



16° RENCONTRES
INTERNATIONALES
DU TEXTILE ET DE LA MODE

THINK TANK ON FASHION TECHNOLOGY
AND THE DIGITAL REVOLUTION

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Coordinated by **Lucas Delattre**, Professor, IFM

With the contribution of:

Pia Hazoume, Eliane Heutschi, Yoland Moutama students from the Institut français de la Mode-Start ;
Sarah Cerisel, Corentin Prune, students from Ecole 42

And the participation of **Noémie Balmat**, Clausette.

Eliane Heutschi, IFM-Start

After a BA in fashion design at the Fashion Institute FHNW | HGK in Basel, Switzerland, I deepened my knowledge of the fashion industry by experiencing the intersection of reality and creation at the German/French fashion brand Lutz Huelle in Paris.

Two years and 4 collections later, I was searching for another angle on fashion and left to work for a NGO in Peru. Working with indigenous weavers in the communities around Cusco made me realise that incredible ancestral savoir faire are dying not because of a lack of interest but because of our incapability to produce contemporary designs.

Savoir faire are often intangible but we treat them as tangible, when in reality it is only the product itself that is tangible. The savoir faire does not necessarily imply a certain aesthetic so why do they look so similar? Why do we conserve savoir faire rather than think outside the box to use the techniques for new ideas? All savoir faire have developed over time, so why don't we believe in them and adapt them so they can survive the digital revolution?

The same applies to fashion technology. Why is it that such garments are more likely to be worn in a science fiction film than real life? Often the word 'gadget' would probably be more adequate than 'garment'. We are missing a message, a purpose.

Creating something new for the sake of creating something new is about as unnecessary as it is impossible to innovate without knowing and understanding what was before.

However if we enrich technology with ancestral, intangible techniques in a similar way as biology inspires technology, I believe we will not only save ancestral savoir faire but make them evolve in unimaginable ways. Through collaborations with artisans of both digital and analogue savoir faire we will be able to overcome today's boundaries and explore the unknown. Therefore for my first womenswear capsule collection that will be launched in November 2016, I'm collaborating with Maria Lehner, a Swiss bobbin lace artisan, as well as Sarah Cerisel, a student of the 42 programming school in Paris. The possibilities are unlimited; all we need are open minds and the will and time to understand each other's expertise. We will access our incredible cultural archives and revisit the intangible knowledge to create contemporary fashion.

I don't fear computers replacing men but men thinking like computers. It would be wrong to think that technology is communication. It is just a tool, a language, but not the message itself; for this we need extraordinary human minds.

Technology challenges fashion. Technology changes the process, the communication and sales. But on the contrary fashion should inspire technology to develop new materials and new functions.

With time, both aspects will develop in spite of personal beliefs and in spite of all. I believe we have the privilege to influence how it will change.

After my studies (Université Paris X and EM Lyon Business School) I spent 6 years working for Procter & Gamble. As Brand Manager I worked at expanding into new markets in Africa. Given the lack of reliable data for this region, I opted for a more ethnographic marketing approach: by travelling throughout the continent to do in-home visits and observing women in their everyday lives, I managed to get new insights to design better-suited products and create more relevant advertising campaigns.

I am now reusing these observation and analysis skills to model women's motivations when choosing their clothes. Within the scope of IFM's START program, I am currently designing an algorithm based on anthropological principles which predicts women's clothing preferences in order to improve fashion websites' conversion rates.

With the booming of fast fashion these last years (Zara launches around 30 000 products each year) and the democratization of e-shops (such as Shopify delivering turnkey websites) shoppers are faced with a multitude of clothes available online.

Nowadays, all the e-shops are standardised (white background, catch-all models) in order to allow for a more efficient shopping and therefore make it bearable for the user to flip through the 40+ pages of clothes that are put forward in his/her quest for the perfect pair of jeans. But this sterilisation of e-commerce is missing one of the most fundamental dimensions of shopping: hedonism. Yet today, beyond mere efficiency, shoppers are also looking for fantasy and relevance.

So we are entering into what we call the « hyper qualified content era ». The stakes for the professionals now lie in proposing a structured and filtered offer with an intelligent reading of the collected data. Yet, most algorithms today are based on models which do not take into consideration the specificities of clothes and what they represent in the user's mind-set. Most of them are based on socio demographic data and past consumption behaviours. Applied to fashion, they limit potential recommendations to a narrower stylistic perimeter. However, algorithms do deliver on their promises in other sectors (35% of goods sold on Amazon were initially suggested to the user by the system). Now it's just a question of finding the right way to adapt these tools to the fashion world.

