

# The art and technic of dressing: automatism and consumerism

## Abstract

This article examines the art and technique of dressing, and emphasizes two sets of conflicts: the industry and the consumer; automatism and consumerism. It presents the philosophical ideas of Jacques from the 1950's to talk about technique and automatism, and other authors to discuss textile consumption and sustainability. Innovations and the intensification of the presence of machines, intelligent systems and media have contributed to the increase in the supply of clothes and fabrics, the acceleration of fashion, and the production of textile waste, which point to benefits and harms that society needs to learn to deal with. The Planet cries out, and we need to respond!

**Keywords:** textile waste, industrial automation, textile consumption, sustainable development

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## Introduction

Reality is quite flexible and dynamic, and that is why we believe that principles such as responsibility, sustainability and ethics are part of the propositions of this study. Interdisciplinary and multidisciplinary are ways of reinforcing local and global thinking, and can encourage cities and their structures to seek sustainable development. We live the advent of the knowledge society as well, considering its growing the importance of organizations that are changing both the way they value this aspect and how they deal with their human resources, adopting an approach aimed at managing the individual and corporate resources. "The dissemination of knowledge is considered crucial for establishing a knowledge society,<sup>1</sup> emphasizing principles of justice, equality, and non-discrimination".<sup>1</sup>

As reflect Boons et al.,<sup>2</sup> sustainable development requires integral changes in systems innovations. In companies, sustainable innovation is a process that considers environment, society, finances aspects, research and development, and commerce. This applies to products, services and technologies, as well as to new business and organizational models".<sup>2</sup> It means to change the whole systems to arrive to 'win-win' for all.

The contemporizing moment, plenty of technics and technologies, provides a substantial number of new concepts and tools to explore new and old materials and to create development strategies.

Furthermore, there are also countless new possibilities for the biological creation of new raw materials and materials, through genomics and other omics, as well as the new discipline of synthetic biology. Therefore, we have a fertile scenario for innovation.<sup>3</sup>

The reality for the production of fabrics and clothing for billions of people on the Planet is no different. Regarding the ways of producing, clothing has been an essential way to understand the hierarchies that humanity has established, protection needs and aesthetic preferences. In this article, we seek to understand the proposals of the philosopher Jacques Ellul, which shed light on the understanding of automatism, being a relevant means of critical reflection for the art and technic of dressing. The automatism of technology imposes itself on humanity, shapes production and consumption actions, and generates economic, socio-environmental, cultural and political impacts.<sup>4</sup>

## Technologies in the art and technic of dressing

Until the 14th century, clothes were in testaments and inherited by rich and poor alike. Considered valuable and durable, especially because of the techniques and technologies of spinning, weaving, dyeing and sewing, the clothing processes were time-consuming. Artisans mainly used their own hands and tools to develop and project their sewing patterns, reproduced during generations, according to the culture and territory of each region.

The ways of dressing and the use of technics and technologies reflected more intense on social classes, privileges and professions from the middle Ages onwards. The term fashion emerged during the 15th century, with the presence of artisans, the variety of fabrics, craft specialties and mercantilism. Clothes were made to measure in ateliers, and tailors improved modeling and sewing techniques and technologies.

With the Industrial Revolution, the invention of the sewing machine in the 19th century and the mechanization of work, there was a shortening of the clothing production process, consequently increasing its availability and supply. For Hobsbawm,<sup>5</sup> cotton manufacturing was the trigger for the industrial revolution. It was a raw material used in a mixture with linen, and competed with wool and silk manufacturers. "The cotton factories of the Industrial Revolution were basically spinning houses (and establishments for carding cotton, before spinning it).<sup>5</sup>

The concept of ready-to-wear, that is, clothes ready for use, emerged between the 1940's and 1950's, featuring large-scale production, with varied and standardized numbers, and democratizing access to fashion. The computerization of the textile sector, which began in the 1980's, further accelerated production and streamlined work.<sup>6</sup> In the 21st century, fast fashion dominated the fashion market, described by Guimarães and Ribeiro<sup>7</sup> as an aggressive model of mass production that offers current trends at competitive prices. Clothing brands like Zara and H&M quickly (re)create versions of trends resulting in shorter fashion cycles and constant stock renewal.

