crafts and craftsmanship within fashion and textile design goes back a long time. As a child I made all the clothes for my Barbie dolls; in fact they had a bigger wardrobe than you could buy for any Barbie in the shop. When I grew up I simply had to buy second hand clothes, mostly menswear, or make my own clothes because most of the 'alternative' items I longed for where just not for sale in the Netherlands in the early 1980s. I started with making a black bathing suit and soon was sewing my whole wardrobe, while in the meantime Barbie had miniature copies of the most wanted Jean-Paul Gaultier designs. The love for making clothes myself is what made me pursue a career in fashion design in the first place. I feel a great affiliation with the view of Richard Sennett (2008), suggesting that 'craftsmanship names an enduring, basic human impulse, the desire to do a job well for its own sake'. He also argues that 'all skills, even the most abstract, begin as bodily practices; second, that technical understanding develops through the powers of imagination' (Sennett, 2008, p.10).

At the art school I soon was introduced to different crafts such as sewing by hand and on an electrical sewing machine, silkscreen printing, knitting on a manual-knitting machine, pattern drawing and draping on a tailors stand. Next to learning to master these traditional crafts we were encouraged to experiment with all sorts of fabrics, alternative materials and non-fashion techniques. I knotted, dyed, painted, embroidered, felted, glued, moulded, scrubbed and stretched fabrics, and in the process I also stretched my boundaries. Making garments takes quite an amount of time, and this gave me the opportunity to make adjustments in the original designs and rethink what to improve next time around. What I learned is that developing knowledge and skills through hands-on experience, including reflection on one's own work and process has a great impact on the design process. Although terms such as 'making is thinking' (Sennett, 2008) and 'learning by doing', which draws from the experimental learning theory from David Kolb (1984), had not been introduced in the fashion domain yet, I knew that mastering fashion crafts and possessing a substantial body of knowledge on textiles is the fundament for every fashion professional,

for designers as well as for all others working within the broad field of fashion. This is something my own career in fashion may testify to, whether it was designing for various Dutch high fashion labels such as Viktor&Rolf, Alexander Van Slobbe and Saskia Van Drimmelen, or being a course leader of fashion bachelor and master studies at the HKU University of the Arts Utrecht and ArtEZ Institute of the Arts in Arnhem. I strongly believe that crafts and craftsmanship are the solid building blocks for new designs, scenarios and inventions. How 'future crafts' can find their place within fashion education in support of this vision was the motivation to start this research project.

It would have been impossible for me to complete this research project without the support of a long list of people (Appendix 1). Several of them deserve special mention. First of all I would like to thank José Teunissen (School of Design & Technology at the London College of Fashion (LCF), professor of Fashion Theory & Research at ArtEZ) and Lidewij Edelkoort (Trend Union, Hybrid Design Studies at Parsons The New School) for being the two most vital discussion partners, even before embarking on this research project. A renewed interest in the possibilities of fashion and technology within higher fashion education emerged while working together with Teunissen and Stoffel Kuenen on a benchmark report (unpublished). Dr. Oscar Tomico, assistant professor in Designing Quality in Interaction at Eindhoven University of Technology (TU/e), served as my external critic and as my colleague in the project *Crafting Wearables*, the annual series of one-week design research projects for first year students we formulated and implemented at ArtEZ Fashion Masters and the Industrial Design department at TU/e. I thank Steven Faerm, associate professor Fashion Design at Parsons School of Design, for sharing his profound articles with me, and Dirk Osinga (do|ob) for his collaboration on the prospective scenarios for the future fashion school.

Furthermore I thank my tutors and co-students at the Piet Zwart Institute, especially Ingrid Commandeur, Sjoerd Westbroek, Renée Turner and Annelies De Leede, who supported me and who believed in my 'gut intuition'. Not in the least I want to thank my colleagues at ArtEZ and at the professorships Fashion Theory & Research and Education in Arts & Culture for their support. Finally, my thanks go out to graphic designer Michaël Snitker, my peer-reviewer Hanka Van Der Voet, and text editors Anna Elisabeth Kruyswijk and Ton Brouwers for their valuable role in this project. To Mees and Swaan, with love!

## Introduction

Due to pressing environmental and social problems the global fashion industry is currently facing, the notion of sustainability has definitively entered the world of fashion, and to a lesser extent that of fashion education. Emerging technological applications and new business models for fashion can offer solutions to new problems. Alex McIntosh, course leader of the MA Fashion Futures and Business and research associate at the research *centre for Sustainable Fashion* at the LCF, has defined sustainability in a useful way as 'ecological literacy and cultural sensibility' (2016).

The research project *Recrafting Craft* concentrates on the interactions between the domains of 'fashion' and 'advanced fashion education'. The overlap of these two closely related topics serves as focal point and brings to the fore the various changes regarding the notion and the position of 'crafts' and 'craftsmanship', including the implications for fashion education. The 'recrafting' in this project's title refers to 're-tailoring', to the importance of craft as essential vehicle for fashion education, with special attention for the fashion design workshop as a basic format[1].

### Research Objective

This research seeks to explore how the potential merging of traditional and digital crafts can offer new propositions and future scenarios for the global fashion industry. It particularly articulates how we can reimagine the fashion workshop within art schools in the Netherlands in order to prepare fashion students as primary agents of change in a way that allows them to keep adapting to this industry in flux. The argument presented proposes an answer to the question: how can traditional and future crafts be merged and create synergy in fashion workshops and fashion curricula at art schools in the Netherlands, in order to give fashion students new professional perspectives to adapt to changes within the global fashion industry?

1 The English word 'workshop', meaning workspace or workplace, is not to be confused with the Dutch word 'workshop', which describes a short course of one or more days in which commonly theoretical and practical education take place at the same time.

### Relevancy for Fashion Education

The research presented here reflects an encapsulated moment in time and challenges fashion professionals educators and policymakers, as well as fashion students, in Dutch art schools to open up a collaborative discussion on the future of fashion education, while also inviting them to actively take part in a network of stakeholders. Specifically, this project takes into consideration six renowned art schools based in the Netherlands: ArtEZ (Arnhem), Gerrit Rietveld Academy (Amsterdam), HKU University of the Arts Utrecht (Utrecht), Maastricht Academy of Fine Arts and Design (Maastricht), Royal Academy of Art (The Hague) and Willem de Kooning Academy (Rotterdam). The aim of this project is to provide a balanced perspective on the relationship between advanced fashion design education, crafts, sustainability and technological change. The consequential opportunities lead to a set of prospective scenarios of the fashion workshop which serve as an invitation to join an on-going discussion on this topic.

### Research Methodology

*Recrafting Craft* starts from questioning how traditional and digital crafts are, or can be, merged to create a synergy in fashion workshops and fashion curricula at art schools in the Netherlands. The Fashion Council NL (FCNL) and CLICK NL (Next Fashion) serve as inspirational models for the methodology of this research. FCNL, in collaboration with the research centre on *Change Management of The Hague University of Applied Science, initiated a work conference under the name Cruise Collection*. This involves a network of people from the broad field of Dutch fashion education coming from intermediate vocational education (MBO), advanced vocational education (HBO), universities and various Dutch companies, who in a series of meetings are currently discussing the future of Dutch fashion education with a focus on collaborations across different levels of education (Fashion Council NL, 2015). In the Netherlands the network *Next Fashion*, develops and executes the so-called 'innovation agenda' for the fashion sector within the Dutch Creative Industries Knowledge and Innovation Network *CLICKNL,* which represents the creative industry as one of the governmentally appointed 'top sectors' in the Netherlands.

Since 2011 CLICKNL|NextFashion has been focussing on four innovation themes within the field of fashion and textiles: *The Value of Fashion, Fashion & Technology, Fashion & Sustainability* and *Strengthening the Innovation System* (Teunissen, 2011).

The chapters below revolve around this main enquiry, each one being structured around new sub-questions which presented themselves during the research process. The first issue addressed within this research scope is the theoretical framework in *The Fashion Industry in Flux.* This is based on a variety of essays and articles providing multiple perspectives on actual debates, and on factual reports from several research institutes. Through a problem statement it is explored how current changes and developments in the global fashion industry influence the position and notion of (traditional) crafts and craftsmanship within fashion. *Fashion Data* (Teunissen & Van Zijverden, 2016) serves as a vital resource. By discussing a selection of best practices by cutting edge young fashion designers from the Netherlands showing recent efforts in the fields of social innovation, sustainability and digital manufacturing within fashion, the argument pursues answers to the question: how do current changes and developments in the global fashion industry influence the position and notion of (traditional) crafts and craftsmanship within fashion?

The second issue this research addresses is the educational model of the fashion workshop. To gain insight into the state of the art of front-running schools within the field of the innovation of crafts, I visited two art schools with both a fashion and a textile department. This resulted in a comparative study between the Royal Academy of Art in The Hague and Central Saint Martins in fashion capital London. Based on observations and interviews in the chapter *The Workshop as Educational Model*, I discuss fashion education's answer to the current technological and social developments in the fashion industry. The question explored here is: how do fashion schools respond to the current technological and social developments in the fashion industry in order to prepare their students for this changing field?

Next, the third concern articulated involves the profile of the 'future fashion professional'. This is done by means of two test moments. The first is the 'round-table', the education project accompanying this research where fashion students and experts collaborate on defining what fashion students need to obtain the capability to create future propositions and scenarios for the fashion industry. The second part pertains to the pedagogical underpinning, where an analysis of what is missing reveals the various new opportunities. By combining the two, it becomes possible to develop a response to the following question: what are the characteristics, conditions and skills of the 'future fashion professional' in order to be able to keep adapting within an industry in flux?

Finally, the research results show a shifted consensus within the fashion discourse in *A Synergy of Crafts.* Reflection on the conclusions is followed by a set of recommendations for fashion education in the Netherlands. Moreover, the research assembles the first sketches for making prospective scenarios for the fashion workshop, which is made in collaboration with researcher and architect Dirk Osinga. These prospects entail bold visions about retailoring craft through re-tailoring fashion workshops, shining light on how this can be done, with which tools and what kind of technical and artistic expertise. Finally, the last question to be addressed will make it possible to interconnect all aspects of the research: what are the opportunities for fashion education in the Netherlands and how can the fashion workshop be re-tailored with tools and (technical and artistic) expertise in order to offer a relevant learning environment for new propositions for the global fashion industry?

# 1 THE FASHION INDUSTRY IN FLUX
*Theoretical Framework*

## 1.1 A Broken Fashion System

Over the past decade different factors have pointed towards the fact that fashion in its current form is a broken system. Due to the modernisation of the fashion industry and the introduction of machinery during the industrial revolution, the manufacturing processes completely changed. It became possible to mass-produce 'high street fashion' which became available and affordable throughout the Western world. 'That fashion contributes to unsustainability is incontestable: it is readily characterized by the superfluity of mass production and unlimited consumption and often targeted, rightly, as in need of a greater moral conscience' (Fletcher & Tham, 2015). Because fashion has always been about being 'up to date', new trends, 'fashion, more than any other discipline, permanently feeds our desire for consumption' (Teunissen & Van Zijverden, 2016), so called 'fast fashion' was introduced. This subsequently caused haute couture, hand crafted and 'made-to-measure' clothes to become a luxury product only accessible for the 'rich and famous'.