To do so, it is crucial to enable and foster mixes across sectors (either through recruitments or adopting new methods) to enrich and adapt the tools.

There is a human depth in fashion that current algorithms are struggling to capture. Stylistic preferences and affinities towards brands can be easily identified but are not sufficient. In order to get to a recommendation that can be as relevant and welcomed as the one a good friend would give, we have to supplement the existing data with an understanding of each woman's intrinsic motivations; these would give us the necessary nuance so specific to fashion and enable us to go further by deciphering the values that drive individual choices. It is all about understanding what a woman is trying to express through the clothes she chooses to wear (differentiation, conformism, standing out ...). Looking at data through a human prism allows to get more intelligent engines and consequently, live an experience that is richer, more satisfying and more varied (surprising the user to seduce her).

Therefore, I believe that proper data usage can allow to bring back sensations to online shopping. Used properly, it could even become a sense as such and capture what is tacit in the shopper's behaviour. Quoting sociologist Dominique Cardon: « Predictive algorithms are not telling you what people say they want to do but what they actually do without necessarily wanting to say it ». Very precious to better anticipate!

We are students at 42, a computer school. For those who haven't heard of it yet, this school was created 3 years ago by Xavier Niel. It is quite unique in view of its pedagogy.

In fact, there are no teachers, no classes and each student moves at his/her own pace. The program is split up in projects that we must carry out so as to get "experience scores" that will allow us to improve our "level" and move forward to the next project. Another noteworthy point on this school is its selection process: it's totally opened while being very demanding.

The school is opened to all with no diploma or revenue prerequisites. But the admission exam – The Pool – is quite unconventional.

One month of intensive work "13/7" where we study computer programming and where mutual support plays a very important role. What is remarkable is the multitude of profiles selected.

From the student fresh out of high school like Corentin Prune, to the young drop out who left the school system very early, from students from "grandes écoles" to workers in professional retraining. From math geeks to artists. Nobody has followed the same path and that's what brings high value to this school.

I joined 42 without any knowledge in the computer field and I discovered a new subject (in the plastic art sense of the word). I immediately drew an analogy with fabric. A computer program is like a pattern (we use the word pattern in fashion as well as in the digital field). I create loops, increments and diminutions, and I see my code take shape. I've replaced thread with numbers. I no longer work with fabric cards that I assemble but rather with bits of code that I reuse. So I create new models just like with fashion or with any other art form.

Since the end of the 90s, we've entered in a new digital era. The digital field has become unavoidable. The many successive crisis have pushed society towards finding new development models. We are talking of the uberization of the economy, of the emergence of a third power. Digital technologies find their way between the producer/creator and the end customer, re-formatting some of our rules in their wake. These constraints impose revisiting our approaches, not only when it comes to production but also in creation. The Fashion Tech then brings together digital technologies and fashion.

We don't want to oppose digital technologies to creation but rather make them intersect.

Today, we consider developers as technicians. I think that in some instances, the name "artisan" would fit better. In Eliane Heutshi's project (savwarfer), the creator integrates the coding aesthetics directly in her work; she uses it as a source of inspiration and considers the developer as an artisan. He or she is no longer a tool but a collaborator. Computers, digital technologies and the mastering of these tools can be a form of art. You cannot separate the creator from his or her artisan.

More and more digital artists are emerging thanks to new technologies allowing them to express themselves fully in their artistic approach.

Following this logic, we can't oppose computer technologies and creativity. Electronics and digital technologies are the new media of the future.

Yoland Moutama, IFM-Start

As an autodidact, I started to work professionally in the digital sector as of 2009. After spending a year in a small Parisian webmarketing agency specialized in search engine optimization, I joined the new digital team of Le Monde in 2010. During a year, I took care of audience acquisition at lemonde.fr and huffingtonpost.fr (ex-lepost.fr). In 2011, I took a year off to discover Japan. Upon my return in 2012, I joined the digital analytical team of Havas Media and stayed with them for a year and a half. From 2013 to 2015, I took part in the digital conversion of AXA within the « Digital Agency », a team specially created and managed by Yves Caseau. During this period, I was responsible for the international strategy « Digital Analytics and Effectiveness », which relied on data capture and interpretation based on a « customer centric » approach. I joined IFM's Start program in 2015 and am currently creating my own company.

The mutation of industry in the wake of the technological advances of the last decades is undeniable. It should be considered as a new industrial revolution. Obviously some habits are changing but an industry that goes digital shouldn't limit itself to using neologisms while sticking to a conservative attitude that is just a mere reflection of its incapacity to face the momentum and depth of these changes.

