DRESSING THE POSSIBLE FUTURES: THE BODY AND DRESS IN SOCIAL SCIENCE FICTION NARRATIVES

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ETHICAL DECLARATION

I hereby declare that I am the sole author of this thesis and that I have conducted my work in accordance with academic rules and ethical behavior at every stage from the planning of the thesis to its defense. I confirm that I have cited all ideas, information and findings that are not specific to my study, as required by the code of ethical behavior, and that all statements not cited are my own.

Name, Surname:
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18 July 2023

ABSTRACT

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In this dissertation, science fiction literature is identified as ‘an experimental laboratory’ where literary speculations as to the material forms and social practices of possible futures might offer insights into the role of design in constructing an alternative vision of the world. The research examines how speculative visions of the future in the selected science fiction narratives are constructed through the body and dress in particular and to what extent these constructions are informed by the social imaginary of the culture or era to which they relate. This study argues that science fiction discourse, whose affinity with critical theory is emphasized by Carl Freedman, provides a fertile ground for discussing the limits of the human body and the social functions of the dress by addressing the sociological dimensions, biopolitical consequences, and ethical dilemmas of social changes brought by technological progress. With this claim, the research examines how the collective traumas of different stages of industrialization are represented in literary texts through the portrayal of body and dress on an imaginary level. In this context, eight novels

(*Looking Backward: 2000-1887* (1888), *News from Nowhere* (1890), *The Time Machine* (1895), *We* (1924), *Brave New World* (1932), *Nineteen Eighty-Four* (1949), *Neuromancer* (1984), The *Windup Girl* (2009)), respectively illustrating the visions of pre-industrial, industrial and post-industrial societies about the future in fiction were analyzed in three sections with the close reading method.

Keywords: body-technology relationship, dress, science fiction literature, critical posthumanism, future imaginaries

ÖZET

MUHTEMEL GELECEKLERİ GİYDİRMEK: SOSYAL BİLİM KURGU ANLATILARINDA BEDEN VE GİYSİ

Tekcan, Elif

Tasarım Çalışmaları Doktora Programı

Tez Danışmanı: Dr. Öğretim Üyesi Emre GÖNLÜGÜR

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Bu tez kapsamında bilim kurgu edebiyatı, muhtemel geleceklerin maddi biçimleri ve sosyal pratiklerine ilişkin edebi spekülasyonların, alternatif bir dünya vizyonunun inşasında tasarımın rolüne dair içgörü sunabilecek 'deneysel bir laboratuvar' olarak tanımlanmaktadır. Yapılan araştırmada, seçilmiş bilimkurgu anlatılarında yer alan geleceğe dair spekülatif öngörülerin, özellikle beden ve giysiler aracılığıyla nasıl inşa edildiği ve bu kurguların, ilişkili bulundukları kültür veya dönemin toplumsal tahayyüllerinden ne ölçüde beslendiği incelenmektedir. Bu çalışmada, Carl Freedman tarafından eleştirel kuramla yakınlığı vurgulanan bilimkurgu söyleminin, teknolojik ilerlemenin getirdiği toplumsal değişimlerin sosyolojik boyutlarını, biyopolitik sonuçlarını ve etik ikilemlerini gündeme getirerek insan bedeninin sınırları ve giysinin toplumsal işlevlerini tartışmak için verimli bir zemin sağladığı savunulmaktadır. Bu iddia ile araştırma, sanayileşmenin farklı aşamalarında yaşanan kolektif travmaların edebi metinlerde beden ve kıyafet tasvirleri aracılığıyla imgesel düzeyde nasıl temsil edildiğini incelemektedir. Bu kapsamda sırasıyla sanayi öncesi, sanayi ve sanayi

sonrası toplumlarının geleceğe dair vizyonlarını bir kurgu metin içinde tasvir eden sekiz roman (*Geçmişe Bakış: 2000-1887* (1888), *Hiçbir Yerden Haberler* (1890), *Zaman Makinesi* (1895), Biz (1924), *Cesur Yeni Dünya* (1932), *Bin Dokuz Yüz Seksen Dört* (1949), *Neuromancer* (1984), *Kurma Kız* (2009)) üç bölümde, yakın okuma tekniği ile analiz edilmiştir.

Anahtar Kelimeler: beden-teknoloji ilişkisi, giysi, bilimkurgu edebiyatı, eleştirel posthümanizm, gelecek tahayyülleri

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CHAPTER 1: INTRODUCTION

This thesis explores the representations of the body and dress in seminal science fiction narratives and aims to understand how they have become the subject of future-oriented thinking at certain critical historical junctions. This study suggests that science fiction can generate a fertile ground for discussion as an experimental laboratory, which provides systematic speculative knowledge concerning the future of everyday life from a critical point of view. Since its early examples, science fiction literature has revealed that science and technology are not the only phenomena that shape the history of humanity, but the very notion of human itself, together with its conceptual and physical boundaries. Therefore, the speculative ideas produced in the history of science fiction do not only draw parallels to the history of industrial revolutions but also the history of different humanisms (humanism, transhumanism, posthumanism, etc.). In this study, it is argued that all humanisms until now suggest different ideals on humanity because science and technology expand our knowledge of the universe and change how we make sense of the world. Accordingly, the cumulative knowledge of humanity continuously transforms how we define and position ourselves in relation to other things and beings.

Today, as designers, we need narratives that critically examine how current technologies are about to transform the association between humans, machines, and the world by considering new intersubjective relationships that will emerge between them. However, in our time dominated by market economies, future narratives influencing the collective imagination are shaped around the visionary products and systems developed by multinational technology corporations. These corporations use storytelling as a strategic tool of marketing. The corporate visions are conveyed to a global audience through advertisements, news, digital platforms, and broadcasts of mainstream media organizations. With the spread of these visions, the companies confine people's imagination to what they can release in the market, and in that way, they secure the demand for their enterprise. However, their profit-oriented technological utopianism, which shapes collective imagination, lacks the critical perspective needed to anticipate the possible dangers of new technologies. At this stage, there arises a need for alternative future narratives that will constitute a ground for a fruitful discussion regarding the human-technology relationship.

In the dawn of the posthuman turn, critical narratives gain added significance as we approach a future where humans have the potential to shape their own evolutions because the humans' ability to enhance their minds and bodies also carries the risk of what Katherine Hayles terms a posthuman nightmare: "*a culture inhabited by posthumans who regard their bodies as fashion accessories rather than the ground of being*" (Hayles, 1999, p. 5). Hayles suggests that, in the immediate future, the human body may become increasingly susceptible to manipulation by capitalist industries, which benefit from people's lack of self-confidence and self-love.

1.1. Research Aims and Questions

This study aims to investigate how and to what extent humanist/trans-humanist/posthumanist ideals influence the future imaginings of the body and the way it is clothed concerning technological and scientific advancements of the ages driven by successive stages of industrial growth in the modern period (described as the first, second and the third industrial revolutions, referring respectively to the Industrial Revolution of the 18th century, progression of mass-production in the late-19th century and the Digital Revolution of the mid-20th century). It is argued that the future possibilities projected by science fiction narratives provide a fertile environment where the limits of the body and the social functions of dress can be discussed. Within the framework of posthuman discussion, the study explores the changing future ideals of the human body by acknowledging 'human' as an open notion that needs to be considered in relation to technology and nature. With this intention, the study aims to answer the questions listed below:

Main Question: What role do body and dress assume in literary explorations of the future of human existence? To what extent are the literary portrayals of body and dress in science fiction narratives informed by the social imaginary of historical periods marked by the different stages of industrial progress?

SQ 1: How does the human body evolve, enhance or degenerate in the selected science fiction narratives, and how much is this change affected by the notions of 'human' and 'progress' that prevailed in the period?

SQ 2: Are there specific motifs that continue to surface in science fiction narratives of different periods in defining 'human'? If so, to what extent do these motifs relate to the fundamental concepts of the posthuman discussion?

SQ 3: What are the social, historical, and technological bases for the literary depictions of the dress in science fiction narratives, and how are these literary portrayals conveyed via material references to design elements (form, color, material, etc.)?

SQ 4: How does dress contribute to the potential of science fiction as an instrument for social commentary, and how does this critical capacity influence our conception of dress?

1.2. Research Methodology

This study employs a blended approach, integrating close and distant reading, a method based on "*two scales of analysis work in tandem and inform each other*" (Jockers, 2013, p. 26). In this study, distant reading is used to divide science fiction chronology into meaningful and coherent categories, specifically focusing on how it is affected by the different stages of the industrial revolution. The following chapter will explain in detail how this method is used to identify distinct periods and categories of books within the science fiction genre (see chapter 2.4.1.2). Conversely, close reading is the primary method used in this investigation, taking precedence in the comprehensive analysis of the selected novels.

Close Reading Method

The close reading method is a frequently used analytical tool in literary studies. Barry Brummett defines the close reading method as a "*mindful, disciplined reading of an object with a view to deeper understanding of its meanings*" (Brummett, 2010, p. 9). In this definition, the word 'object' substitutes a variety of mediums, including texts, visuals, or even actions implying a narrative. In this research, the object is the phrases and passages that describe the 'body' and 'dress' in the selected science fiction novels. Here, 'dress' as a general term refers to body modifications (e.g., hair, skin, nails, muscular/skeletal system, teeth, etc.) and body supplements (e.g., enclosures, attachments, and handheld objects/accessories, etc.) by giving references to Mary Ellen Roach-Higgins and Joanne B. Eicher's (1992) definition. Higgins and Eicher

describe the ‘dress’ as a “*gender-neutral*” noun (Roach-Higgins and Eicher, 1992, p. 2) which they consider to be more accurate and comprehensive than the relevant terms -such as “*appearance, adornment, apparel, clothing, costume, and fashion*” (Roach-Higgins and Eicher, 1992, p. 3)- that have been suggested as alternatives.

Within this research, the texts used for the definition of body and dress are analyzed by paying due attention to how they relate to:

- The main body of work (novel) and the messages it conveys
  (The interconnection between the parts portraying the body and clothing and the overall work considering how they contribute to the narrative together)

Although the imaginary realm of fiction invites the reader to a textual space that does not and will not exist, this space still offers a cognitive logic. Therefore, there is often a consistency between the parts and the whole. Based on this assumption, the study explores how the representation of the body and the dress relates to the imaginary space to which they belong.

- The historical framework affecting the social imaginary
  (The social, ideological, and economic context affecting the perception of science and technology; and body and clothing discourse of the era)

According to Gerald Alva Miller Jr. “*SF serves as a mirror—we see ourselves when we gaze into it, but we always see ourselves transferred into the space of the Other*” (Miller Jr., 2012, p. 15). In this study, the close reading method serves as a critical tool to decode these distorted reflections of ourselves and discern their relevance to our lived reality and actual surroundings. Through these analyses, the research expects to uncover how the depiction of the body and dress contributes to the distinctive quality of estrangement within science fiction narratives. Moreover, it aims to explore how this estrangement is strategically employed to envision future societies founded upon new sets of values, beliefs, politics, gender roles, body configurations, and hierarchies.

- The main concepts of the posthuman discussion
  (Posthuman subjectivity, human-other, animal-other, machine-other, earth-other, nature-culture continuum, biopolitics, necropolitics, etc.*)*

As Barry Brummett argues:

> *"theories, methods, and techniques give the close-reading critic a structure, a discipline, in reading that allows meanings to be detected more powerfully and more efficiently."* (Brummett, 2010, p. 28)

In his definition, theories serve as road maps helping the close reader to relate a confined body of text with a broader context. In this research, this road map is drawn by the posthuman theory and the key concepts it proposes.

Distant Reading Method

Distant reading is a term coined by Franco Moretti as an alternative to close reading, highlighting the necessity of using "*quantitative methods to study large, digitized corpora of texts*" (So and Roland, 2020, p. 59). The method is primarily used "*to identify textual patterns of content and form at the scale of thousands of texts, invisible to the (closely reading) human eye*" (So and Roland, 2020, p. 59). In addition to the prolific advantages that it provides to detect specific stylistic, thematic, and geographical patterns within literary studies, distant reading enables researchers to create connections between different cycles (Moretti, 2013). For instance, Moretti calls attention to the connections between literary and political cycles by suggesting that the French Revolution resulted in the fall of the French novel. As Matthew L. Jockers argues, although these types of statements could be made anecdotally, the data based on quantitative research and the graph demonstrating the dramatic change in the novel published after the revolution "*leave little room for debate*" (Jockers, 2013, p. 20). This method, whose advantages in detecting similarities in different cycles have been emphasized by scholars, is used in this study with the urge to draw parallels between the chronology of science fiction literature and the history of industrial developments.

1.3. Structure of the Thesis

This thesis consists of six chapters. Chapter 1, Introduction, explains the aim of the study, the research questions, and the methodology, followed by a brief explanation of the rationale for the study. Chapter 2 centers on the imperative for critical narratives to comprehend the evolving functions of design and the responsibilities of designers in a future where the limits of the human body are expected to undergo a dramatic change. It also explores the potential of science fiction narratives to respond to this necessity with its affinity to critical thinking and explains how posthuman theory can

help to mediate this discussion. Finally, it describes the methodologies followed to identify and categorize the novels to be analyzed in the study.

Chapters 3, 4, and 5 constitute the main chapters in which eight science fiction novels are analyzed in three groups following chronological order. The initial group analyzed in Chapter 3 comprises three prominent novels, i.e., Edward Bellamy's *Looking Backward: 2000-1887* (1888), William Morris's *News from Nowhere* (1890), and H. G. Wells's *The Time Machine* (1895). These literary works serve as notable representatives of the late 19th-century social imaginary concerning industrialization and its potential ramifications on society. In Chapter 3, it is argued that Bellamy, Morris, and Wells, who take a similar approach to defining the industrialization-related problems of their age, put forward three distinct visions of the future, each stemming from the way in which they approach the concepts of 'human' and 'progress' and envision the future of human body and how it is clothed. Their novels encourage the reader to contemplate humans' symbiotic relationship with machines, nature, and animals from the perspective of early industrial societies. In so doing, the novels also offer valuable insights into the origins of posthuman discussion within the science fiction genre.

Chapter 4 focuses on the second group of novels, which consists of Yevgeny Zamyatin's *We* (1924), Aldous Huxley's *Brave New World* (1932), and George Orwell's *Nineteen Eighty-Four* (1949). These novels, all written in the first half of the 20th century, are shaped by the prevailing skepticism and distrust towards the future-building projects undertaken by totalitarian modern states to the imaginary realm of science fiction. In these narratives, where human subjectivity is intertwined with social roles, the human body and the dress become instruments of social discipline and resistance, depending on their role in reinforcing or challenging the supremacy of the authorities in power. These literary portrayals, where science and technology serve the interest of the ruling minority, also offer valuable insights into the multifaceted discourse surrounding transhumanism and its potential implications for contemporary society.

Chapter 5 explores the representation of the human body and dress in William Gibson's *Neuromancer* (1984) and Paolo Bacigalupi's *The Windup Girl* (2009), portraying two diverse scenarios about the posthuman future. In these novels, where

different forms of technologically enhanced or genetically modified human forms co-exist, the traditional distinctions between human, animal, and machine gradually disappear.

Lastly, the concluding chapter revisits the research questions formulated in the early stages of the discussion. This chapter primarily concentrates on how the literary portrayals of the human body and the dress contribute to science fiction in materializing the future of human existence by paying attention to the emerging similarities and differences between the groups of novels and how two disciplines, literature and design can contribute to each other in imagining the future.

CHAPTER 2: NARRATING THE POSTHUMAN FUTURE: SCIENCE FICTION IMAGINARIES

This chapter consists of four sub-sections. The first part addresses the necessity of critical narratives in the age of technological mediation, arguing that the present-day techno utopias proposed by the industry lack objectivity and reliability in envisioning the future due to their profit-driven motivations. Furthermore, it highlights the limitations of theoretical knowledge regarding the body and technology relationship in comprehending the practical aspects of yet-to-be-realized design concepts. The second part provides a concise discussion elaborating on the fundamental concepts of the posthuman theory, claiming that the problems highlighted in the first part necessitate a particular focus in the dawn of the posthuman turn. The third part suggests that with its affinity to critical theory and its capacity to produce systematic speculative knowledge concerning the future of human existence, science fiction literature responds to the search for critical narratives. Finally, the fourth section describes the methodology employed in the selection and classification of eight major science fiction narratives that form the backbone of the novels.

2.1. The Need for Critical Narratives in the Age of Technological Mediation

Technologies mediate our relationship with the world around us. First, they affect how we make and use artifacts, as well as how we produce knowledge. These human activities further transform society by introducing new power relations, hierarchies, and value systems, which require a constant calibration of the self to the new and the contemporary. This calibration process, on the other hand, necessitates a further set of alterations. To sync with the world, we change our bodies, practices, acts, and behaviors, as well as the things we possess. In brief, as we shape the world, the world shapes us, and this never-ending process of transformation is maintained through technological mediation.

However, how technology mediates human actions is also changing. When Don Ihde developed his mediation theory at the beginning of the 1990s, he identified four types of relations combining humans, technologies, and the world: embodiment, hermeneutic, alterity, and background relations (Future Learn, 2023). In Ihde's definition, actants are relational yet separate entities. Today, on the other hand, the radical separation between subjects, objects, and their environment no longer exists

since technology liquefies everything to such a degree that nothing can secure its boundaries. For instance, Paul Verbeek (2015) writes that smart environments provide immersive settings where we can no longer define them as backgrounds, and bodies and technologies are blended to such a degree that their relation expresses a state of fusion rather than embodiment. As Verbeek argues,

> *"recent insights from the philosophy of technology, specifically from the approach of 'technological mediation,' lead us to rethink the relations between humans and things"* (Verbeek, 2015, p. 26).

The work of Verbeek, along with many other scholars of the philosophy of technology, sheds new light on the role of technology in the designing of human beings[1] and corresponds to the hypothesis of other philosophers who embark on anti-anthropocentric views rejecting the privileged position of human existence over non-humans (including Graham Harman[2], Bruno Latour[3]). However, the new set of interactions between human and nonhuman actants that underpin anti-anthropocentric design philosophies is also subjected to a misreading, which may cause the consolidation of human-centrism. Unfortunately, this deliberate misreading is maintained by multinational companies aiming at commercial sustainability with high profits. These companies possess the power to transmit their innovation-oriented corporate visions to the visual consumption of the international customer base through various visual and audio channels, significantly affecting the collective imagination. While the visual narratives they put into circulation spread the idea that technological progress is a prerequisite for a better future, they systematically encourage people to purchase specific products and services.

We can see the most concrete examples of these narratives in the concept videos of the pioneering technology corporations.[4] In their concept videos, the citizens of the near

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[1] For Verbeek, with his own words: "*the design of interactions … implies not only the design of technological objects that allow for specific interactions, but also the design of the human subjects who interact with these objects. Designing technology is designing human beings*" (Verbeek 2015, 28).

[2] See Graham Harman's Object-Oriented Ontology: A New Theory of Everything published in 2018.

[3] See Bruno Latour's The Actor-network Theory

[4] Some concept videos launched by pioneering technology companies:
(Lenovo) Lenovo Tech World - Internet Of Things:
https://www.youtube.com/watch?v=lsiHUfIpNGY
(Beko) Discover Tomorrow's Connected Home!: https://www.youtube.com/watch?v=cJmA6eXZmAg

future -those lucky enough to own a smart home equipped with all sorts of smart appliances- enjoy a flawless life where technology is treated as magic. The built environments and industrial objects, fully controlled with IoT technologies, fulfill their prescribed functions in a communication network focusing on human benefit and comfort. Dynamic visual narratives, like videos, constrain the contemplation time and limit the viewers' opportunity to develop a profound understanding of the content (Pimenta and Poovaiah, 2010). Consequently, these visually coherent and technically plausible techno-utopias are consumed in isolation from the socio-economic reality of our world, significantly influencing the collective perception of the future.

The technology concepts presented in these videos are not spectacular for the design society now, as they are already well-informed about forthcoming advancements. However, it was different at the beginning of the 2000s, when Don Norman had laid out a vision of the future where the inanimate world of everyday objects would be equipped with a capacity to sense and respond to human presence. In *The Future of Everyday Things* (2007), Norman, who formerly worked for various technology giants such as Apple and Hewlett-Packard, illustrated the future with enticing examples: the magic mirrors helping with clothing decisions, refrigerators making product suggestions according to the purchasing preferences of the neighbors, intelligent household appliances communicating with one another; books providing content tailored to one's interests; and various other novelties that bring convenience and ease to everyday living. "*What if the everyday objects around us came to life?*" he asked the reader: "*What if they could sense our presence, our focus of attention, and our actions, and could respond with relevant information, suggestions, and actions? Would you like that?*" (Norman, 2007, p. 155).

Although there is no chance of knowing the responses given by his readers, the comments written under the videos mentioned above become a significant record of what society thinks of future technologies, which are already variations of what Norman proposed. The comments show that besides the majority willing to accept the technologically enabled luxuries of the future, a substantial number of people still

(Microsoft) Microsoft's Concept - Future vision 2020: https://www.youtube.com/watch?v=ozLaklIFWUI
(Corning Incorporated) A Day Made of Glass... Made possible by Corning. (2011): https://www.youtube.com/watch?v=6Cf7IL_eZ38

question the plausibility, practicality, benevolence, and social inclusiveness of these market-oriented visions. Contradictory reactions given to today's technocratic utopias produced by multinational corporations prove that an ambitious goal such as designing the future requires a comprehensive perspective, in which technology should be grasped with its all social consequences. However, this requires a long-term simulation of future life involving the interaction of diverse participants, and this can only be achieved with systematic speculative knowledge.

Based on the distinct differences in their perspectives, this study suggests that neither the philosophy of technology nor the commercially-driven predictions of the industry can provide a holistic approach regarding the future of the visionary designs of today, some of which will have direct influences on the alternative forms that the human body might take in the near future. The philosophy of technology gives us epistemological knowledge of things and technologies. The diversity of areas it relates to (such as science, sociology, politics, ethics, history, anthropology, etc.) provides an opportunity to understand the human-technology association in versatile ways. However, hypothetical knowledge may not be sufficient to theorize the practical aspects of everyday designs that will possibly be used in the future. In many instances, history has shown that the anticipated social functions of technologies have undergone major changes in the daily flow of life. Especially when the technological changes are strong enough to dislocate the status quo by giving rise to new power relations between different segments of society, corporations, and nations, theoretical knowledge of things and their practical consequences can hardly match.

Present-time techno utopias proposed by the industry, on the other hand, give us speculations about the practical usages of future technologies but not their knowledge in a complete sense. Therefore, the affirmative contents of sales-oriented design narratives may cause users to have incomplete or false expectations about future technologies. The following part reveals why the present-time techno-utopias of the industry tend to promote human-centric future ideals and consciously stay silent about the anti-anthropocentric turn and why this denial can be unsafe for society.

1. The industry's profitability requires the conditional fulfillment of its promises. Therefore, the present-day techno utopias promise power and control, which will never be fully possessed.

Unlike the post-anthropocentric design philosophies, which imagine humans, technology, and the world in mutual dependency, the market-oriented visions of the future endow humans with a ubiquitous power, a power that can be obtained with the purchase of a set of interactive products, which probably will demand more purchases (either new products or applications from the same product family). This conditional freedom is confined to continuous interruption since these products will possibly be smart enough to remind their own needs continuously for being renewed, updated, or upgraded to stay fast, smart, and easy. In the future, as it is today, the glitches of technology -designed most of the time intentionally- will be fixed with another technological solution; and happiness -the ultimate goal of every utopia- will constantly be succumbing to a life controlled by a fast speed, to "*dromocracy*" as Paul Virilio named it (Virilio, 2007, p. 69).

2. Technology-oriented future visions tend to affirm the idea of fast life, a dromocratic society. The dromocratic societies are built upon the modernist conception of technological progress, which acknowledges precaution as an obstacle against advancement and economic growth. Unfortunately, this brings along unpredictable technological risks.

According to Virilio, since the industrial revolution, everything has been defined by speed: "*there is no 'industrial revolution' but only a 'dromocratic revolution;' there is no democracy, only dromocracy; there is no a strategy, only dromology*" (Virilio, 2007, p. 69). Virilio's emphasis on 'speed' is rather meaningful these days when we question the industrial systems transforming life with politics of speed independent of human's biorhythm and nature's life cycle. In this mechanism, technologies, which should facilitate life, compel humans (and all the natural others) to adapt themselves to the artificial haste enforced by the industry. This speed determines how much we produce, how much we consume, and how much we waste, but maybe more importantly, how much we can trust our own decisions -if there are any-; because dromology also requires fast decision-making, which mostly ends up with problematic outcomes in both micro and macro levels.

Today, the ecological crisis, which manifests itself with environmental pollution, climate change, destruction of natural resources, and biodiversity loss, is the outcome of rapid and unplanned industrialization. However, this was not the dream of people

who witnessed the dawn of the industrial revolution more than a hundred years ago. Like us, all they dreamed of was a solution that would end social injustice: a life compatible with human dignity. Today, there is neither social justice nor a chance for a decent life for the majority of the world population; yet the understanding that regards technological advancement as the only condition for social progress still determines the future visions of both peoples and governments.

The difference between technology-related expectations and outcomes essentially results from the capitalist delusion, which positions technology as a risk-free medium of social transformation. The future-oriented contemporary myths created and advertised by corporate brands cause this delusion to become a social imaginary shared by many people worldwide. Virilio's philosophy, which "*diverges from that offered by a frictionless capitalism and its ideologies of ... seamless control*", alerts us about the "*cumulative destiny of dromological globalization*," which he perceives as a "*successively violent, increasingly integrated history of accidents*" (Bratton, 2007, p. 20). In that sense, Virilio presents a Ballardian sensitivity, which presumes "*the invention or adoption of a new technology*" as "*the invention and adoption of a new accident*" (Bratton, 2007, p. 20).

In some cases, the accidents that technology can cause are predictable. For example, there is a possibility that a technology developed by the military industry could be used to destroy a community anywhere in the world; or with the spread of automation systems, the need for human labor can decrease, leading to unemployment. When it comes to the predictable risks of technology, countries/communities can develop mechanisms to take precautions or counteractions. However, the absolute risk arises when the promises of technology are seductive enough to gain approval from the majority of society.

Today, technology and technoscience seem to have the potential to realize the ideals (such as wealth, physical health, youthfulness, happiness, and long life) that we come across in almost all social utopias from the past to the present. Although there is nothing wrong with the desire for these little luxuries offered by technology, the miscalculation of their true costs mostly drives societies to a different point than they are willing to reach. As Rudi Volti (2001) claims, every worthwhile endeavor is

accompanied by associated costs. However, when it comes to technology, it is most difficult to predict the true cost, which is not always monetary.

> **3. The technologies are not wicked; they just need attention, care, and responsibility. However, at the age of the Capitalocene, they lose their timeliness very quickly and then are abandoned. It results from human apathy towards the non-human, which develops as a side-effect of modernism's human-centric emancipation project.**

In many aspects, Bruno Latour's approach to the human-technology relationship is similar to that of Virilio. In his inspiring essay "Love Your Monsters: Why We Must Care for Our Technologies As We Do Our Children" (2011), he draws attention to the modernist conception of technological progress, which moves forward blissfully, often disregarding the potential consequences (Latour, 2011) to innovate, rather than measuring the risks and taking precautions. Although speed politics is one of the reasons behind the modernist approach, which receives precautions as an obstacle slowing down technological progress, Latour draws attention to new concerns such as care and responsibility.

To better illustrate his arguments, he builds his essay on Mary Shelley's *Frankenstein, or, The Modern Prometheus* (1818). When scientific optimization first became a topic of discussion, Shelley drew attention to the possibility that scientific ambitions may result in devastating consequences, leading to the total extinction of the human race. Although the story of Frankenstein is known as a tragedy, in which a monster accidentally created by a scientist brings death and evilness to the world for vengeance 200 years after the book was written, the novel's message expands with new interpretations. For Latour, contrary to what is believed, the tragedy described in the novel does not result from the scientist's violation of God's or Nature's laws. The flow of events, causing the death of many innocents, starts when Dr. Frankenstein refuses to take responsibility for the monster, which is his own creation:

> *"Written at the dawn of the great technological revolutions that would define the 19th and 20th centuries, Frankenstein foresees that the gigantic sins that were to be committed would hide a much greater sin. It is not the case that we have failed to care for Creation, but that we have failed to care for our own creations.*

> *We blame the monster, not the creator, and ascribe our sins against Nature to our technologies. But our iniquity is not that we created our technologies, but that we have failed to love and care for them."* (Latour, 2011, p. 20)

Today, it is not enough to love our technologies unless we love them and feel responsible for them in all phases of their life cycles. According to Latour, the act of creating requires a sense of responsibility, which also comprises the post-production phases[5]. Things, like humans, have life cycles: they are born, live, and die. However, their lives mostly end not when they stop functioning but when a new design/technology is launched to replace them.