Since the 1990s this need for newness greatly accelerated: internet and outsourcing of production made it possible to produce new garments in just a few weeks. This development allowed global brands like *H&M* and *Zara* to make cheap copies of designer outfits and put them on the market even before the luxury brand itself. Within this 'fast fashion' system, collections followed each other every (mid-) season at ever greater speeds. As a result of the over-consumption thus generated, the fashion industry began to contribute more strongly to imminent shortage of water, poisoning of waterways and poor working conditions. Nowadays it is one of the most polluting industries worldwide, with China topping the list. In 2011 *Greenpeace* sounded the alarm with the publication *Dirty Laundry. Unravelling the corporate connections to toxic water pollution in China*. The organization states that 'although large-scale pollution from the textile industry has been a problem throughout its history, the more recent use of persistent and hazardous chemicals poses a greater, and often invisible, threat to ecosystems and human health' (Greenpeace, 2011). Environmental and social issues are triggering discussions on the validity of the current production system. The disclosure of

sustainable problems has caused consumers to lose their trust in the true value of the product. Within a few decades a garment has changed from a desirable and treasured possession into a cheap disposable object.

Turning Points

The economic crisis that revealed itself in 2008, has served as catalyst for the fashion to undergo a change. Sales went down, brands and department stores went bankrupt, and the industry at large was therefore forced to take a close look in the 'full length mirror'. The sight was not that pretty. Today 'unethical and unsustainable workings of the current fashion system' (Teunissen & Van Zijverden, 2016) are dominating the discourse of the global fashion industry.

Another turning point was the collapse of the *Rana Plaza* garment factory in Bangladesh (on 24 April 2013) that killed 1.134 people. Rana Plaza itself is now a symbol for global change, as it put the various social implications of fast fashion on the political agenda. Although there has been more awareness in the industry and amongst consumers since this disaster, it has been argued that 'Dutch brands did take minor steps in the improvement of more sustainable and ethical circumstances' (Rank a Brand & Clean Clothes Campaign, 2015). Another concern is that technological innovations in the industry tend to be realized slowly. As Lidewij Edelkoort has observed, 'they have been promising spidersilk for 25 years already, and it is not available yet, so I'm still anxiously waiting for it. It should nearly be there, for I have seen the fibre and touched it. It is going to be available, then, but the process is very slow indeed' (Edelkoort, 2016).

The ecological awareness of the fashion industry furthermore insists on change. As Brand and Teunissen have argued, 'fabrics need to be developed whose production require much smaller quantities of soil and water than that of cotton, and more and more technologies will be integrated in various clothing items' (2013, p.9). Despite the slow progress being made, the revaluation of the classical fashion system, sustainability and technology are key topics amongst a selection of pioneering young designers, a small group of critical consumers but also for a few big global players, like *H&M* which with its *Conscious* collection taps into sustainability as the new fashion trend (H&M, 2015).

## 1.2 Developments in the Fashion Industry

Given the different environmental and economic issues the global fashion industry is currently facing, a segment of the fashion industry has been engaged in a constructive drive for change and reformation. Although there are overlaps, actual developments can roughly be divided as taking place in three areas, which illustrate how a contemporary fashion label is able to move along with, rather than around, the abovementioned turning points:

A Social Innovation

This concern revolves around the revaluation of fashion and clothes by the consumer. Consumers are looking for brands with more transparent business models, which are accountable not only for the designs, but also for the whole production process and the logistics. The end users want evidence that their clothes are 'social': that they are made under fair circumstances for those who produced them and, without child labour being involved. A good example of a high fashion label for women and men that offers an alternative to 'fast fashion' is the Dutch brand *Studio Jux,* which was profiled for *Fashion Data* (2016) as follows: 'Studio JUX's garments [...] are produced under good labour conditions in their own factory in Kathmandu, Nepal. With this factory, Studio JUX aims to create good working conditions and improves the lives of the Nepalese employees. [The designers] Lundgren and Helmink also initiate other projects and have set up small companies that are particularly focused on supporting the emancipation and independence of women. Under the slogan *Your Nepali Tailor is a Rockstar* on their blog, they show us who the factory workers are. This makes the production process more transparent for the consumer.'

B Sustainability

This second area of concern pertains to the overall production process; making the complete production chain more sustainable; from raw material to the end product and the disposal of the garment. Striving for

so called ‘circular design’ to close the production loop, involves the use of alternative fibres and yarns, the reduction of over-production, the prolonging of the lifecycle of clothes, high-tech recycling and making the logistics more sustainable. Here, another Dutch brand is exemplary. *MUD Jeans,* founded by Bert Van Son in 2008, strives to be completely sustainable by using organic cotton and packaging made from recycled materials, and it is ‘committed to making structural improvements to the social and economic conditions of the production process’ (Teunissen & Van Zijverden, 2016). With the launch of their concept *Lease a Jeans* in 2013 ownership of clothing is revised. *MUD Jeans* not only *designs for recycling (*the jeans are designed in such a way that they are easy to recycle), it also ‘*upcycles’* (after returning the jeans they are sold as vintage items on the web-shop, accompanied by a short story on the previous user).

C Digital Manufacturing

The third and last area of concern is geared to technological and digital developments in relation to research, production and application of new materials, through a combination of textile technology and information and communication technology (ICT). This results in ‘smart textiles’ (fabrics made with nanotechnology or 3D printing techniques), ‘wearables’ (clothing with implemented electronics or high-tech devices) and biotech designs (designs with living organisms like bacteria, algae and mould). Next to this development, digital body-scan technology makes it possible to reintroduce ‘made-to-measure’ clothes, which reduces over-production and local production reduces pollution by transportation. Due to the possibilities of incorporating the digital into the design and production process, new manufacturing programmes are developed. Open source serves as inspiration here, which is based on complete transparency by giving free access to source materials so that the programme itself can be changed. It democratizes the role of the consumer, the user, and thereby changes the role and position of the designer. All this is possible at *The Post-Couture Collective*. The label aims ‘to develop garment production methods that will increase sustainability in today’s polluting and unjust textile industry [...] uses modern production techniques like laser cutting and 3D printing to achieve this’ (Teunissen & Van Zijverden, 2016). The founders Martijn Van Strien and Vera De Pont advocate with their *Open Source Manifesto* (2016) a vision for an ‘open source fashion industry’ addressing designers, businesses and consumers to turn brands into transparent businesses, to make clothes yourself, to share, recycle, reuse and repair clothes. The designs are made by the consumers themselves — such as at a *MakerSpace* or at a *FabLab*[2] — after buying the digital data for it.

New Business Models

These three main areas of concern may serve as basic angle for the development of new business models for fashion brands. In this regard, new revenue models and flexible organisation formats are being set up, as a way to develop alternatives for a variety of new problems that occur in fashion and the world at large, while ‘recognizing the complexity of aligning fashion with sustainability’ (Fletcher & Tham, 2015). Small or niche labels seem sensitive towards this in particular, and they are able to include this sensitivity into their brand story as basis. ‘In fashion’, Teunissen argues, ‘the primary consideration is a garment’s aesthetics and the message it communicates rather than its function, comfort and capability’. Because ‘wearable technology lacks a narrative about the relationship between the design of the garment and the body’, most experiments on wearable technology are still done outside the realm of fashion (Teunissen, 2013). However, the number of designers who develop collections that are transparent (*The Post-Couture Collective*), ethical (*Studio Jux*) and ‘slow’ (*MUD Jeans*) is on the rise. These models rely on more than one season, purpose or even gender, in order to put

2 *FabLab* is a worldwide formal network of local workshops which enable innovation through providing tools and equipment for digital production. In a Fablab everyone can realize a prototype or product with the help of high tech devices, after which they can share their knowledge and skill with others on a global basis.

a stop to the fast fashion system. Alternatives are created for production (DIY[3], digitally and locally) and owning (swapping, sharing and loaning), and many of these put emphasis on the inherent value of clothes.

## 1.3 Crafts as Fundament for Change

Most of the abovementioned Dutch fashion labels show that innovation finds its basis in the process of making. Crafts as a base of the production of clothes are essential in rethinking the whole production circle. Digital crafts and 'technological craftsmanship' (Sennett, 2008, p.33) contribute to new scenarios in response to the ecological, ethical and economic problems faced by the fashion industry, yet at the same time they put pressure on traditional crafts and craftsmanship. This has been an on-going process for the past two centuries. Traditional crafts have even become subject to extinction due to the fashion system's increasingly volatile cycles and the demand for cheap clothes by consumers. As Lidewij Edelkoort has claimed, 'cost cutting in both the education system and within fashion houses are threatening the textile industry. This means that European fibre, yarn and textile industries are threatened with extinction. Without them the knowledge of spinning, weaving, finishing and printing will be lost (Fairs, 2015). Traditional, hand crafted techniques are only applied within the, mainly French, high end luxury labels with a heritage in handmade accessories and garments, such as *Louis Vuitton*, *Chanel* and *Hermès.* These brands seem to claim the exclusive right to the production of crafted goods by buying up old fabric factories and the few remaining artisanal ateliers. *Chanel*, for example, has been buying ailing companies which are vital to its haute couture, including a button company, an embroiderer, a shoemaker, a feather dresser, a gold and silver smith, a glove maker and a cashmere factory. By doing so these luxury brands preserve centuries-old practices and crafts. Together with influential trend forecasters, and the *Worlds Crafts Council – Europe*, they raise awareness of the significance of crafts and their sustained protection.

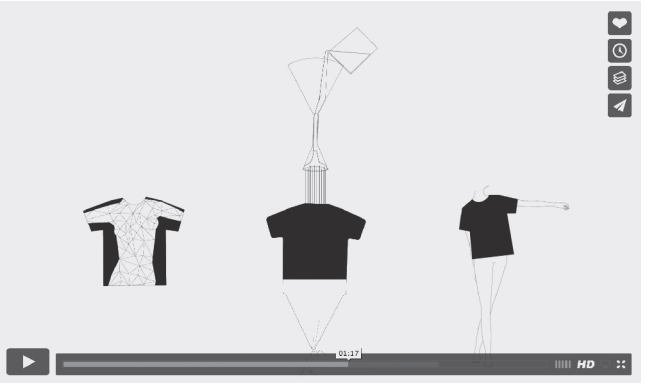
3 *DIY:* 'Do it yourself', which refers to making or repairing something without the help of a professional expert or company.