The trend that leads to adopt fashionable good practices or to try to emulate the innovator of the moment, is a trap. Innovation must support the global marketing strategy and the best suited practices will follow, the innovation priorities will be set, all this in a transversal and coherent effort. The right questions must of course be asked regarding the value this brings to potential clients, how this value is captured and which innovation should be envisaged. The design of the products must also evolve to stay competitive. Iteration and agility!

I'm convinced that creation stems from excitement and emotion. However, the choice of technologies to achieve this remains in the hands of the creators.

The threats are much more of an internal than an external nature: the lack of a digital culture and adapted training, the development of basic technological infrastructures that is too slow, the lack of a vision and strong commitment of the industry. Innovation and creation must be able to nourish each other, in a mutual and sound way.

All revolutions must systematically pass through three steps: the ridicule, being considered as dangerous and then being considered as obvious.

Noémie Balmat, Claurette

After starting in the world of advertisement agencies, Noemie founded Claurette.cc in 2014 and has since collaborated with fashion brands as consultant in innovation. She has taken part in several Fashion Tech events as panellist such as the WeAreAble Festival organised by Showroom Privé at la Gaîté Lyrique last March. She also works for the crowdsourced innovation media Soon Soon Soon since March 2016.

CLAUETTE.CC A CREATIVE LAB TO EXPLORE TOMORROW'S FASHION

The on-line magazine detects and analyses the influence of technology, science and creative industries (art, food, design) on fashion. It deciphers and anticipates on how these creative domains will eventually enrich fashion in an aesthetical and functional manner, while improving its sustainability and accountability as an industry.

The C.LAB (creative lab) accompanies fashion brands in their innovation process through different collaborations.

VISION: THE FASHION TECH ACCORDING TO CLAUETTE

Major source of innovation for fashion: a few examples of revolutions already on-going today and set to gain momentum and transform fashion.

- 3D printing : more than a gimmick technology, 3D printing is revolutionising all sectors, fashion included. How? Beyond the more visible applications and the creative opportunity offered by the technology (thanks to the possibility of creating complex shapes since it no longer needs moulds to create fashion accessories), 3D printing is set to revolutionize industry in its production chain: we think of the example of Nike who joined in with Flex to use 3D printing in its production chain which should allow to save 1 billion dollars a year just in scraps of materials that no longer exist with 3D printing. We also think of jewellers like Gemmyo who use 3D printing to allow their clients to get personalised jewels at an affordable price.
- Virtual Reality : many today already consider VR as a revolution comparable to that of the birth of the cinema. This says a lot! For example:

In communications: it is easy to imagine the possibilities offered by this technology (creation of new totally immersive experiences, be able to immerse the consumer in the universe of the brand– and here, the word universe takes a full other dimension!) VR offers a formidable virtual relay towards reality materialised by virtual reality installations in shops: at Topshop for example where randomly selected women clients got to see a fashion show in real time from the boutique's window; or at Dior Parfums, where a VR headset printed in 3D was made available to clients to view the backstage makeup sessions.

In design: the Google Tiltbrush example, a VR artistic creation tool, opens to new ways of designing clothing by being totally immersed in one's own creative universe... We can imagine eventually coupling this technology with that of holograms to be able to "touch" these virtual creations.

- Artificial intelligence: it's the capacity for a computer to solve problems by itself. Today, there are a few examples of AI applications in fashion whether directly with the client via the famous chatbots (automatised or semi-automatised one-to-one client communication tools) already tested by Sephora or H&M, or via e-commerce recommendation algorithms like Threads... or in the back office with inventory and production management ...

- Bio-technologies: progress made in research in bio-technologies is starting to hit fashion. An example with the MIT bioLogic project: in collaboration with New Balance, the MIT integrated a bacteria present in rice and whose behaviour allows a piece of clothing to adapt to the body temperature of the person wearing it according to the skin moisture...

Other noticeable example: designer Suzanne Lee created her leather BioCouture lab based on the culture of bacteria. Revisiting the concept of technology

A major stake: make technology evolve from the simple concept of "solution to a problem" to a genuine "source of inspiration opening the way to infinite creative possibilities".

This motivation led to the creation of the CTT, standing for Creative Tech Tank (inside which Noemie is responsible for the fashion sector within the Board): a Think Tank at the frontier of creation and technology.

Claurette, in collaboration with the CTT, wishes to contribute to bring this shift in the fashion industry, help it open up to these profiles so as to better apprehend the new innovation based opportunities. Dedicated events, a reflexion on the creation of new training programmes in collaboration with the best art schools and other collaborations are under preparation!