The market economy creates a delusion of happiness and a false promise of emancipation that people can access by owning a variety of consumer goods. It results in the spread of an egocentric value system that prioritizes human desires and encourages people to abandon their new possessions and productions voluntarily. Technology, on the other hand, can contribute to the acceleration of this devaluation process; by constantly responding to market demand for innovation through the creation of slight differences rather than producing long-term benefits encouraging social, ecological, and economic sustainability.

Today, tools and objects, defeated to time and abandoned by their users long before they lose their usefulness, cause a severe waste of labor and environmental sources. For Latour, modernism's human-centric emancipation project deepens the nature-culture divide and excludes the nonhuman, and it is one of the underlying causes of environmental problems that have reached serious dimensions today:

> *"The dominant, peculiar story of modernity is of humankind's emancipation from Nature… The dream of emancipation has not turned into a nightmare. It was simply too limited: it excluded nonhumans. It did not care about unexpected consequences; it was unable to follow through with its responsibilities; it entertained a wholly unrealistic notion of what science and technology had to offer; it relied on… a totally absurd notion of what creation, innovation, and mastery could provide.*" (Latour, 2011, p. 26)

[5] Expanding on his ideas, it should also be underlined that the same sensibility is also needed in the phases of purchasing and using of technologies (as well as all the other artifacts that they relate to) since these actions influence production volumes and industry trends.

Latour's emphasis on the nonhuman (including technological other, animal other, and earth other) is based on his environmentalist concerns; on the other hand, the environment (both natural and human-made) should not be perceived as something independent of the human. Every action that ignores the non-human subjects of life endangers the sustainability of life as a whole.

4. Techno-utopias projected by the market position humans at the center of life, although the new technologies that constitute their core ideas prepare us for a posthuman future where even the concept of 'human' will be in question.

Shelley's character Dr. Frankenstein is undoubtedly modern. However, his mind, which is open to all alternatives scientifically, can hardly produce an alternative to his rigid aesthetic perception. Therefore, he sacrifices his scientific success for his aesthetic judgments. Dr. Frankenstein's monster conveys all the bodily functions that a man should possess; however, he does not appeal to the western understanding of beauty, drawing a parallel between physical perfection, good spirit, and morality, and it becomes the reason for the social exclusion of Frankenstein's scientifically manufactured man.

Unlike Dr. Frankenstein, today's scientists do not have to take the trouble of making anthropomorphic collages made of flesh and bone. In the present day, robotic experts can produce intelligent robots that can closely mimic the physical and functional characteristics of the human body; biotechnology engineers can print the various parts of the human body three-dimensionally in a laboratory environment to replace their original. While the human body is continuously scanned, molded, and reproduced through scientific and technological interventions, anthropomorphic robots equipped with AI also find new fields of circulation. At first glance, the new Prometheus would appear to be more fortunate than the modern Prometheus, considering that it is much easier to love and embrace a creation that is equally functional and good-looking. However, the current technoscientific possibilities of repositioning 'human' as an entity, which necessitates enhancement or redesign, and putting AIs in human form in social circulation, may bring up new problems that we have not yet encountered. At this stage, some new questions may arise: what if the altered and manufactured forms of humans make the source, the original unnecessary? What if the formal/functional

designs developed to liberate the human body become a part of a commercial system enforcing the body to change constantly? Or, what if the co-evolution of humans and machines as two distinct species may end with the total extinction of homo sapiens?

When these questions are lined up, we may feel as if the future will bring up a manufactured monster that will cause the extinction of the human race, with the same anxiety that guides the actions of Dr. Frankenstein in Shelley's novel. However, the age of monsters is over. Now, it is time to realize that the technologies -IoT technologies in particular- are about to connect humans, things, and environments in a single network; and in this network, the future will not be shaped by only technologies but by how we treat them. If we listen to Latour's advice and treat our technologies as we treated our children without being exploitative, the future can possibly be much brighter; but if we treat ourselves as we treated our technologies until now, the human body can be continually pushed into a competitive mechanism to be constantly better and smarter; and if our relationship with the non-human is based on competition, instead of cooperation, this may cause mankind to voluntarily design its own evolution, even extinction.

2.2. Posthuman Theory: The Limits of Humanness

This section unpacks the theoretical discussions within posthumanism by explaining the basic concepts that make up the vocabulary of a posthuman glossary. After giving a brief introduction focusing on how the idea of human perfectibility transforms in humanist, transhumanist, and posthumanist traditions, the section expands on the multiple meanings of posthuman subjectivity with specific reference to the writings of Rosi Braidotti, Francesca Ferrando, and Donna Haraway, etc.

According to Ihab Hassan, humanism, the product of five-hundred years old tradition, transforms itself into "*something that we must helplessly call post-humanism*" (Bendle, 2002, p. 47), and this new phenomenon requires a fresh look into how we define the human since its unique form, "*including human desire and all its external representations*," is poised to undergo dramatic changes (Bendle, 2002, p. 47).

In examining the idea of human perfectibility, theorist Mervyn Bendle (2002) identifies the posthuman condition as the last stage of the human enhancement project, which has its roots in classical humanism. As Bendle argues, referring to Peter

Sloterdijk, the origins of the human enhancement project can be traced back to classical humanism, to the idea that humans can be perfected through humanistic learning. However, the idea that human nature can be improved, tamed, and controlled by the progress of civilization came to nothing when the soft technologies of education failed in their promise to engender an advanced society. Later, hard sciences took on this humanist project, chasing the same ideal of human perfectibility. Genetic engineering was deemed particularly suited to the task since its scientific motivation could be seen as an extension of the ideals of humanist thinking (Bendle, 2002). Accepting the failure of conventional approaches intended to overcome barbarism, educate humanity and achieve social change, Sloterdijk suggested that "*genetic engineering [was] not just a possibility but a necessity*" to accomplish these goals (Bendle, 2002, p. 49).

The process, which dragged humanity into a posthuman path, had gained further momentum with the developments seen in other fields of science. In the first half of the 1990s, Max More "*predicted that the dawn of the new millennium would see a powerful new Prometheanism*" since the perfectibility of humankind would no longer be a dream with the genetically engineered viruses and nanotechnology enabling the reconstruction of the human body (Bendle, 2002, p. 52). These scientific predictions suggested that all the utopian ideals of achieving forever young and healthy bodies were practically possible, and immortality was just one step away.

In his discussion, Bendle often uses the terms 'transhumanism' and 'posthumanism' almost interchangeably. He defines transhumans as transitional entities which will eventually evolve into posthumans. Posthuman, on the other hand, is defined as "*a human descendent who has been [technologically] augmented to such a degree as to be no longer a human*" (Bendle, 2002, p. 48).

Although the physical attributions of transhumans and posthumans vastly vary to such a degree that it blurs the difference between them at some point, the philosophical background fostering transhumanism and posthumanism diverges significantly. According to Delgado et al., the posthumanist phase positions humans as one among other entities, including both natural and technological. Even though posthumanism upholds the idea of enhancement, an idea so central to humanist thinking, it differentiates itself from humanism by proposing an alternative to the liberal tradition,

"*according to which human is at the apex of all creation*" (Delgado et al., 2012, 205). Although many posthumanist propositions have "*some affinities with the postmodern deconstruction of central Western tropes… transhumanism firmly reinstates an extreme faith in the capacities of humankind to move beyond given limitations*" (Delgado et al., 2012, 205).

Put simply, both transhumanism and posthumanism conceive of the human as an "*open notion*" which can be transformed through evolution, technology, and ecology (Ferrando, 2017). Principally, transhumanism aims to achieve human enhancement by utilizing scientific and technological tools. It thus continues to follow the tradition of humanism, albeit at a different level. Posthumanism, on the other hand, perceives the human as an entity that needs to be deconstructed. This view rejects humanism, anthropocentrism, and dualism and stresses the interconnectedness of all entities (Ferrando, 2017).

Like Ferrando, Rosi Braidotti, in her discussion on the posthuman, focuses on three main concepts: post-humanism, post-anthropocentrism, and monistic philosophy. According to Braidotti, the roots of classical humanism can be traced as far back as Protagoras, who describes man as 'the measure of all things,' and Leonardo da Vinci, who illustrates this proposition in the form of the 'Vitruvian Man.' However, she argues that both this idea and its visual representation are problematic because classical humanism -by placing the human at the center of everything- excludes all non-human entities, and the universal model of the Vitruvian man embodied in the white, aristocratic, male figure is an extension of Western ideals. Therefore, both the philosophical and aesthetic foundations of this idea represent Eurocentric standards and introduce a dualistic discourse putting the self and the other in binary opposition. In this equation:

> *"Subjectivity is equated with consciousness, universal rationality, and self-regulating ethical behavior, whereas Otherness is defined as its negative and specular counterpart*" (Braidotti, 2013, p. 15).

This artificial duality produces the "*sexualized, racialized, and naturalized others*" and reinforces the superiority of Western subjectivity by relegating all its others to an inferior status (Braidotti, 2013, p. 15).

Braidotti also draws attention to other concepts introduced and prioritized by Humanism by suggesting that positive elements of humanism should be taken into consideration together with their problematic counterparts because "*individualism breeds egotism and self-centredness; self-determination can turn to arrogance and domination; and science is not free from its own dogmatic tendencies*" (Braidotti, 2013, p. 30). Secularity, on the other hand, strengthens the oppression of women by relating them with the concepts pushed beyond the frame of rationality and order: such as nature, emotions, spirituality, and religion. Braidotti criticizes binary oppositions established between different concepts and groups since they are mostly used for social discrimination, polarization, and, therefore, the annihilation of the different. This separation results in a humanist crisis when "*the structural others of the modern humanistic subject re-emerge with a vengeance in postmodernity*" (Braidotti, 2013, p. 37).

Braidotti's formulation of the posthuman is largely grounded on anti-humanist tenets, yet she calls for a brand-new term that will not appear as the structural other of humanism. She suggests that although anti-humanism opposes humanistic discourse fostering dualism and standardization, it still has a humanistic residue. Therefore, her conception of posthumanism embraces the positive aspects of humanistic thought "*without falling back onto the Human as generalized standard and violent exclusions this standard entails*" (Van Der Zaag, 2016, p. 331). Therefore, her description of critical post-humanism is designed to solve the crisis of humanism by marking a historical moment where the opposition between humanism and anti-humanism melts within a new framework, which allows the production of new affirmative alternatives to the future of humanity.

In Annette-Carina van der Zaag's view, Braidotti's most original contribution to posthumanist thinking is "*her analytical separation between posthumanism and post-anthropocentrism*" (Van Der Zaag, 2016, p. 332). Comparing these two concepts, Braidotti suggests that the "*critique of anthropocentrism has even more shattering implications than the transformative agenda of posthumanism*" (Braidotti, 2013, p. 57).

Braidotti believes that the post-anthropocentric turn has great potential to engender a new form of contemporary subjectivity. Therefore, she speculates about the possible

forms this subjectivity might take to supplant its anthropocentric predecessor. At this point, she turns to Donna Haraway, who has maintained her distance from post-humanistic discourse, yet with her "A Cyborg Manifesto", became an influential figure in its development. Braidotti builds on Haraway's thought in two main respects, one of which concerns the deep-seated ontological distinctions between things that Haraway believes are gradually dissolving as a result of the advance of cybernetic technologies, while the other relates to what Haraway potentially sees as a state of heightened consciousness about the interconnectedness of species.

Donna Haraway argues that high-tech culture blurs the distinction between three things: the separation between human and animal, organism and machine, physical and nonphysical. She suggests that none of the human constructs, including "*language, tool use, social behavior, mental events,*" ensures the uniqueness of humankind and constitutes a convincing ground for its superiority over animals and other species (Haraway, 2000, p. 293). Cybernetic machines of the late twentieth century, on the other hand, demolish the distinction "*between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines*" (Haraway, 2000, pp. 293-4). Finally, the third distinction appears as the outcome of the second and diminishes the difference between the physical and the non-physical.

Braidotti makes a similar categorization in her description of how post-anthropocentric inquiry transforms the forms of posthuman subjectivity. With further reference to Deleuze and Guattari, she examines these conditions under three categories: becoming-animal, becoming-earth, and becoming-machine. The becoming-animal axis deconstructs the anthropocentric view, which privileges the human over other species and acknowledges 'trans-species solidarity.' The notion of becoming-animal assumes that humans are "*environmentally based*" entities that need to be considered in "*symbiosis with other species*" (Braidotti, 2013, p. 66). The notion of becoming-earth, on the other hand, specifically focuses on human impacts on ecology and social sustainability. Finally, the notion of becoming-machine questions the boundaries of humans and machines with specific reference to "*biotechnologically mediated relations*" (Braidotti, 2013, p. 66).

Haraway's conception of the 'cyborg' explains specifically the intricate relation and unification of organisms and machines (and other things they are related to), which were previously put in a binary opposition as solid, intransitive, and self-contained entities. In "A Cyborg Manifesto," Haraway defines the cyborg as "*a hybrid of machine and organism, a creature of social reality as well as a creature of fiction*" (Haraway, 2000, p. 291). With this proposition, she challenges conventional approaches that draw rigid distinctions between human, animal, and machine; and diminishes "*the boundary between science fiction and social reality" to an "optical illusion*" (Haraway, 2000, p. 291)

Haraway's cyborg fulfills the critical function of science fiction by opening the forms and meanings of humans into question. This inquiry allows humans to discover their inherent connections with ecological and technological others by abandoning their privileged position. This renunciation may lead to interspecies solidarity and global responsibility towards life in general, including the lives of others.

Life-centeredness also appears as one of the key terms that Braidotti emphasized in her explanation of post-anthropocentrism. According to Braidotti:

> *"Post-anthropocentrism is marked by the emergence of the politics of life itself. 'Life', far from being codified as the exclusive property or the unalienable right of one species, the human, over all others or of being sacralized as a pre-established given, is posited as process, interactive and open-ended. This vitalist approach to living matter displaces the boundary between the portion of life – both organic and discursive – that has traditionally been reserved for anthropos, that is to say bios, and the wider scope of animal and non-human life, also known as zoe. Zoe as the dynamic, self organizing structure of life itself … stands for generative vitality. It is the transversal force that cuts across and reconnects previously segregated species, categories and domains.*" (Braidotti, 2013, p. 68)

In her extensive commentary on Braidotti's notion of posthuman subjectivity, cultural critic Anette-Carina Van Der Zaag writes that Braidotti's conception of life/zoe diminishes the dichotomy between life and death. Van Der Zaag argues that Braidotti's philosophy, which has grounded on "*neo-Spinozist monism and radical immanence*," leads her to "*an affirmative theory of death*" (Van Der Zaag, 2016, p. 334). This understanding confronts the narcissistic side effects of individualism, which consider

humans as the custodians of their own faith and, therefore, their own lives, extinguishing the need for responsibility and care about the sustainability of life as a whole. This philosophy reminds us that life/zoe is an imminent force, which encapsulates all the living matters, including us, and this force stays alive after our physical deaths. Instead of grasping life as a finite source aligned with our own existence, this view positions life/zoe as a force surpassing the individual, so as death. Braidotti believes that neither the life nor the death in us is ours, apart from a very limited interpretation of the term.

The zoe-centered posthuman awareness also makes us alert for the "*necro-political face of post-anthropocentrism*" (Van Der Zaag, 2016, p. 333), which benefits from interspecies vulnerability. Braidotti suggests that today both politics and the global economy are post-anthropocentric in the sense that they establish interterritorial networks where all species are combined in a negative sense. This situation especially becomes visible with the latest implementations of the global war industry since it continuously produces new forms of dying. Today, especially the wealthy countries allocating extensive budgets to the war industry threaten the biological continuity of the relatively less developed communities by utilizing the most recent opportunities offered by science and technology. This death-bound international rivalry, so-called war, is post-anthropocentric in terms of both its tools and methods and its global impacts threatening life and biodiversity.

Van Der Zaag (2016) observes that Braidotti "*explicitly foregrounds the danger of neglecting questions of oppression and domination in favor of posthuman theorizing*," emphasizing that "*we are all humans, but some of us are just more mortal than others*" (Braidotti cited in Van Der Zaag 2016, p. 331). This statement becomes particularly relevant when we consider that the opportunities provided by science and technology are not equally distributed among all people and that the scientific achievements aiming at human enhancement and immortality may result in an irreversible distinction between different human groups. In that case, a minority holding the capital -therefore the technoscientific heritage- can have an opportunity of controlling their own custom-made evolutions, leaving the underdeveloped majority to their own devices. Furthermore, the existence of genetically/technologically enhanced posthumans equipped with advanced skills can render the survival of the natural others

unnecessary, and the natural others may become less human and, therefore, more vulnerable to discrimination, exploitation, and maybe even extermination.

This scenario can even be more catastrophic if the human race, as a whole, becomes more mortal than the machines. When Haraway had written thirty-five years ago, "the machines are so alive, whereas the humans are so inert!" her statement was more of a speculative premise. Today, it is not. Humankind, having been able to modify natural bodies and mental capabilities, can recently animate human-like machines with sensorial systems and AI; and the simultaneous developments observed in different fields of science and technology (such as neurobiology, neurochemistry, nanotechnology, bioengineering, artificial intelligence, etc.) may lead to the co-evolution of human and machine as two distinct species (Mazlish, 1995). Therefore, the near future can witness a war between two groups of cyborgs (humans enhanced with technological components versus machines developed with biological interfaces) or even a war between cyborgized humans versus disembodied AI.

Although all these future speculations are based on scientific extrapolations, it is not yet possible to know how they will guide the future. However, there is one thing that seems inevitable: science and technology continuously transform the world we inhabit with new inventions but fail to make accurate projections about their long-term impact on individuals, society, and the environment, because an invention produced in a controlled environment, becomes a cultural phenomenon when it is used by society and creates its own history depending on how it is used. Therefore, their potential (either good or evil) can only be manifested gradually in time. On the other hand, a global economy driven by competitive values promotes fast production and consumption; therefore, companies prefer to launch new products immediately to the market to benefit from their innovation values at the maximum level possible. Therefore, the profit-driven use of science and technology's ability to create innovation detaches innovation from the context of functionality and social utility by transforming it into a competitive social segregation tool.

2.3. Science Fiction as Critical Theory

In this study, science fiction (sf) is regarded as a significant cultural medium that offers critical reflections on society, politics, and human existence. Here, it is argued that science fiction narratives present diverse, holistic, and multifaceted approaches to real-

world problems, unlike the techno-utopian promises of the corporate and governmental institutions and the social theories insufficient to imagine the practical aspects of science and technology. Therefore, each novel selected in this study to be analyzed is thought to reveal the genre's unique ability to challenge techno-utopian ideologies, expose social contradictions, and inspire critical engagement by offering alternative visions of the world, especially in the age of technological mediation. With a particular interest in social science fiction, the study also argues that it is necessary to develop a deeper understanding of the term (and related concepts such as utopia, dystopia, and heterotopia) to unlock the critical potential of sf. In this section, the affinity of science fiction to critical theory will be examined in reference to the ideas of prominent scholars and science fiction theorists such as Darko Suvin, Carl Freedman, Fredric Jameson, and Gerald Alva Miller Jr.

Darko Suvin is one of the earliest figures to identify the genre's critical potential with his definition of science fiction as "*the literature of cognitive estrangement*" (Suvin, 1972, p. 372). Suvin argues that an estranging representation achieved with the advent of 'novum' in sf allows readers to develop a critical perspective on familiar subjects, although they look unfamiliar (Suvin, 1972). Building on Suvin's definition, Carl Freedman suggests that science fiction is identified with "*the dialectic between estrangement and cognition*" (Freedman, 2000, p. 16). In this equation, the first term functions as the estranging interrogation of the physical world by rejecting to take it for granted. However, this interrogation gains critical power with the operation of the second term, enabling science fiction narrative to follow cognitive logic in its own territory. As he argues, "*[i]f the dialectic is flattened out to mere cognition*," the result becomes realistic fiction, and "*if the dialectic is flattened out to mere estrangement*," the result becomes fantasy (Freedman, 2000, pp. 16-7). In both conditions, the theoretical complexity of sf disappears since the synergy established between estrangement and cognition is broken.

Giving reference to Georg Lukács, who privileges the historical novel as a paradigmatic genre for Marxism, Freedman suggests that such a position can be applied to science fiction not only for Marxism but critical theory as a whole because, among all types of fiction, science fiction "*bears the deepest and most interesting affinity with the rigors of dialectical thinking*" (Freedman, 2000, p. xv). As Freedman argues, Lukács demonstrates illuminating insights into the critical function of the

historical novel by examining it in relation to historical materialism. Based on this example, he suggests that it is also necessary to read the works of science-fiction authors such as "*Philip K. Dick, Ursula Le Guin, Stanisław Lem, and Samuel Delany*" in conjunction with "*the theoretical production of writers like Mikhail Bakhtin, Jacques Lacan, Ernst Bloch, Theodor Adorno, and Lukács himself*" (Freedman, 2000, p. xv). With this proposal, Freedman does not merely suggest applying critical theory to science fiction; instead, he demonstrates the necessity of "*understanding these two modes of discourse together*," considering it "*can reveal much about both*" (Freedman, 2000, p. xvi).

In his article *Science Fiction and Critical Theory*, Freedman argues that critical thinking encourages transformative action with reference to Max Horkheimer (Freedman, 1987). In his proposal, this potential, which gives a political character to critical thinking, is also an inherent feature of science fiction. Based on this parallelism, Freedman suggests that science fiction's capacity to speculate on new technologies and social arrangements encourages the articulation of radical political prospects. He grounds this argument on works of science fiction that challenge dominant ideologies by relying on utopian tradition. As Freedman puts it, "*SF authors, like critical theorists, have been more extensively occupied with the negative or demystifying aspect of the dialectic*;" however, this aspect still "*contains its own implicit positivity*," a utopian essence (Freedman, 1987, p. 188).

In *Exploring the Limits of the Human through Science Fiction*, Gerald Gerald Alva Miller Jr. identifies the shortcomings of the existing discussions, which relate science fiction with critical theory. In his eye-opening discussion, he objects to Carl Freedman and Fredric Jameson, who tend to examine science fiction through the lens of utopia, perceiving it as a method for social critique. In this discussion, Miller Jr. suggests that science fiction does not represent a utopian genre; instead, it tends to use "*utopias as objects of critique or as a tool for satire*" (Miller Jr., 2012, p. 19). In order to clarify his statement, Miller Jr. benefits from the literary history witnessing the downfall of utopian fiction in the early 20th century. According to Miller Jr., utopia, once an "*avenue for radical thought*" (Miller Jr., 2012, p. 17), had lost its progressive nature by the early 20th century due to world wars, genocides, and totalitarian practices of modern states, which systematically manipulated utopias to consolidate their normative actions. When *"[t]he utopian fell under suspicion because of the inherent*

dangers it purportedly harbored," it led to the rise of dystopian narratives, which "*criticized the totalizing systems that had arisen from bastardized utopian dreams"* (Miller Jr., 2012, p. 17). As he remarks, Yevgeny Zamyatin's *We*, Aldous Huxley's *Brave New World*, and George Orwell's *Nineteen Eighty-Four* present the most paradigmatic examples of such texts, which today rank among the seminal works in science fiction.

Freedman and Jameson, who discuss the connection of science fiction with critical theory from the perspective of utopia, are not entirely wrong in their comments, as the chronology of utopian fiction and science fiction often overlap in the history of literature. However, Gerald Alva Miller Jr.'s comments are equally valid and essential to understand how science fiction and utopia tradition evolved within a historical framework and renewed their dialogues with the critical theory, either separately or together. Although utopian fiction and science fiction are two different genres, there have been times when they have intertwined and fed each other since they tend to problematize similar issues concerning humanity with different methods and tools. For example, the perspective change simultaneously affecting both genres in the first half of the twentieth century was driven by their shared disbelief in modern science and technology to build a better future.

Although the disbelief giving rise to the dystopian narratives in the early 20th century has not entirely displaced the utopian visions from the discourse of critical theory and SF, the traumatic events shaping collective memory and imagination necessitated a radical renewal that will strip both utopian fiction and science fiction from their modern, normative qualities. Under the influence of postmodernism, both genres responded to this necessity and moved closer to each other again. The 1960s and 1970s, marked by the New Wave movement, also defined a new era in which science fiction expanded its definition and scope by changing its focus from hard to soft sciences. The incorporation of new concepts from the social sciences into science fiction increased the acceptance and legitimacy of new sub-genres such as eco-fiction, feminist science fiction, and social science fiction, some of which still pose a utopian impulse. Among these, social science fiction -or soft science fiction- served as an umbrella term to describe science fiction with a particular interest in the social, political, and economic consequences of science and technology. Here, the synergy

reestablished between technology and social change also increased the critical potential and the academic legitimacy of the genre.

'Social-science fiction' is a term first coined by sf critic Donald F. Theall in 1975 to define science fiction "*that draws directly upon ideas from the social sciences*" (Gerlach and Hamilton, 2003, p. 164). In his article "The Art of Social-Science Fiction: The Ambiguous Utopian Dialectics of Ursula K. Le Guin," Theall (1975) argues that the 20th century has seen significant improvements in the social sciences -or *humane sciences* as Le Guin names it-, which greatly influenced the concepts of the utopian tradition within SF. Theall notes that:

> *"[a]lthough concern with social and cultural questions has always been a central feature of the utopian tradition within SF, a conscious use of concepts from the social sciences has been considerably slower to develop in SF than that of concepts from the natural sciences"* (Theall, 1975, p. 256).

Especially given this slowness, Theall's introduction of social science fiction as a new term into the sf lexicon is an important milestone in bringing the reciprocal relationship between science fiction and the social sciences to the fore. However, this first definition still needs different perspectives to better illustrate how science fiction deals with social and critical theories. According to Gerlach and Hamilton, in literary studies, there are two different approaches to questioning "*the relationship between sf and social theories and practice*" (Gerlach and Hamilton, 2003, p. 164). With their descriptions:

> *"The first recognizes that sf has occasionally taken up social science as a topic or has drawn its extrapolations from social-scientific ideas. The second suggests that any truly accomplished and valuable sf engages in social critique."* (Gerlach and Hamilton, 2003, p. 164)

While the first group's approach largely overlaps with Theall's definition of social science fiction, it remains superficial in grounding science fiction's relation to social and critical theories. It is because this view attributes a passive role to science fiction, suggesting that it borrows existing notions of social sciences in both practical and theoretical manners. This approach also reminds Gerald Alva Miller Jr.'s comments on Carl Freedman and Steven Shaviro, whom he criticizes for using science fiction to exemplify existing theoretical concepts already discussed by different disciplines and

schools of thought. Miller Jr.'s opinions, on the other hand, correspond to the second group since he believes "*science fiction is always already critical theory*" (Miller Jr., 2012, p. 3), having its own agenda.

Another point that brings Theall and Freedman together is the claim that science fiction encourages dialectical thinking. However, building on Freedman and Jameson, Gerald Alva Miller Jr. also argues that science fiction goes beyond its dialectical relationship with critical theory and takes on the more radical task of challenging and dismantling our accepted notions of the world we live in:

> *"Jameson and Freedman argue that science fiction provides the means for reflecting upon our current sociopolitical episteme or theoretical concepts, but sci-fi texts actually perform a far more profound function: they use estrangement to undercut our basic notions of reality, as is the case with science fictions of estrangement, or they reflect our reality in a fashion that demonstrates the fundamentally uncanny and potentially fictional nature of it."* (Miller Jr., 2012, pp. 18-9)

Based on this claim, he ascribes a postmodern identity to science fiction and defines it as a "*heterotopian genre of narrative*" (Miller Jr., 2012, p. 22). With this proposal, he shows that science fiction not only reflects the physical world in an estranged form but also unveils its strange nature by recreating it in the space of otherness:

> *"But science fiction also extrapolates beyond our present condition to imagine the potential transcendence of these limits, to examine the possibility of new social forms and identity configurations, and to critically interrogate the current manifestations of the human, its philosophical outlooks, and its sociocultural practices."* (Miller Jr., 2012, p. 3)

In his discussion of science fiction, Miller Jr. draws on Foucault's separation between utopias and heterotopias. Building on Foucault's discussions on utopia, he suggests that "*the utopian is not simply a kind of literature or sociopolitical theory*" but rather an ideal space that is impossible to reach (Miller Jr., 2012, p. 19). In Foucault's words:

> *"Utopias afford consolation: although they have no real locality there is nevertheless a fantastic, untroubled region in which they are able to unfold; they*

> *open up cities with vast avenues, superbly planted gardens, countries where life is easy, even though the road to them is chimerical."* (Foucault, 2005, p. xix)

The textual space of heterotopias, on the other hand, is different from utopias' comforting, peaceful, and trouble-free territories consolidating a daydream:

> *"Heterotopias are disturbing, probably because they secretly undermine language, because they make it impossible to name this and that, because they shatter or tangle common names, because they destroy 'syntax' in advance, and not only the syntax with which we construct sentences but also that less apparent syntax which causes words and things (next to and also opposite one another) to 'hold together'."* (Foucault, 2005, p. xix)

Drawing on Foucault's definition of heterotopia, Miller Jr. defines science fiction as a literary space that questions and dislocates utopian notions regarding humanity "*to delve into realms of otherness, chaos, and multiplicity*" (Miller Jr., 2012, p. 21). This heterotopian space offers new forms of subjectivity, undermining utopias' naive expectations of achieving perfection. This offer, of course, is also an opportunity to question normative conventions defining the human, together with its physical and conceptual boundaries.