The Return of Haute Couture

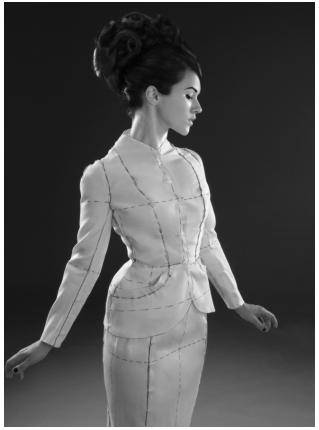
In this respect, Edelkoort suggested that 'we will see the comeback of couture as a major benefit. After all it is in the atelier of couture that we will find the laboratory of this labour of love. Suddenly the profession of couturier will become coveted and the exclusive way of crafting couture will be inspiring all others' (Edelkoort, 2014, p.8). Following the line of this forecast, applications of digital technologies within fashion, like ultra-personalized design and production systems with body scan technology and 3D printed garments, made on demand, make it possible to create made-to-measure clothes for a larger group of people. Also, some of the time consuming and therefore expensive crafts like hand-embroidery, which was nearly lost, are being re-vitalized. According to Oxman, 'the incredible possibilities afforded by these new technologies allow us to reinterpret the tradition of couture as 'tech couture' where delicate hand-made embroidery and needlework is replaced by code' (Oxman, 2013).

Karin Vlug is an example of a designer who tries to bridge the gap between 'old' and 'new' couture [Figure 1]. She pushes the boundaries of smart production and construction techniques in order to transform the production process into made-to-measure designs within reach for everybody. In collaboration

[1] Karin Vlug & Laura Duncker, *Smart Fashion Production* [Video still]
Illustrations: Chris Wienk (2015)



[2] Christian Dior, *Bar Suit*
Photography: Willy Maywald (1947)



[3] Annette Duburg & Rixt Van Der Tol, *Christian Dior 1950* *
Photography: Louise Te Poele (2007)

[4] Iris Van Herpen, *Scar Dress*
Photography: Jean-Baptiste Mondino (2013)

* A remake of a Dior's design for the publication *Draping: Art and Craftsmanship in Fashion Design* (Duburg & Van Der Tol, 2007) which is used as key educational handbook in Dutch fashion education.

with industrial designer Laura Duncker, Vlug is working on the research project *Smart Fashion Production.* Based on a three-dimensional body scan, a personalized digital design is made which is translated into a flexible mould is. Next, the mould is casted with liquid textile fibres which, after solidifying, result in the garment. Because the production is done directly in 3D, there is no leftover material and no extensive handwork is needed. The aim of Vlug is to develop a complete 'circular design' system.

Still, a coming together of the formally separate notion of 'traditional haute couture versus hi-tech haute couture' is generally overlooked. A perfect fusion can be found by putting two designs side by side: a *New Look* ensemble by couturier Christian Dior (1947) and a dress of the *Wilderness Embodied Couture* collection by Iris van Herpen (2013). A compilation [Figures 2-4] provides a strong comparative study, as against the backdrop of a similar silhouette new craftsmanship is revealed. With the 'hourglass silhouette' and the pose of the model, Van Herpen refers to the work of Dior, and the preconditions and quality standards of haute couture in general. Van Herpen thus positions her work emphatically as 'tomorrow's haute couture'. This hybrid dress was developed in collaboration with architect Isaïe Bloch and 3D manufacturing company *Materialise.* Partly 3D printed and partly manufactured by hand, the dress is not only made-to-measure, which is required in haute couture, but also seamless. In this way '3D Printing can serve as a beautiful and functional part of the whole, adding value to traditional craftsmanship' (Materialise, 2013). Best practices of cutting edge, young designers show how trans-disciplinary collaborations provide a synergy of which all stakeholders can benefit. Here, the series of studies that follows is introduced by two of the most iconic examples.

## Tactility of New Crafts

Traditional crafts, handicrafts, in the domain of design have already been undergoing a revival for years. This renewed interest, in the view of the Dutch Crafts Council 'is associated with an impending demise of specialist skills, experience and knowledge' (Crafts Council Nederland, 2016). After a revival of

crafts in the 1970s, Sennett put the notion of 'craftsmanship' back on the agenda in 2008. His lecture *Out of Touch* (2011) left an impression in the field of Dutch design. In this context, Nordeman observed that 'the current fascination with craft, which we now observe in the cultural sector and art academies, can be understood as a way of redefining our relationships with digital technologies' (Nordeman, 2014). In fashion, digital technology has a direct and intimate relationship with our human bodies. Because smart textiles are worn directly on our skin, tactility is a main condition. Designers experiment with creating tactility and 'washability' in smart textiles as well wearables, by collaboration with scientists and technicians.

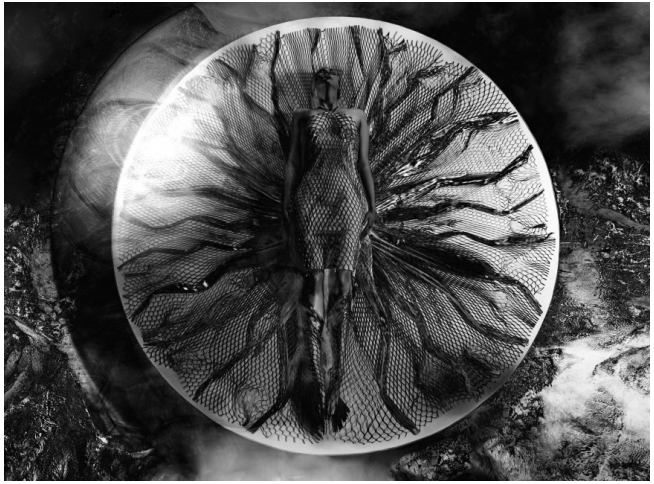
A first example of a tactile application in fashion by Pauline Van Dongen can be seen in *Solar Shirt* part of the Wearable Solar Collection [Figure 5]. When considering her current design practice, it strikes one that she actively pursues close ties with research and educational facilities (*Holst Centre*, *Eindhoven University of Technology*), businesses (*Philips*) and designers from technological disciplines. *Solar Shirt* is a seamless design with 120 thin solar cells and may recharge a *smartphone* or any other USB-compatible device. The electronics is directly processed into the knitted material and flexible, which is why the shirt has a soft feel and becomes wearable.

Merging of Crafts

Many young fashion designers are experimenting with all sorts of new crafts in which traditional crafts serve as basis for the development of new techniques. Traditional weaving and knitting techniques, for example, inspire the creation of flexible applications for 3D printing. Fashion designers are rethinking the manufacturing of clothes from scratch. To assemble clothes new seamless options like 3D knitting, layer by layer, moulding and spraying are tested and developed further. Designers start from the innovative possibilities that digital manufacturing and or biotechnology offer without trying to re-invent traditional crafts in a digital way. Traditional and future crafts co-exist side by side, and reinforce each other. This merging of crafts pushes the boundaries of traditional manufacturing.

[5] Pauline van Dongen, *Solar Shirt*
Photography: Liselotte Fleur (2015)

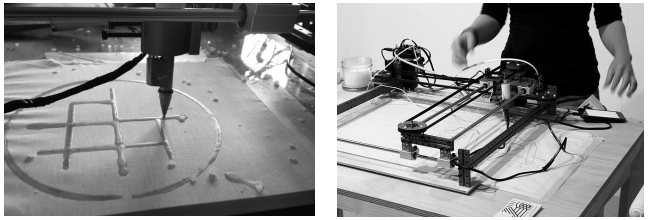
1A high-end best practice is the work of Dutch fashion designer Iris Van Herpen. During her *Quaquaversal* show (Spring/Summer '16) in Paris, robotic arms created a circular dress that combined 3D printing, laser cutting and weaving techniques. The dress was partly hand-woven and partly robotically printed [Figure 6].



[6] Iris Van Herpen, *Circular Dress*
Photography: Warren Du Preez & Nick Thornton Jones (2015)

Hacking of Tools

In order to develop smart- or biomaterials, designers also need new machines and tools to create, test and apply them. Apart from making new tools, there is a tendency towards the breaking or 'hacking' of tools, machinery and software in order to experiment with and develop new materials and digital fabricated clothes. This new phenomenon shows that the invention of new materials and the development of the machines that produce them go hand in hand. It becomes clear that this is an iterative design process where materials and machines are inseparable as they continue to influence each other. Contemporary designers do not only create an end product but also rethink the manufacturing of products and its applications, which in fact turns designers into producers as well. This process



[7] Amélia Desnoyers, Eugenia Morpurgo & Olivia de Gouveia, *Digital Wax Print*
Photography: Courtesy of the designers (2013)

automatically results in other, alternative business models and has implications for the role of the designer and the consumer. This may prove to be the route towards radical changes in the entire fashion landscape, whereby fashion education might well take on a leading role.

An example of a project in which designers created a tool themselves in order to be able to further develop their design is the *Digital Wax Print*, which digitally controls the application of the wax pattern [Figure 7] by Amélia Desnoyer, Eugenia Morpurgo and Olivia de Gouveia, all recent alumni of the *Design Academy Eindhoven* (DAE). This focus on developing a new technique by making a prototype reflects the research profile of DAE, marked as it is by the concept of 'Thinking through Making'. This involves an 'iterative process whereby there is a dynamic interplay of making, thinking and reflecting. In this way, creation and reflection go hand in hand, in both teaching and research' (Design Academy Eindhoven, 2015).

# 2 THE WORKSHOP AS EDUCATIONAL MODEL
*Case Studies*

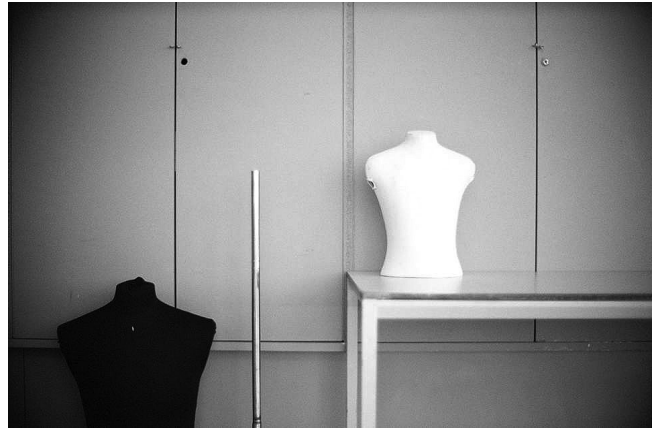
## 2.1 The Fashion Workshop

The fashion workshop is the core, beating heart of each Dutch fashion design department. Traditionally the curricula are designed around the workshop and almost all courses physically take place *at* the workshop. It is the place where valuable peer-to-peer and knowledge exchange on crafts and craftsmanship takes place, where ideas and concepts are tested and come to life. Although the workshop is not a realistic reflection of the work field anymore, because the making of clothes is outsourced to Asia or Eastern Europe, learning how to make clothes is nevertheless a precondition for becoming a professional designer. By making a garment, one becomes aware of its flexibility or wearable quality, the human proportions and the boundaries of the application of the used fabric. The encounter with a variety of difficulties and unexpected interesting options influences the design process in positive ways. It involves an array of valuable skills which can be utilized and deployed throughout one's career.