The production organization started to take place in a network, based on collaboration between companies, suppliers and partners due to the need for agile supply chains. This enables an even faster

response to consumer trends; however, questions arise about the clothing quality and sustainability. The speed acceleration generated what, in contemporary times, we call ultra-fast fashion. As an example, we mention the Chinese brand Shein, which features low prices, fast deliveries, online sales, aggressive marketing, constant discounts, and the use of artificial intelligence to determine what is going to be manufactured.

The ultra-fast fashion production model assumes the automation characteristic, integrating technologies to maximize productivity, communication, logistics and, consequently, the low durability of products. This productive standardization goes hand in hand with the phenomenon of hyper consumerism and generates a serious problem for the Planet population.

### Jacques Ellul' ideas

Jacques Ellul, French sociologist, philosopher and theologian, dedicated part of his work to techniques studies and their influence on society. He defends the thesis that technology constitutes an autonomous reality. Technique means mechanization itself, the search for the best and most efficient way of carrying out any task. It is not just a set of tools or methods, but also a cultural and social force that imposes itself and shapes human existence. The author distinguishes current technology from past technology in its relationship with society. Until the 18th century, technical activity was neither an object of occupation nor a social concern. The technical context was local, and there was a diversity of approaches to achieve the same results. The instruments and tool created and adapted for the professionals, varied according to the artisan's creativity (Ellul, 1954).

Modern technique has subordinated itself to the search for efficiency, abandoning the principles of transmission generational knowledge. Jacques Ellul places the Industrial Revolution as a milestone in this transformation, identifying five factors that contributed to technological progress in the 19th century: accumulated previous experience, population expansion, and the economic environment in flux, the plasticity of the social environment and the use of technology to solve problems and improve everyday life (Ellul, 1954).

The global expansion of technology has resulted in the creation of interconnected civilizations, oriented towards technical choices that standardize choices and identities. Jacques Ellul identifies striking characteristics of automatism, namely rationality, artificiality, automatic choice, self-feeding, uniqueness and universalism. Such qualities interconnect with each other and shape human existence. He explains that presumption of rationality by technical decisions guided in the search for maximum efficiency and rationality. Artificiality, in turn, is closely-linked to automatism present in all spheres of life, not limited to machines alone.

Automatic choice is related to the impulse that biased the options without considering the subject's subjectivities. Technical self-feeding not only operates automatically, but also feeds on itself, so technical advances stimulate others in different domains. This process stimulates others and continually unfolds like a spiral drawing. However, paradoxically, as the technique advances, its importance takes precedence over the individual. The uniqueness and interdependence of the technique means that global requirements prevail over particular cases, and are intertwined in a determining and interdependent way. The universalism recognizes that there are no geographical boundaries for technology, which is why it has a global reach.

These Ellul's ideas about technique characterize the autonomous reality that express human existence. In fashion, this is reflected in

the way dressing techniques have moved from manual and artisanal processes to automated and industrialized methods. Machines and systems dominated clothing production, reducing human intervention and artisanal skill. Automation emphasizes the search for efficiency and maximizing productivity, manifested in the rapid production of clothing on a large scale, observed in fast fashion and ultra-fast fashion models. Brands use technologies to speed up the production cycle, prioritizing quantity over quality.

Observed in fast fashion and ultra-fast fashion models, automatism emphasizes the search for efficiency and maximizing productivity, materialized in the rapid manufacture of clothing using labor and capital to produce more and more products. It prioritizes quantity, volume, costs, technology, marketing and finances. Niinimäki et al.<sup>8</sup> explain that fashion has a high cost for environment, taking into account increase in clothing consumption and textile production.