One of the main points emphasized by Miller Jr. in his book is the similarity between science fiction and critical theory in examining fundamental issues concerning the definitions, limits, and new potentialities of the human. However, science fiction's simultaneous use of 'realism' and 'fiction' demonstrates its even superior position to generate theoretical concepts relevant to the real world but not yet defined. Here, it is also argued that science fiction's particular focus on the limits of the human and creative endeavors akin to critical theory brings it closer to the posthuman discussion.

2.4. From Early to Contemporary Science Fiction: A Proposal for Classification

After reviewing several chronologies published in literary surveys and anthologies by scholars, this study focuses on eight science fiction novels that fall under three sub-categories. These categories are identified after a detailed examination of the chronology of science fiction literature by paying due attention to its breaking points, which had been affected by both the inner and outer dynamics of the genre.

Based on these sub-categories, four main criteria were considered for the selection of the novels:

- The subject matter of the study and the relevance between selected narratives
- The scope of the study
- The novels' narrative capacity to provide content for examination
- Literary value and widespread impact

2.4.1. Definition of the Sub-Categories

What the first science fiction novel was and how far back the genre's history goes varies according to different sources and scholars.[6] These differences also influence how the science fiction chronology is classified into periods. Before deciding on the works to be analyzed, an investigation was carried out to examine the turning points in the history of science fiction literature. In the first stage of the analysis, two important reference sources were analyzed comparatively. This analysis excluded reference books that divide the history of science fiction into successive decades and the ones written by a single author and focused more on sources that propose organic distinctions based on the dynamics of the genre itself. In the second stage of the study, Franco Moretti's distant reading method was followed with the purpose of establishing a meaningful pattern of classification based on the distributions of novels published by year.

2.4.1.1. Sf History as Classified in Selected Sources

When we examine the reference sources on the history of science fiction literature, we observe that their classifications are mainly shaped around the internal dynamics of the science fiction genre, and they usually differ based on the perspective of the authors/editors who have written/compiled the source. In this section, two reference sources, including *Cambridge Companion to Science Fiction* and *The Routledge Companion to Science Fiction,* were selected for examination. The selection of these

[6] According to Adam Roberts, a considerable number of sf critics agreed on a "short history" model, acknowledging science fiction as "a relatively recent development in human culture" (A. Roberts 2009, 3) As one of these names, Brian Aldiss refers to Mary Shelley's *Frankenstein* as the first science fiction novel ever written in history; and the others (such as Wingrove and Luckhurst, respectively) find this beginning in the literary works of Jules Verne or H.G. Wells in the late nineteenth century; and for some Hugo Gernsback, who coined the word "scientifiction" and popularized the genre in the 1920s was the true inventor of sf (A. Roberts 2009).

sources was influenced by the fact that they were written with contributions from different authors, which means that they do not only reflect the opinion of one single author. Also, the chronological divisions in the books were made organically, paying due attention to the history of science, politics, and publishing.

In *Cambridge Companion to Science Fiction*[7] (2003), edited by Edward James and Farah Mendlesohn, science fiction history is investigated in four periods:

1. Science fiction before the genre
2. The magazine era: 1926–1960
3. New Wave and backwash: 1960–1980
4. Science fiction from 1980 to the present

On the other hand, in *The Routledge Companion to Science Fiction*[8] (2009), edited by Mark Bould, Andrew M. Butler, Adam Roberts, and Sherryl Vint, the history of science fiction is divided into eight consecutive periods:

1. The Copernican Revolution
2. Nineteenth-century sf
3. Fiction, 1895–1926
4. Fiction, 1926–1949
5. Fiction, 1950–1963
6. Fiction, 1964–1979
7. Fiction, 1980–1992
8. Fiction since 1992

When the two sources are compared in terms of the classification they proposed, they have similarities in some points and differences in others. Starting with the parallels, both sources go back to the origin of science fiction before it became a literary genre and refer to the Copernican Revolution either directly or indirectly. As Adam Roberts (2009) puts it:

> *"The Copernican revolution is bound up with the ways in which science supplanted religion and myth in the imaginative economy of European thought;*

[7] Hereinafter referred to as CCSF.
[8] Hereinafter referred to as RCSF.

and sf emerges from, and is shaped by, precisely that struggle." (Roberts, 2009, p. 5)

The Copernican Revolution influenced skeptical souls to look into the cosmos with fresh eyes, and this new perspective of the universe affected especially the satirical fantasies written in the 17th century. In *Ignatius His Conclave* (1611), John Donne, satirizing Jesuit evangelism, directly referred to scientists challenging the Church's domination of knowledge, including Copernicus, Kepler, Galileo, and Brahe. In 1634, Kepler wrote his *Somnium*, which makes him "*the first to coach an earnest scientific argument – a representation of the Copernican theory of the solar system – as a visionary fantasy*" (Stableford, 2003, p. 16).

The heliocentric model of Copernicus replacing the geocentric approach was more than an update of scientific truth eroding the Church's supremacy. This development ending the hierarchical superiority of the Earth in the universe, also opened the universal sovereignty of humans into question. By the middle of the 17th century, although it has a theological origin, a common belief was "*based upon the idea that God would not create so vast a cosmic space to no purpose, and that therefore all planets must contain life*" (Roberts, 2009, p. 8). This assumption and the increasing scientific curiosity going beyond the Earth's surface inspired imaginary voyage stories and other fantastic narratives focusing on humans' encounters with extraterrestrial beings. Francis Godwin's *The Man in the Moone* (1638), John Wilkins' *Discovery of a World in the Moon* (1638), Bernard de Fontenelle's *Dialogue on the Plurality of the Worlds* (1686), Christiaan Huygens's *Cosmotheoros* (1698) and many other works some written in the 18th-century such as Voltaire's Micromégas (1752) seems to be influenced from these ideas.

Another point that Roberts and Stableford agreed on was that the science fiction genre, which has a wide range of subjects, was influenced by utopianism as much as scientific thinking. The respective period, witnessing the emergence of new narratives blending More's utopianism with scientific knowledge -including Francis Bacon's *New Atlantis* (1617) and Tommaso Campanella's *The City of the Sun* (1623) (Stableford, 2003)- proves the justness of this claim.

Stableford's text examines the early sf period, which continues till 1926, more thematically. However, the nineteenth-century sf is highlighted as a separate chapter in RCSF. Professor Arthur B. Evans, writing this chapter, explains this necessity by referring to the literary critics, recognizing sf as a literary tradition "*conceived during the industrial revolution and born during the latter half of the nineteenth century in Jules Verne's voyages extraordinaires and H.G. Wells's fin-de-siècle scientific romances*" (Evans, 2009, p. 13). According to Evans, the increase in the number of SF-type narratives during the 19th century can only be explained by the dramatic effects of the industrial revolution and the social transformation it triggered, which together caused the development of two significant thematic sf strands. As Evan puts it, the rapid industrial growth, the spread of new technologies, and the political unrest caused European society to think that the future would be much different from the past, and that point became where 'futuristic fiction' of the 19th century was born. The second strand, on the other hand, was shaped around 'the mad scientist' archetype that originated in Mary Shelley's *Frankenstein* (1818) (Evans, 2009).

The early science-fiction narratives of the 19th century developed in diverse directions when the future-oriented curiosity was blended with opposing perspectives regarding the scientific/technological advancements of the time. Consequently, the contrasting views on the future of humanity have led to the emergence of stories about 'progress,' 'regression,' or total 'extinction' of the human race in the years to come. Some of these works (such as Jane Webb-Loudon's *The Mummy! A tale of the twenty-second century* (1827), Émile Souvestre's *The World as it Shall Be* (1846), and Albert Robida's *The Twentieth Century* (1883)) possessed satirical elements similar to those written in the earlier periods. However, the century also witnessed the release of more earnest publications shaping the collective imagination. Edward Bellamy's famous novel *Looking Backward: 2000–1887* (1888) was one of them, "*a reason-based and technology-driven socialist utopia*" embracing the blessings of industrial society (Evans, 2009, p. 15). Although his visionary ideas inspired diverse communities willing to take responsibility for the formation of a prosperous future society, some writers were still skeptical of mechanization. For example, pointing out that the machines would turn out to be a future threat to humankind, Samuel Butler's *Erewhon* (1872) became one of the early examples dealing with the human-machine relationship that many dystopian writers speculated on during the 20th century. Concerns about the

future of the industrialized world also led to the emergence of pastoral utopias such as William Morris's *News from Nowhere* (1890) and the early examples of the eco-science fiction genre, including W.H. Hudson's *A Crystal Age* (1887) (Evans, 2009).

Another essential point to be emphasized about the early science fiction narratives of the 19th century is the appearance of the pioneering writers who produced a large number of works contributing to the genre, such as Jules Verne and H.G. Wells.[9] Especially Wells's *Time Machine* (1895) is seen as marking the beginning of a new period in sf history in several sources, including RCSF. John Rieder (2009), commenting on the period between 1895 and 1926, explains the significance of these dates as follows:

> *"The years 1895 and 1926 mark monumental events in the history of sf: the publication of The Time Machine, H.G. Wells's first important work of fiction, and the inauguration of Amazing Stories (1926–2005), edited by Hugo Gernsback, the first magazine devoted exclusively and explicitly to publishing sf."* (Rieder, 2009, p. 23)

For Rieder, the importance of 1895 for the history of science fiction is not only related to the publication of a single work, *The Time Machine*. This date is also a milestone in the career of H.G. Wells, who -after *The Time Machine*- writes an enormous number of works, including:

> *"The Island of Doctor Moreau (1896), The Invisible Man (1897), "The Star" (1897), The War of the Worlds (1898), When the Sleeper Wakes (1899), The First Men in the Moon (1901), "The Land Ironclads" (1903), and "The Country of the Blind" (1904), [which together] comprise arguably the most important and influential body of fiction any writer has contributed to the genre. It is so impressive an achievement that it has sometimes inspired the exaggerated claim that Wells invented sf itself."* (Rieder, 2009, p. 23)

Although his invention of the time machine as a narrative tool is enough to give him a unique place in sf history for many people, Wells' actual contribution to the genre is

[9] Hugo Gernsback, the founder and the editor of the first sf magazine *Amazing Stories* (1926-2005), recognized Jules Verne, H.G. Wells and Edgar Allan Poe as the creators of the genre that he called "scientification" (Evans 2009, 16).

his success in bringing together "*almost all of the disparate threads of what we now identify as early sf*" (Rieder, 2009, p. 23).

After commenting on Wellsian influence, Rieder draws attention to the political climate of the world that became influential in sf narratives by referring to the imperialist rivalry and xenophobia that marked one of the most prolific strands of sf before the First World War. And, after the First World War, the pessimism concerning the future of civilization starts to blend with the theme of apocalypticism, particularly in England. At the beginning of the 20th century, when imperial powers in Western Europe were at the height of their power, there were still a few areas left to be explored in remote corners of the world, and these inaccessible geographies often kindled the public imagination as potential homes to unknown cultures and human races. This possibility also became influential for the 'lost-race' and 'lost-world' narratives, such as Frank Aubrey's The Devil-Tree of El Dorado (1897) and Conan Doyle's The Lost World (1912) (Rieder, 2009).

As major forces of industrialization, Britain and America, in particular, offered a favorable cultural milieu in the late 19th century for the development of science fiction. However, at the beginning of the 20th century, outside the Anglo-Saxon world, the high-prestige authors working in different fields also published ground-breaking early sf narratives. The most prominent examples of them include *RUR* (Rossum's Universal Robots) (1920) by Czech author Karel Čapek, the inventor of the word robot, and Yevgeny Zamyatin's *We* (1924), which has satirical elements often found in dystopias (Rieder, 2009).

According to the widely accepted view, the period when science fiction was named and matured as a genre is the beginning of the twentieth century, given the impact of the American pulps becoming widespread due to low paper costs and easy distribution made possible by expanding railroads.[10] Especially the year 1926 -the beginning of a new period in both CCSF and RCSF- is a milestone in the history of science fiction recognized by almost all sf critics since it was when Hugo Gernsback (took the existing

[10] Although Gernsback's initiative is credited with giving the genre a pulp quality, the increase in magazine sales was also related to "the invention of cheap wood pulp paper [that] made it possible to publish far more for far less" (Mendlesohn 2009, 52). For Farah Mendlesohn, another reason for increasing magazine publishing was the development of railroads and the cheapening of transportation and postal services.

opportunity in the publication sector and) launched the first science fiction magazine, *Amazing Stories* (1926-2005), which popularized the genre and established a community of "*highly vocal readers*" (Mendlesohn, 2009, p. 54).[11] As Mendlesohn argued, "*Gernsback believed that sf should be grounded in what we know and what can be extrapolated from it*" (Mendlesohn, 2009, p. 54). This approach was shared by the magazine's fan base and significantly impacted feedback directed to the publications.[12] His magazine format, including the letters from fans, created a ground for fruitful discussions regarding the genre's possibilities and constituted one of the first serious attempts to develop a critical theory that focused directly on science fiction (Attebery, 2003). Another thing that makes Gernsback important for the history of sf is his enthusiasm for the contribution of female writers.[13] Clare Winger Harris, winning third place in a contest (1927) organized by the magazine *Amazing Stories* under his editorship, became one of the writers he supported in the following years.

According to Farah Mendlesohn, "*If Gernsback began the period [the magazine era], John W. Campbell was indisputably the editor who took sf into its own future*" (Mendlesohn, 2009, p. 53). This view is in line with Brian Attebery's claim that the golden age of science fiction began with Campbell (Attebery, 2003), whose success partially came from building on Gernsback's legacy. Campbell took over the editorship of *Astounding Stories*[14] from F. Orlin Tremaine in 1937 and renamed it *Astounding Science-Fiction.* Like Gernsback, he valued the feedback from the readers since "he was himself a fan turned writer and editor" (Attebery, 2003, p. 38).

Another significant development of the so-called magazine era was the foundation of informal organizations and local fan clubs, enabling writers and readers to meet in person. With the initiation of Gernsback, some of these associations came together and

[11] In fact, *Amazing Stories* was not the first magazine published by Gernsback. With The Electrical Experimenter (1913-1920), he realized that there was an existing market for the engineering stories pioneered by Jules Verne and the scientific romances that were the legacy of H.G. Wells (Mendlesohn 2009).

[12] The question 'should science fiction be based on scientific fact?' was the subject of perhaps one of the genre's earliest and most heated debates dating back to this period. However, as the field has expanded with new contributions, the new authors willing to experience the unknown realms of the future through creative speculation became more enthusiastic about the 'what if' of science (Mendlesohn 2009).

[13] As Mendlesohn argues the active years of Gernsback marking the late 1920s and the early 1930s, were much more woman-friendly than the 15 years that followed.

[14] One of the sf magazines published after *Astonishing Stories*.

founded the Science Fiction League in 1934. Although the association did not have a long life, the smaller communities involved carried on the tradition of meeting, discussing, and producing new publications. Another fan group, the Futurians, involved the next generation of writers and sf critics, including "*Frederik Pohl, Damon Knight, Judith Merril, Cyril Kornbluth, Isaac Asimov, and James Blish*" (Attebery, 2003, p. 38).

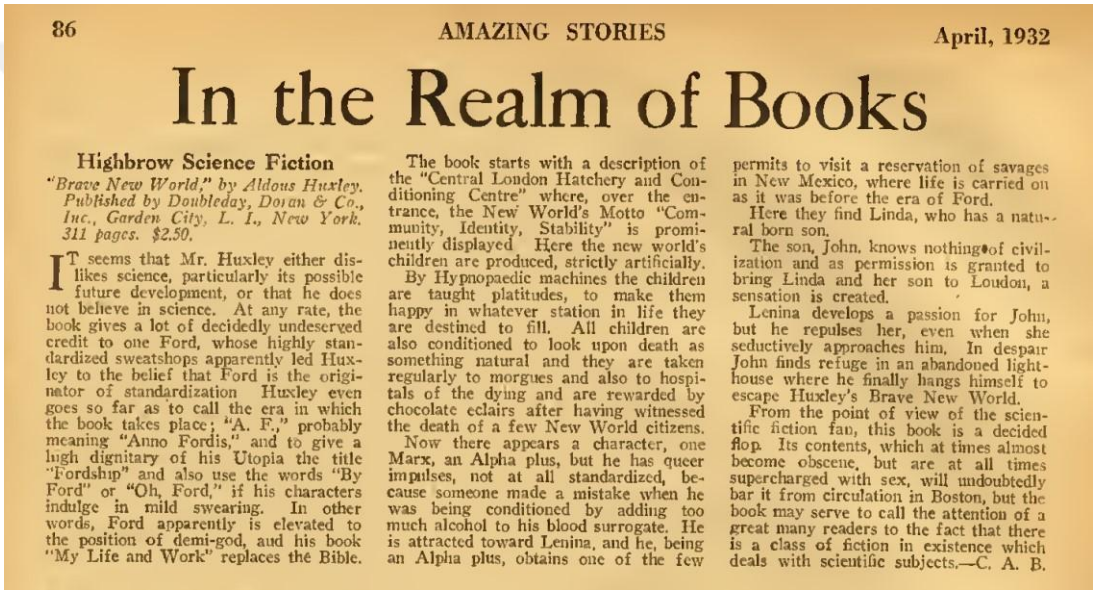
Compared to the early examples, the science fiction narratives written in the 1930s and 1940s differed not only in terms of their audience but also in the authors' approaches to science and technology. As Mendlesohn (2009) argued:

> *"Despite the example of Edward Bellamy's Looking Backward: 2000–1887 (1888) and Gernsback's own Ralph 124C 411: a romance of the year 2660 (1911–12), invention fiction of the 1930s and early 1940s rarely attempted to create futuristic worlds for its new objects of desire… Inventions and discoveries tended to be large and world-shattering, and authors rarely attempted to conceive of the large effect of a small change."* (Mendlesohn, 2009, p. 55)

Unlike their predecessors, which had a utopian essence in accepting science and technology as a prerequisite for a promising future, the fiction of the period did not take the burden of promising a happy ending. A significant majority of the invention stories ended badly, often "*with the demise of both inventor and invention*" (Mendlesohn, 2009, p. 55). What is interesting here –although Mendlesohn refers to the ones who claimed otherwise- was that they did not show any sense of mistrust towards science and technology. For example, despite its disastrous outcome, Isaac Asimov's *Nightfall* (1941) was still an "*evangelical pamphlet for science*" (Mendlesohn, 2009, p. 55).

This period also witnessed reviewers almost attacking writers who questioned (and made their readers question) the ability of science and technology to create social good. Although *Brave New World* (1932) has been acknowledged as one of the groundbreaking classics in sf literature now, its author, Aldous Huxley, received similar criticisms when the book was written. *Brave New World*, indeed, was challenging for regular science fiction readers accustomed to the magazine format for multiple reasons. For Attebery, referring to the essay titled 'Highbrow Science Fiction' published in Amazing Stories (Figure 1), one of the strongest objections directed to

Huxley was related to the way he approached science. In this essay, the reviewer (credited as C. A. B.) blamed Huxley for that he "*either dislikes science, particularly its possible future development or that he does not believe in science*" (Amazing Stories, 1932, p. 86). Although cloning, artificial wombs, and recreational drugs, which he envisioned in the 1930s, are still on the agenda of both science and science fiction, Huxley was subjected to a condemnation of science fiction reviewers of the period, as he revealed the possible problems of a capitalism that was based on science rather than glorifying science. Huxley was also attacked for the "*raciness*" of his novel since "*overt sexuality*" was strictly excluded from the sf magazines at the time (Attebery, 2003, p. 44).



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In the Realm of Books

Highbrow Science Fiction

"Brave New World," by Aldous Huxley. Published by Doubleday, Doran & Co., Inc., Garden City, L. I., New York. 311 pages. $2.50.

IT seems that Mr. Huxley either dislikes science, particularly its possible future development, or that he does not believe in science. At any rate, the book gives a lot of decidedly undeserved credit to one Ford, whose highly standardized sweatshops apparently led Huxley to the belief that Ford is the originator of standardization. Huxley even goes so far as to call the era in which the book takes place; "A. F.," probably meaning "Anno Fordis," and to give a high dignitary of his Utopia the title "Fordship" and also use the words "By Ford" or "Oh, Ford," if his characters indulge in mild swearing. In other words, Ford apparently is elevated to the position of demi-god, and his book "My Life and Work" replaces the Bible.

The book starts with a description of the "Central London Hatchery and Conditioning Centre" where, over the entrance, the New World's Motto "Community, Identity, Stability" is prominently displayed. Here the new world's children are produced, strictly artificially.

By Hypnopaedic machines the children are taught platitudes, to make them happy in whatever station in life they are destined to fill. All children are also conditioned to look upon death as something natural and they are taken regularly to morgues and also to hospitals of the dying and are rewarded by chocolate eclairs after having witnessed the death of a few New World citizens.

Now there appears a character, one Marx, an Alpha plus, but he has queer impulses, not at all standardized, because someone made a mistake when he was being conditioned by adding too much alcohol to his blood surrogate. He is attracted toward Lenina, and he, being an Alpha plus, obtains one of the few permits to visit a reservation of savages in New Mexico, where life is carried on as it was before the era of Ford.

Here they find Linda, who has a natural born son.

The son, John, knows nothing of civilization and as permission is granted to bring Linda and her son to London, a sensation is created.

Lenina develops a passion for John, but he repulses her, even when she seductively approaches him. In despair John finds refuge in an abandoned lighthouse where he finally hangs himself to escape Huxley's Brave New World.

From the point of view of the scientific fiction fan, this book is a decided flop. Its contents, which at times almost become obscene, but are at all times supercharged with sex, will undoubtedly bar it from circulation in Boston, but the book may serve to call the attention of a great many readers to the fact that there is a class of fiction in existence which deals with scientific subjects.—C. A. B.

Figure 1. The essay titled 'Highbrow Science Fiction' published in Amazing Stories 1932 April issue (Amazing Stories, 1932, p. 86).

The disapproval of *Brave New World* among the sf community was also related to the fact that the popular sf of the magazine era had positioned itself in opposition to literary, or rather high-brow fiction. Some arguments against Huxley displayed the conservative attitude that was implicitly diffused in the community and unveiled the necessity of an inclusive structure welcoming new ideas, literary styles, and publication formats. However, there were also reasonable economic motives for the magazine community to distance itself from high-brow fiction. As a matter of fact, in the following decades, the transition from the magazine format came along with certain sacrifices. The magazine market, which was relatively smaller in scale

compared to the book market, had fostered a more independent production environment, which in return encouraged a diversity of themes and styles (Attebery, 2003).

Attebery characterizes the beginning of the 1960s as the moment when pulp culture started to decline and argues that the early signs of this change were seen primarily in magazines. Unlike the early pulps bearing a strong resemblance to comic books in terms of presentation and paper quality, the magazines of the later period were more like paperback novels. The change in the design and technical details of the magazines was closely related to the paper restrictions of the Second World War. Whereas Astounding became the first magazine to change its publication size under this influence, Amazing abandoned folio-sized pages[15] in favor of digest size[16]. Initially thought to limit the magazines' visibility, this change gave science fiction a more literary look (Attebery, 2003).

In RCSF, Science fiction critic Rob Latham (2009), who examines the period between 1950 and 1963 in a separate chapter, refers to an earlier date for this change. According to his observations:

> *"While the New Wave is generally seen as the moment when sf decisively shed its pulp heritage and began to adopt the aesthetic modalities of "mainstream" literature, this trend was actually set in motion during the 1950s."* (Latham, 2009, p. 83)

Although Campbell gave science fiction its heyday in pulp format, Latham argues that his strict and uncompromising attitude to scientific accuracy caused important writers with literary sensibilities to turn to other media. Whereas Asimov, Heinlein, and L. Sprague de Camp -trained as scientists and engineers- were the three major contributors to Campbell's magazine, Theodore Sturgeon, a strong literary figure with humanist leanings, published only one story in *Astounding* in the decade following the 1950s marking the opening of new markets (Latham, 2009).

[15] 8.5 x 13 inches, which is equal to 30.5 x 48.3 cm in metric system.

[16] Approximately 5½ x 8¼ inches, which is equal to 14 cm × 21 cm in metric system.
(but can also be 5⅜ x 8⅜ and 5½ x 7½ inches, which are equal to 13.65 cm × 21.27 and 14 cm × 19 cm in metric system respectively.

Similar to Atteberry, Latham points out that change in the genre came at a price by referring to the experienced sf writers such as "*Bester, Miller, Sturgeon, Algis J. Budrys, Ward Moore, Robert Silverberg and William Tenn*" who distanced themselves from the genre due to the crisis in science fiction and were replaced by names such as "*Lloyd Biggle Jr, Keith Laumer, Fred Saberhagen*," whom he finds relatively less successful (Latham, 2009, p. 88).

According to Latham, "*what is unquestionable is that the genre failed, at the dawn of the 1960s*" (Latham, 2009, p. 88), unable to maintain the momentum of the previous decade. However, the same period also witnessed the first seeds of the developments that would lead to a revival of the genre. As magazines gradually lost their effectiveness, the growing book market brought new publishing opportunities. Meanwhile, Milford conferences[17] set the agenda for emerging writers willing to experiment with new styles with aesthetic concerns and "*to transcend prevailing orthodoxies*" (Latham, 2009, p. 88). Also, Judith Merril's annuals of *"the Year's Best S-F"* became an important record proving that exceptional works were still being written despite the ongoing crisis, while her editorial calls encouraged the new speculative fiction that would entirely revolutionize the genre. All these developments formed the skeleton of the New Wave movement that would be influential first in England and then in America in the mid-1960s (Latham, 2009).

One of the milestones in the history of science fiction that almost all critics and relevant sources agreed on is the 1960s, which was shaped by the New Wave movement. In RCSF, Helen Merrick (2009) considers 1964 as the date marking the beginning of the period since it was when Michael Moorcock assumed the editorship of *New Worlds*, a magazine closely associated with the rise of the New Wave. Moorcock's selection of publications was almost identical to the framework that New Wave underlined. Experimental in form and content, these stories were concerned more about the inner than the outer space while often permitting an open language that de-tabooed sexuality. Redefining the boundaries of sf, *New Worlds* encouraged the contributions of new writers and served as a venue for the experimental works of more qualified writers, including Brian Aldiss and James Graham Ballard (Merrick, 2009).

[17] A get-together held with the participation of sf and fantasy writers, which began in USA in 1956 (https://milfordsfwriters.wordpress.com/about/).

Merrick explains the primary difference between New Wave and the 'old guard' in their relation to mainstream literature. She defines the New Wave's pursuit as "*the threat or promise of an escape from the 'ghetto' looms*," which, as a result, gives sf "*a new respectability or at least visibility*" (Merrick, 2009, pp. 112-3). In parallel with this change, science fiction works began to appear on bestseller shelves for the first time.

Another point that New Wave distinguished itself from its priors was that it offered a literary platform more inclusive for women writers and critics and content speculating on the ideological, social, and political implications of science. This moved the genre away from 'hard' science and made it more focused on scientific possibilities influencing the human condition. In this period, science fiction was also nurtured from a broader cultural framework. The countercultures of the 60s, the sexual revolution, the civil rights struggle, Vietnam, pop, and rock 'n' roll culture shaped the internal dynamics of the genre (Merrick, 2009). Particularly skeptical of the "*shiny promises*" of modernity leaning its back to technology, New Wave science fiction bore similarities with the avant-garde culture diffused in different forms of art such as theatre and cinema (Luckhurst, 2005, p. 143).

Merrick, citing Luckhurst, describes the 1970s as the "*interregnum*" between the New Wave and cyberpunk movements (Merrick, 2009, p. 107). However, in this period, which Sterling describes as "*confused, self-involved, and stale*" and Luckhurst claims to have failed to reflect the "*structural crisis*" of the time, some important works of literature were written, including Ursula Le Guin's *The Word for World is Forest* (1972) and *The Dispossessed* (1974), Joe Haldeman's *The Forever War* (1974), James Tiptree Jr's *Houston, Houston, Do You Read?* (1976), John Brunner's *The Sheep Look up* (1972), and Ernest Callenbach's *Ecotopia* (1975) (Merrick 2009, 107). These works, many of which were awarded Nebula and Hugo, in fact, presented strong reflections on diverse subjects occupying the world agenda, such as environmentalism, anti-war activism, capitalism, and racial violence.