Fashion workshops at art schools are relatively large spaces equipped with machinery, like a series of knitting machines, sewing machines and ironing facilities, and they house a set of so called tailor's dummies. Next to the 'dry' workshop some fashion departments also have a 'wet-room' with silkscreen facilities to print or dye fabrics. Every workshop is staffed with a 'workshop assistant'. This assistant is looking after the facilities of workshop (maintenance of machinery) and gives instructions to students on how to use the machinery and tools. Most of the time it is also possible for students to buy yarn, fabrics and a basic supply of haberdashery. At these workshops, skilled instructors teach a variety of practical classes, like draping (on a tailors dummy), pattern drawing, knitting and sewing. Developing and making a specific (series of) fashion design (or 'a fashion collection') are crucial in any fashion curriculum, which by and large did not change since the establishment of fashion departments in the Netherlands in the early 50s. British fashion and technology expert Bradley Quinn refers to this domain in *Fashion Futures* (2012). He addresses that 'most fashion items continue to be cut out in pieces of cloth that are stitched together, just as they were at the onset

Fashion workshops at ArtEZ Institute of the Arts, Arnhem
Photography: Clemens Thornquist (2014)

Fashion workshop with tailors dummies



Fashion workshop with tailors dummies

Although the emphasis on traditional crafts within art schools is still very strong (there has hardly been a time when there were more hand-knitted, embroidered and tufted collections on show than in the last few years), crafts in fashion are under

Fashion workshops at the Gerrit Rietveld Academy, Amsterdam
Photography: Jonas Lund & Anika Schwarzbse (2008)

Fashion workshop with sewing machines

Fashion workshop sewing machines and ironing table

of the Industrial Revolution in the eighteen century, and fashion students still follow the time-honoured practice of draping fabric against the body before cutting out the pattern in toile so that design can be tested' (Quinn, 2012, p.6).

pressure. Due to not only the growing emphasis in fashion curricula on entrepreneurial skills, at the expense of technical ones, but also general cutbacks in fashion education, courses on 'the knowledge of fabrics' (distinction and determination of raw materials, yarns, fabrics and finishes) and 'history of dress' (historical and terminological) have grown less prominent. Lack of this knowledge will subsequently have a negative effect on the knowledge of crafts and craftsmanship. Fashion professionals have been sounding the alarm for some time now already. As Edelkoort observed recently: 'The fashion schools are under pressure with most of our governments taking away the bulk of their finances and therefore [they] have to adopt a commercial model. In the process, the first to be sacrificed are knitting and weaving ateliers. As a result students are no longer instructed in textile creation and basic knowledge about cloth' (Edelkoort, 2014, p.2). In this way students will lack specific knowledge and major skills, and this will make it harder for them to flourish within the field.

Globally, fashion studies are investing in workshops again and are opening big 'making centres' (Edelkoort, 2016) where machines are installed for 3D printing, seamless knitting and robots, next to traditional looms and old fashioned machines, all mixed together. This is done in order to sample on traditional machines or looms, the results of which may subsequently be translated into high tech solutions. Critical views coming from the art school itself show how curricula and workshops are already being re-tailored around new digital crafts, including the possible implications for the position of traditional crafts and their role in the near future.

### 2.2 The Royal Academy of Art, The Hague (KABK)
*Visited: 14 March 2016*

At the KABK Fashion Design and Textile Design courses are integrated into one study program. They share all workshops, machinery and tools. Students may also use the facilities at the *3D Lab* of the KABK, which houses several different 3D printing machines. Next to traditional machinery like sewing and knitting machines, and waving looms, the school invested in digitally controlled machines, like a sublimation printer and a laser cutter. KABK can be seen as a frontrunner in offering digital crafts within fashion education in the Netherlands. According to the coordinator of the fashion department, Gerrit Uittenbogaard, the programme is beginning to be 'too packed'. He explained to me that they cannot handle teaching any more classes, implying that in the future 'something has to go' (Uittenbogaard, 2016). An underlying reason for not expanding the workshop by buying more digital machinery in the near future is the space it takes. Additionally, he said that consumers are not yet ready to start wearing clothes made out of new materials 'because the tactility of smart textiles is still lacking and the emotional relationship we have with our clothes prevails over the possible sustainable and technological advantages. We simply have to give it more time' (Uittenbogaard, 2016). Fourth year student Sarah Lauwaert, one of this year's eight fashion design graduates, who made a collection without a sewing machine but sealed the garments together, experienced missing out on 'a facility or platform' to get informed better or quicker. As she told me: 'It is possible to save time during the process and have direct feedback from a professional craftsman. This would benefit my critical reflection and improve my skills faster than when I have to teach myself how to use a new machine from scratch' (Lauwaert, 2016).

So far the teaching of skills on how to use and program digital devices through guidance do not have a natural place in the curriculum. This limits the opportunities for fashion students to explore these new facilities. Staff and tutors should take the lead by revising the curricula and create space in them to answer to the needs of students, which seems to call for skilled technical tutors as well as an artistic vision on the implementation of digital technologies. Bart Vissers, Head of Technical & Digital Services, shows another perspective on the implementation of new developments. According to him, they revolve less around tools than around people (Vissers, 2016). Therefore he questions the added value of investing in new digital devices for the student if the use of these machines does not have a basis in the curricula. 'A main condition is the connection between education and workshops which starts with people who are willing to

[next pages] Fashion and textile workshops Royal Academy of Art, The Hague
Photography: Courtesy of Royal Academy of Art (2016)

Fashion workshop with weaving looms



Fashion workshop with manual knitting machines

Fashion workshop with sublimation printer




Fashion workshop with skiving machine (front), laser cutter (middle), mangle (back)

collaborate and share' (Vissers, 2016). To start a discussion on the future of the workshop, Vissers recently organised a meeting for workshop assistants and tutors of the KABK on the desirable position of the workshop within the art school for the coming ten years. This resulted in a set of recommendations presented to the board of the KABK.

The report advocates a redesign of the organisation in a way that acknowledges the process of 'making'. [...] The organisation of the school should follow from the pedagogic, didactic vision, in which the workshops have a natural, logical and content-related place' (Schwab, 2016). Vissers is also investigating the possibility of sharing expensive machines with other art schools and institutes like the *Textile Museum* with its extensive *Textile Lab* in Tilburg, by initiating meetings with a variety of stakeholders across the country. He argues that 'it is just not efficient and affordable to buy expensive machinery which probably will not be used on a daily basis' (Visser, 2016).

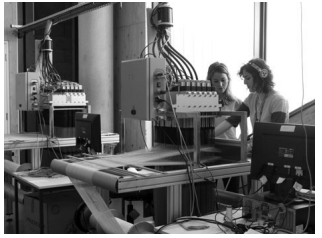
That at the KABK textile and fashion workshops are shared creates opportunities for interaction and creative cross-pollination, which is not necessarily true for the mere fact that traditional and digital crafts are facilitated side by side. This actually does not seem to be enough to generate a comprehensive added value to the existing programme. The conditions to create synergy between 'old' and 'new' crafts revolve mainly around motivated staff and tutors who technically and artistically can support students in the exploration of new machines and their possibilities.

## 2.3 Central Saint Martins, London (CSM)
*Visited: 12 April 2016*

CSM, which ranked as the best bachelor fashion design school in the world (Business of Fashion, 2015), is part of the London University of the Arts. Like the KABK it is a traditional art school which offers undergraduate and postgraduate courses in art and design disciplines. CSM has approximately 120 undergraduate fashion design students and six different specialized BA pathways on fashion and textiles which all share the workshops, such as the combined print and dye workshop, which consists of a print workshop, wash-out areas,

**Knitting workshop**
Photography: John Sturrock (2011)

**Fashion studio**
Photography: John Sturrock (2011)



**Digital weaving machine (left)**
**Computer controlled knitting machine (right)**
Photography: Dezeen (2012)

Fashion workshops and fashion studios Central Saint Martins, London

a heat transfer printing room, dye and finishing workshops and an exposure room. Next to this workshop CSM houses a knit workshop and an open access workshop, which is divided into several distinct zones with different specialist equipment in each area. These include professional and domestic knitting machines, a finishing zone and a *CAD/CAM*[4] workshop, while there is also a yarn store. In addition, there are ample possibilities at CSM to research future materials, their applications and new production methods, at the *Design*

*& Living Systems Lab*, *Textile Futures Research Centre*[5] and a *3D Digital Fabrication Bureau*. Next to this CSM offers the MA *Material Futures*[6]. In 2011 the school moved to a new building, which gave it the opportunity to rethink the role and position of the workshop. For textile and fashion programmes it entailed that the workshops were expanded and were shared from that time on. Carole Collet, director of the Master Textile Futures from 2000-2010 and professor in Design for Sustainable Futures, explained to me that 'it was a strategic decision to make the workshops stronger' (Collet, 2016). In the *Design & Living Systems Lab* she established in 2014, biotechnology and organic design play an innovative role. In fact, as she added, 'the whole building is a workshop' in which 'technicians have a critical role' (Collet, 2016).

As one of them, June Fish who is a specialist technician at the Print & Dye workshop, claimed: 'more interaction between both fashion and textiles students occurs which has been beneficial socially and in working practices'. She signals that students now incorporate more digital work in their design process, and move towards collaboration between digital, dye, print and decorative processes. Many students seem to work across multi-media, including laser cutting, embroidery, fabric moulding and etching (Fish, 2016). CSM offers the possibility to experiment with traditional techniques like natural dyeing and Shibori as well as new technologies. As Collet told me, 'cross-pollination gives students a tool for new ways of thinking' (Collet, 2016). Its importance is highlighted because one has to make new aesthetic choices. A concern is that, after the investment in new facilities, this has caused a doubling of activities.
Over the last years the biggest change has perhaps been the challenge of 'how to be impartial across all courses and bring different working practices together'. Another concern is that of design development and originality working with for example digital prints, whereas 'using a traditional craft or practice can sometimes add an extra dimension to a design' (Fish, 2016).

4 CAD/CAM: Computer-Aided Design and Computer-Aided Manufacturing.

5 *Textile Futures Research Centre* is one of the eight Research Centers established at University of the Arts London, and is based at Central Saint Martins and Chelsea College of Arts.

6 Before: *MA Textile Futures.*

It is a challenge for tutors and students alike to stay focussed on the quality of the design, and that it takes precedence over the usability of new machines and tools. The didactics will have to change along with it. Another challenge is linked to new methods and practices of teaching. For example, a more prominent role of biotechnology, or the growing of materials, will simply take time and may change the pace of education in general. Digital literacy and digital craftsmanship require another set of skills, knowledge and attitude.

The strengthening of the position of the workshop by investments in machinery and the recognition of the importance of the role of the tutors and specialized technicians yield results in the work of students. It seems a fertile breeding ground for crossovers of a variety of crafts and interdisciplinary collaborations between students. But attention must be given to the position of traditional crafts. The implementation of digital crafts puts pressure on the packed curriculum and facilities of traditional crafts might have to be reduced if attention on the merging of crafts is not elaborated on carefully.

### 2.4 Research as Fundament for Innovation

The most significant challenges for both the KABK and CSM concentrate on people (how to get a commonly agreed approach), pedagogy (how to implement new methods and practice of teaching), time (how to implement future crafts into an already full packed curriculum) and money (for technical staff, for maintaining old and buying new equipment), as the on-site interviews established.