The fashion industry is also a major consumer of water (79 trillion litres per year), responsible for ~20% of industrial water pollution from textile treatment and dyeing, contributes ~35% (190,000 tonnes per year) of oceanic primary microplastic pollution and produces vast quantities of textile waste (>92 million tonnes per year), much of which ends up in landfill or is burnt, including unsold product.<sup>8</sup>

Automation also contributes to the throwaway culture, in which produced clothes, used for a short scope are discarded quickly. The fashion trends' speed encourages consumers to treat clothing as disposable goods rather than durable or valuable items. This reflects Jacques Ellul's criticism of how technology influences society without people questioning its consequences. We align ourselves with Ellul's idea that technology automatically shapes human choices and trajectories, and abandon manual skills and traditional knowledge of clothing, becoming a rare knowledge. In addition, to be at the mercy of machines and technology declines interest for handcrafted performance.

Simultaneously, the fashion production organization has become an interdependent network, with collaboration between companies, suppliers and partners on a global scale. The dynamic needs an agile supply chains and the integration of technologies, which infers, in Ellul's view, about the interconnection of techniques in contemporary society. These relationships highlight how revolutions in techniques, technologies and the art of dressing are interlaced with the characteristics of automatism, reflecting a society that values efficiency and mass production, often to the detriment of quality, sustainability and human work.

With this background, the result is a cycle in which used clothes for a few time is discarded prematurely, furthermore discarded without even having been used. There is a strong line between throwaway culture and the scarcity of stimulus for repairs. Consumers are rarely encouraged to repair their clothes. Additionally, the professionals with technical skills and technologies to perform these repairs are becoming scarce.

### Textile consumption

Basic consumption has advanced towards hyperconsumption, rooted in the feeling of hyperindividualism, in which people find emotional satisfaction in the act of consuming.

A relevant argument to understand this phenomenon comes from Lipovetsky's way of thinking the subject (1987). He declares that we live in the era of hypermodernity, filled with an emptiness that generates hyperindividualism, hypermarcissism and a hedonism. In reality, individualism suggests not worrying about your fellow human

beings, not to mention the Planet. These ephemera sensations arise on people's choices and consumption. According to the author, "the great social propagation of jeans says nothing more about this point than this: fashion always combines individualism and conformism, and individualism only manifests itself through mimicry".<sup>9</sup>

It is interesting to highlight that Lipovetsky<sup>9</sup> tells us that fashion has a history that has gradually changed over time, and an example of this is denim textile. The creation of denim dates back to the 18th century, and was a utilitarian fabric in sailors' uniforms. However, nowadays, this entire social historical framework is not preserved, but the use of this clothing links mimicry, models, and admiration, besides what one wants to imitate, or feel the same way as what one sees.

We emphasize that the concept of individualism links narcissism to fashion's culture. Fashion is changing and has an avid speed, making consumers eager to keep up, and as a result, they seem to be racing against time to feel happy. The concept of happiness seems to be associated with superficiality, meaning that the consumer looks illusorily to reach the peak. After the conquest, new forms of seduction appear, used by marketing, which suggest that happiness request the possession of other objects, such as clothes, accessories, telephones, technological devices, and so on... Such points define an idea of modernity that, according to Hall,<sup>10</sup> is "by definition, a society of constant, rapid and permanent change".

In the face of hyper, it is useful to look at the diversity for understanding the word consumption. There are authors who expand the meanings by adding complementary adjectives: green consumption, conscious consumption and responsible consumption.<sup>11-15</sup> These concepts emerge to express, above all, the problem of waste from automated textile production and consumer demand in the hyperconsumption society.

The relevance of reflecting on the environmental impacts caused by fast fashion and ultra-fast-fashion and waste disposal. Cardim's research<sup>16</sup> highlights the lack of focus on the degradation of natural resources through textile consumption and hyperconsumerism. In Sousa's<sup>13</sup> analysis, she warns us that, sometimes, a piece of clothing lasts very little and is quickly discarded. This comes from changes in fast fashion, industrial movement and a lack of rigor, quality and durability.