Another significant point about the 1970s that should not be overlooked is that the relationship between science fiction and critical theory strengthened in this decade. As Luckhurst argues, SF's "academic legitimacy and institutional consolidation" gained momentum with the emergence of international associations (including the Science

Fiction Research Association (1970), Science Fiction Foundation (1972), International Association for the Fantastic in the Arts (1980)) and academic contributions (especially that of Darko Suvin's) that built SF's theoretical framework (Luckhurst, 2005, p. 167). Academic journals such as Foundation (1972) and Science Fiction Studies (1973), which continue to be published today, appeared in this period (Broderick, 2003).

By the 1980s, science fiction ideas started to be conveyed to the consumer dominantly through cinema, television, and computer games. Besides, a significant portion of what was presented in a written format was "*the versions of sf works which had first appeared in other media*" (Clute, 2003, p. 64). Another dead-end for written science fiction was its failure to innovate. Michael Levy describes the early 1980s as a period in which "*dinosaurs*" and "*traditionalists*" continued to recycle old ideas and win Hugos and Nebulas for works that were not even close to their bests. This vicious circle ended with the emergence of the cyberpunk[18] movement, considered "*the biggest thing to hit sf since the New Wave*" (Levy, 2009, p. 153). William Gibson's winning the Hugo and Nebula for *Neuromancer* (1984) -by leaving Heinlein and Niven behind- marked the beginning of a radical change in the science fiction world.

The cyberpunk movement, pioneered by William Gibson, Bruce Sterling, and Rudy Rucker, was closely associated with internet technology, dramatically changing how people perceived the real world. This new theme, particularly in Gibson's *Sprawl* trilogy (the first of which is *Neuromancer),* evolved into an "*intensely urban near future*" story aestheticized with a noir flair, which later "*became a new template for the field*" (Levy, 2009, p. 156). The 1980s also saw the development of a new literary approach positioned at the opposite end of cyberpunk, called 'humanist sf,' with the contributions of "*Connie Willis, Kim Stanley Robinson, John Kessel, and James Patrick Kelly*" (Levy, 2009, p. 157). As Clute notes, Kim Stanley Robinson, a prolific contributor to the genre, used "*the cognitive tools of traditional sf*" in stories where ecological, social, and historical consciousness took on extra significance (Clute, 2003, p. 73). Although seen as the successors of traditional science fiction, Robinson and

[18] The term 'cyberpunk,' coined by Bruce Bethke from the word 'cybernetics' to describe stories about the digital information explosion that marked the 1980s, later became the name of a literary genre.

other humanist sf writers achieved a literary quality that only a few writers have reached in the previous decades (Levy, 2009).

By the 1990s, the names leaving a mark on the previous decade were still active in literature. Nevertheless, both the writing tendencies of the old authors and the current themes of science fiction have changed. As Paul Kincaid notes, at the beginning of the decade, the most prominent expressions associated with cyberpunk were presented in Pat Cadigan's novels *Synners* (1991) and *Fools* (1992) (Bould, et al., 2009); however, starting from 1992, the genre transformed into something different than what it had been in the previous decade (Levy, 2009). The change was primarily seen in the storytelling of those who prioritized cyberpunk. Bruce Sterling -although still benefitting from his cyberpunk background, particularly in his short stories- wrote fascinating novels (such as *Distraction* (1999)) with elements of political satire (Bould, et al., 2009). Also, William Gibson moved away from cyberpunk entirely in the early 2000s and fused science fiction themes with mainstream fiction about the present in novels such as *Pattern Recognition* (2003) and *Spook Country* (2007).

The critic Paul Kincaid argues that the genre's commons, which affirm scientificity, secularism, and rationality, had changed when religion became a major issue on the world agenda. Referring to the origins of sf and the philosophy behind it, he provides a brief summary of what distinguishes narratives written after 1992 from their predecessors:

> *"If we recognize sf as a literature forged in the rationalist revolution of the Renaissance and tempered in the secularist revolution of the Enlightenment, then the years after 1992 have seen the literature under more stress than at any time in its history. As religion becomes a major issue in world (as opposed to local) conflict for the first time since the seventeenth century and a potent force in the local politics of even such supposedly secularist states as Britain and the US, as global terrorism brings anxiety into every moment of daily life, and as environmental struggles gather pace, a literature espousing rationalism and secularism seems more and more out of step with the world."* (Kincaid, 2009, p.174)

Kincaid argues that this change in the world agenda has also transformed the science fiction universe and supports this claim with two main indicators. The first of these is the appearance of the 'fictions about the post-human future,' which he sees as an extension of the cyberpunk movement. These post-cyberpunk fictions shaped around the themes of singularity, artificial life, simulated reality (which was also prominent in *Neuromancer*, and examples of which can be seen in Greg Egan's *Permutation City* (1994) and *Diaspora* (1997)) have led to the emergence of the second concept Kincaid mentions, 'the new irrationality':

> *"These fictions, representative of a powerful and imaginative new strain that began to appear in the late 1990s, are also indicative of a new irrationalism. The scenario allows for transformations of character or universe at a moment's notice and with little or no real-world consequence; the most fanciful bodies or environments can be tried and discarded at will, and death is no longer permanent."* (Kincaid, 2009, p.176)

Although not mentioned in Kincaid and Clute's essays in RCSF and CCSF, respectively, apocalyptic/post-apocalyptic scenarios and the threat of global pandemics were other important themes that needed to be addressed for this period. Since its onset in the early 1980s, globalization has created an interconnected global community, mainly at the point of consumption through advanced capitalism. On the other hand, Islamophobia and xenophobia have been taken to another level after 9/11 and other acts of terrorism. Political tensions between nations, the lack of peace in the Middle East, China's growing economy seen as a global threat, and the risk of biological terrorism in parallel with nuclear warfare all pointed to a future in which human beings would become more and more fragile. Parallel with these developments, the post-cyberpunk fiction mentioned by Kincaid merged with biologically-induced post-humanity in some notable sf texts. Paolo Bacigalupi's *The Windup Girl* (2009), the last work selected for this study, is one of them since it seamlessly combines many of the themes that influenced the period (racism, religious radicalism, food-borne diseases, post-humanity, and global warming). Especially with the Covid-19 pandemic, when humans became more aware of their biological selves, vulnerable to diseases caused by microscopic entities such as bacteria, microbes, and viruses, these sf texts became more meaningful.

2.4.1.2. Turning Points in Sf History as Determined with Distant Reading Approach

Without disregarding the earlier classifications of the science fiction authorities, this study proposes an alternative classification based on Moretti's (2013) distant reading approach. After reviewing reference books[19] about the history of science fiction, the chronology published in *Cambridge Companion to Science Fiction* is selected for further investigation by considering its extensive coverage.[20] When the number of publications printed in each decade is compared, significant rises are observed on specific dates. Not surprisingly, these dates coincide with the dates of the different stages of industrial growth since the middle decades of the eighteenth century. Starting from 1740, which marks the beginning of the first industrial revolution, it is observed that there has been an increase in the frequency of sf publications. The 1870s witness a sharp increase in the number of science fiction novels, which also coincides with the so-called second industrial revolution. The most significant leap in the table, on the other hand, is observed in the 1950s, when the third industrial revolution, also known as the digital revolution, began.

[19] The other resources reviewed for that part of study are Science Fiction After 1900: from the Steam Man to the Stars (2002) edited by Brooks Landon and The Cambridge Companion to Literature and the Posthuman (2017) edited by Bruce Clark and Manuela Rossini.

[20] This chronology starts with Thomas More's Utopia (1516), which is accepted as the precursor of the social science fiction genre and ends with Kim Stanley Robinson's The Years of Rice and Salt published in 2002, which is also the publication date of the chronology. It includes 212 books, 40 novellas/short stories and 11 collections.

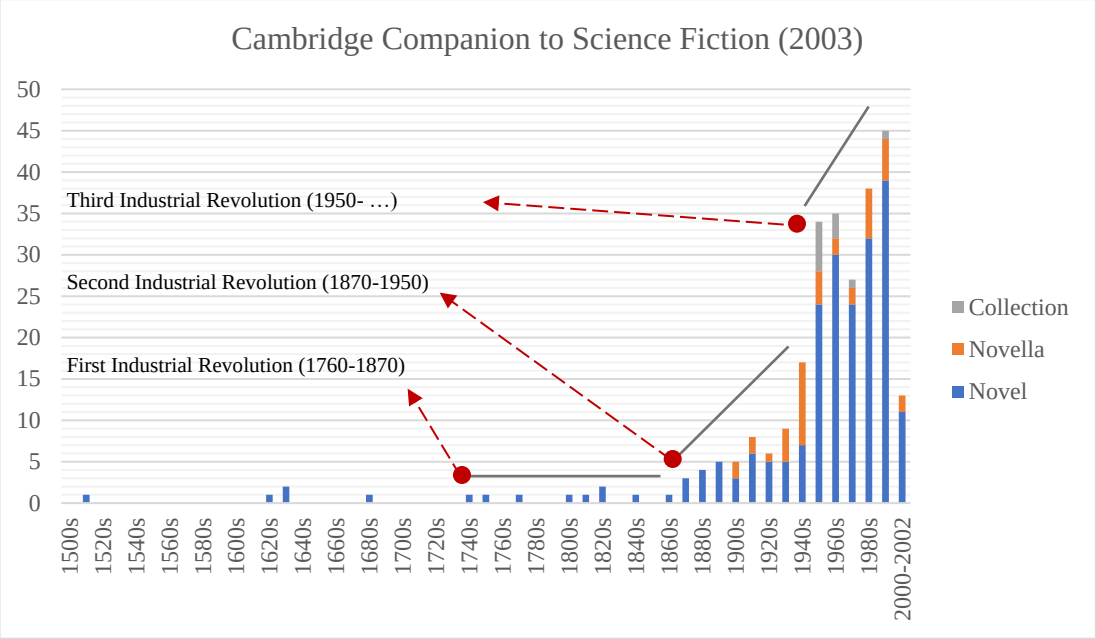

Figure 2. The number of science fiction publications (novel, novella/short story, collection) by years, listed in the book *Cambridge Companion to Science Fiction* (2003). The list excludes anthologies, journals, or other unrelated contents in the chronology.

Figure 2 verifies that science fiction is a literary genre highly sensitive to technological changes that drive history. This graphic, which draws a parallel between the history of science fiction literature and the industrial revolutions, also contributes to the identification of data sets by dividing the timeline into three consecutive zones. Although the initial idea is to select a set of literary examples from each zone, the close examinations of the novels in the first category show that each represents singular examples that can hardly be related.[21] Consequently, the first data set is selected from the early period examples of the second category, which were all written in the late 19th century. The second data set, on the other hand, is selected from the books written

[21] When nine books published between 1740 and 1870 are closely examined, it was observed that some of these narratives (such as Ludvig Holberg's Niels Klim's Underground Travels (1741), Voltaire's Micromégas (1752)) were much closer to be satirical fantasies than science fiction. Cousin de Granville's *The Last Man* (1805) and Edgar Allan Poe's *Eureka* (1848), on the other hand were prose poems. Although the reviews show that they were remarkable examples for the visionary speculations they manifested, Louis-Sebastien Mercier's The Year 2440 (1771) and Jane Webb Loudon's The Mummy! The Tale of the Twenty-Second Century (1827) could not be reached for analysis. Finally, the other books that remained on the list (including Mary Shelley's Frankenstein (1818) and The Last Man (1826), Jules Verne's From the Earth to the Moon (1865)) could not be related due to their diverse settings and themes.

in the first half of the 20th century, and finally, the third data set is chosen among the examples published after 1950.

2.4.2. Selection of the Novels

2.4.2.1. Subject Matter of the Study and Relevance between Selected Narratives:

This study examines a selection of novels with either intertextuality or relevant content. The first group includes Edward Bellamy's *Looking Backward: 2000-1887* (1888), William Morris's *News from Nowhere* (1890), and H. G. Wells's *The Time Machine* (1895), which are quite representative of the late nineteenth-century social imaginary on industrialization and its possible societal impacts. In the study, this stage in science fiction is labeled as a 'convergence phase:' which is characterized by widespread contact between humans and industrial machines. These novels constitute a significant place in the study for their capacity to show how industrialization affects the concept of humanism and the image of the ideal body that they portrayed, and how these relations are used to form insightful predictions on the future of humanity. Besides, they provide content to discuss one of the most fundamental posthumanist critiques of humanism, highlighting humanism's normative qualities that are sometimes exclusionist. In *Looking Backward*, Bellamy describes his imagined society as an industrial army that could finally achieve social justice with the equal distribution of wealth accumulated with the help of advanced machinery. The author, putting faith in industrial production for its potential to democratize luxury, describes a future shaped by bourgeois tastes and aesthetics. In that sense, Bellamy's ideal human is shaped around the bourgeois standards that prevailed in the late 19th century.

Conversely, Morris, a socialist activist who has been one of the pioneering names in the arts and crafts movement, recognizes production as one of the most significant human traits. Therefore, he argues that the machinery must provide ease for production instead of creating extra time for idleness. Based on this idea, he idealizes the laborer's body, which he imagined getting stronger and more beautiful under fair working conditions. In *The Time Machine*, on the other hand, Wells questions the utopian visions of the future, which usually go in tandem with human centric thoughts. He represents the human as an open notion, which changes with the passage of time in the nature/culture continuum. Instead of imagining a golden age, where human beings could finally reach their full potential in both physical and social terms, he propounds

a new possibility, in which humankind has devolved into two inferior species and then become extinct. Essentially, in writing *The Time Machine*, H. G. Wells, who was a student of T. H. Huxley, ingeniously speculates on his tutor's ideas proposed in *Evolution and Ethics* (1893). In this publication, Huxley,

> "*paradoxically argues that humanity's 'State of Art' (civilization) seamlessly merges with the 'State of Nature' and yet constitutes a separate ethical domain in which the amoral laws of survival and adaptation do not apply*" (Gomel, 2011, p. 344).

In this sense, *The Time Machine* is not only the third alternative to discuss the late 19th century perspectives on the human-machine relationship, but also it is one of the early works of science fiction literature that constitute a base for discussions around posthumanism discussions, which is one of the main concerns of the present study.

The second group of books under consideration includes Yevgeny Zamyatin's *We* (1924), Aldous Huxley's *Brave New World* (1932), and George Orwell's *Nineteen Eighty-Four* (1949), some of which have not been considered sf at the time when they were published.[22] Unlike the popular pulps of their time, these three novels demonstrate a mistrust of the rise of machinery. At the beginning of the 20th century, especially after World War I, utopian thinking, which had once been "*an avenue for radical thoughts*," lost its practicality when it "*had been absorbed into the affirmative ideologies of the totalizing systems of Stalinist Russia, Nazi Germany, and the corporate United States*" (Miller Jr., 2012, p. 17). In that period, the inherent dangers of utopian thought were manifested in the practices of totalitarian regimes. Consequently, some authors began to write dystopian narratives in which they questioned "*totalizing systems that had arisen from bastardized utopian dreams*" and

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[22] As Brian Attebery argues, in the magazine era marking the years between 1926-1960, there was a great opposition between popular sf and literary fiction. Therefore, especially Aldous Huxley's Brave New World had been mercilessly criticized by the reviewers in *Amazing Stories* "in terms of its failure to meet the expectations of magazine readers" (Attebery 2003, 44). In fact, the main criticism directed to Huxley was related with his approach to science. One of the reviewers argued that he "either dislikes science, … or that he does not believe in science" (Attebery 2003, 44), because Huxley's skeptical approach towards scientific possibilities, was not fitting in the general assumption of his time, which was always "toward onward and upward, whether to technocratic heaven or the stars" (Mendlesohn, 2009, p. 56).

Yevgeny Zamyatin's *We* (1932), Aldous Huxley's *Brave New World* (1932), and George Orwell's *Nineteen Eighty-Four* (1949) were among "*the paradigmatic examples of such texts*" (Miller Jr., 2012, p. 17). The critical essence, which makes them question the practicality of utopian thought leads to the invention of a new theme in SF, which is "*a utopia as a form of disaster*" (Mendlesohn, 2009, p. 56). Although they are formulated around different plots, all three narratives show that a flawless society operating like clockwork could be tyrannical if it leaves no space for personal freedom, and sometimes this freedom can only be gained through resistance by opposing the current flow of the system. In all three narratives, human beings are represented as mass-produced biological machines with their uniform looks and systematical actions controlled by totalitarian systems taking their power from advanced technology and scientific knowledge.

In the study, this section is defined as a 'resemblance phase' in terms of the human and machine relationship the books portrayed. These novels invite their readers to reconsider the potential dangers of scientific management of society, which was once proposed by utopian writers such as Bellamy. However, unlike the imaginary communities portrayed in the early science fiction novels, the modern industrial societies described by Zamyatin, Huxley, and Orwell are characterized by a total break-off from humanity's past. In all the narratives, body and dress become a site of both social discipline and resistance, which either intensify or deteriorate the supremacy of the machine empire. On the one hand, the prevailing power holders control the members of society through the regulations, which compel them to follow the biological timeline prescribed for them, and a dress code, which highlights their rank and social status. Especially dress, as a marker of social inclusion and segregation, constantly reminds people that they cannot have subjectivity independent of society. So, the concept of uniform clothing, once used in the early utopias as a manifestation of egalitarianism, social justice, and solidarity, becomes a filter eradicating all the richness, uniqueness, diversity, and vigor embedded in humanity. On the other hand, the dress also becomes a tool of resistance, which provokes the collective memory of the past or a site of remembrance, self-discovery, and identity formation. An antique dress represented as an object of ridicule or the people of sanctioned territories associated with savagery becomes an active narrative instrument by creating thresholds for protagonists' transformations.

Although the word ‘transhuman’ did not exist then, the narratives making the portrayal of human beings, whose mental and physical characteristics are transformed by the sovereign minorities to ensure the continuity of the social structure, describe a process in which the transhumanist ideal of human enhancement developed in a reverse direction. In that manner, body and clothing practices described in the narratives constitute a fundamental source to discuss the promises of transhumanism and its possible dangers, as well as the modernist subjectivity, which simultaneously creates its negative counterparts.

Finally, the third group of novels includes William Gibson’s *Neuromancer* (1984) and Paolo Bacigalupi’s *The Windup Girl* (2009). They together belong to what I propose to define as the ‘co-existence/mergence’ phase of science fiction, referring to the possibility of a posthuman future where different forms of technologically enhanced or genetically modified human forms co-exist. As Delgado et al. (2012) propose:

> *“Neuromancer anticipates a prominent image of a postindustrial society: a corrupt world dominated by large corporations in which control over information is crucial. In 1983, Gibson for the first time used the concept of “cyberspace,” defining it as a “collective hallucination,” a matrix of virtual reality… The “disembodied body” is a key image in the unfolding of the narrative and the dual realities of cyberspace and the material world central elements in the sociotechnical imaginary evoked by it.”* (Delgado et al., 2012, p. 209)

In *Neuromancer*, Gibson’s representation of cyberspace leads to the invention of a new form of human enhancement, which is “body as information” (Delgado et al., 2012, p. 202). However, what is spectacular about Gibson’s invention is not his portrayal of cyber cowboys, which are running in and out between the real world and cyberspace, but the co-existence of different technologically enhanced human forms with the embodied/disembodied AIs in multiple environments (The Sprawl, Freeside, Istanbul, Chiba, Tokyo, The Villa Straylight, etc.). The novel, presenting a very large panorama of a variety of virtual/real spaces with elaborate details, demonstrates an eclectic and anachronistic vision of the future. This aesthetic preference also influences the formulation of the characters. In this post-industrial nightmare, bodies are copied, enhanced, sustained, or mutilated with various technologies and scientific applications

either with the free will of the subjects or as an intervention of the others. This presents a grotesque mixture of natural, organic, synthetic, and cybernetic materials associated with different cultural, technological, and historical contexts in and around the body.

Bacigalupi's *The Windup Girl* (2009), on the other hand, is set in twenty-third-century Thailand, which cut off the global trade "*as a protectionist measure against calorie monopolies, megacorporations who control global food production in a world beset by anthropogenic climate change*" (Donnelly, 2014, p. 157). In this future, where the human population is threatened by food-borne pandemic diseases such as 'cibiscosis' and 'blister rust,' Thailand, with its reserve of unmodified seeds, becomes the target of calorie companies (King, 2016). However, in Thailand, which follows a closed-economy policy, there is a never-ending struggle between people of different ethnic origins, professional groups, and even ministries. The novel, which is shaped around the story of Emiko, a windup Japanese girl (bioengineered New People) illegally residing in the country, illustrates different forms of miseries that the New People encountered as well as the vulnerabilities of humans toward bioengineered viruses and racist mistreatments.

The eight novels discussed here have been selected to observe how the representations of the human body differ in science fiction narratives written at various historical junctures marked by shifting notions of humanism, different stages of industrial development, and changing socio-economic/political conditions.

Table 1 shows the list of the novels selected for the data analysis based on their categories:

Table 1. The list of the novels selected for the data analysis.

Year	**Book Titles** ***Authors***	**Historical Period**	**Human/ Machine Relationship**	**Conception of th Human body**
1888	Looking Backward, 2000-1887 *Edward Bellamy*	Early-Industrial Society	Convergence	Humanism
1890	News from Nowhere *William Morris*			
1895	The Time Machine H. G. Wells			Core Ideas on Posthumanism

Table 1. (Continued). The list of the novels selected for the data analysis.

1924	We *Yevgeny Zamyatin*	Industrial Society	Resemblance	Transhumanism
1932	Brave New World *Aldous Huxley*			
1949	Nineteen Eighty-Four *George Orwell*			
1984	Neuromancer *William Gibson*	Post-Industrial Society	Co-existence / Mergence	Posthumanism
2009	The Windup Girl *Paolo Bacigalupi*			

2.4.2.2. Common Traits of the Selected Novels

The eight novels under review here share common traits in their focus on (1) terrestrial life, (2) the interplay of humans, technology, and environment, (3) the practices of dressing, and (4) developing social commentary. Consequently, the study focuses on future speculations regarding:

1. The future of humanity on Earth by excluding the narratives which speculate on the possibility of living elsewhere in the universe. Therefore, the study excludes the narratives taking place in other settings such as other planets, space colonies or spaceships, etc. **(Habitat)**
2. The gradually changing relationships between humans, technology, and the environment. Although some of the selected narratives include enhanced humans, AIs, clones, or replicants, the study excludes the texts focusing on extraterrestrial beings that cannot be positioned in this web of relations. **(Subject/s)**
3. The ideals of different humanisms projected on the body and practices of dressing. Therefore, the study excludes those narratives, which do not cultivate a fruitful discussion on humanism, transhumanism, and posthumanism, and which do not include sufficient textual information related to body and dress. **(Context)**
4. The social changes driven by major scientific and technological advancements creating global impacts. Therefore, the analysis examines narratives that can be considered under the social science fiction genre. In that manner, the study excludes literary works categorized under the hard

science fiction genre, "characterized by an interest in scientific detail or accuracy." **(Literary Perspective)**

2.4.2.3. The Novel's Narrative Capacity to Provide Content for Examination:

One of the criteria employed in selecting novels is the books' narrative capacity to provide content for examination. Therefore, the narratives, which are in line with the subject and scope of the study, were also reviewed in terms of the descriptions of body and dress. The evaluation was made by measuring the word frequencies of basic nouns and verbs related to body and dress (Table 2). In the word selection, the novels' publication dates were also considered to include outdated yet related words. For example, the word 'clad,' which means 'clothed' in the late 19th century narratives, was added to the list, as well as the word 'unif,' which was used as an expression derived from 'uniform' in Zamyatin's *We* (1924). After this evaluation, some literary works that comply with the other criteria (such as Philip K. Dick's *Do Android Dream of Electric Sheep*, Kim Stanley Robinson's *Three Californias Trilogy*, etc.) were eliminated.

Table 2. The word frequencies of basic nouns and verbs related to body and dress in the selected novels.

Title	Word Frequencies							
	Dress*	Cloth**	Wear***	Garment	Clad	Uniform/Unif ****	Human*****	TOTAL
Looking Backward: 2000-1887	11	10	8	2	1	3	91	126
News from Nowhere	30	26	3	5	16	-	18	98
Time Machine	3	7	-	3	5	3	36	57
We	17	8	-	1	-	46	39	111
Brave New World	6	19	10	2	-	8	23	68
Nineteen Eighty-Four	12	31	19	1	-	18	77	158
Neuromancer	7	24	13	1	-	5	24	74
The Windup Girl	15	38	26	1	-	31	31	142

*both as a noun and verb together with suffixes/words not associated with word stem (such as address etc.) were excluded.

** both singular and plural forms together with other words derived from cloth (such as clothe, clothing, etc.)
*** both as a noun and verb together with suffixes/words not directly associated with word stem (such as weary, weariness, swear, etc.) were excluded.
**** in *We*, the word unif substitutes uniform / both singular and plural forms together with other words derived from uniform (such as uniformity, uniformly, etc.)
***** together with other words derived from human (such as humanity, humanness, inhumanity, inhumane, dehumanized, etc.)

2.4.2.4. Literary Value and Widespread Effect:

In this study, the novels' literary values and widespread impact have been determined by their international audiences, the literary awards that they received, and the influences that they left on their contemporaries. Also, by using the EBSCOhost Research Platform, the number of academic publications related to each book has been reviewed to measure the capacity of the works to create resources for academic studies.

The late 19th century examples *Looking Backward: 2000-1887*, *News from Nowhere*, and *The Time Machine* are accepted as early science fiction narratives as they predate the definition of the genre itself. However, their vision of the future is still debated by international scholars today. *We, Brave New World*, and *Nineteen Eighty-Four*, written between two World Wars, commence a new literary tradition that presents utopia as a new form of disaster. Although they were banned, rejected, or criticized for their revolutionary ideas ahead of their time, they are currently acknowledged as the most influential dystopian novels of the century (Moore, 2014). Many years after their publications, *We* and *Brave New World* were awarded Prometheus Awards in 'the Honor of Fame' category, respectively, in 1994 and 1984. *Neuromancer*, on the other hand, is "*the first [and only] novel to win the triple crown - Hugo, Nebula, and Philip K. Dick awards*" (Levy, 2009, p. 153). Bacigalupi's *The Windup Girl*, which was later included in the study, received the appreciation of sf authorities. Adam Roberts propounds that the first novel of Bacigalupi, which had been compared to Gibson's *Neuromancer* because of "*the plot-twists, the bursts of violence and a noir stylishness*" present in both, "*embodies what sf does best of all: it remakes reality in compelling, absorbing and thought-provoking ways, and it lives on vividly in the mind*" (Roberts, 2010). The novel also received Nebula, Hugo, Campbell Memorial, and Compton Crook awards in 2010.

CHAPTER 3: BODY AND TECHNOLOGY IN EARLY SCIENCE FICTION: A COMPARATIVE ANALYSIS OF BELLAMY'S *LOOKING BACKWARD*, MORRIS'S *NEWS FROM NOWHERE*, AND WELLS'S *THE TIME MACHINE*

In his utopian science fiction novel *Looking Backward: 2000–1887*, Edward Bellamy describes an imaginary future society where all turbulences that characterize the late nineteenth century—economic crises, labor strikes, class struggles, etc. —are completely resolved. Although Bellamy himself was not a student of Marxism or socialism before writing *Looking Backward* (Abrash, 1991), the visions manifested in the book contributed to the spread of socialism and the establishment of 'Bellamy Clubs' across the United States (Magdoff, 2006).

Despite its favorable reception within both socialist and non-socialist circles, the popularity of the novel did not prevent William Morris from publishing a strong criticism of Bellamy's ideas and accusing him of short-sightedness in addressing the deep-seated problems of labor, industrialization, and urbanization (Morris, 1976). Unlike Bellamy, who builds his imaginary society on the positive aspects of the modern bourgeois civilization and regards machinery as a solution to address the burden of labor, in *News from Nowhere*, Morris invites his readers to rural landscapes where members of his ideal society enjoy a close-knit relationship with nature and embrace labor as a source of peace and freedom.

Five years after *News from Nowhere* had been published, H. G. Wells wrote *The Time Machine*. As Parrinder argues, Well's work is influenced by the utopianism of Morris from various aspects,[23] although the book illustrates a vastly different future (Parrinder, 2009). At the beginning of the novel, the protagonist invents a gadget enabling him to travel in time, and upon testing it, he transports himself to year A.D. 802,701. In a narrative sense, this device enables Wells to make the extrapolative

[23] Prior to writing *The Time Machine*, H. G. Wells was the disciple of T. H. Huxley, an English biologist, and "had been converted to socialism by Morris" (Hale, 2003, p. 250). However, although Morris had been influential in his early career and Wells remained "a convinced socialist… he later dismissed Morris's views of both humanity and nature as romantic and his socialism as impracticable" (Hale, 2003, p. 250).

modeling of the far future and propose more radical questions concerning the continuity of human existence on earth.

Wells's *The Time Machine* constitutes neither a technocratic utopia similar to that of Bellamy nor its regressive anti-thesis written by Morris. Instead, he depicts a half-grotesque dystopia in which the human descendants are declined into two inferior species. In Wells' dystopia, they are represented as Morlocks and Eloi, the first of which is the brutal white-skinned creatures deprived of the human form, and the others are the miniature humans who lack intelligence and physical strength. According to Parrinder, the post-Darwinian interpretations of the post-human epitomize "*our hopes and fears about the human condition*," and in *The Time Machine*, they "*relapse into primitivism and savagery*" (Parrinder 2009, 57).