Implementation of digital technology and new crafts mainly depends on the commitment and vision of the school. Even though the KABK has several digital facilities, the current staff of the fashion department of the KABK cannot fully adapt to developments on digital manufacturing and incorporate them into the existing curriculum. Because CSM does have ample research possibilities, such as on new materials and their applications at its research centres, laboratories and specialized master programmes, and also employs several research professors, like Carole Colette, the school manages to create a climate in which

new developments are embraced in a natural way. A good way to get the dialogue on fashion and technology going is to pursue direct links between teaching and the research programmes, in collaboration with research centres. In this way, the teaching will remain in touch with the latest ideas and problems that have to be solved (Teunissen, 2016). The research programs at CSM therefore serves as a fertile breeding ground for the innovation of education and its curricula. The school subsequently creates an environment where students have possibilities to explore and get prepared for the changing field of fashion.

In the Netherlands the first centre of expertise which revolves around fashion and design opened its doors in early 2015. The *Centre of Expertise: Future Makers: Research, Fashion, Design* of ArtEZ is geared to the development and application of new, sustainable materials and processes of making, in collaboration with the business sector. Within different innovative research projects, the centre cooperates with students of the ArtEZ fashion master programmes, other educational institutes, businesses, researchers and knowledge facilities. The changed position ascribed to research is further explored by peers. Noël Palomo-Lovinski (associate professor Fashion Design at the Kent State University) and Steven Faerm (associated professor at Parsons School of Design and author of multiple academic articles on advenced fashion education) advocate research as foundation for fashion education*:* 'Universities need to become places of conceptual and innovative thinking utilizing interdisciplinary practice labs as a large component of the educational layout. Textile and production technology, global awareness, and sustainability must become undercurrents to any design solution. [...] The ideal graduate therefore would change from vocational master who dictates personal taste to conceptualist or innovator who utilizes well researched methodologies when approaching the design process' (Palomo-Lovinski & Faerm, 2009, p.92).

## 2.5 Opportunities for Dutch Fashion Education

At CSM as well as at the KABK it has become clear that due to developments and facilities on digital manufacturing, the pressure on the curricula will increase. As long as 'old' and 'new' crafts at the KABK are seen as two different entities, which co-exist next to each other, the curriculum will continue to be overloaded and students will not be able to profit from the potential opportunities of digitalization and future crafts. The answer lies in the coalition, integration or merging of traditional and digital crafts, including crafts related to biotechnology. José Teunissen emphasizes that in order to retain traditional crafts, a combination with new technologies is necessary (Teunissen, 2016). New e-textiles, biotechnology, but also digital pattern cutting, laser cut techniques and 3D printing will have their impact on the making of outfits. The possibility to experiment with all sorts of 'old' and 'new' crafts side by side, provoke cross-pollination which could create new designs and propositions for fashion. Starting experiments with traditional techniques, like working on a loom, could serve as inspiration for digital applications, just like the *Circular Dress* (2016) by Iris Van Herpen (See 1.3. *Crafts as Fundament for Change*). Fashion workshops where a diversity of crafts and skills can be taught, both high tech and traditional ones, and where blending and hybridization of crafts is made possible, may provide a basis for creating new forms of designs and production. As such the workshop may serve as an environment where synergy of crafts can occur, which in turn creates a fertile breeding ground for students.

To reflect on the future of fashion education, the role and position of its workshops and the merging of crafts within these workshops, new scenarios can and must be developed which address the structure of these workshops. If it will be possible in the future to 'grow' your clothes, biotechnology needs to become part of the core fashion curricula. But what would a workshop look like in such a situation and how will it function? In anticipation of the results of the education project (Chapter 3), this research project aims to open up the discussion with art schools to answer to calls of ambitious students.

# 3 THE FUTURE FASHION PROFESSIONAL
*Education Project*

## 3.1 Round-Table

The education project in the context of this research project explores the potential of new technologies such as digital fabrication and biotechnology in response to the pressing issues around ethics and sustainability within the changing fashion and textile industry. These new technologies, in combination with changing consumer values, are influencing the notion and role of the fashion designer. This raises the question of how we tailor fashion education in order to prepare students and give them new professional perspectives to adapt to an industry in flux. What students need to obtain these perspectives was the subject of a discussion — during a *round-table* in collaboration with Waag Society — amongst fashion students and alumni from art school across the Netherlands and experts from the fields of fashion, design, technology and education. They collaboratively mapped out a profile of the 'future fashion professional' and formulated a preliminary set of opportunities for fashion education.

The format of the round-table workshop enables all participants — students, alumni and fashion professionals — to contribute to the discussions on issues of shared concern and to generate ideas for action.

### Research Questions

The central question addressed was: What are the characteristics, conditions and skills of the 'future fashion professional' in order to be able to keep adapting within an industry in flux? We used this question to challenge students, based on their educational experience and aspirations, collaboratively to formulate a profile of this definition of the 'future fashion professional'. Secondly we discussed the question: How can fashion education create conditions to fill the gap between the needs of this fashion professional and the global fashion industry?

### Objectives

The main objective of the round-table was to find common ground on the formulation of a preliminary set of opportunities for fashion education based on a profile of the 'future fashion professional'. In addition this round-table aimed to bring a group

of selected students a step further in their process of positioning themselves as 'future fashion professional' while expanding their professional network. This was also meant to serve as a fertile breeding ground for future interdisciplinary collaborative projects. At the same time this project was designed to serve as a valuable tool for collecting information and identifying the group of stakeholders.

Framework

This education project was developed and conducted in May 2016 in collaboration with Ista Boszhard and Cecilia Raspanti of the Waag Society, an institute for art, science and technology, in Amsterdam. For the Waag Society this education project served as kick-off for their contribution to the *Textile and Clothing Business Labs (*TCBL) research program (Waag Society, 2016). For a period of four years, TCBL, together with various stakeholders, will investigate how the clothing sector can benefit from new technologies, processes and business models. The main objective of TCBL is to bring 5% of the production capacity of clothes back to Europe by 2025. As TCBL claimed, 'it is currently too difficult for small business to experiment with possible new business models to answer to an 'industry that continues to experience a period of deep crisis' (TCBL, 2016).

This collaboration provided a professional setting which supported the education project and its objectives. Next to this, our network was shared which generated a solid fundament for gathering the group of stakeholders.

Participants

We asked the course directors and coordinators of the six fashion design departments of art schools in the Netherlands to select one or two fashion design (or fashion communication) students or recent alumni, designers who are pioneering in the fields of (digital) crafts, (bio) technology, digital fabrication, virtual reality and/or innovative textiles. In addition to this research group of eleven people, four students from the Amsterdam Fashion Institute (AMFI) joined, as well as three master alumni with a special interest in fashion and technology from two different universities and three different fields of study. The observations and contributions of the last-mentioned are only included when applicable (Appendix 1.3. Education Project: Students & Alumni).

Next to the group of students and alumni, we invited a cross section of twelve interdisciplinary leading designers, artists and educators who have a strong opinion on how we should move to a more sustainable and ethical design industry by means of crafts. They functioned as intermediate between education and practice (Appendix 1.3. Education Project: Experts).

Programme

The round-table was divided in two sessions of three hours during two different evenings in one week. The first evening, only the students were invited. During this meeting students collaboratively set the agenda for the second meeting by mapping out a preliminary profile of the 'future fashion professional'. Based on what they missed in their education to meet these standards and to fill this gap between education and the industry, they developed a preliminary set of opportunities for fashion education. During the second meeting two pairs of students presented this profile and the set of opportunities to the group of experts. These presentations constituted the starting point for a vibrant discussion with the aim to find consensus on the profile of the 'future fashion professional' and the specific opportunities for fashion education. This context was at the same time the backdrop for the individual feedback on their own work in one on one meetings with two experts of their choice at the end of this second evening. Afterwards there was ample opportunity to talk with each other and expand one's network.

## 3.2 Pedagogical Underpinnings

This workshop draws from the master-apprentice learning method. Students learn directly from experienced experts from the specialized field they aspire to find a position in. An important component of the round-table is that students get not only feedback on their work and answers to their questions but also the opportunity to construct knowledge on their own by giving shape to the format and content on the second evening of the workshop. In this way they become part owner of the

process. This fits in the developments of ‘maker education’, ‘learning by doing’, gaining new experiences through creation, which leads to (new) knowledge, insights and opportunities.

Criteria

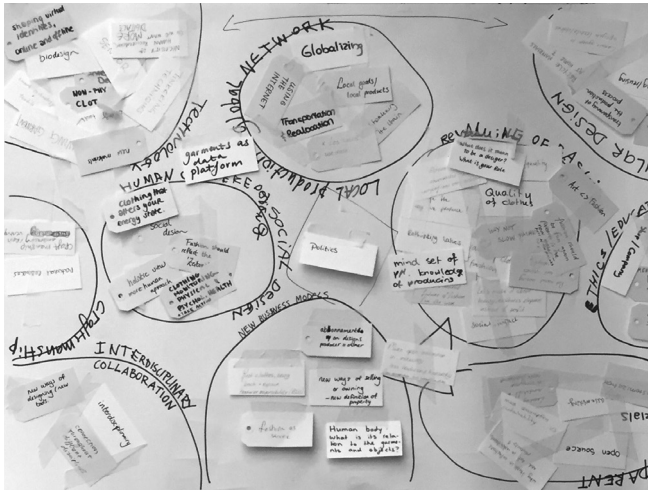
In order to check if the workshop meets the objectives of the professional field and prepare students to this field, a set of criteria was used. These criteria were drawn from the evaluation criteria of the *Creative Industries Fund NL* (2016), which has the task to continue the renewal of applied arts in the Netherlands. Instead of drawing from art education, this set of criteria gives students a better insight into their own competences, also in comparison with peers and future colleagues. These criteria were incorporated in the survey which was handed out after the workshop.

Set of criteria:
- Artistic Quality
- Innovation
- Greater Depth of Knowledge
- Talent Development
- Fostering Cross-Sector Cooperation
- Fostering Cultural Entrepreneurship
- Strengthening International Position
- Fostering Public Interest

## 3.3 Report and Field Notes

Round-Table # 1
*24 May 2016*

The objective of the first round-table, which served as preparatory workshop for the second evening, was to discuss the context and set the parameters in order to prepare the students for the meeting with the experts. At the same time this meeting served as a tool for the students to (re)position themselves as a future fashion professional, including the role they want to have within the current fashion discourse and what they think they need to learn to do so. After the introduction, the explanation of the framework and objective of the round-




[8] Round-Table #1, *Mapping Context*

table, the students were asked to map out the context of today’s fashion field by listing relevant developments they see happening in this changing fashion field. While working in pairs, key-words on the discourse in the changing fashion field were formulated and noted down on several white cards, which after ample discussion were divided into eight groups: Circular Design, Revaluing Fashion, Open Source and Transparency, Local Production & Global Network, Technology, Craftsmanship, Human Centred Design and Ethics [Figure 8].