The movement motivates new acquisitions. This evokes, according to Silva,<sup>11</sup> the necessity to attribute values to ethical and sustainable behaviors. According to her, fast fashion is a business model, started in Europe that has spread across the planet, without considering the socio-environmental and cultural issues arising from these practices. Fashion phenomenon's root comes from constant change of appearances and an unbridled passion, an immoderate enthusiasm for the new with an end in itself. The search for transformation which, in addition to social differentiation, has as its central objective the desire to constantly show oneself different for the simple pleasure of being different. "Fashion only takes shape when change is sought for its own sake, and it occurs frequently [...]. She is irrational. It consists of change for the sake of change".<sup>17</sup>

In addition, the production chain and retail trade are aligned with the fast fashion movement, forming a cycle of purchase, sale and disposal that is inappropriate from a planetary socio-environmental perspective. There are alternatives to curb these consumerist shifting, such as textile reuse and recycling, and through the principles of circular economy in the production system.<sup>11-13,15,16,18</sup>

The Circular Economy model is an economic concept that emphasizes the principles of sustainability, and the proposal is that

the generation of waste in the industry serves as raw material for other industries or for the industry itself. In product development, actions can be planned in order not to generate waste.<sup>16</sup>

According to the aforementioned researchers, in the circular economy, the use of waste materials generates profits and brings solutions to problems in the processes. In Silva's study,<sup>11</sup> she presents the Sotaque Art project. The continuation of the project depends on a partnership and integration between industrial and artisanal productions. There are strategies proposed by researchers for the textile industry through social innovation, socio-environmental responsibility, sustainable fashion, ecodesign and artisanal textile production.<sup>11,12,14,19,20</sup>

Avila's research<sup>20</sup> found that consumers are engaging gradually, in relation to fashion products. Advertising and media information are contributing to this, highlighting the importance of reflection before purchasing. Sousa<sup>13</sup> reinforces that changes come from consumers, who can refuse brands that are not committed to sustainability. In this way, they are exercising the rights of 21st Century citizens, and agreeing with the continuity of life on the Planet.

## Final ideas

Clothes have always been symbols of protection, social distinction and security. They have characteristics that reflect and shape the existence of human beings in society. Dressing techniques and technologies have changed throughout history, from artisanal production to automation, associated with technological innovations and automatism. Dressing techniques and technologies have changed throughout history, from artisanal production to automation, associated with technological innovations and automatism. Consequently, we have two important points in the art and technique of dressing. On one side, industry, and on the other, textile consumption. Conflicts are also located on two levels: automatism and consumerism. These are the dilemmas of contemporary society.

If these were not enough, we have the issue of time, which has accelerated with information and communication technologies. That phenomena placed things in the clouds and the wind scattered them everywhere. The transition from fashion to fast fashion and ultra-fast fashion marks this idea of the past, present and future happening simultaneously. The art of dressing, the technique, which for Jaques Ellul is autonomous, represented by machines, technological systems, artificial intelligence and media, incorporated into clothes, increasing their productivity and disposability. It removed the expertise of artisans and tailors to move them to the systematization of knowledge in machines. The art of dressing is not so close to the consumer, but rather to the phenomenon of fashion, the proposals and offers of production models, techniques and technologies.

Textile consumption increased on a large scale and brought socio-environmental problems. The initiatives are still timid, even though research is advancing. We are all responsible, and we need to work together to achieve the desired balance, which the Planet knows so well and is signaling to us every day. Ethics and responsibility are values that can help us become citizens who defend fashion, beauty and sustainable dressing.

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## Conflicts of interest

The authors declare that there is no conflict of interest.