The differences between the approaches of Bellamy, Morris, and Wells become apparent not only in the abstract models defining social structures but also in the material manifestations of the imaginary worlds they construct: buildings, cityscapes, furniture, art, and clothing. The references to body and dress, in particular, portray how authors' divergent approaches to technological progress affect the formulation of their societies.

Bellamy does not envision a radical change in the way members of his imaginary society would dress. He is content with making fashion—normally a reserve of the upper classes—accessible to all citizens. Morris, on the other hand, is influenced by primitive communism and medievalism. He draws inspiration from 14th-century costumes in dressing his imaginary characters. Although "*the gay, brightly-dressed people*" described in *The Time Machine* "*are strongly reminiscent of Morris*" (Parrinder, 1976, p. 271), Wells does not use this symbolism to praise medievalism, instead, he uses these archaic basic dress forms in the portrayal of the degraded folk resembling children from both physical and intellectual aspects.

This chapter aims to explore how the material constructions of utopian/dystopian narratives published towards the end of the nineteenth century are informed by ideological crosscurrents and the concept of technological progress. It proposes to examine how the imaginary societies of Bellamy, Morris, and Wells are dressed to comprehend how much they are influenced by the contemporary critiques of fashion and the idea of utopian dress, which had been considerably affected by

industrialization and modernization. The theories developed by Thorstein Veblen in *The Theory of the Leisure Class* (1899) and by Georg Simmel in his essay *Fashion* (1904) constitute the theoretical framework of this comparative study.

3.1. About Novels

Edward Bellamy's *Looking Backward: 2000–1887* is narrated by the protagonist Julian West, who once was a young bourgeois living in the19th-century Boston. West describes himself as a wealthy man who never had to work for a living. He inherits this privilege from his great-grandfather, who once had "*accumulated a sum of money on which his descendants had ever since lived*" (Bellamy, 2007, p. 5). The sum, which had been initially small, has grown over the years and become enough to support three generations. On the other hand, Mr. West's pleasant life spent in idleness gets in danger when the labor strikes break out all over the country. The workers:

> *"On every side, with one accord, … demands for higher pay, shorter hours, better dwellings, better educational advantages, and a share in the refinements and luxuries of life, demands which it was impossible to see the way to granting unless the world were to become a great deal richer than it then was"* (Bellamy, 2007, p. 10)

Within the same industrial system, the world could not be enriched suddenly. Therefore, the rights demanded by the workers create a feeling of insecurity among the members of the upper classes anticipating that they might have to waive their acquired privileges.

Life becomes extra difficult for Mr. West when his neighborhood is invaded by "*tenement houses and manufactories*" (Bellamy, 2007, p. 13). Having been unable to sleep at night, he builds a sleeping chamber beneath the foundation of his house to isolate himself from all the noises of Boston. In search of a remedy to his restless nights, Mr. West also tries an unusual method as a cure. He consults Doctor Pillsbury, a quack doctor, helping him sleep under hypnosis. One day, Mr. West's sleep is disrupted by unfamiliar voices. When he wakes up, he sees Dr. Leete, a gracious man inquisitively observing him. After a couple of questions and answers, both discover that West's uninterrupted hypnotic trance lasted for 113 years, and Dr. Leete incidentally found his chamber during an excavation at the site where West's house had burnt for an unknown reason. In the course of events, Julian West suddenly finds

himself in a future where all turbulences that characterize the late nineteenth century are entirely resolved, and this radical change comes peacefully when the necessary conditions are met. His Boston, which had been once invaded by factories, apartments, and the never-ending noises arising from them, has become a well-organized city hosting wide streets, elegant buildings, and spacious squares filled with trees, fountains, and sculptures.

In his proposal, Bellamy illustrates his imaginary society as an "*industrial army*" (Bellamy, 2007, p. 37) that acts in harmony for the mutual benefit of its members. This industrial army utilizes industrial tools to minimize the burden of labor and provide time for leisure and self-improvement. No one suffers from unemployment, and everyone retires at 45 when there is still time to enjoy the world's blessings. Equal income policies eliminating class differences do not lead to standardization of lifestyles since people's purchasing behaviors vary extensively based on their tastes and preferences. This variety manifests itself also in urban planning. The houses change in size and elegance; therefore, large houses are usually occupied by large families having many members contributing to rent. Nobody hires domestic servants since the house-works does not exist. Washing is done at "*public laundries*," cooking at "*public kitchens*," and making and repairing of the garments in "*public shops*" (Bellamy, 2007, p. 70).

Unlike other imaginary societies proposed by earlier literary texts, in *Looking Backward*, Bellamy envisions a classless society utilizing advanced industrial technologies to provide "*material necessities of a good life*" (Abrash, 1991, p. 6). Merritt Abrash suggests that in that sense, the outlines of Bellamy's utopian visions bear an affinity with Marxist thinking. However, what makes his ideals more acceptable than Marx's is his domestication of Marxist principles in line with American morals and sensibilities.

A great many Marxist critiques of *Looking Backward* agree that Bellamy's portrayal of 21st century Boston fails to provide a comprehensive insight into public life and social interactions. In his discussion of the novel, Abrash argues that Bellamy seems to neglect the representation of "*any mass or collective aspects of Boston 2000*" and "*readers get so absorbed in the Utopian substance of what Julian West is told that they fail to notice that direct depiction of the society in action is virtually absent*" (Abrash,

1991, p. 7). This also appears to be an outcome of Bellamy's narrative decision, which he framed around the Leetes, but which also provides a very limited perspective for the readers who would like to grasp a better understanding of his imaginary society of the 21st century.

Considering their critical position in the storyline, the family typology of the Leetes needs further investigation for the disclosure of the values they represent because the values making them ideal for Bellamy also give clues about how the author interprets his milieu for his conception of an ideal society. The plot shows that the Leete family is not much different from an average bourgeois family in the late 19th century in terms of family structure, gender roles, moral codes, and daily practices. While Doctor Leete does not engage in any physical work, Mrs. Leete does not show a distinct presence. In her domestic environment and public places, she exists to accompany her husband. Their daughter Edit Leete, on the other hand, is portrayed as a beautiful young lady spending her money on pretty clothes. In a nutshell, "*father works, mother runs the household with the aid of public facilities and (if necessary) hire(s) help, and daughter shops*" (Abrash, 1991, p. 7).

Although *Looking Backward* is acknowledged to be an early science fiction narrative based on socialist values, the details hidden between the lines subtly indicate that it may not entirely be the case. Although Leetes' consumerist happiness based on idleness looks quite attractive to the readers, especially when they are told that this privilege is given to all segments of society, the issue of labor seems to be overlooked in the book. This especially becomes evident when the narrative does not provide a reasonable explanation of who is doing the work in the public facilities and why they work in there if they are equally paid with the Leetes. As Abrash suggests:

> *"Not only do the working classes not rule in Looking Backward, but they are shunted even further out of the sight of Bellamy's contemporary middle-class reader than their real-life counterparts of 1888. It is significant that the nearest Julian gets to proletarians is at the warehouse, where the work consists of order-filling and distribution rather than production. Of labor or laborers in factories, there is not even a pretense of first-hand description anywhere in the book."* (Abrash, 1991, p. 7)

However, the novel, which does not provide any revolutionary solution for the labor problem, proposes innovative systems concerning the purchase and the marketing of the goods. It possibly indicates that Bellamy's intention in writing *Looking Backward* is to draw attention to conspicuous consumption, which determines the pecuniary culture of the middle-class starting from the late 19th century, rather than forming a socialist utopia with a particular focus on labor and laborer. Hence, the future society that Bellamy envisioned for the 21st century is a society of conscious consumers rather than happy producers. Within the mechanism he projected, he eliminates all the marketing approaches that tend to convince customers to buy things they do not need (such as advertisements, window displays, tenacious clerks, etc.). Also, individuality and variety are emphasized as the notions determining shopping behaviors.

Whether it is established on socialist roots or not, Bellamy's happy dream, smoothly melting the egalitarian essence of socialism with the idea of technological progress, appealed to a wide range of audiences with or without an affinity to socialism. Later, the book's reputation exceeded the borders of the country, and the British Nationalization of Labour Society (NSL) aimed to spread "*the principles enunciated in Edward Bellamy's Looking Backward*" (Manton, 2004, p. 326) through the Journal Nationalization News. As Barbara Goodwin and Keith Taylor argue, Bellamy's Boston of 2000 also influenced public imagination and provoked his contemporaries to respond with pro-and anti-Bellamy literary responses (Goodwin and Taylor, 2009). Andrew Milner, for instance, refers to anti-utopian fictions which oppose Bellamy's utopian proposal, including "Richard C. Michaelis's *Looking Further Forward* (1890), Arthur Dudley Vinton's *Looking Further Backward* (1890), W. W. Satterlee's *Looking Backward*, and *What I Saw* (1890) and J. W. Roberts's *Looking Within: The Misleading Tendencies of 'Looking Backward' Made Manifest* (1893)" (Milner, 2012, p. 118). However, for Milner, William Morris's *News from Nowhere* which is "*self-consciously designed to refute Bellamy's utopia"* constitutes a distinctive position among all (Milner, 2012, p. 118). Unlike the other names listed by Milner, Morris is still read by the readers even today, and he embodies his criticism with an alternative future proposal.

For Morris, the social transformation that Bellamy envisioned for the 21st century was based on unhistoric assumptions; and neither this half-change nor the peaceful revolution sounds realistic. He also addresses the possible dangers of the one big

‘industrial army’ since it can easily turn into a monopolistic tyranny in the organization of life and production, and centralization of labor can diminish one’s sensitivities about the details of his work. According to Morris, Bellamy’s misconception of labor also prevents him from finding a rational plan for the use of machinery. He believes that the idea suggesting the use of machinery in the reduction of working hours seems futile since “*the development of man’s resources*” results in “*fresh desires and fresh demands on nature*” therefore, “*multiplication of machinery… just multiply machinery*” without diminishing the energy spent on labor. Unlike Bellamy, Morris celebrates “*happy labor*” and suggests using industrial tools to reduce pain in labor (Morris, 1976, p. 289).

Unlike Julian West, who is a young bourgeois, Morris’s main character William Guest comes from a socialist background. One day he wakes up and suddenly finds himself at the beginning of the 21st century. In this unknown future, Mr. Guest goes on a journey accompanied by a new friend Dick Hammond who will go up the Thames for hay harvest. During this journey, Guest learns more about the society of the 21st century built after a socialist revolution. In this society, the state does not exist, and all the ills of capitalism disappear. Cities and working cities are decentralized, and freer relationships are established between men and women. Children learn by experience, and people take pleasure from their labor and artistic production. Morris’s ideals exhibit parallels with Marxist and Engelsian perspectives in their emphasis on recognizing “*work as central to human existence*” in contrast to the views of Bellamy, who instead celebrates leisure (Magdoff, 2006).

While Bellamy relies on technological progress for an optimistic future, Morris turns his face to historical cases and nature. H. G. Wells, on the other hand, experiments on the third formula in *The Time Machine* (1895) by assembling these two contradictory ideas in the same narrative in a distant future dystopia. In *The Time Machine*, he envisions a posthuman future (A.D. 802701), in which the human generation is degenerated and eventually evolves into two different species after they had gained mastery over both machinery and the earth for a while. With this approach, Wells not only critiques existing social structures but also questions the utopian proposals introduced by his contemporaries. Unlike Bellamy and Morris, who attempt to propose a rational set of guidelines for the resolution of the ills of the 19th century with a political undertone, in *The Time Machine*, Wells takes advantage of being a fiction

writer to speculate on the plausible future scenarios based on the scientific assumptions of his time.

H. G. Wells's *The Time Machine* is an innovative piece of literature in many aspects, some of which distinguish it from *Looking Backward* and *News from Nowhere.* This becomes evident in his selection of characters, the organization of the plot, and the way how he approaches the concept of the future[24]. The protagonist of *The Time Machine,* in the novel referred to as The Time Traveler, is a scientist working on the invention of a new gadget that would enable him to travel in time. Unlike Julian West and William Guest, who accidentally find themselves in the dawn of the 21st century, the time traveler can selectively go back and forth in time with the machine that he invented. It makes his journey a scientific discovery where he can observe different stages of human existence.

When testing his machine, The Time Traveler finds himself in a place that looks like "*a lawn in a garden*" (Wells, 2002, p. 19). Then, he perceives a group of figures, some of whom will soon come and take him to where they live. Together they pass from a huge entrance and come into a magnificent building with a great hall and mysterious portals. Here, The Time Traveler is surrounded by a vast crowd of tiny creature's folk called Eloi reside in massive, ostentatious yet dilapidated buildings. Hundreds of them

[24] H. G. Wells's enthusiasm for science also affects how the concept of the future is presented to the reader. In *Looking Backward* and *News from Nowhere*, the protagonists access the secrets of the future with the narration of the secondary characters that they have encountered throughout their journey. In the dialogues built in a form of consecutive questions and answers, Julian West and William Guest learn about the social dynamics of the future societies which are the outcomes of a century-old transformation. These narratives are based on the constant comparisons between the 19th century in which they lived and the 21st-century ideals which the authors proposed. In *The Time Machine,* on the other hand, The Time Traveler does not have a chance to access any reliable, direct source to learn how the human race evolved in thousands of years. Therefore, he makes anthropological inferences based on his observations about the physical and behavioral characteristics of the human descendants. To make sense of the far future, he tracks every bit of information that he obtains from nature and all kinds of human artifacts. In *The Time Machine,* the protagonist benefits from the late 19th-century not as a constant variable of comparison, but as a source of reference that provides a scientific framework for interpretation. As the heritors of utopian tradition, Bellamy and Morris draw a roadmap for the residents of the future, showing the virtue of a good life to highlight what they perceive as wrong and what needs to be altered. H. G. Wells, on the other hand, does not undertake the burden of constructing future ideals that will convince and please his contemporaries. Instead, he seems to contemplate what the fate of humankind would be like in the future if the current conditions reach their extremes. Rather than being didactic, he grasps the future as a result of the historical course of events and he builds his narrative accordingly.

eat together in great halls, where the foods are served on an innumerable number of tables. After spending some time with them, The Time Traveler concludes that the human generation was degraded into physically fragile, happy creatures with a lack of intelligence and adopted a form of communal living for some necessity.

In AD 802701, however, humans are not the only species exposed to such dramatic change. Long neglected weedless gardens of the future show that humankind seemed to have won its fight over the harmful plants; and became remarkably successful in cultivating the beneficial types. The delicate flowers embellishing the gardens and the delightful fruits served at the dining tables are somewhat different from their equivalents in the 19th century, with their outlandish features and proportions. Despite the spectacular evolution of the plants, most of the animals, including "*horses, cattle, sheep [and] dogs"* (Wells, 2002, p. 24), follow the dinosaurs into extinction. These changes eating habits, and the human descendants become strict vegetarians.

Based on his first impressions, The Time Traveler assumes that he has reached a peaceful golden age, where people lead a safe and stable life without competition and rivalry. However, very soon, he becomes aware of an unsettling danger, threatening the lives of Eloi. This danger has arisen from Morlock resembling white-skinned apes appearing in the darkness. Later, The Time Traveler discovers that they lived in underground cities, where all the production facilities were located. After then, he gradually faces the astonishing truth:

> *"that Man had not remained one species, but had differentiated into two distinct animals: [the] graceful children of the Upper-world were not the sole descendants of [human] generation, but that this bleached, obscene, nocturnal Thing, … was also heir to all the ages"* (Wells, 2002, p. 42)

3.2. 19th Century Ideals on the Future Body

This chapter explores how the material constructions of utopian/dystopian narratives published towards the end of the nineteenth century are informed by ideological crosscurrents and the concept of technological progress. It proposes to examine how the imaginary societies of Bellamy, Morris, and Wells are dressed to comprehend how much they are influenced by the contemporary critiques of fashion and the idea of utopian dress, which had been considerably affected by industrialization and modernization. The theories developed by Thorstein Veblen in *The Theory of the*

Leisure Class (1899) and by Georg Simmel in his essay *Fashion* (1904) constitute the theoretical framework of this comparative study.

3.2.1. Male Body and Dress

In *Looking Backward: 2000–1887,* Julian West falls asleep in 1887 and wakes up in 2000. Dr. Leete, who accidentally finds West's sleeping chamber during an excavation, becomes his host and mentor in his new life. Dr. Leete invites West to his terrace, where he can see the transformation of Boston for the first time. There, Mr. West is stunned by the view of a great city, which is extremely different from what he had seen in the 19th century. However, he does not feel the same excitement when given new garments since they look similar to the ones he already had, except for a few details. Based on this experience, he confesses that there was not "*any very startling revolution in men's attire,*" although the future had been shaped by great changes told by his host (Bellamy, 2007, p. 23).

The male garments that Bellamy envisioned for 2000 are not much different from those in 1887 because his utopia is based on bourgeois values and aesthetics, which were essentially dominated by the male culture. In the late nineteenth century, the men's suit, which became internationally widespread, particularly in England, America, and modern states of Europe, had been accepted as an ideal garment rationally designed to accentuate the male figure and comply with his active social life. In other words, it was already perfected and, therefore, less dependent on fashion's fast-changing pace compared to women's dress, as was debated by the philosophers of the time (Fuchs, 2004).

According to Eduard Fuchs, bourgeois dress (particularly the male dress) embodied the democratic values surfacing with the triumph of the French Revolution. For him, democracy was "*the essential and universal life form of Europe's most civilized peoples,*" and it was already diffused in life. "*Democracy as a general lifestyle [was] the unavoidable social consequence of the modern mode of big capitalist production because ... it [was] also its indispensable basis.*" Consequently, "*the specific character of all clothing also had to become democratic, i.e., bourgeois*" and "take the place of the previous court fashions" (Fuchs, 2004, p. 318).

Following the French Revolution, bourgeois men's fashion underwent a significant transformation that John Carl Flügel defined as "*the great masculine renunciation*" (Kawamura, 2005, p. 10). For Flügel, it was "the most remarkable event in the whole history of dress" since it was characterized by the "*sudden reduction of male sartorial decorativeness*" embedded in the culture of the old aristocracy (Flügel, 2004, p. 103).

> *"One of the purposes of decorative dress was… to emphasize distinctions of rank and wealth -distinctions which, in the fifteenth sixteenth, and seventeenth centuries, the aristocracy had often endeavored to preserve by means of special sumptuary laws. But distinctions of this kind were among the chief of those that the French Revolution, with its world-echoing slogan of "Liberty, Equality, Fraternity," aimed at abolishing."* (Flügel, 2004, p. 104)

So, the modern men of the civilized world voluntarily waived their right to wear elaborate garments with bright colors and flamboyant embellishments, "*leaving these entirely to the use of women*" (Flügel, 2004, p. 103). Of course, this transformation was not solely the outcome of the values spread after the French Revolution but also the technological advancements introduced by the Industrial Revolution. Although the French Revolution marked the eighteenth century, standardization of male garments could only be possible after the nineteenth century.

In the nineteenth century, the Industrial Revolution brought a series of new inventions, which transformed nearly all the stages of textile manufacturing, starting from yarn production to finished garments. The textile industry, in return, played a significant role in the development of the factory system. Together with the widespread use of spinning machines, power looms, roller printings, jacquard machines, and synthetic dyes, textile materials in various colors and patterns could be produced in a shorter time with less budget, "*making mass-produced fabrics for dress and furnishings available to a large portion of society*" (Watt, 2004). By the end of the century, "machine cutting was standard; pressing became more efficient" and "*men began to look and dress alike, and the sameness of their dress made multiple productions by a machine entirely possible*"; however, "*ready-made clothing for women lagged behind what was available for men*" (Steele, 2004, p. 25). This situation was also related to the sartorial culture, which developed dissimilarly in menswear and womenswear. As Anne Hollander argues in *Sex and Suits: The Evolution of Modern Dress* (1994):

> *"[In the nineteenth-century], tailoring establishments for men provided all the materials along with the finished product, the two having long seemed obviously inextricable. Men didn't brood at home over fashion plates, and then go to several different fabric stores and study many varieties of texture and fiber, and shop around for different colors for facings, and compare the thicknesses of ornamental braid or the sizes of buttons, all in connection with going separately to the tailor's shop and ordering a suit."* (Hollander, 1994, p. 118)

So the design of a suit was the product of industrial logic, even if they were custom-made:

> *"The design of a suit would moreover be a matter of variation on an established form, the variant often consisting only of a new fabric or trim suggested and provided by the tailor himself. His shop would then see to all the results from beginning to end."* (Hollander, 1994, p. 118)

The bourgeois men's clothing was characterized by uniformity, masculinity, and industrial logic. Therefore, it contrasted with the monarchical values of the '*ancien régime.'* It was modern, sensible, simplified, and supportive of the active life. Technically, it was democratic and even universally accepted among the men of the world's civilized nations. Unlike women's clothing, which still needed a "*rescue*," it was not the subject of an essential reform (Hollander, 1994, p. 125). Bellamy's concise description of 21st-century men's clothing proves that he was convinced by the contemporary debates celebrating the suit, emphasizing the absolute, steady figure of a bourgeois man and his supremacy.

Although many people praised capitalist production for its capacity to democratize luxury with industrial logic, William Morris was dissatisfied with the products of industrial manufacturing because of their poor design qualities and standardized outcomes. Therefore, his sensitivity to art and labor, which distinguishes him from Bellamy's techno-utopianism, has led Morris to envision a way of dressing quite contrary to the modern male ideal of his age.

In the *News From Nowhere*, Unlike Julian West, who does not feel any excitement towards his new garments, William Guest, feels like a "*scarecrow*" (Morris, 2002, p.

84) with his "*rough blue duds,*"[25] which deeply contrast with "*the gay attire of the citizens*" (Morris, 2002, p. 83). Therefore, he immediately wants to renew his garments to avoid the curious gazes of the people he comes across. When his new friend, Dick (Richard Hammond), rejects to give Mr. Guest new clothes considering that his antiquarian great-grandfather would prefer to see him as he was, he is terrified to be seen as "*a curiosity for the amusement*"[26] and wishes to "*look a little less like a discharged ship's purser*" (Morris, 2002, p. 83). William Guest's desperate desire to get his new garment and Dick's determination to preserve his authentic look show how much his attire is different from the ones in the 21st century:

> *"William Guest: "My clothes--Couldn't I? You see--What do think could be done about them?"*
>
> *…*
>
> *Dick: O don't get new clothes yet. You see, my great-grandfather is an antiquarian, and he will want to see you just as you are. And, you know, I mustn't preach to you, but surely it wouldn't be right for you to take away people's pleasure of studying your attire, by just going and making yourself like everybody else. You feel that, don't you?" said he, earnestly"* (Morris, 2002, pp. 83-4)

Morris's rejection of modern men's clothes conveys him to find an alternative dressing style for his male characters in the *News from Nowhere*. The author's belief in the spiral progression, his trust in the cumulative nature of knowledge, and his aesthetic discontent regarding the designs of his age guide him to find a solution, which had its roots in the pre-renaissance period. He believes that even the richest men of his time were poorer than the peasants of the Middle Ages, considering that they were surrounded by tasteless objects incapable of giving them pleasure or happiness (Clutton-Brock, 2012). Wishing to make people aware of this new type of poverty threatening humanity, he dresses his imaginary society in garments resembling 14th-century costumes. In the novel, the look of the waterman, the first character that William Guest has met in the future, is one the best representatives of this style.

> *"His dress was not like any modern work-a-day clothes I had seen, but would have served very well as a costume for a picture of fourteenth century life: it was*

[25] Dud…

[26] A criosity of amusements…

> *of dark blue cloth, simple enough, but of fine web, and without a stain on it. He had a brown leather belt round his waist, and I noticed that its clasp was of damascened steel beautifully wrought. In short, he seemed to be like some specially manly and refined young gentleman, playing waterman for a spree, and I concluded that this was the case."* (Morris, 2002, pp. 57-8)

In this short description, Morris stresses three essential issues regarding the character's dressing style. First, this outfit does not resemble "*any modern work-a-day clothes*"; instead, the man wearing it looks like he stepped out of a 14th-century painting (Morris, 2002, p. 57). Here, the author's decision makes the dress a threshold, where the protagonist realizes his temporal jump. However, more importantly, it is a clear indication of Morris' negative attitude towards the notion of modern men's dress. Second, the man looks like a "*refined young gentleman*" (Morris, 2002, p. 58) although he is a waterman. This detail reveals that the author envisions a future where the proletariat looks respectable, unlike those living in the 19th century. Finally, although a waterman wore it, the garment does not have a single stain. Here, the emphasis of Morris is not about the qualities of the dress but the nature of the labor. In his utopia, working is not an action that tires the human body and spoils its appearance.

Among the people he has met, Mr. Boffin (also known as Golden Dustman) becomes the character that amazes Mr. Guest the most. Although he is a dustman, he dresses "*so showily*" that his look resembles "*a baron of the Middle Ages*" (Morris, 2002, p. 71). In the narrative, also some construction workers take the attention of Mr. Guest with their tastes, similar to Mr. Boffin:

> *"As I eyed the pile of clothes, I could see the gleam of gold and silk embroidery on it, and judged that some of these workmen had tastes akin to those of the Golden Dustman of Hammersmith."* (Morris, 2002, p. 95)

In the novel, no one judges Mr. Boffins and other people dressing like him for their eccentric looks because people respect individual tastes and personal differences. This paragraph also shows that the author revives the decorative details that can no longer be found in the modern men's wardrobe. Morris is against the all-out rejection of the historical values embedded in clothing culture and the abandoning of labor-intensive production processes enabling the construction of delicate details. Therefore, instead

of avoiding decorative elements in men's clothing, he prefers to change what they signified. In other words, he breaks the connection between the ornamentation and the old aristocracy.

3.2.2. Female Body and Dress

In *Looking Backward,* even though the men's attire did not change much in a century, there were significant changes in women's dress. In the section where Mr. West describes his 19th-century fiancé, Edit Bartlett, he also informs the reader about the clothing styles of nineteenth-century women:

> *"My lady readers, I am aware, will protest at this. "Handsome she might have been" I hear them saying, "but graceful never, in the costumes which were the fashion at that period, when the head covering was a dizzy structure a foot tall, and the almost incredible extension of the skirt behind by means of artificial contrivances more thoroughly dehumanized the form than any former device of dressmakers.*" (Bellamy, 2007, pp. 8-9)

Although the future ideals of Bellamy and Morris were almost diametrically opposite, the sections where they described nineteenth-century women's fashion and the sarcastic tone of their narrative styles reveal that both authors were equally concerned about the extravagant contrivances of the Victorian era. In the *News from Nowhere,* the women of the 19th century are described by Old Hammond (105), who had seen some of them grown old; and knew their youth from his father:

> *"... they were as little like young women as might be: they had hands like bunches of skewers, and wretched little arms like sticks; and waists like hour-glasses, and thin lips and peaked noses and pale cheeks; and they were always pretending to be offended at anything you said or did to them."* (Morris, 2002, p. 88)

The passage from *Looking Backward* illustrates that nineteenth-century fashion items are regarded as artificial extensions, which disfigure the natural silhouette of the female body, and dressmakers are blamed for their dehumanizing inventions. The female figures described by Morris, on the other hand, look almost like grotesque caricatures, which shine out with their ugliness.

3.2.2.1. The Critiques on the 19th Century Women's Fashion

In order to understand the reasons for the rather harsh criticisms of the writers towards the late 19th century women's fashion, it is necessary to know the clothing culture of the period. In the late nineteenth century, the extremely artificial form that the female body gained was the semiotic outcome of a series of changes, which restructured the definitions of gender roles, class, social status, and therefore the perception of the ideal body. As Helene E. Roberts indicates in her article, in America and England, where the gender roles of men and women were significantly differentiated, the minor anatomical differences between the two sexes were exaggerated with the definitions of the dress (Roberts, 1977). Contrary to men's clothing, which had been simplified to adapt to the flow of modern life, women's fashion became a symbol of a male-dominated bourgeois ethic and conspicuous consumption.

In that period wearing a tight-laced corset (Figure 3) was a common practice among women (Roberts, 1977). This undergarment, invented to structure the female body in line with the hegemonic ideal of a slim waist, was used with other clothing articles attached to the hips, such as hoopskirts and bustles, doubling the illusion (Figure 4). Nevertheless, these inventions enlarging the hips towards the backside were much straiter than the crinolines of the earlier periods. Therefore, this proportional change that comes with the narrowing of the skirt required a further reduction in waist size. As a result of the intense pressure applied to the diaphragm, many women could only breathe from the upper chest. Although it threatened women's health, this appearance, resulting in "*the peculiarly feminine heaving of bosoms*," was described as a desirable feminine quality in the popular novels of the period (Roberts, 1977, p. 558).