Students’ Notes

Based on this context they discussed what they missed in their education and mapped out their needs as ‘future fashion professional’. As students indicated, there is not enough time set aside in the curricula for doing theoretical research in depth in order to learn how to reflect critically in more elaborated ways. Students also said that they want to be better informed on ethical issues within the fashion industry. They claimed to miss out on knowledge about the production processes of fabrics and long for more facilities and guidance to experiment

with ‘hacking and manipulation’ of crafts, new and sustainable materials, and actually applying them. Because students said to miss the connection with the realities of the fashion industry, they wanted the school to facilitate (interdisciplinary) collaborations, with people from the industry but also with other schools. They expressed a need for a shared network of craftsmen to learn from and collaborate with. This would fill their need to be better prepared for their future professional field. An internship of three months was not seen as enough. On top of it all this group of pioneering students felt it to be difficult to position themselves within the practice of the still dominating fast fashion industry.

These collected notes contributed to forming a preliminary profile of the ‘future fashion professional’, which revolved around experimenting with (digital) crafts, new and sustainable materials and knowing how to apply them, collaborating and networking with other professionals, being transparent, ethical, and critical on one’s own work and process, and the ability to position oneself.

In the days between the two round-tables, students were asked to prepare their presentations to the experts for the next round-table. One pair prepared a short presentation of the outcome of the first session, ‘mapping out the context’ and the second pair prepared the results of the second assignment, the profiling of the ‘future fashion professional’. Further, students were asked to prepare a short elevator pitch to introduce themselves and their topics of interest to the experts. We advised them, to start to say something about themselves as a designer in general (vision, mission, aspirations) and illustrate this by highlighting one particular project (graduation collection or research project). Based on this pitch they were advised to write a short professional summary on their research or work of around 125 words to hand out to the experts as a reminder for later. In addition they were asked to formulate a set of key questions on their work which they could individually discuss with one or two experts of their choice at the end of the second evening. These questions had to do with the positioning of themselves as ‘future fashion professional’ in the fashion industry and the role of digital technology and future crafts in their work.

***Round-table # 1***
Photography: Jimena Gauna for Waag Society (2016)

Round-Table # 2
*26 May 2016*

The main objective of this round-table was to gain a consensus on the context to which the 'future fashion professional' will relate, the profile of the 'future fashion professional' and the opportunities for advanced fashion education. Accordingly, the second evening started with presentations on the context as well as the profile of the 'future fashion professional'. The experts were asked to add to the list of topics and the sketched profile. During a vivid discussion notes were taken on big sheets, while one of the moderators ensured constant back and forth verification. Points of attention the experts would like to add to the map of the context:

– Redefining the role, position and definition of the designer.
*The designer needs to start thinking, designing as a user and producer and must be able to connect to all the disciplines within the production cycle. It is this cycle — from raw material to the disposal of the product — in which the designer can play a key role to make it more sustainable. This is a topical issue in all maker disciplines like architecture and product design.*
– Sharing and democratization of knowledge.
*Using Fablabs, DIY platforms and social media are important for the democratization of knowledge. To share knowledge you need to learn the language of other disciplines and be able to give a clear explanation of the used terms, like fashion, sustainability, transparency, etc.*
– Focussing on the 'future fashion consumer'.
*To change the industry, we have to change the role and position of consumers and their consumption. We have a role in educating consumers so they actually understand the workings of the textile industry. The responsibility to change the industry is a coalition between the designer and the user.*
– Legislation and regulation on import of fabrics and clothes made in poor and polluting conditions.
*Fair fashion must get a more significant place on the political agenda.*
– Garments as data platform.
*New applications emerge where smart garments serve as data collector to benefit big companies such as Google, an interface for social issues or a service system. This also raises questions on transparency, ethics and legislation.*

Most abovementioned topics were included in the eight topics on the preliminary list, only the political discourse around legislation and regulation was missing and was therefore added. The context of the 'future fashion professional' now revolved around ten, overlapping and interconnected focal points, with sustainability in fashion serving as overarching objective in light of which all nine topics must be read.

1 Circular Design
2 Revaluing Fashion
3 Open Source and Transparency
4 Local Production
5 Global Network
6 Technology
7 Craftsmanship
8 Human Centred Design
9 Ethics
10 Politics

Criteria of the Future Fashion Professional

After the moderated discussion resulting from the presentation of the students on the future fashion professional, the experts added three criteria to the preliminary seven points. These added topics comprised three essential abilities, at least according to the experts. The first one revolved around the lack of a basic understanding of the workings of the fashion industry, the second had to do with the fact that they expressed their concern on the ability of students to do in depth research, and the third pertained to the observation that students lack the skill to communicate in clear and professional ways. Students acknowledged that these skills were essential and that a greater emphasis on these points was absolutely advisable. Next the profile of the 'future fashion professional' was edited, and this resulted in the list below.

The ‘future fashion professional’

- Knows how to experiment in a comprehensive way with (digital) crafts and new and sustainable materials
- Can apply (digital) crafts and new and sustainable materials into eminent designs
- Initiates and participates in multi, inter- and trans-disciplinary collaborations with other designers, artists engineers, technicians, scientists and people from the industry.
- Is able to create a network of professional craftsmen, engineers, technicians, scientists and people from the industry to share knowledge and skills
- Has the capacity to reflect critically on his or her own work, position, role and responsibility as designer
- Is transparent and ethical about his or her own work and (manufacturing) process.
- Has a clear understanding of and insight in the context and the workings of the fashion industry at large
- Is able to position him/herself in the global fashion industry
- Has ample knowledge and skills for doing theoretical and design research
- Possesses the ability to communicate and promote his or her own work, aspirations and relevant topics, online as well as offline.

Opportunities for Fashion Education

Based on these ten points the participants discussed what is needed and what, according to the students, is still more or less lacking in fashion education to actually prepare students to become a well-equipped professional. A preliminary description of opportunities for advanced Dutch fashion education was drawn up. Fashion schools are challenged to:

- Put a stronger emphasis on / proving ample knowledge on the context and the workings of fashion industry at large.
- Provide more knowledge and skills on doing theoretical and design research.
- Facilitate the possibility to experiment in a comprehensive way with (digital) crafts and new and sustainable materials.
- Offer (more) professional workshops with craftsmen, technicians, scientists, engineers and people from the industry (network of experts) to share knowledge and skills.
- Facilitate multi, inter- and trans-disciplinary collaborations with other students, professionals, schools and institutes.
- Put a stronger emphasis on how to position oneself in a changing industry and on how to communicate one’s work and vision.

Questionnaire

At the end of the last evening we handed out a questionnaire to the students and alumni who were still present. A total of 14 questionnaires were filled-out and returned. We combined the results in a diagram (Appendix 2. *Questionnaire Education Project)*. Overall the students and alumni strongly emphasized the relevancy of the round-table. Because most students experience pioneering with new technologies as a lonesome adventure, they highly valued peer-to-peer contact and attached much importance to meeting likeminded people. The content, topics and outline of the round-table as well as the used methodology were rated with an average of 9 out of 10. The relevancy of the experts and the one on one feedback received a comparable evaluation. On the question about what points the round-table served as an addition to your professional development, fourteen students replied that sharing knowledge, skills and expertise helped them a step further, ten valued the ability for collaboration and nine students felt they were now more capable to position themselves as designer. The most important aspect for students was the opportunity to network with peers and experts. All 14 students expressed their interest in a follow-up.

## 3.4 Articulating the Gap

The participating students experience a large gap between their education and the fashion industry. These pioneering students are exploring new terrains in fashion and technology but fashion education is not (yet) equipped to meet the needs of these students. As they indicated, they miss input and guidance, both with regards to people and machines, for experimenting with digital crafts, new and sustainable materials and how to apply these into their designs. They stressed that collaborating and networking with other professionals from

Liesbeth In 't Hout (Fashion Council NL)


Lucie Huiskens (CLICKNL|Next Fashion, ArtEZ CoE Future Makers)

Eva Roolker (Creative Industries Fund NL)

One-on-one discussions

**Students and experts** Photography: Jimena Gauna for Waag Society (2016)

various disciplines would help to further develop their work. They also claimed to lack key knowledge on the context of the current industry. Although they are eager to learn to position themselves in emerging new fields, it seems difficult to them to 'fit in the market' and at the same time they wonder if they do have so at all.

The training of students aimed at becoming professionals might shift to an understanding that they can actually influence and define their own field and contribute to stretching its borders. The set of preliminary opportunities for fashion education therefore focuses on three key words: 'research', 'experiment' and 'collaboration', in which the ability to reflect critically, on one's own work, position, role and responsibility, is an overarching criteria. The remarks of students demonstrate an intrinsic call to continue the dialogue on the implementation of 'future fashion' within current fashion education. During the round-tables, they appeared to have become more confident to act like, and identify with, agents of change. They were eager to team up and meet again in the near further to collectively try to push the outcomes of the workshop to a next level by addressing relevant stakeholders.

Adaptation to changes will have considerable implications on facilities and staffing of the workshop and will affect the interrelated curriculum in various ways. The possibility to experiment in a comprehensive manner with digital crafts and new and sustainable materials calls for high tech machinery, tools, tutors with an unfeigned interest in these new developments, as well as skilled technicians. Facilitating inter- and trans-disciplinary collaborations with other students, professionals (craftsmen, scientists and technicians) schools and institutes is a condition to give shape to the practical implementation and imbedding. The key to success, it seems, will be to expand students' knowledge of the context and the workings of the fashion industry at large, including knowledge and skills with respect to doing theoretical and design research. It is up to the alliance of students, policymakers and educational specialists to respond to the call of this small group of change agents.

Conclusion

The ‘fast fashion’ system is undergoing radical changes. It is a time when the accepted way of making and disposing clothes is increasingly being questioned, in which crafts have the potential power to change the future of fashion completely. This paradigm shift directly follows from the pressing environmental and social problems faced by the global fashion industry today. Innovative developments in the realm of digital fabrication and biotechnology are generating new propositions in response to these problems. Fashion students, the future fashion professionals, play a key role in taking the first step when it comes to developing alternative, sustainable and ethical ways of producing materials and clothes, as well as launching new business models. Due to the innovation of design and production processes, the role of the designer and the position of craftsmanship have been changing. Although pioneering students are exploring new terrains in fashion and technology today, fashion education is not yet fully equipped to give them adequate professional knowledge and skills to adapt to changes within the global fashion industry. In order to provide the students agency to determine future perspectives, fashion education at Dutch art schools has to be re-tailored. To innovate fashion and to rethink the complete production chain, from raw material to the end product and its ultimate disposal, students need *and* want to experiment with digital crafts, new and sustainable materials. The tension between traditional and technological ways of designing has to be resolved - a process that can outstandingly be facilitated by ‘learning by doing’ within the art schools and/or in collaboration with other institutes and professionals from various disciplines. Education can bridge the gap between education and industry. A renewed sense of the notion and position of crafts will be a crucial element in this process of change. It is in the fashion workshop where the combined power of ‘old’ and ‘new’, the cross-pollination of manual and digital, will create a synergy of crafts by which prospective scenarios for fashion will emerge

Recommendations for Fashion Education

Based on the findings of the case studies and the results of the education project, the notion is clear that in order to

provide students with future perspectives to be able to adapt to changes within the global fashion industry, fashion education at art schools has to be re-tailored. It will be up to policymakers at these schools whether this will be done at all, and if so, how it will be done, in collaboration with whom, with what means and at what pace. There are certainly limitations and constraints which revolve around the willingness of people to change and act. Art schools need motivated and skilled tutors, technicians *and* researchers to articulate a vision on fashion education, to innovate the curriculum and implement new methods and practices of teaching. This is a major precondition for sustained re-tailoring of fashion education and the role of fashion workshops. To achieve this objective, art schools need to have a strong and well-articulated vision, whereby students may well serve as catalysts of change. The following concerns may thereby be taken into account, that serve as substantiated recommendations as well as noncommittal invitations:

– Fashion education should acknowledge the paradigm shift in fashion and make sustainability the undercurrent of its shared vision and commonly agreed approach on the future of fashion.