## References

1. Znagui Z. Examining factors influencing the emergence of a knowledge society: an explorative study. *Journal of e-Learning and Knowledge Society*. 2024;20(2):28–41.
2. Boons F, Montalvo C, Quist J, et al. Sustainable innovation, business models and economic performance: an overview. *Journal of Cleaner Production*. 2013;45:1–8.
3. Galembeck F. Inovação para a sustentabilidade. *Revista Química Nova*. 2013;36(10).
4. Cupani A. Capítulo 9. A questão do determinismo tecnológico. *Filosofia da Tecnologia: um convite*, 3rd edn. Florianópolis: Editora da UFSC, 2011:201–226.
5. Hobsbawn EJ. Da revolução industrial inglesa ao imperialismo. Rio de Janeiro, Forense-Universitária; 1969.
6. Braga J. História da moda: uma narrativa. 3rd edn. Editora Anhembi Morumbi, 2004.
7. Guimarães MP, Ribeiro R. Os processos de identificação social na moda: do luxo ao fast fashion. ESPM-Rio. *Diálogo com a Economia Criativa*. 2013;8(22):132–145.
8. Niinimäki K, Peters G, Dahlbo H, et al. The environmental price of fast fashion. *Nature Reviews: Earth and Environment*. 2020;1:189–200.
9. Lipovetsky G. O Império do efêmero – a moda e seus destinos na sociedade moderna. São Paulo: Companhia das Letras; 1987.
10. Hall S. A identidade cultural na pós-modernidade. 11th edn. Rio de Janeiro: DP&A; 2006.
11. Silva U. Os caminhos da moda ética no Brasil. 2018. Dissertação (Mestrado em Artes Visuais) – Escola de Belas Artes, Universidade Federal da Bahia, Salvador, 2018.
12. Silveira LM. da. Inovação Social e Sustentabilidade na moda: proposta de solução habilitante para reaproveitamento de resíduos têxteis. 2019. Dissertação (Mestrado em Design) – Universidade do Vale do Rio dos Sinos, Porto Alegre, 2019.
13. Sousa Thaís MP de. Estudo sobre ações de desenvolvimento sustentável na indústria de confecção do Distrito Federal. 2019. Dissertação (Mestrado em Design) – Universidade de Brasília, 2019.
14. Tirloni Georgio H. Caracterização e desenvolvimento de um composto de polietileno verde reforçado com resíduo têxtil. 2020. Dissertação (Mestrado) – Universidade Federal de Santa Maria, 2020.
15. Santos WI. G. dos. Economia circular e economia criativa na gestão de resíduos sólidos: interfaces e contribuições na cadeia têxtil. 2021. Dissertação (Mestrado) – Faculdade de Saúde Pública, Universidade de São Paulo, São Paulo, 2021.
16. Cardim RA. Aplicação da economia circular para obtenção de lucro na indústria do vestuário. 2020. Dissertação (Mestrado) – Universidade Estadual de Maringá, Instituto Federal do Paraná, Umuarama, 2020.
17. Debom P. Moda: nascimento, conceito e história. *Veredas da História*. 2018;11(2):7–25.
18. Andrade Lucília L. de. Minimização dos impactos ambientais causados por peças do vestuário descartadas pós fabricação: uma proposta de modelo de negócio e plataforma web para o polo confeccionista. 2020. Tese (Doutorado em Tecnologia Ambiental) – Universidade de Ribeirão Preto, Ribeirão Preto, 2020.
19. Kauer R. Avaliação da incorporação de resíduos têxteis em polímero de SBS. 2018. Dissertação (Mestrado em Tecnologia de Materiais e Processos Industriais) – Universidade Feevale, Novo Hamburgo, 2018.
20. Ana Paula SA. de. Diagnóstico de trajetórias empresariais: práticas mais sustentáveis relacionadas à geração de resíduos têxteis sólidos. 2019. Dissertação (Mestrado) – Centro de Artes, Universidade do Estado de Santa Catarina, Florianópolis, 2019.