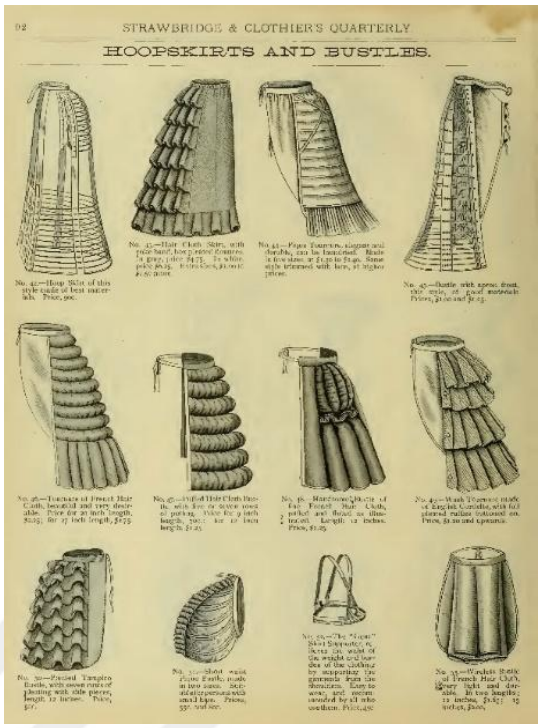


Figure 3 (left). Corset advertisements (Strawbridge & Clothier's Quarterly, Spring 1883, p. 88).

Figure 4 (right). Hoopskirt and Bustle advertisements (Strawbridge & Clothier's Quarterly, Spring 1883, p. 92).

The popularity of the corset among women was closely related to the gender definitions of the bourgeois culture, which nurtured male hegemony. In this era, tight lacing was evidence of "*a well-disciplined mind and well-regulated feelings*," and its tightness was a code revealing its wearers' age and marital status (Roberts, 1977, p. 565). For the young girls who were conditioned to their submissive roles in society starting from their childhood, the practice of tight lacing was a medium consolidating these roles physically. Since it requires more effort to shape an adult body, the mothers willingly put their daughters in baby stays (Figure 5) and then unboned tight-fitting corsets (Figure 6), which do not provide much space for young bodies to grow. On the other hand, for the female adults, wearing a tight-laced corset was a form of body training, which they applied to gain their husbands' affection, fond of a thin waist. This practice of helping them gradually narrow down their waist circumference was quite a painful experience. Still, they used to believe that the pleasure of getting into a lovely dress was worth all the patience and suffering (Roberts, 1977).

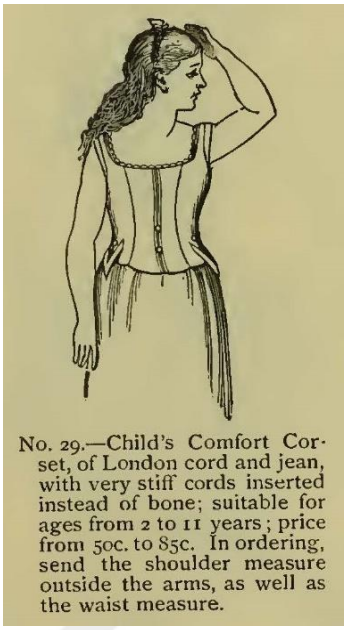


Figure 5 (left). Ferris Bros's Good Sense corset advertisements for children's use from 1890s (Pinterest, 2023)

Figure 6 (right). Child's Comfort Corset advertisements (Strawbridge & Clothier's Quarterly, Spring 1883, p. 287).

The tightly-laced corset was not just a clothing item favored by ladies to gain the affection and admiration of the opposite sex but also a status symbol showcasing the family wealth. According to Torstein Veblen, one of the woman's functions in society was "*to put in evidence her household's ability to pay*" (Veblen, 1998, p. 83). All clothing items and practices disregarding the woman's physical comfort (such as corsets, very tight or wide skirts, high heels, or exaggerated headdresses, etc.) were indicators of her unproductive expenditure and economic dependency on a man. The uncomfortable yet highly expensive dresses made of luxurious fabrics and furnishings also indicated that the family could afford someone else's physical labor. Indeed, the fashionable silhouette of the period demanded the use of multiple undergarments, which were impossible to fasten without the assistance of a maid; and nicely fitted dresses with fine craft required the employment of a skillful tailor.

In the 1870s and 1880s, conspicuous consumption was at its height; therefore, the social significance of women's clothing became even much greater (Roberts, 1977). While tightly-laced corsets increased "*the prestige value of the female body*" (Corrigan, 2008, p. 58), the amount and variety of decorative details (artificial flowers, feathers, ribbons, laces, buttons, and all sorts of accessories) that would indicate the

material value of the garment gained extra importance. This lavish decorativeness was also associated with the rapid change in fashion.

According to Lady Paget, fashion's quick change was related to its rapid spread in every stratum of society (Corrigan, 2008). George Simmel explained this change with his trickle-down theory, suggesting that the fashion system is based on the tension between the upper classes who want to differentiate themselves in society and the lower classes who want to adapt to the upper classes through imitation (Simmel, 1957). However, parallel with the spread of sewing machines, advertising culture, and department stores, the styles in the reserve of the upper classes trickled down to the lower classes much more easily and quickly, and the competitive mechanisms between different classes resulted in the spread of extravagant styles.

The following two sections focus on two essential elements that escalate the competition between classes through the dressing culture and speed up the change in fashion. The first heading concentrates on commercial and domestic type sewing machines, whose usage increases significantly with the effect of printed advertisements boosting sales. This section mainly aims to show one of the industry-related motives affecting the appearance of Victorian women, which was exposed to severe criticisms by Bellamy and Morris. Although the novels do not directly refer to the historical circumstances to be given in this chapter, it is hoped that the findings will shed light on the transformation of women's fashion of the era. The second sub-chapter, on the other hand, is about the department stores of the 19th century, where mass-produced goods were intended to be sold in large quantities. These new venues designed for shopping challenged the conventional, small-size business models, especially by targeting female customers with innovative marketing techniques. These places, which gathered various items under one roof with their interesting mise-en-scène, have become the focus of attention not only for women who can buy these products but also for those who want to experience this ambiance. This transformation, which affected production, consumption, and the share of public spaces, also attracted the attention of authors, including French novelist Emile Zola writing *Au Bonheur des Dames (The Ladies' Paradise)* in 1883. Unlike this novel, in which Zola aims to reflect his age with the influence of the naturalism movement, in *Looking Backward*, Bellamy develops a new vision for the future by considering the positive and negative social effects of department stores. The chapter narrating the shopping experience of Julian

West and Edith Leete gives clues about the shopping behaviors of the 21st century women that Bellamy envisioned. Although it is not directly related to the dressing styles of the female characters, it helps to understand the social roles that significantly affect the dressing styles.

The Commercial and Domestic Use of Sewing Machine

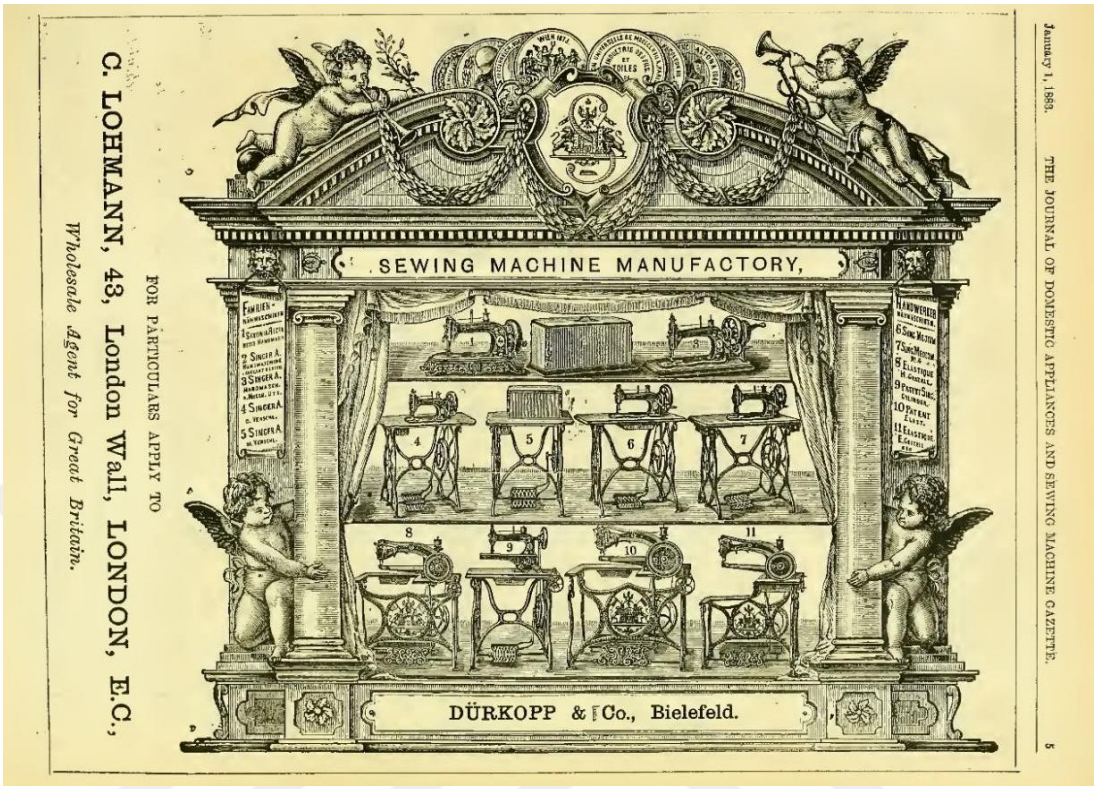
When the ready-to-wear industry started to develop in England, its focus concentrated on male clothing. However, by the 1870s, the mass production of women's clothing could also be possible with the development of standardized sizing and the spread of commercial sewing machines. Although the fashionable looks of the period consisted of tight-fitted dresses tailored exclusively for female customers, the trade volume expanded in the 1880s, with the utilization of jersey fabrics, which allowed "*a more flexible fit*" (Richmond, 2013, p. 41).[27] A similar condition was observed in the American market. At the end of the 1860s, ready-made garments accounted for "*twenty-five percent*" of the total apparel manufacturing in the US; this ratio had reached "*sixty percent*" by 1890 (Green, 1997, p. 118). The increase in the sales of ready-to-wear garments was also related to the advertising culture.[28] Although all segments of society could not afford the products available in the market, the images circulated through advertising campaigns "*helped to shape normative ideas and expectations about clothing styles*" (Green, 1997, p. 118).

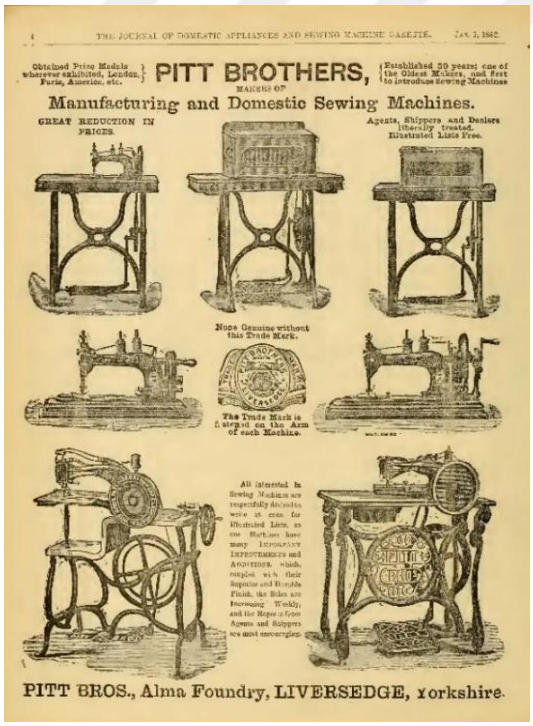
Advertising culture contributed not only to the spread of fashionable styles but also to the marketing of sewing machines (Figure 7) necessary for the production of clothing. A sewing machine was a necessity for professionals engaged in domestic production. The ones who were able to buy one could make the clothing for their family members as well. However, they were still too expensive for the domestic use of a housewife (Richmond, 2013). Although the manufacturers reduced the prices and offered hire purchase options (Figure 8 and 9), it did not help much to increase the sales of the domestic sewing machines because the high prices were not the only factor that prevented the purchase. These machines were means of production, and it was

[27] In the next decade, the industry would see a more extensive growth when the dress was replaced by two-piece suits.

[28] Advertising culture was encouraged with the "abolition of stamp duties" in the 1850s, and the growing net income of the working class in the second half of the century (Green 1997).

necessary to rebrand them as household appliances by removing their former industrial connotations.





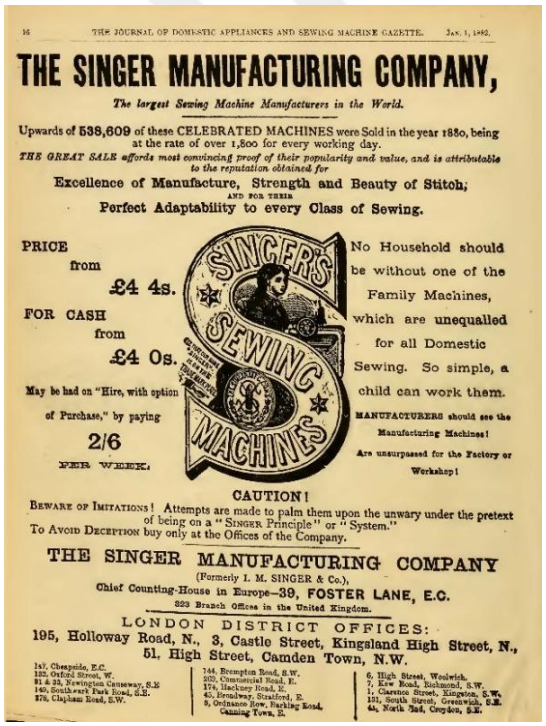


Figure 7 (top). Dürkopp & Co., Bielefeld Sewing Machine Manufactory, Advertisements (Journal of Domestic Appliances and Sewing Machine Gazette, 1 January 1883, p.5).

Figure 8 (bottom left). Pitt Brothers Advertisements promoting price reduction (Journal of Domestic Appliances and Sewing Machine Gazette, 1 January 1882, p.4).

Figure 9 (bottom right). Singer Sewing Machine Advertisements announcing pricing and hire purchase options (Journal of Domestic Appliances and Sewing Machine Gazette, 1 January 1882, p.16).

This problem was also partially fixed through advertising, displaying sewing machines in prominent places of the domestic environment (Corrigan, 1997). Yet, having been aware that the advertisements alone were not enough to increase sales, manufacturers started to design models that would look like nice ornaments contributing to the decorations of homes. Therefore, companies drew attention to the small, light, and elegant designs of the products as a marketing strategy (Forty, 1986). In the passage taken from a journal promoting sewing machines and household appliances in the 1880s, a reviewer states that an elegant machine was not only profitable for manufacturers because it increased sales but also for customers who bought an item designed with an aesthetic concern:

> *"Aside from the seller's interest in making his machine attractive in order that he may promote his sales, the purchaser has an interest in having the machine he designs to purchase constructed with a reasonable regard for its beauty and comeliness. The machine, when placed, forms a part of the furniture of his works."* (Journal of Domestic Appliances and Sewing Machine Gazette, 1 January 1882, p.11)

Parallel with the marketing efforts, the sales of domestic sewing machines, which started around the 1850s, increased dramatically towards the end of the century. In the early 1860s, the number of domestic machines sold in Britain was around 5000. By the 1890s, only Singer, holding a monopoly in a UK market, sold "*about 150,000 machines per annum*" (Richmond, 2013, p. 115).

Sewing machines, reducing the production time and necessity of manual labor, allowed middle-class women to wear elaborate dresses with comparatively moderate budgets. As a result, the upper classes, which had to maintain their distinctive image in society (Roberts, 1977), started to invent new styles. This constant search for the new, which speeds up with the availability of mass-produced textiles and accessories

in the market, resulted in extravagant fashion styles that Bellamy and Morris severely criticized for their aesthetic insufficiency and wastefulness.

The Rise of Department Stores

The first modern department stores established in the mid-nineteenth century were the children of technological revolutions in manufacturing and transportation (Corrigan, 1997). Industrialization allowed the mass production of goods in a short time with consistent quality. However, the existing trade and distribution system was not feasible for the sale of a large number of products released at once in the market. Thus, department stores were developed as a response to factory production. However, the success of department stores also depended on the presence of potential buyers. As Richard Sennett explains, "*the sheer physical complexity of the old city streets was also an obstacle to assembling this mass of consumers*"[29] (Sennett, 1992, p. 143). In England and the USA, the development of public transportation systems provided a shorter and more comfortable ride. The public transportation lines enabling workers to access city centers also changed the shopping behaviors of the middle class, which now had a chance to travel long distances to visit department stores (Sennett, 1992).

Shopping in the department stores was a wholly new experience. Before the department stores, there were shops specialized in only one or related types of products, and their customers were mostly the ones living in the neighborhood. However, the department stores allowed people with different social backgrounds to find everything they needed under one roof. In old-style shopping, there was not any fixed price. Therefore, the money that would be paid used to be determined by bargaining between the buyer and the seller. In addition, the salespeople were not obliged to please all their customers. Depending on whom he is dealing with, the seller could take a personal attitude, directly affecting both the shopping experience and the price paid. Thus, they had a bad reputation for being untrustworthy. However, department store employees, who dealt with different customer profiles, had to adopt a standard behavior to ensure absolute customer satisfaction. They had to "*be disciplined, cultivated and pleasant. In a word, they had to be presentable*" (Corrigan, 1997, p. 58). The department stores also required a new system for representing the

[29] For instance, a distance that can be walked in 15 minutes today, required an hour and a half in 19th century Paris because of its narrow and tangled streets.

products. Formerly, commodities were "*neither displayed nor advertised*" (Corrigan, 1997, p. 61), instead presented by the sellers on demand. Since this process requires the active involvement of a salesperson, the customers used to feel obliged to buy. In the new system:

> *"The commodities were showed and 'staged' in splendid, eye-catching settings within the store or in the outside store windows… A particular display technique the early department stores applied was the presentation of products against an exotic background in order to increase their appeal. In line with the then dominant fashion of 'Orientalism', they often used images of the Orient to give clothes, chinaware, furniture or other nouveautés a distinct 'look'… For the American department stores trendy Europe also functioned as an important source of exotic inspiration. Clothes, hats and other women's fashions were often associated with Paris, 'the capital of fashion'."* (Laermans, 1993, p. 91)

Marketing strategies applied in department stores also changed the purchasing preferences of people. The shoppers, which once used to pay more attention to the functionality, aesthetic quality, and durability of the products, were enchanted by the fantasy world created around the commodities. Even the most mundane objects became desirable because of how they were presented. The display units and light emphasis used in visual merchandising created an ambiance of an art gallery, and the authentic mise-en-scenes used as backdrops opened the doors of a magical world for the customers. The consumption psychology, explained by Karl Marx with the concept of "*commodity fetishism*," stimulated customers to purchase according to artificial meanings that the products were associated with, instead of their actual use (Laermans, 1993).

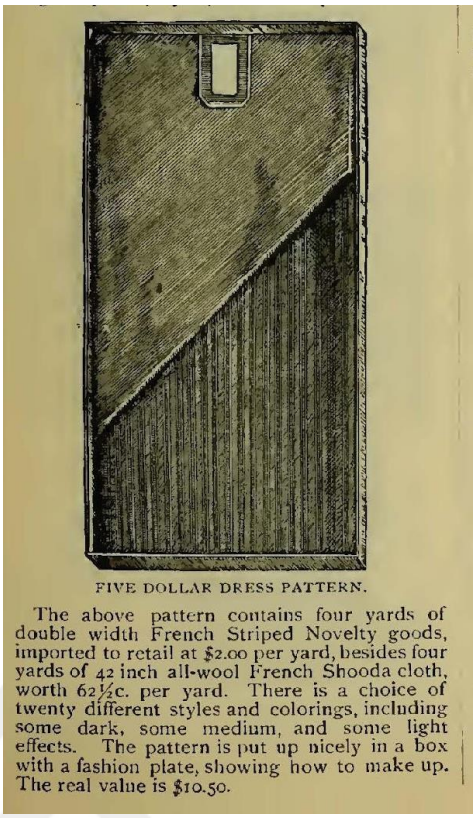
Although the cheapening of production reduced the value of labor, the excessive amount of the products put on the shelves created an image of abundance. This image was also supported by the printed advertisements and brochures published by the department stores. Strawbridge & Clothier's[30] Quarterly Magazine, published in the 1880s, provides a significant record of what was available in the store. In the magazine targeting female customers, it is observed that the clothing items which look very similar in shape were priced differently depending on the materials used for their

[30] Department Store in USA founded in 1868

designs.[31] Also, the production kits, which include dress patterns and the necessary materials, encourage female customers to produce elegant dresses with moderate budgets. Similar to the ready-made garments, the price range of sewing kits changes according to to dress patterns as well as the quality and amount of the materials included in the box ($5-$30) (Figure 11 and 12).

Figure 10. Ladies' Suits from $8 to $35 (Strawbridge & Clothier's Quarterly, Spring 1883, p.100).

[31] For instance, while the silk suits with elaborate trimmings stand out with their high prices ($26-$35), the ones produced with flannels and had relatively fewer details are sold at more affordable prices ($8-$10) (Figure 10).



FIVE DOLLAR DRESS PATTERN.

The above pattern contains four yards of double width French Striped Novelty goods, imported to retail at $2.00 per yard, besides four yards of 42 inch all-wool French Shooda cloth, worth 62½c. per yard. There is a choice of twenty different styles and colorings, including some dark, some medium, and some light effects. The pattern is put up nicely in a box with a fashion plate, showing how to make up. The real value is $10.50.

Figure 11 (left). Dress patterns with different price options (10-30 $) accompanied by fashion plates containing the necessary materials for making (Strawbridge & Clothier's Quarterly, Spring 1883, p.42).

Figure 12 (right). Five-dollar dress pattern accompanied by fashion plates containing the necessary materials for making (Strawbridge & Clothier's Quarterly, Spring 1883, p.41).

Besides the ready-made garments and accessories[32] reflecting the latest trends in fashion, the magazine also includes a great variety of materials necessary for the production of clothing. In addition to fabrics of various qualities (cotton goods, muslins, silks, velvets, plushes, etc.), the department store also sells trimmings and accessories (embroideries, guipures, laces, buttons, etc.), some of which are imported from different parts of the world (Figure 13, 14 and 15).

These spectacle venues, which had an extensive portfolio of products specifically for the needs and interests of female customers, led to the formation of a new public space for women. As Laermans suggested, "*American department stores stimulated both the*

[32] 446-Page catalogue includes clothing items such as dresses, coats, suits, corsets and underwear products as well as the accessories such as bags, gloves, collars, shawls and hosieries.

'leisurization' of shopping and the transformation of their stores into distinct female public space" (Laermans, 1993, p. 88). One of its main reasons was that the shoppers who visited the store were not obliged to do shopping. Although the act of 'just-looking' was the initial step leading to 'just-buying,' the female customers, independent from their purchases, could walk freely around the displayed items to enjoy the ambiance and benefit from the free services of the stores:

> *"With their many free services for, and courteous treatment of, shoppers, the early department stores created an almost aristocratic ambience. The female customer was intended to feel like a real queen or at least a lady while she was shopping because she walked in a palace-like atmosphere that was thoroughly imbued with luxury."* (Laermans, 1993, p. 93)

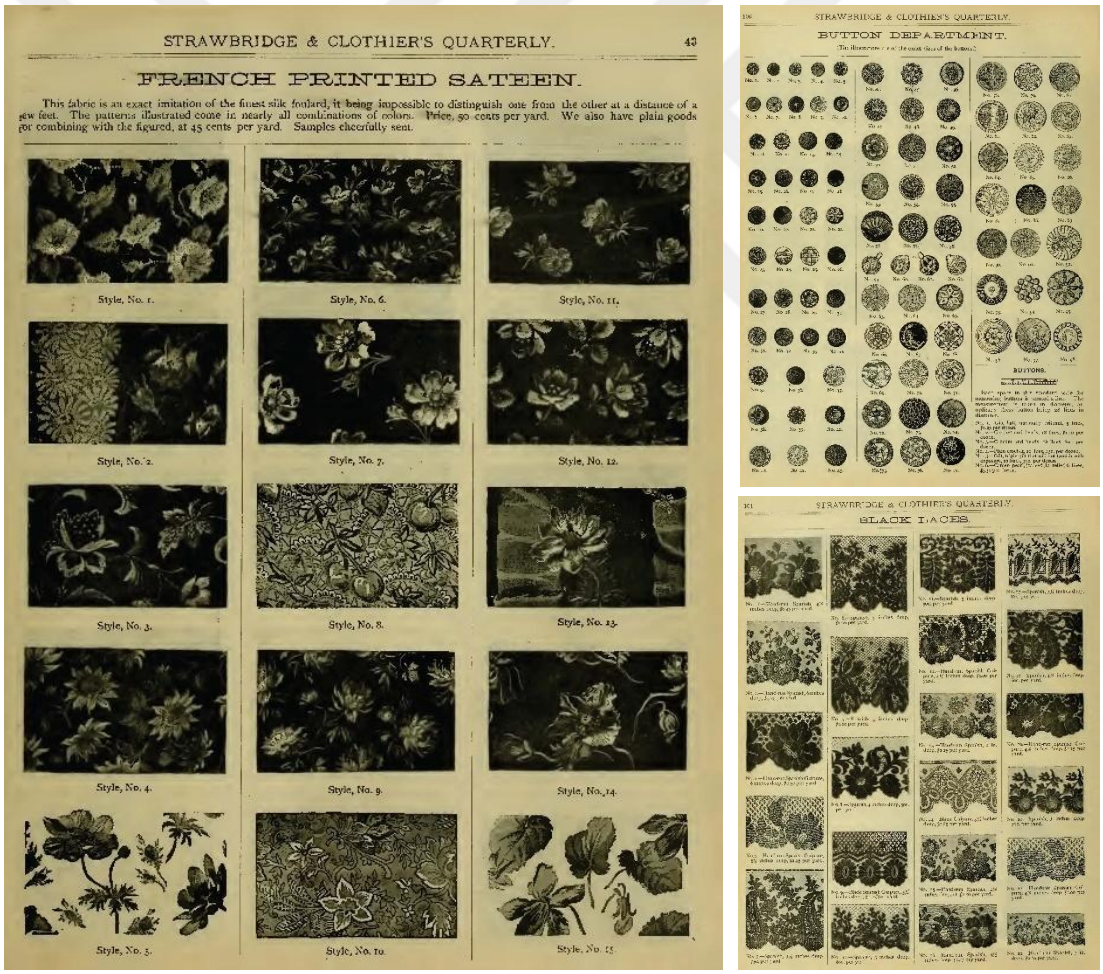


Figure 13 (left). Fabric swatch for French printed sateen (Strawbridge & Clothier's Quarterly, Spring 1883, p.43).

Figure 14 (upper right). Button department (Strawbridge & Clothier's Quarterly, Spring 1883, p.106).

Figure 15 (bottom right). Black laces (Strawbridge & Clothier's Quarterly, Spring 1883, p.104).

The department stores were the temples of consumerism, and similar to the other monumental buildings "designed to awe small human creatures" (Corrigan, 1997, p. 55), they fascinated people with their immense architecture and enticing interiors (Figure 16 and 17). In Émile Zola's novel Ladies Paradise *'Au Bonheur des Dames'*, published in 1883, the department store was described as "*the cathedral of modern business, strong and yet light, built for vast crowds of customers*" (Zola, 2012, p. 234).

Figure 16 (top). John Wanamaker's Grand Depot, Book News Monthly, December 1884 (Library Company of Philadelphia, 2023).