– Fashion education should ensure the relation between research and teaching and research in the realm sustainability and fashion and technology, by developing research programmes, in collaboration with (in house) research centres, laboratories or other schools and institutes.

– Fashion education should encourage and facilitate inter- and trans-disciplinary collaborations with craftsmen, scientists, engineers and specialized technicians from various disciplines and professional fields.

– Fashion education should aim for students with aspirations to become a 'future fashion professional' — one who can contribute to the innovation of the fashion industry on the long term and at the same time is capable of critical reflection on his or her own work, position, role and responsibility.

– Fashion education should provide a fully equipped workshop (with high tech machinery and tools) where comprehensive research with digital crafts and sustainable materials and biomaterials can take place under the guidance of skilled technicians and tutors with an unfeigned interest in new developments.

– Fashion education should revise its curriculum in order to ensure a coalition, integration or merging of traditional and digital crafts, and promote this synergy as the aspect of the education bearing most agency for change.

A future step towards creating a platform for the discussion on the re-tailoring of fashion education is perhaps implied in the invitation of *the Creative Industries Fund NL* to discuss the possibility of starting an online network group of stakeholders. This fund aims to set up research projects on technology, innovation, sustainability and the circular economy in 2017, together with the Netherlands Organisation for Scientific Research (NWO), CLICKNL|NextFashion and Fashion Council NL, and with the aim of fostering cooperation and community building. This online platform would provide a joint agency devoted to crafts, craftsmanship and technology for advanced fashion education. At the same time this democratic process of co-creating and addressing the discourse around the future of fashion education — together with students, staff and professionals in the field — affords this research and education project broad consensus and therefore proof of its relevancy.

# 5 EPILOGUE: PROSPECTIVE SCENARIOS FOR FASHION SCHOOLS

*Extended Conversation by Dirk Osinga*



## Introduction

These rudimentary scenarios are meant as an invitation to think about how the future fashion school could function — an invitation which reflects and goes beyond current changes inside and outside the fashion industry. Some of these ideas acknowledge what is already happening today and some try to be more innovative. They are not exclusive scenarios, with the aim to be realised; some should be combined or even be rejected. So these scenarios, rather than serving as concrete proposals, were conceived as starting points for a discussion. The initial scenarios discussed below were formulated on the basis of several premises. The first is that in the Western world there is arguably a need to move away from an individualistic society based on consumerism and global production towards a more socio-centric organised society with localised forms of production. In other parts of the world we see an opposite tendency. This may imply for the world of fashion that a so called hyper individualistic fashion needs to be complemented by a fashion which is the expression of multiple collective identities. Furthermore in order to take an integral approach towards changing the fashion industry and overcoming the borders between disciplines and different levels of education, advanced fashion education could collaborate with universities for research and vocational education and training (VET) for working with the crafts. Additionally fashion education should move from an exclusive focus on haute couture to a more research-based approach in order to tackle social and environmental issues like resource scarcity and climate change. All of this may well contribute to a renewed relevance for fashion, one that goes beyond the fast fashion and its dichotomy of haute couture and ready-to-wear.

## THE BIOTECH FASHION SCHOOL

### The fashion school as a laboratory

What if the fashion school would merge with a biotech research lab at a university? Fashion designers would collaborate with scientists to grow genetically modified textiles and in-vitro leathers in laboratory conditions. By experimenting with colours,

transparencies, textures, patterns and softness through bio hacking and craft production methods, these bio-fashion designers and biological and chemistry scientists may well develop truly sustainable and bio-gradable fabrics that can even grow into predetermined shapes, like skins of mammalian bodies. The garments produced in this school may even result in a 'living' fashion, one that acts as an interface or an extension of the human body and mimics all kinds of heating and cooling mechanisms seen in nature. This radically new fashion might even act as a kind of bacterial shields against a multitude of superbugs. Living fashion would blur the boundaries between nature and culture, and potentially contribute to crossbreeding of all kinds of strange but wonderful hybrids. Imagination and exploration often starts small, but through learning by doing, real innovations can be created. Can fast fashion be superseded by a superfast biodegradable fashion?

Protagonists: Aniela Hoitink, Suzanne Lee, Neri Oxman

THE NATURAL FASHION SCHOOL
The fashion school as a farm

What if the future fashion school creates its own circular economy? Europe once had a blossoming textile industry. Can it be revived? This fashion school takes scarcity, resource management and frugal lifestyles seriously. It could be situated in the countryside as semi-autonomous community, which grows its own fibres from agricultural sources by growing plants and rearing animals. And processes these fibres and wool into natural dyed high quality fabrics which are adapted to local conditions. From crop to garment. This fashion school rediscovers the potential of native natural fibres, from flax to seaweed and from hemp to mycelium, with the help of open-source digital fabrication methods. Spinning, weaving, sewing and embroidering all take place under one roof, merging crafts with the arts, to create a durable and highly tactile fashion. Perhaps it would even be possible to locate this school within urban settings. What about harvesting, for instance, the surfaces of hairy buildings? Continuing the tradition of counter cultural communities of the sixties with its DIY ethics and open-source technology, communal off the grid living, as well as taking inspiration from indigenous communities through anthropological research from around the world, this school will foster a relational society that reconnects with the landscape and will possibly regain a cosmic relation through its super slow fashion. Fast is exciting but slow is enduring.

Protagonists: Carole Collet, Katrien van Hecke, Christien Meindertsma

THE HIGH STREET SCHOOL
The fashion school as a shopping mall

What if fashion schools were to appropriate shopping malls and transform spaces of pure consumption into hybrid spaces of production? This fashion school could educate a broad range of specialised professionals in design, sales, personal identity and brand management. Can high fashion reclaim the street and can the street be high end? With the ongoing development of technology, fashion schools can stimulate localised forms of production through digital fabrication and renew the art of fashion. Digital fabrication allows to mass-produce items that can be highly personalised. Robotic arms weave 3d forms overnight that fit the unique digitally scanned body shape of the customer. The fashion school as a shopping mall allows fashion students to get back in touch with people, and it allows people to engage with fashion in new ways and learn about themselves and the garments they wear. This school can have a direct influence on what people wear on the street and thereby inform a local fashion culture. If fashion is about identity, can this fashion school help to build up multiple, imagined and real personal identities together with people on the street? These days everybody is wearing the same type of garments with imposed slogans and brand names. Can fashion students together with poets and lyricists develop personal texts that can be applied or woven into fabrics to create personal identities? Sometimes reality is the strangest fantasy of all.

Protagonists: Sarah Andelman, Suzy Menkes, Carla Sozzani

THE FASHION MUSEUM SCHOOL

The fashion school as an archive

What if, instead of just recycling images and styles superficially, fashion took history seriously? How did one use fashion, for example, as an expression of culture or to form the identity of particular social groups in society? And what about the present, could this research be complemented by a contemporary anthropology? What are the relations between fashion and the other arts and sciences? And what kind of materials, techniques have been used in days long gone? Research on the past can prove to be a rich source for creating a renewed future fashion culture. The fashion museum school as guardians of material knowledge. Fashioning our collective memory. The museum as a school gives the opportunity to combine education with research, experimentation and presentation. The fashion school as an archive could maybe create new common cultural symbols based instead of the commercial brands or personal tattoos people nowadays wear to express their identity. And what is a brand anyway and why do we need it? And what stories of the social and ecological consequences of fashion can be told? Furthermore the fashion museum school invites amateurs and experts for courses, debates and lectures. It is an open space for social learning. The space of a museum gives time for collective and private reflection. Fashion can stare back into its own mirror and develop the discipline from within. Open up spaces for different times. Furthermore the school could not only teach designer craftsmen and women but also scientists and professional curators and writers. A museum is not just about (re)presentation and (re)collection – it is also a place where fashion can be created and of course celebrated.

Protagonists: Judith Clark, José Teunissen, Valerie Steele

THE FASHION ENGINEERING SCHOOL

The fashion school as a garage

What if fashion students in addition to their fashion craft skills, like sewing and weaving, learn to code and tinker with technology? Would we get programmable fabrics? Or woven software? How could digital culture influence fashion and vice versa? Will wearable technology ever break through? Wouldn't it be great if you could digitally change the colour of your shirt to match with your newly bought trousers? Or wear plug-in fashion that measures your mood through your garments? Expressing emotional feedback loops which heighten awareness and facilitate communication. And what about sustainable fashion as a form of heating and cooling of the body? That would be much more efficient than insulating and regulating our buildings! Developments in material science, the miniaturisation of electronics and artificial intelligence could radically change fashion. And due to Moore's law, the accessibility of these technologies is closer within reach for education than ever before. The engineering fashion school would be using and abusing these technologies to create new tools which could for example lead to cloaking devices, electromagnetic shields, or garments that function as data collecting devices. This fashion school would also focus on the performance of fashion in normal but also in extreme conditions for example for outer space exploration, or closer to earth, in very hot or very cold climates. The worlds of engineering and fashion could collaborate to create protective and performance enhancing gear with augmented capabilities used in sports and on the job. There are many ways in which technology can be integrated into fabrics and fashion into technology. Without cross-overs it is hard to make real innovation; it is on the boundary edge of disciplines where the excitement takes place.

Protagonists: Clara Daguin, Pauline van Dongen, Iris van Herpen

THE NO FASHION SCHOOL

The fashion school everywhere

An almost suspicious number of well-known fashion designers say there are enough fashion designers. Some even say fashion is dead. And who wants to be a fashion designer anyway? Producing six to nine collections a year? Designers have become stylists. But, wait a minute, wasn't fashion about beauty and style? About a vision on society? About traditional crafts and modern technology? Sensuality and boldness? A lot of people feel that the world could use more of that. So, what

if the no fashion school did not educate fashion designers in the traditional sense, but teach professionals to apply fashion wherever it is needed most, which is everywhere: at work and in the city, at home and in politics, in science and technology. Educating society about the good life. The no-fashion school could be everywhere. Or should the no fashion school just concentrate on clothing? Aren't we all wearing the same comfortable clothes everywhere, from jeans to t-shirts and from skirts to suits? Luxury has lost its meaning. The no fashion school would start there where it all began: clothing. By blurring the boundaries between nationalities, groups and gender, creating a generic sustainable fashion, we have reached our destination, the end of our journey; back to the start.