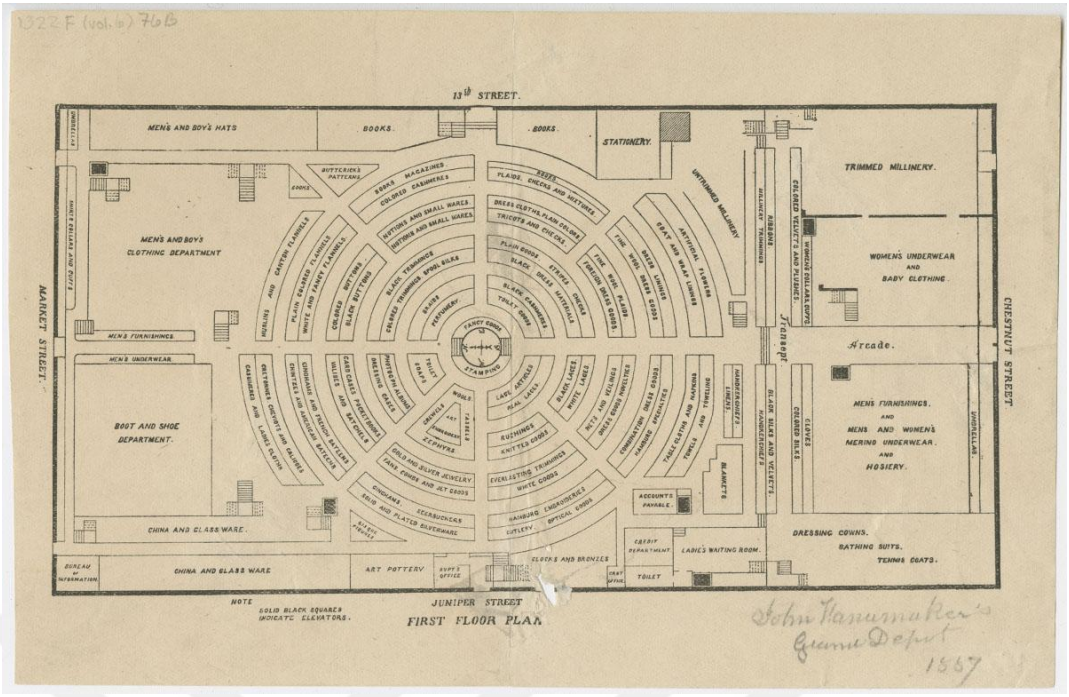


Figure 17 (bottom). First-floor plan of John Wanamaker's Grand Depot, 1887 (Library Company of Philadelphia, 2023).

3.2.2.2. Envisioning the Shopping Experience of the 21st Century

The department stores of the late 19th century, which dramatically change the trading system, the use of public space, and the clothing culture of Victorian women, seem to influence Bellamy's 21st-century ideals in *Looking Backward*. Although Bellamy's sensitivity to wastefulness inspires him to find alternative models to existing trading/shopping behaviors, his imagination still positions women as the subject of consumption. In his somewhat rationalized future, Edit Leete is described by her father as an 'indefatigable shopper,' and Julian West, accompanying her in the shopping, is fascinated by the splendid sample stores of the new century:

> *"It was the first interior of a twentieth-century public building that I had ever beheld, and the spectacle naturally impressed me deeply. I was in a vast hall full of light, received not alone from the windows on all sides, but from the dome, the point of which was a hundred feet above. Beneath it, in the centre of the hall, a magnificent fountain played, cooling the atmosphere to a delicious freshness with its spray. The walls and ceiling were frescoed in mellow tints, calculated to soften without absorbing the light which flooded the interior. Around the fountain was a space occupied with chairs and sofas, on which many persons were seated conversing. Legends on the walls all about the hall indicated to what*

classes of commodities the counters below were devoted." (Bellamy, 2007, p. 60)

The sample store that Bellamy described in *Looking Backward* is quite similar to department stores of the late 19th century in terms of its magnificent size. The impressive light coming from all the windows and the dome gives an almost sacred context to the space that evokes respect and admiration. The frescoed walls and ceiling and the fountain placed in the center of the hall offer the kind of splendor that would appear in palaces. In this way, the architectural qualities of the space make shopping an enjoyable experience.

In Bellamy's utopia, shopping is still a leisure activity for women; therefore, the sample stores replacing the department stores still serve as ladies' paradise. Edith Leete's enthusiasm for buying "*pretty clothes*" (Bellamy, 2007, p. 64) is evidence that the ideal life envisioned by Bellamy for a young woman of the 21st century was based on bourgeois ideals of the 19th century. After she learned that the women of the 19th century had to visit "*a vast number of shops, each with its different assortment*" to find what they were looking for, Edith feels lucky of being an "*indefatigable shopper"* instead of being "*fatigued one*" (Bellamy, 2007, p. 59). The young lady, who could not make any sense of the old shopping habits, informs Julian West about the new system, which is rationally designed to function flawlessly at every step, including labeling, purchasing, payment, and delivery:

"We buy where we please, though naturally most often near home. But I should have gained nothing by visiting other stores. The assortment in all is exactly the same, representing as it does in each case samples of all the varieties produced or imported by the United States. That is why one can decide quickly, and never need visit two stores." (Bellamy, 2007, p. 62)

In this passage, Bellamy describes a kind of chain store system, where each store includes identical products, leaving no necessity for visiting the other ones to find the best product with less money. In that way, he also eliminates the competition between different sellers, which mostly ends up with the loss of small businesses:

> *"All our stores are sample stores, except as to a few classes of articles. The goods, with these exceptions, are all at the great central warehouse of the city, to which they are shipped directly from the producers."* (Bellamy, 2007, p. 62)

The window displays and advertisements, which became very powerful marketing tools in the late 19th century, are also entirely abandoned. These visual signs, which also indicate the business identity of the location, are replaced with a monumental structure that symbolizes fertility and abundance:

> *"There was no display of goods in the great windows, or any device to advertise wares, or attract custom. Nor was there any sort of sign or legend on the front of the building to indicate the character of the business carried on there; but instead, above the portal, standing out from the front of the building, a majestic life-size group of statuary, the central figure of which was a female ideal of Plenty, with her cornucopia*." (Bellamy, 2007, p. 62)

Another remarkable change in 21st-century stores is related to the duties and responsibilities of store employees. The new shopping system that Bellamy explains seems to prevent both the unreliability of former traders who determine their attitude and price according to the customer and the insincerity of department store employees who treat each customer in a standard way. So, the clerks who once tried to persuade customers to buy products become responsible for receiving payments and ensuring delivery in the 21st century:

> *"Where is the clerk?" I asked, for there was no one behind the counter, and no one seemed coming to attend to the customer.*
> *"I have no need of the clerk yet," said Edith; "I have not made my selection."*
> *"It was the principal business of clerks to help people to make their selections in my day," I replied.*
> *"What! To tell people what they wanted?"*
> *"Yes; and oftener to induce them to buy what they didn't want."* (Bellamy, 2007, p. 60)

In the 19th century, the clerk's advice was valuable for the customers since they were almost the only source to get information about the qualities and possible use of the products. However, in the 21st-century stores that Bellamy illustrated, the customers

"*order from the sample and the printed statement of texture, make, and qualities*" (Bellamy, 2007, p. 62). Therefore, clerks appear only on demand. In that way, Bellamy aims to encourage conscious consumption to avoid wastage by establishing a system enabling people to make purchases according to their tastes and preferences and, most importantly, their free will.

Interestingly, the most innovative ideas in Bellamy's socialist utopia concern purchasing, in other words, consumption. In Boston of the 21st century, people use credit cards for payment. The clerks getting the orders record them in two copies, one for the buyer and the other for the central warehouse, "*where they receive the orders from the different sample houses all over the city and parcel out and send the goods to their destinations*" (Bellamy, 2007, p. 63). The written orders are sent to the central warehouse with pneumatic transmitters, and the larger tubes are used to deliver the products to the districts.

Although Bellamy reforms all sorts of practices that would encourage consumerism by revisiting the existing shopping experience and marketing tools of his time, the way he designed the character of Edith Leete creates a great contrast with the utopian essence of his narrative. The author changing the method and experience of shopping does not seem to bother with consumers' internal motivations. Here, the author either aims to design a future that would appeal to his female readers or grasps shopping as a feminine activity. On both occasions, it is unexpected to see that he acknowledges shopping as an act provoked by external factors and ignores one's internal control mechanisms.

3.2.2.3. Fashioning the 21st Century Women

In *Looking Backward*, Bellamy describes the ladies of the 21st century as the "*lovely demonstrations of the effect of appropriate drapery in accenting feminine graces*" (Bellamy, 2007, p. 9). Even though he does not give many details about his visions of women's clothing, based on this description, the reader can easily imagine a much simpler dress form compared to the ones preferred in the late 19th century. Considering the ancient Greek associations that Bellamy used in his spatial/architectural descriptions, this dress form accentuating the splendor of the female body with drapery can easily be associated with the ones worn in ancient Greece or Regency Era. While the ideals that Bellamy sets for 21st-century women draw parallel with the sanitary

theories rest on rational and culturally acceptable grounds, William Morris' approach is more aligned with the Artistic Dress Movement, which aestheticized medievalism as opposed to the overly-constructed image of a Victorian woman. The dress form suggested by the movement does not shape the body; instead, it gently follows the natural silhouette of the female form. While the arts and crafts-inspired decorative elements on dress celebrate the human intellect and production skills, nature becomes the greatest inspiration for color and structure. The following three sections will explore various approaches that may have influenced writers to shape their 21st-century female characters, including the sanitary theories embracing the classical body, the arguments of rational dress society prioritizing women's rights, and finally, the Artistic Dress Movement, which brings forward a new female archetype challenging the Victorian standards of beauty and femininity.

A Search for a Civilized Form: Venus de Medici

The dress reformers of the 19th century, who criticized the practice of tight-lacing, searched for a new model to create an alternative to the prevailing fashion. However, the earlier attempts[33] to reform women's dress showed the necessity of an image that would not be seen as marginal but, more importantly, with high cultural value. Under these circumstances, "*the classical body*" was "*readily available as a model*" since it was "*familiar and undoubtedly civilized*" (Corrigan, 2008, p. 54). Many writers, artists, and health reformers of the period referred to the female body image represented in the art of ancient Greek to convince women to abandon the practices that irreversibly can damage their health.

Since the beginning of the 19th century, several health authorities have carried out campaigns to spread dressing styles that prioritize health for both women and men (Wilson, 2003). Through anatomical studies and publications, these people informed the scientific community and the public about the effects of dress on health. Their focus was primarily on the harmful effects of restrictive clothing items, which modify the female anatomy by putting physical pressure on the skeletal system and internal organs. In *Outlines of Physiology, Both Comparative and Human* (1837), American

[33] Although women's rights activists in the mid-19th century had developed a dress form inspired by Eastern cultures, this formula did not gain recognition in public due to its incompatibility with Western norms and gender definitions.

surgeon John Lee Comstock stated that wearing a tight lacing was no different from suicide considering the diseases that it may cause to the body:

> *"Now since the practice of Tight Lacing, if not universal, is at least exceedingly common, and as the remains of comparatively few who die of diseases of the lungs are submitted to post mortem examination, it is impossible to give any conjecture of the number who destroy themselves in this way. But I have no doubt that the ladies themselves, to a considerable extent, will agree with me in believing, that hundreds, nay thousands, of females literally kill themselves every year by this fashion in our own country: and if suicide is a crime, how will such escape in the day of final account"* (Comstock, 1837, p. 299)

Comstock used comparative illustrations in his book to better display the difference between a healthy body and the body deformed by the corset (Figure 18 and 19). In the figures given below, he benefited from the silhouette of Venus de Medici as a model to exemplify a well-developed human form (Figure 19).

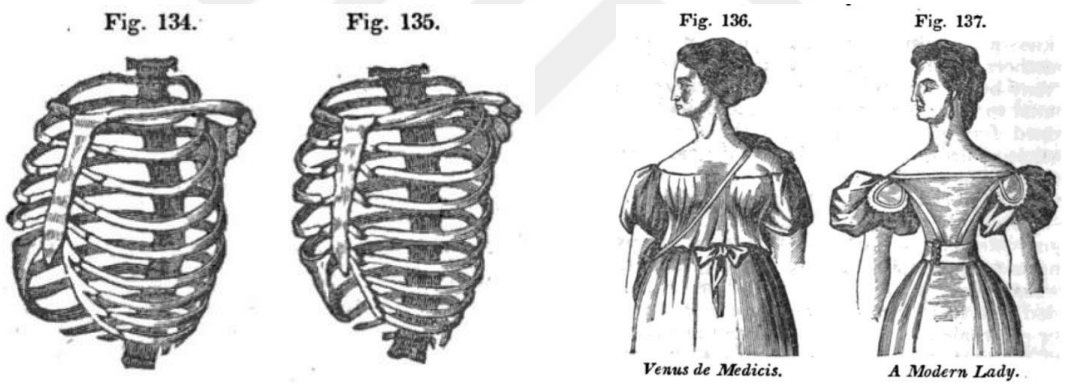


Figure 18 (left). Figure comparing the natural human skeleton with the one deformed by the pressure of stays (Comstock, 1837, p. 299).

Figure 19 (right). Figure comparing the silhouette of a modern lady with that of Venus de Medicis, which was promoted as an ideal female figure in the late 19th century (Comstock, 1837, p. 308).

Similarly, Doctor Sir Frederick Treves, in *The Influence of Clothing on Health* (1886), advocated the classical body ideals in his comparison with the contemporary female silhouette:

> *"As a matter of beauty, the claims of the constricted waist have been somewhat severely criticized and opposed… In an anatomical sense, the most perfect*

> *outline of the female figure would be represented by that of a nude, young, normally developed woman. Such a figure would, it is well known, present a waist some 26 of 27 inches in circumference; that would be regarded by many with absolute horror. Now, in all the most excellent attempts that art has made to give expression to female loveliness, this outline of the healthy and perfectly constructed woman has always been reverently preserved. It is the cutline that has been made famous by the grandest statuary of ancient and modern times, and that has been the glory of the painter since the earliest day of art. Such an outline is well represented by the famous Venus de Medici."* (Treves, 1886, pp. 74-5)

Doctor Treves' commentaries show that almost half a century after John Lee Comstock, medical experts were compelled to discuss the same issues with very similar concerns. However, in the 1880s, the prevailing problem became more evident with the spread of Victorian fashion, reducing the circumference of women's waist to almost 14 inches. This extremely unproportioned form explains Bellamy's accusations addressing the dressmakers of the time. Finding their designs 'dehumanizing,' he imagines a plainer dress form "*with appropriate drapery*" (Bellamy, 2007, p. 9). This dress form, which is reminiscent of the chiton of ancient Greek, underlines the feminine features of the body. In this way, Bellamy puts women in a rational guise in line with the requirements of modern life and avoids the image of the 'masculine woman' that had become a collective phobia in Victorian bourgeois society.

Rational Dress Society: Reclaiming Health and Comfort

In the late 19th century, the popularity of Victorian dress, which was blamed for being "*unhygienic and restricting*" (Wilson, 2003, p. 2013), mobilized different groups to take action, in addition to health reformers. In 1881, the Rational Dress Society was founded in search of a dress form that would fit the requirements of health, beauty, and comfort (Figure 20). In the *Gazette*, which was their own publication, the society explained its mission as follows:

> *"The Rational Dress Society protests against the introduction of any fashion in dress that either deforms the figure, impedes the movements of the body, or in any way tends to injure the health. It protests against the wearing of tightly-fitting corsets; of high-heeled shoes; of heavily-weighted skirts, as rendering*

> *healthy exercise almost impossible; and of all tie down cloaks or other garments impeding on the movements of the arms. It protests against crinolines or crinolettes of any kind as ugly and deforming. The objective of the R.D.S. is to promote the adoption, according to individual taste and convenience, of a style of dress based upon considerations of health, comfort, and beauty, and to deprecate constant changes of fashion that cannot be recommended on any of these grounds."* (RDS cited in Cunningham, 2003, 124)

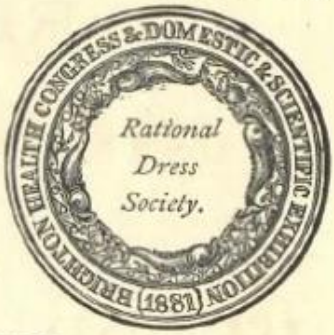
In line with the missions outlined by RDS, Viscountess Harberton, one of the leading members of society, invented a 'divided skirt' for women's comfort. Originally designed as wide trousers resembling a skirt, this garment promised women ease of movement. However, Mrs. Harberton's initiative did not end with success and recognition. Although society aimed to reform the prevailing clothing practices with aesthetic concerns, the model she suggested was criticized for being "*masculine*" and "*inappropriate*" (Wahl, 2020, p. 24). In *the International Health Exhibition* held in London in 1884, the divided skirt was exhibited with other items of rational dress such as Dr. Jaeger's Sanitary Woollen System.[34] Although it "drew large crowds" (Wilson, 2003, p. 213), the interest that it created could not contribute to its popularity among women.

[34] The brand founded by British entrepreneur Lewis Tomalin in 1884 focused on the marketing of wool undergarments by getting inspiration from German scientist Gustav Jäger's comments suggesting that animal fibers should be worn close to the skin (Figures 21, 22 and 23).

THE

RATIONAL DRESS SOCIETY.

Silver Medal awarded to the Society at the Health Congress held at Brighton, December, 1881.



Committee:

MRS. BISHOP (Miss Isabella L. Bird).
THE LADY ARCHIBALD CAMPBELL.
MISS SHARMAN CRAWFORD.
MRS. GLOVER.
MISS HAMILTON.
MRS. LYNCH.
MRS. DUNCAN MCLAREN.
MRS. CHARLES MCLAREN.
MRS. THOMAS TAYLOR.
MISS WILSON.

President:

THE VISCOUNTESS HARBERTON.

Reference Committee:

DR. FRANCES HOGGAN. | DR. AGNES MCLAREN.

RULES.

1.—The name of the Society shall be "THE RATIONAL DRESS SOCIETY."

2.—The objects of the Society shall be to promote the adoption, according to individual taste and convenience, of a style of dress based upon considerations of health, comfort, and beauty, and to deprecate constant changes of fashion, which cannot be recommended on any of these grounds.

3.—The Society will seek to promote its objects by means of Drawing-room Meetings, Advertisements, circulating Pamphlets, Leaflets, &c., and also by issuing patterns which meet the approval of the Committee.

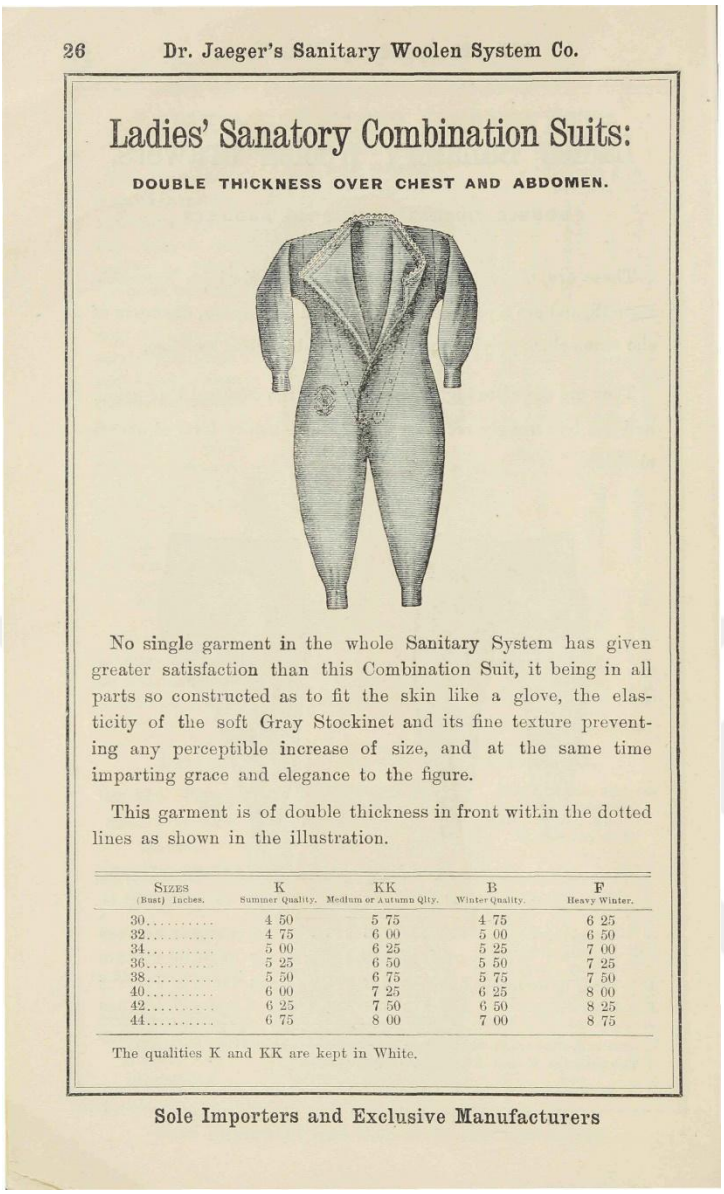
4.—An annual subscription of 2/6 constitutes membership.

Those interested in the objects of the Society are requested to write to the Secretary,

MISS E. M. CARPENTER,
69, Shaftesbury Road, Hammersmith, W.

Stand in International Health Exhibition, 29, East Quadrant.

Figure 20. Pamphlet published by the Rational Dress Society to explain their aims and rules (Makepeace, 2021).



26 Dr. Jaeger's Sanitary Woolen System Co.

Ladies' Sanatory Combination Suits:

DOUBLE THICKNESS OVER CHEST AND ABDOMEN.

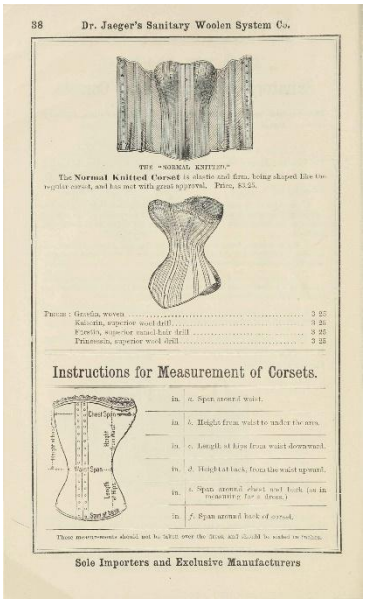
No single garment in the whole Sanitary System has given greater satisfaction than this Combination Suit, it being in all parts so constructed as to fit the skin like a glove, the elasticity of the soft Gray Stockinet and its fine texture preventing any perceptible increase of size, and at the same time imparting grace and elegance to the figure.

This garment is of double thickness in front within the dotted lines as shown in the illustration.

Sizes (Bust) Inches.	K Summer Quality.	KK Medium or Autumn Qlty.	B Winter Quality.	F Heavy Winter.
30.....	4 50	5 75	4 75	6 25
32.....	4 75	6 00	5 00	6 50
34.....	5 00	6 25	5 25	7 00
36.....	5 25	6 50	5 50	7 25
38.....	5 50	6 75	5 75	7 50
40.....	6 00	7 25	6 25	8 00
42.....	6 25	7 50	6 50	8 25
44.....	6 75	8 00	7 00	8 75

The qualities K and KK are kept in White.

Sole Importers and Exclusive Manufacturers



38 Dr. Jaeger's Sanitary Woolen System Co.

THE "NORMAL KNITTED"

The **Normal Knitted Corset** is elastic and firm, being shaped like the regular corset, and has met with great approval. Price, $3.25.

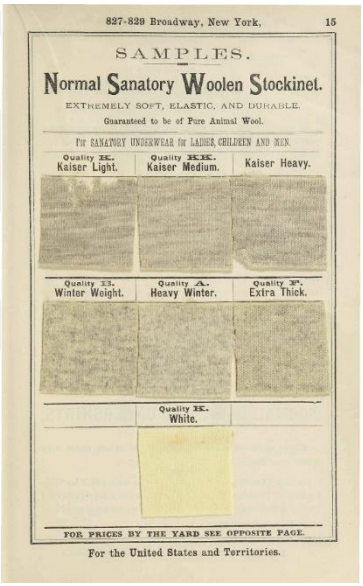
Patent: Gentin, woven 3 25
Kaisorin, superior wool drill 3 25
Kirstin, superior camel-hair drill 3 25
Princessin, superior wool drill 3 25

Instructions for Measurement of Corsets.

	a. Span around waist.	
	b. Height from waist to under the arm.	
	c. Length of hips from waist downward.	
	d. Height at back, from the waist upward.	
	e. Span around chest and back (as in measuring for a dress.)	
	f. Span around back of corset.	

These measurements should not be taken over the dress and should be taken in inches.

Sole Importers and Exclusive Manufacturers



827-829 Broadway, New York. 15

SAMPLES.

Normal Sanatory Woolen Stockinet.

EXTREMELY SOFT, ELASTIC, AND DURABLE.

Guaranteed to be of Pure Animal Wool.

For SANATORY UNDERWEAR for LADIES, CHILDREN AND MEN.

Quality K. Kaiser Light. | Quality KK. Kaiser Medium. | Kaiser Heavy.

Quality B. Winter Weight. | Quality A. Heavy Winter. | Quality F. Extra Thick.

Quality K. White.

FOR PRICES BY THE YARD SEE OPPOSITE PAGE.

For the United States and Territories.

Figure 21 (left). Ladies' Sanatory Combination Suit (Dr. Jaeger's Sanitary Woolen System Co., 1887, p. 26).

Figure 22 (upper right). Knitted corset (Dr. Jaeger's Sanitary Woolen System Co., 1887, p. 38).

Figure 23 (bottom right). Fabric samples (Dr. Jaeger's Sanitary Woolen System Co., 1887, p. 15).

Although the principles set by The Rational Dress Society did not find support in public, female intellectuals and cyclists argued that women should have the right to wear comfortable clothing that would allow them to adapt to the flow of an active life. Irish author Constance Wilde was one of the leading members of RSD, and her husband, Oscar Wilde, supported her case with critical essays and lectures in which he

discussed the laws of rational clothing and its relationship with the human body. Oscar Wilde's opinions were in line with health reformers to a certain extent, yet, they were the product of a multi-layered perspective and much deeper aesthetic concerns. In his lectures, he drew attention to two main principles that would influence the dressing styles of the future: the principles of beauty built on Greek proportions and the principles of health developed by Germans (Corrigan, 2008).

The *Pall Mall Gazette* report reviewing Wilde's 1884 lecture is a significant source that reflects his critical comments on modern women's dress. In the review, "high-heeled boots which threw the whole body forward" are explained as the clothing articles which are exposed to the condemnation of Wilde, together with "*tight-lacing*" and "*dress improvers*," which he finds equally "*injurious*" and "*ungraceful*" (Rose & Richmond, 2021, pp. 257-8). In addition to strong criticisms that he directed toward the modern women's dress, Wilde also expresses himself "*strongly in favor of such modification of the Greek costume as would meet the exigencies of … varying climate*" (Rose and Richmond, 2021, pp. 257-8).

Also, in his famous essay *The Philosophy of Dress* published in *The New York Tribune* in 1885, Wilde rejects the criticism that he attaches too much importance to clothing because his focus is not the dress but the human itself. He particularly blames French milliners, who regarded women as display units, which they used to showcase their "*elaborate and expensive wares*" (Wilde, 1885). Wilde confesses that for him, the "*gorgeous costumes*" exhibited in M. Worth's couture house look like "*Capo di Monte cups*," with all their curves and dramatic details arousing curiosity in onlookers. By considering the contemporary examples of women's clothing as such, he maintains that "*the more complete a dress looks on the dummy figure … the less suitable it is for being worn*" (Wilde, 1885).[35] Therefore, he opposes the logic of design, which submits dress as a purely decorative object and ignores human form and its movement:

> *"I hold that dress is made for the service of Humanity. They think that Beauty is a matter of frills and furbelows. I care nothing at all for frills, and I don't know what furbelows are, but I care a great deal for the wonder and grace of the human Form, and I hold that the very first canon of art is that Beauty is always*

[35] Charles Frederick Worth. English fashion designer acknowledged to be the father of haute couture.

organic, and comes from within, and not from without, comes from the perfection of its own being and not from any added prettiness. And that consequently the beauty of a dress depends entirely and absolutely on the loveliness it shields, and on the freedom and motion that it does not impede." (Wilde, 1885)

Oscar Wilde's emphasis on Greek proportions also does not come from his love of antiquity but the high ability of Greek art in the examination and representation of human form:

"There must be no attempt to revive an ancient mode of apparel simply because it is ancient, or to turn life into that chaos of costume, the Fancy Dress Ball. We start, not from History, but from the proportions of the human form. Our aim is not archaeological accuracy, but the highest possible amount of freedom." (Wilde, 1885)

There are obvious parallels between Oscar Wilde's discourse and the criticisms set forth by Morris in his *News from Nowhere* regarding women's fashion of the late 19th century. Like Wilde, who draws a parallel between the gorgeous women's costumes of his time and the overly decorated 'Capo di Monte cups,' in the novel, William Guests describes the women of the late 19th century as 'upholstered chairs':

"As to their dress, which of course I took note of, I should say that they were decently veiled with drapery, and not bundled up with millinery; that they were clothed like women, not upholstered like armchairs, as most women of our time are." (Morris, 2002, p. 12)

In the book, unlike their grandparents, the ladies of the 21st century wear dresses that are "*somewhat between that of the ancient classical costume and the simpler forms of the fourteenth-century garments;*" however, despite the similarity, the dress form described here is "*not an imitation of either*" (Morris, 2002, p. 12). The clothing depictions used by William Morris can be seen as a romantic approach to antiquity and medievalism. However, it is also possible that the author, who openly avoids imitations, is searching for method and perspective -like Oscar Wilde, who does not seek archaeological accuracy in dress- rather than a form.

Artistic Dress Movement: Reinvention of the Plain Woman

In the late 19th century, the artists involved in the Pre-Raphaelite Brotherhood[36] also contributed to the development of the Arts and Crafts movement, which intended to reform art and design culture as a reaction to industrial production, causing a noticeable drop in the quality of wares. The group and the community it influenced "*advocated reform in the visual arts and recognized the need to improve taste in all aspects of life, including women's dress*" (Cunningham, 2003, p. 104).