Protagonists: Iris Apfel, Lidewij Edelkoort, Katharine Hamnett

Dirk Osinga is an architect, researcher and co-founder of *The Workshop Workshop*. He is a PhD Candidate at Hasselt University focusing on the innovation of architectural education and collaborates with Jurgen Bey from *Studio Makkink & Bey* on *Werkplaats Centraal*, a design research project on the future of vocational education and training (VET) in the Netherlands.

# Appendix 1: Network of Stakeholders

## 1.1 Professional Fashion Relations

Nana Adusei-Poku
John Coenen
Carole Collet
Pauline Van Dongen
Lidewij Edelkoort
Jeroen Van Den Eijnde
Ellen Van Esbroek
Steven Faerm
June Fish
Judith Ter Haar
Willemien Ippel
Anke Jongejan
Marcel Van Kan
Niels Klavers
Anna Elisabeth Kruyswijk
Jeroen Lutters
Alex McIntosch
Maurizio Montalti
Lynne Murray
Rachid Naas
Dirk Osinga
Jurgi Persoons
Eric Reiman
Rick Steggerda
Martijn Van Strien
Bibi Straatman
José Teunissen
Oscar Tomico Plasencia
Gerrit Uittenbogaard
Hebe Verstappen
Bart Vissers
Hanka Van Der Voet
Gerrit Jan Vos

## 1.2 Piet Zwart Institute, MEiA (2014-2016)

Tutors:
Kate Brehme
Clare Butcher
Ingrid Commandeur
Marike Hoekstra
Frans-Willem Korsten
Levien Nordeman
Maaike Roozenburg
Sjoerd Westbroek

Graduation Show:
Clare Butcher
Nikola Knezevic
Eloise Sweetman
Geert Van Mil

Students:
Karin Arink
Juan Beladrich
Clare Breen
Sita De Kam
Annelies De Leede
Mariana Fernandes
Rick Fingal
Mariska Hamelink
Maartje Heijsteeg
Doran Schmaal
Katinka Van Der Laan
Bien Van Der Voorden
Lori Van Vlerken
Erica Volpini

Waag Society:
Ista Bozshard
Jimena Gauna
Karen Van Der Moolen
Cecilia Raspanti
Joeke Van Der Veen

Experts:
Hein Daanen
Carlo Bertante
Hendrik-Jan Grievink
Aniela Hoitink
Liesbeth In 't Hout
Lucie Huiskens
Troy Nachtigall
Marion Poortvliet
Eva Roolker
Ineke Siersema
Marina Toeters
Femke De Vries

Students & Alumni:
Nienke Creemers
Zoé Daemen
Sam Edens
Kirsten Eerland
Ting Gong
Maartje Janse
Jolike Kessels
Nathan Klein
Lizet Van Der Knaap
Sarah Lauwaert
Ashkhen Minasyan
Karlijne Opmeer
Linda Plaude
Amber Slooten
Laura IJzerman
Sofie IJzerman
Zil Julie Vostalova
Pia Walter

## Appendix 2. Questionnaire Education Project

| | | Average out 1-10 | Number of Students (total of 14) |
|---|---|---|---|
| 1 | Relevance of this round-table | 9,4 | |
| 2 | Content and topics of the round-table | 9,2 | |
| 3 | Outline and programme of the round-table | 8,6 | |
| 4 | Used methods of the round-table | 8,2 | |
| 5 | Relevance of the experts | 8,6 | |
| 6 | Relevance of feedback of the experts for your individual research and /or professional development | 8,4 | |
| 7 | Expertise of the organisation | 8,9 | |
| 8 | Was the round-table in total an addition to your professional development? | 9,0 | |

| | | | | |
|---|---|---|---|---|
| 9 | On which points?<br>*(Please encircle - more answers possible)* | 1 | Artistically | 3 |
| | | 2 | Knowledge on Innovation | 6 |
| | | 3 | Knowledge on the Fashion Industry | 4 |
| | | 4 | Positioning as Designer | 9 |
| | | 5 | (Interdisciplinary) Collaboration | 10 |
| | | 6 | Entrepreneurial Skills | 4 |
| | | 7 | International Perspective | 4 |
| | | 8 | Sharing (knowledge, skills and expertise) | 14 |

| | | | |
|---|---|---|---|
| 10 | What was the most important to you?<br>*(Please encircle - more answers possible)* | 1 Mapping the Context | 5 |
| | | 2 Mapping the 'future fashion professional' | 6 |
| | | 3 Networking | 13 |
| | | 4 Meeting Experts | 8 |
| | | 5 Individual Feedback | 3 |
| | | 6 Other:<br>– It was a great experience. More of these talks and connection.<br>– Just talking with others<br>– Meeting likeminded people.<br>– Meeting other students, alumni, getting to know the labs and their future plans. | 4 |
| 11 | Are you interested in a follow-up meeting? | Yes / No / I don't know yet | 14 × Yes |

| | | |
|---|---|---|
| 12 | Additional comments, recommendations or questions:<br>– I would like a follow up.<br>– I appreciate a lot what you have initiated, very motivating!<br>– Loved it thank you.<br>– Hope there will be a moment of finishing your future vision on fashion<br>– We have skills of design, but we need skills to make.<br>– The same topics are also taking place in other disciplines. A meta level approach to this topic would be a possibility.<br>– Thanks for organising this great workshop.<br>– Very nice. I did not expect this to be so extremely interesting and useful. I absolutely loved all of the tips, discussions and assignments we got. Great start of some very exciting times!!<br>– More time for discussions, more time in general. A 'conclusion' on how each of us can go on to work on the discussed matters. | – I really liked meeting new people that think about the same things as I do. The talks planted a lot of ideas in my head.<br>– This should happen more often!<br>– The topic could be more specific to be able to go more in depth. Could be some topic from what we already discussed. We should continue and raise more awareness of people from the same industry. Next time invite people who are not sustainable or all who are up for traditional way of fashion making, to enlighten them with our ideas?<br>– Thanks for bringing this inspirational group together!<br>– More speed-dating time please. Rotation-principle maybe. Also people who you do not expect. Now speed dates were a bit chosen, predetermined by preference. This part was amazing and should/could grow bigger. It was extremely useful!<br>– Here the boundaries meet and all contradictions exist side by side.<br>– Very nice to meet up with likeminded people and 'teaming up'. I hope there will be a follow up some day. |

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RECRAFTING CRAFT
Synergie tussen ambachten binnen het modeonderwijs aan Nederlandse kunstopleidingen

## Summary in Dutch

Binnen de hedendaagse mode-industrie worden cruciale aspecten van de mondiale productieketen kritisch onder loep genomen. Waar is kleding van gemaakt? Hoe, waar en door wie is het geproduceerd? En wat doen we met kleding zodra deze wordt afgedankt? Deze vragen hebben betrekking op het ontwerp en de productie van textiel en kleding, maar ook op de rol van het ambacht daarin. Het onderzoeksproject *Recrafting Craft* richt zich op de onderlinge relatie tussen 'mode' en het 'hoger modeonderwijs'. Op het snijvlak van deze twee werelden is er voortdurend sprake van veranderingen in betekenis ten aanzien van de begrippen 'ambacht' en 'vakmanschap' .

Het hoofddoel van dit onderzoeksproject is om tot een zodanige aanpassing van het begrip 'ambacht' te komen dat het als een wezenlijk kader voor het modeonderwijs kan gaan fungeren. In dit verband is het experimenteren met nieuwe, duurzame materialen en digitale fabricage noodzakelijk voor het realiseren van innovatieve ontwerpen en nieuwe bedrijfsmodellen. Het betoog richt zich dan ook op de vraag: hoe kunnen traditionele en toekomstige ambachten in modewerkplaatsen en modecurricula aan Nederlandse kunstopleidingen worden geïntegreerd om synergie te creëren, om zodoende modestudenten nieuwe professionele perspectieven te bieden om zich voor te bereiden op de veranderingen in de mondiale mode-industrie?

Hierbij is zorgvuldige analyse van de vastgelopen modesector van belang, maar ook een beschouwing van de modewerkplaats als onderwijsmodel. Er wordt in het bijzonder aandacht besteed aan onderwijspraktijken aan de Koninklijke Academie van Beeldende Kunsten (Den Haag) en Central Saint Martins (Londen). Daarnaast komt een onderwijsproject aan bod, georganiseerd in samenwerking met Waag Society, waarin met modestudenten en experts in een speciaal opgezet netwerk van stakeholders, de kloof tussen onderwijs en de huidige industrie wordt onderzocht. Uitgaande van concepten en begrippen die zijn ontwikkeld door de socioloog Richard Sennett, trendforecaster Lidewij Edelkoort, hoogleraar modetheorie José Teunissen ontwikkelt dit project een raamwerk voor de ontwikkeling van een gezamenlijke visie op het betreffende

onderwerp. Omdat de studenten van nu de toekomstige veranderingen in gang zullen moeten zetten, pleit *Recrafting Craft* voor een synergie tussen oude en nieuwe ambachten in modewerkplaatsen om deze verandering mogelijk te maken. Tenslotte worden er enkele uitdagende scenario's voor het modeonderwijs van de toekomst geschetst.

## Curriculum Vitae

Mascha Van Zijverden (Amsterdam, 1968) earned a degree in Fashion Design from ArtEZ Institute of the Arts, Arnhem, in 1991. After having been active as a self-employed designer, she worked for various Dutch fashion designers. In 2002 she switched to the world of art education, and became an instructor of Fashion Design at the HKU University of the Arts Utrecht. In 2004, the Utrecht Graduate School of Visual Art and Design (maHKU) hired her as Course Leader MA Fashion Design, while two years later she also became Head of the bachelor Fashion Design.

In 2009 van Zijverden returned to ArtEZ in Arnhem, where she was appointed Course Director of the renowned Fashion Masters, comprising the Master Fashion Design and the Master Fashion Strategy. Under her passionate guidance the Fashion Masters turned into two innovative, accredited curricula with an extensive international network.

Currently she participates in the Research Group of the Fashion Theory & Research Professorship (*ArtEZ Modelectoraat*) and is working on Research & Projects at the Education in Arts and Culture Professorship at ArtEZ Institute of the Arts in Arnhem. Next to her work she is member of the advisory committee *Design* of the Creative Industries Fund NL and advisor to the Fashion Design department of the *Modern International Art & Design Academy* (MIADA) in Chongqing, China.

# Colophon

*Recrafting Craft.* A master thesis submitted in partial fulfilment of the requirements of the Piet Zwart Institute for the degree of Master Education in Arts *(MEiA).* Rotterdam, the Netherlands.

Published on 17 June 2016.

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**‘My hunch is that we will see the comeback of couture as a major benefit. After all it is in the atelier of couture that we will find the laboratory of this labour of love. Suddenly the profession of couturier will become coveted and the exclusive way of crafting couture will be inspiring all others’.**

(Edelkoort, 2014)