Pre-Raphaelites were inspired by early Renaissance art and focused on the truthful representation of nature. They reflected their perfectionism in details to the garment selection, which they used in compositions. The artists, their wives, and their mothers worked almost like a team to decide on the costumes. For example, "*the mother of Millais researched and made costumes for his paintings*" (Wilson, 2003, p. 209). The women depicted in paintings were dressed in clothes that combined medieval simplicity with a romantic vision. However, the Pre-Raphaelites' sensitivity to clothing was beyond an artistic representation:

> *"Elizabeth Siddal and Jane Morris, lovers and models of pre-Raphaelites, not only posed in but habitually wore a special style of dress. This abandoned both the crinoline and the fashionable dropped shoulder seam and tight lacing, which together prevented the fashionably dressed woman from raising her arms to their full height or extent. The pre-Raphaelite style incorporated sleeves with a very high armhole, and the sleeves themselves were often full at the top. Pre-Raphaelite women went uncorseted."* (Wilson, 2003, p. 209)

This style introduced by pre-Raphaelite circles influenced the Artistic Dress Movement, which "*provide[d] an acceptable alternative to fashionable dress*" (Roberts, 1977, p. 567). In addition to Oscar Wilde, the cause of the artistic community was supported by "*well-known individuals of the times*," including Arthur Lasenby Liberty (department store owner), Mary Eliza Haweis (author), Ellen Terry (actress), and Edward William Godwin (architect) (Cunningham, 2003, p. 104). Especially in

[36] Together with John Ruskin, William Morris were perhaps two of the most influential names in the 19th-century modern art movements. Ruskin inspired and supported the Pre-Raphaelite Brotherhood, founded in 1848 by seven names, including English painters, poets, and art critics. Although he joined the brotherhood later, Morris became one of the names most associated with this community, along with Edward Burne-Jones (Cunningham, 2003).

the books of Mary Eliza Haweis written in the 1870s and 1880s, the dress was one of the subjects discussed in detail with its historical perspective and current examples. In *The Art of Beauty* (1883), Haweis explained how the groundbreaking practices of the Pre-Raphaelites encouraged society to question the ideal body norms and fashionable dress of the Victorian era. In the book, she also acclaimed the values represented by whom she calls 'the plain women':

> *"The pre-Raphaelites have taught us that there is no ugliness in fact, except deformity—nay, even that sometimes is not ugly, cela dépend, for things are all comparative. Do not some people admire a cast in the eye, a slight goitre, even a limp? There is a 'beauté du diable,' stricken with imperfection, but with its own charm…*
>
> *Morris, Burne Jones, and others, have made certain types of face and figure once literally hated, actually the fashion. Red hair—once, to say a woman had red hair was social assassination—is the rage. A pallid face with a protruding upper lip is highly esteemed. Green eyes, a squint, square eyebrows, whitey-brown complexions are not left out in the cold. In fact, the pink-cheeked dolls are nowhere; they are said to have 'no character ' —and a pretty little hand is occasionally voted characterless too. Now is the time for plain women."* (Haweis, 1883).

Figure 24 (right). Portrait photograph of Jane Morris taken by John Robert Parsons from 1865 (Wikimedia, 2021)

Figure 25 (left). The Day Dream (1880) by Dante Gabriel Rosetti portrays Jane Morris in a green silk dress (Wikimedia, 2022)

Jane Morris (Figure 24), the wife of William Morris, who modeled for many of Dante Gabriel Rossetti's paintings, embodied the unorthodox ideal of beauty portrayed by the Pre-Raphaelites (Figure 25). The flowing form of loosely-fitted silk dresses that gently wrapped her body was the common point of the costumes she wore while posing. Also, the pleats and gathers increasing the fullness of the sleeves and the roundness of the shoulders was an aesthetic approach opposing the current fashion trends.

3.3. Dress and Environment

The relationship between the dress and the environment is a theme that deserves attention, particularly in *News from Nowhere* and *The Time Machine*. In *Looking Backward*, Bellamy depicts an urban life that is planned in every detail. Therefore, unaffected by natural phenomena, the built environment is no longer a factor shaping people's clothing preferences. For instance, the men and women dressed deliciously

for dinner could walk in the rain without even needing an umbrella. This is because the sidewalks were enclosed with waterproof covering, making sidewalks a dry corridor, and the open spaces were covered with roofs. However, the readers observe the opposite case in the other two novels. Morris rejects the nature-culture dualism and questions the human-centered conception of the world imposed by industrial societies (Yunusoğlu, 2009). Parallel with this philosophy, in *News from Nowhere*, nature is regarded as an essential element that shapes the characters' personalities, appearances, as well as clothing and plays a vital role in the plot. Unlike the modern individual who conflicts with nature, in Morris' utopia, the citizens of the 21st century adapt to their natural environment through their garments. Women working in the Guest House wear dresses made of "*gay*" and "*light*" materials "*to suit the season*" (Morris, 2002, p. 64). Similarly, the woman Mr. Guest met in the market appears "*in a pretty light-green dress in honor of the season and the hot day*" (Morris, 2002, p. 74). Ellen, a young town girl, is "*dressed deliciously for th[e] beautiful weather*" and gains the admiration of Mr. Guest and his friends (Morris, 2002, p. 194).

When people change location, they also adjust their garments according to the conditions of the new environmental context. Clara, impressed by Ellen's adorable look, selects a clothing style similar to that of the young town girl:

> *"I noticed by the way that Clara must really rather have felt the contrast between herself as a town madam and this piece of the summer country that we all admired so, for she had rather dressed after Ellen that morning as to thinness and scantiness, and went barefoot also, except for light sandals."* (Morris, 2002, p. 197)

Geographical condition is another aspect influencing clothing styles as much as the seasons. Unlike the people in the town, the ones living in the locations where the weather is rough and rainy become rougher in dress:

> *"There are parts of these islands which are rougher and rainier than we are here, and there people are rougher in their dress; and they themselves are tougher and more hard-bitten than we are to look at. But some people like their looks better than ours; they say they have more character in them—that's the word"* (Morris, 2002, p. 75)

While Morris describes a pastoral utopia, in which people live in harmony with the environment, in Wells' distant future dystopia, humans completely subjugate nature; but this absolute mastery makes them the slaves of what they have built in the long run. This problematic relationship between humans, nature, and the built environment developing on the axis of class conflict and capitalism also manifests itself in body and clothing practices.

In *The Time Machine*, Wells speculates on the possibility that anthropocentric goals of Western civilization, which aim to control nature in line with human needs, may finally threaten what is so-called humanity. In the story, Wells conveys the unwavering belief of Western civilization in science and technology through the narration of The Time Traveler, which he has constructed as a representative of this thought system. The Time Traveler hopes to see the Golden Age of humanity in the future. While his first impressions of the Eloi lead him to believe that he was witnessing the Golden Age of humanity, his findings on the origins of Morlocks show that his initial thoughts were based on quickly acquired false assumptions.

At the beginning of the novel, The Time Traveler encounters the mysterious Morlocks and attempts to identify them based on his 19th-century knowledge of various animal species. However, later, it becomes clear that the Morlocks have in fact descended from humans, degenerating into their present state over thousands of years. In a similar vein, Wells' narrative seems to be implicitly suggesting that not just the human body, but clothing too is subject to evolutionary processes. The Morlocks, presumably the producers of Eloi's elegant dresses and leather sandals (which were "*fairly complex specimens of metal-work*" (Wells, 2002, p. 37)), abandon the habit of dressing together with all the civilized gestures of the human body in time. In the story, the naked bodies of Morlocks can be taken as overly dramatic speculation on the future of the working class, most of whom were ragged and hungry since their financial power did not allow them to purchase suitable clothes in the 19th-century conjuncture. As an alternative approach, this can also be associated with their dark living and working environment that eliminates the need to cover up along with the visibility of the body. Besides, a dress may also not fit their newly acquired physical habits that involve running and climbing.

Here, another critical point is that Wells, imagining the future of humanity from the Darwinian point of view, in fact, unwittingly presents an early vision of the post-human. However, as Parrinder argues, the post-Darwinian post-human that Wells described has "a bestial face":

> *"The post-Darwinian 'post-human' generally has two faces, summing up our hopes and fears about the human condition. There is the bestial face, a relapse into primitivism and savagery, as in H. G. Wells's The Time Machine."* (Parrinder, 2009, p. 57)

In The Time Machine, 'the bestial face' of the post-Darwinian 'post-human' manifests itself in two diverse human forms constructed by anthropogenic evolution. Within this framework, the naked body is associated with animalism and becomes the signifier of regression. In the case of *The Time Machine*, it is not convenient to speak of a designed human evolution as in more recent science fiction works. Yet, Wells' envisioning of unintended consequences of human actions as possible causes of environmental (and biological change) draws a parallel with the current discussions developed around the 'Anthropocene.'

3.4. Body, Labor, and Social Class

In the 19th century, people's engagements in physical labor were very much related to social class, and in the novels, this influenced the authors' decisions on not only clothing but also the physical attributes of characters in diverse directions. In Boston, envisioned by Bellamy, the advanced machinery enables people to work considerably less than the average person who had lived in the late 19th century. As a result, the people whose bodies do not wear down under long and heavy duties stay younger for longer years. Bellamy considers that the labor spent by people is inversely proportional to their physical well-being. However, in Hammersmith, Morris constructs this relationship almost the opposite way. Morris imagines a worker's utopia, where labor is blessed. In the novel, both men and women engaged in physical work are described as healthy people with firm, strong, and well-knit bodies. *The Time Machine*, on the other hand, presents a grotesque, distant future dystopia in which the struggle between the Capitalists and the Proletariat causes the human species to evolve into two inferior species whose physical and mental capacities have been directly determined by their engagement in labor.

In order to understand the authors' conception of the future body in relation to labor, it is necessary to grasp how the fashion discourse of the late 19th century relates beauty with class. According to Veblen, the purposeless and wasteful details transforming garments into mere consumption objects are ugly. He claims that despite the prevailing fashion is perceived to be beautiful, this perception is not based on aesthetic grounds (Corrigan, 1997). On the contrary, restrictive dresses designed to prove the wearer's disengagement from physical labor and decorative details that serve no other purpose than to increase waste are in fashion because of their ability to display wealth. Veblen's hypothesis is also closely related to the concept of physical beauty. The body has a memory and often carries the traces of one's social class. For example, in the 19th century, chapped hands and sunburned skin signified that the person engaged in physical labor and thus belonged to the lower class. While the physical attributes associated with poverty were regarded as ugly, the details indicating that the person had free time for idling and plenty of money to spend on their appearance were associated with beauty.

In *News from Nowhere*, Morris reverses the codes of class-based beauty and the rules of fashion transient by nature. The waterman, the first person that William Guest met in the 21st century, is a "*handsome young fellow*" who is "*dark-haired and berry-brown of skin*" (Morris, 2002, p. 57). Looking at his body, Guest presumes that he is "*used to exercising his muscles*"; however, he cannot find anything "*rough or coarse about him*" (Morris, 2002, p. 57). The appearances of the construction workers are also so much different than the miserable laborers of the previous century who suffered under heavy workloads. A group of young men, who have fun wrestling with each other in break-time, look very pleasant and comfortable while working:

> "There were about a dozen of them, strong young men, looking much like a boating party at Oxford would have looked in the days I remembered, and not more troubled with their work." (Morris, 2002, p. 95)

The narrative also mentions that the female characters look charming while working, regardless of their occupations. Haymakers look pretty in the fields, and the women working in the Guest House, carry pleasant expressions on their faces. Contrary to the 19th-century understanding of the beauty that forced women to be skinny and fragile, these women are "*shapely and well-knit of body, and thoroughly healthy-looking and*

strong" (Morris, 2002, p. 64).While describing Clara (Dick's ex-wife and current lover), William Morris does not only write about the feminine qualities of her face and body but also emphasizes the beauty of her strong arms. In this way, he relates beauty with 'physical labor' contrary to the prevailing beauty ideals of the time:

> *"Her skin was as smooth as ivory, her cheeks full and round, her lips as red as the roses she had brought in; her beautiful arms, which she had bared for her work, firm and well-knit from shoulder to wrist."* (Morris, 2002, pp. 68-9)

The Table 3 given below presents the words and phrases used in *News from Nowhere* to describe specific body parts. When the table is examined, it is observed that the words used to describe the characters of the 19th century have negative connotations. This deliberate narrative choice, becoming sarcastic occasionally, seems to be the method Morris has chosen to criticize the conception of beauty prevailing in his age. Conversely, in the utopia Morris envisioned for the 21st century, working is no longer an obligation that wears out the body but an action that keeps one beautiful and strong; therefore, some visual signs associated with poverty in the 19th century are used in a positive context. In that way, the author explicitly reverses the codes of fashion by focusing on body parts associated with production, such as 'hands' and 'arms,' and praising the sunburned skins of workers. It is also worth noting that Morris's ideals of beauty embrace diversity. Regardless of their skin, eye, and hair color, everybody is beautiful as long as they have a healthy body and a pleasant expression.

Table 3. Words and phrases used to describe various body parts in News from Nowhere. While the letter "f" in the table shows that the definition is used for a female character, the letter "m" is used for male characters.

Body Part	**Word Rep.**	**Character (19th Century)**	**Character (21st Century)**
Arm(s)	12	"like sticks" (p.88) *f*	"beautiful" (p.69) *f* "firm and well-knit" (p.69) *f* "beautiful" (p.194) *f* "sun-browned" (p.240) *f*

Table 3. (Continued). Words and phrases used to describe various body parts in News from Nowhere. While the letter "f" in the table shows that the definition is used for a female character, the letter "m" is used for male characters.

Cheek(s)	**7**	**"pale" (p.88) *f***	**"full and round" (p.69) *f*** **"sunburnt" (p.192) *f*** **"healthy apple-red" (p.192) *m***
Feet		"heavy" (p.239) "hopeless" (p.239)	"pretty" (p.188) *f* *"bare"* (p.190) *f* "tanned quite brown with the sun" (p.190) *f*
Hair	11		"dark-[hair]ed" (p.57) *m*, (p.70) *m*, (p.74) *f*, (p.145) *f* "sandy-[hair]ed" (p.62) *m* "light-[hair]ed" (p.190) *f* "tawny" (p.196) *f* "black-[hair]ed" (p.205) *m*, (p.216) *f* "black" (p.238) *f* "wavy" (p.238) *f* "rich" (p.247)
Hand	56	"like bunches of skewers" (p.88) *f*	"pretty" (p.179) *f* "delicate" (p.221) *f* "sun-browned" (p.240) *f* "tanned quite brown with the sun" (p.190) *f*
Lips	4	"thin" (p.88) *f*	"as red as the roses" (p.69) *f* "sweet and beautiful" (p.114) *f*
Muscle(s)	4	-	-
Nose(s)	1	"picked" (p.88) *f*	
Shoulder	13	-	-
Skin	12*	"pasty white" (p.194) *m*	"berry-brown" (p.57) *m* "as smooth as ivory" (p.69) *f* "white-[skin]ned" (p.74) *f* "brown-[skin]ned" (p.85) *m* "clean-[skin]ned" (p.194) *f*
Waist(s)	2	"like hour-glasses" (p.88) *f*	
Wrist	2	-	-

* The word 'skin' is also used for animal skin occasionally.

Contrary to his contemporaries Edward Bellamy and William Morris, who predicted that a social system based on justice would positively affect the human body, H. G. Wells modeled an anti-utopia in which humanity, which once had built a great civilization raised upon science and technology, failed to solve the class conflict and then evolved into two inferior species. Interpreting all the findings that he observed with the rigor of a scientist, The Time Traveler infers that the laborers, who had to work in the underground facilities without daylight, evolved to adapt to the extreme conditions of their new habitats. Their vision ability, adjusted to dim and dark, prevents them from coming to the Upper-world during the daytime. Based on The Time Traveler's descriptions, this half-animal new human form resembles white-skinned apes, moving like spiders. Conversely, the capitalists, freed from both physical and intellectual labor, have evolved into physically weak, indolent creatures with low intellectual capacities and emotional reactions resembling that of children. The time traveler assumes that it is the "*too-perfect security*" they have enjoyed over time that has "*led them to a slow movement of degeneration, to a general dwindling in size, strength, and intelligence*" (Wells, 2002, p. 45).

In *The Time Machine*, H. G. Wells addresses the class conflict between the capitalists and laborers from a Darwinist point of view and propounds fruitful speculations on the forms the human body would take in the distant future. From this aspect, the novel constitutes a base for the transhuman/posthuman discussion, which considers 'human' as an open notion. As Patrick Parrinder, who has conducted extensive research on H. G. Wells, argues that:

> *"Evolution by natural selection -the strictly Darwinian model to which Wells and Huxley adhered- could not have brought about significant changes within the human species within recorded history, so that any such changes must be cultural, not natural in origin. [Yet,] Wells was determined to show the results of hypothetical natural evolution, not of artificial or eugenic processes."* (Parrinder, 1995, p. 39)

Parrinder's ideas about both the process of human evolution and how Wells handled in fiction looks reasonable. Indeed, Wells, who grew up as a student from South Kensington, seems to have planned the even temporal jumps in his story according to what he had learned about the process of human evolution in the 19th century.

However, the view propounding that his fiction was entirely built on natural evolution may not reflect the whole truth. As a matter of fact, in Wells' fiction, nature -which is actually described as a garden in the work- is already the product of a anthropogenic evolutionary process. Therefore, it seems possible to think that Wells envisioned human evolution as an unexpected byproduct of an advanced civilization that progressed in an unbalanced way. Indeed, both the Eloi and the Morlocks

Elena Gomel, building on T. H. Huxley's metaphor of garden, whom he found "*in the same position as every other work of man's art*" (Huxley, 1894), suggests that:

> *"A garden is a slice of wilderness that is tended and cultivated until it becomes its opposite. If neglected, it sinks into wilderness again and there is no particular moment in time in which the continuity between cultivation and nature is broken by a sharp divide. And yet, garden and wilderness are commonly perceived as an opposition."* (Gomel, 2009, p. 342)

Yet,

> *"In The Time Machine, the tropological garden of Huxley becomes the "long neglected and yet weedless garden" of the future, in which the temporal metonymy of evolution underlies the spatial opposition of the diurnal Eloi and the nocturnal Morlocks."* (Gomel, 2009, p. 342)

The "*long neglected and yet weedless garden*" (Wells, 2002, p. 23) Wells describes is a place where the continuity between cultivation and nature is partially broken without the need for further human intervention; therefore, it is also a heterotopia that does not fit into the ordinary course of life and the law of nature. Within this heterotopia, in addition to the opposition between nature and culture, the meanings attributed to upper and lower life forms need to be reconsidered. As Gomel proposed,

> *"[n]atural selection adapts individual organisms to random shifts in the environment and is therefore open-ended and non-progressive… Though later organisms might be better adapted to a particular ecological niche than earlier ones, this does not mean that they are "higher" in any absolute sense"* (Gomel, 2009, p. 337).

As Gomel points out through Huxley's example, cockroaches and lichens would probably be the species best adapted to environmental conditions in the case of a new

ice age, but this does not mean that they are advanced life forms. In A.D. 802,701, there is no sign of a new ice age. However, without coining the term, Wells invents a very early conception of the Anthropocene with hypothetical logic. While envisioning the post-industrial society of the future from a Victorian perspective, he predicts a world in which humans, who had once gained a victory over nature, would lose control of their own evolution and become lower life forms.

3.5. Genderless Body

Bellamy and Morris's intention in imagining a comparatively near future seems to have arisen from their desire to craft a model for their present time. Therefore, it seems unlikely to expect the authors to predict a future in which the human body will undergo a radical change, especially considering the 19th-century technologies that cause a slower social transformation than today. For that reason, in the future envisioned by the authors, the people are not equipped with new bodily qualities; instead, their existing appearances are redesigned and enhanced to reflect the signs of an egalitarian welfare society. In the novels, the 'enhancement' is also provided with the reconstruction of femininity and masculinity ideals. Although the appearance of the male characters described by Bellamy and Morris is relatively different, there is a gender-related difference in the appearances of men and women in both books, which are highlighted through clothing.

Compared to the first two novels, *The Time Machine* presents a relatively different example of how its author envisions the human body's future. The previous chapters discussed how H. G. Wells benefited from the concept of evolution -developed by Darwin and T. H. Huxley- for modeling the Eloi and Morlocks, losing resemblance to both their 19th-century ancestors and each other. Here, one of the remarkable points deserving attention is that despite all the differences, which rendered them separate species, they still have one thing in common: there is no apparent difference between the men and women of either species based on appearance.

The Morlocks are depicted as human descendants who have lost their civilized gestures by severing their ties with modern society. The book does not mention any physical characteristics distinguishing this species' male and female members. As a matter of fact, this difference is not that important because the Morlocks have already been

drawn into the domain of the inhuman. However, the Eloi, the miniature folk who looks alike regardless of their sex and age, catch the attention of the Time Traveler:

> *"In costume, and in all the differences of texture and bearing that now mark off the sexes from each other, these people of the future were alike. And the children seemed to my eyes to be but the miniatures of their parents."* (Wells, 2002, p. 26)

In the book, the too perfect security and balanced population seem to have rendered the intrasexual competition mechanisms unnecessary, causing the disappearance of differences between men, women and children in terms of both body characteristics and dressing. From the narration of The Time Traveler, the close resemblance between men and women is also explained with humans' renunciation from "*militant necessities of an age of physical force*":

> *"I felt that this close resemblance of the sexes was after all what one would expect; for the strength of a man and the softness of a woman, the institution of the family, and the differentiation of occupations are mere militant necessities of an age of physical force. Where population is balanced and abundant, much childbearing becomes an evil rather than a blessing to the State; where violence comes but rarely and offspring are secure, there is less necessity—indeed there is no necessity—for an efficient family, and the specialization of the sexes with reference to their children's needs disappears."* (Wells, 2002, p. 26)

Written for readers of the late 19th century, where the appearance of men and women differentiated dramatically, the narrative refers to the artificiality and hegemonic aspect of this difference. In this set-up, the close relationship between gender roles and dressing styles, which Helene E. Roberts draws attention to (see chapter 3.2.2.), is rebuilt within a system that reverses the existing order. The detail that should not be overlooked at this point is also Wells' approach to uniformity-based egalitarianism, which is commonly associated with communist ideology. Here, by imagining the future society as an identical-looking degenerated race, the author indirectly shows that the political ideals that will lead to the loss of diversity in the society are the product of an immature mind:

> *"The gay, brightly-dressed people, the verdant park landscape and the bathing in the river are strongly reminiscent of Morris. The Eloi live in palace-like*

> *communal buildings, and are lacking in personal or sexual differentiation. On the evening of his arrival, the Time Traveller walks up to a hilltop and surveys the green landscape, murmuring "Communism" to himself. The reference is to Morris rather than to Marx (whose work and ideas Wells never knew well)."* (Parrinder, 1976, p. 271)

This statement also resonates with Parrinder's proposition, suggesting that "The Time Machine in its final form avoids certain limitations of both the Victorian realist novel and the political utopia" (Parrinder, 1976, p. 272). By bringing the Eloi and Morlocks together, it also destroys "*the mirage of utopian communism*" (Parrinder, 1976, p. 272). Wells, also "*merciless[ly]" examines the "second childhood*", although Morris "*blithely accepted [it] in Nowhere*" (Parrinder, 1976, p. 271).

3.6. Material

In the late 19th century, suitable clothing was a matter of fashion and status for the rich; but for the poor, it became a prerequisite of human dignity and respectability. When the economic conditions prevented the low-income groups from purchasing garments made of proper materials, especially the dramatic decline in the quality of workers' clothing became one of the most significant indicators of social injustice. The novels under review prove that Edward Bellamy and William Morris are greatly disturbed by the material differences in clothing, which render the division between the rich and the poor. Therefore, by juxtaposing the present with the possible future, the authors invite their readers to question the disparities of their age, in which some "*wear silks, and others rags*" (Bellamy, 2007, p. 182). They claim that everybody has the right to dress in a manner befitting human dignity, independent of their social position or occupation. Also, Morris seems to be troubled with the industrial transformation of the textile industry, which breaks the competitiveness of high-quality textile materials and handicrafts in the market. Therefore, he gives detailed descriptions of the characters' clothing by drawing attention to their material compositions and production techniques.

The academic resources investigating the clothing culture of the poor in the 18th and the 19th-century help us understand the authors' sensitivity to the material quality of the dress, which becomes the marker of social segregation. As American fashion historian Valerie Steele explains, in the eighteenth-century United States, the country

people walking in the streets of Philadelphia or Boston could easily be distinguished by their outfits because their garments were distinctive in material quality and construction. At that time, America was "*dependent upon England's textile industry*" (Steele, 2015, p. 326), and high-quality textile materials, including silks, woolens, and cotton goods, were only available to the rich. Also, while these refined materials are given form by the experienced hands of tailors and dressmakers, the clothing of ordinary people was produced by amateurs with mostly coarse fabrics (Steele, 2004). Nevertheless, in the 19th century, with the settlement of the working class in cities that became centers of production, social groups that contrasted in appearance began to share the same public space. The passage from *Looking Backward* clearly shows the social transformation suddenly bringing rich and poor to the same physical realm and the role of dress in marking their difference:

> *"The squalor and malodorousness of the town struck me, from the moment I stood upon the street, as facts I had never before observed. But yesterday, moreover, it had seemed quite a matter of course that some of my fellow-citizens should wear silks, and others rags, that some should look well fed, and others hungry. Now on the contrary the glaring disparities in the dress and condition of the men and women who brushed each other on the sidewalks shocked me at every step, and yet more the entire indifference which the prosperous showed to the plight of the unfortunate."* (Bellamy, 2007, p. 182)

The industrial revolution had two significant consequences that affected the clothing culture of the 19th century, especially in the context of England and the United States. First, the rapidly developing textile industry started to employ workers with meager wages to meet the demand. Having difficulties meeting their basic needs such as shelter, food, and clothing, the working class presented a profile quite different from the middle and upper classes with their physically weak and ill-clothed appearance. Second, the textile materials and reproduction techniques suitable for industrial manufacturing replaced high-quality textiles and handicrafts. In short, capitalist production did not only make the poor poorer but also destroyed material diversity for the sake of higher profits.

A prime example of this was the rapid replacement of linen and wool for cotton in the British textile industry because of its suitability for industrial processes and printing.

With the development of the Manchester cotton industry, the spread of ready-made clothing, and the ease of distribution, cotton replaced wool, especially in the clothing of the working class. Simultaneously, the wool industry experienced a significant decline.[37] In those years, cotton fabrics were available in various weights and qualities, "*from the heaviest fustian to the finest cambric*" however, among all, calico was the most preferred option for working-class underwear, women's and children's clothing (Richmond, 2013, pp. 37-8). In time, cotton did replace not only wool but also linen goods from the wardrobes of the working class. Until the last quarter of the 18th century, linen shirts "*were plentiful even in the most humble communities*" (Lemire, 2005, p. 118), but by the 19th century, white linen shirts of fine quality became a status symbol. The gradual change of fustian cloth also explains the disappearance of linen from the garments of the working class:

> *"Fustian, the typical fabric of nineteenth-century laboring men's trousers and other outer garments, was the generic term for a variety of cloths, including moleskin, jean and corduroy. Originally a linen fabric, then a linen-cotton mix and by the nineteenth century increasingly cotton only, fustian, long associated with the working man, became a metaphor for him."* (Richmond, 2013, p. 39)

Friedrich Engels' commentaries on the mid-19th century clothing culture explain how the relatively good quality fabrics suddenly vanished from the wardrobes of the poor by drawing attention to the inaccessibility of linen and wool:

> *"The clothing of the working people, in the majority of cases, is in a very bad condition. The material used for it is not of the best adapted. Wool and linen have almost vanished from the wardrobe of both sexes, and cotton has taken their place. Shirts are made of bleached or colored cotton goods; the dresses of the women are chiefly of cotton print goods, and woolen petticoats are rarely seen on the wash-line. The men wear chiefly trousers of fustian or other heavy cotton goods, and jackets or coats of the same. Fustian has become the proverbial costume of the working men, who are called "fustian jackets," and*

[37] The loss of the traders was so great that one of them sent his woolen merchandise to the King, asking him to wear it as jackets. With this request, he hoped that wool would regain interest among the nobility; but even it did not help wool "complete with cotton" (Richmond 2013, 37).

> *call themselves so in contrast to the gentlemen who wear broadcloth."* (Engels, 2019, p. 64)

When the social significance of cloth considerably increased in public spaces, the difficulty of having suitable clothing led working-class and low-income groups to find various solutions. "*For the majority of the working classes, pawning [became] simply a way of life*" (Higgs, 2019). The poor would pawn their clothes, shoes, and even their wedding rings to find cash temporarily, and when they got some money, they would get them back (Johnson, n.d.). In short, for poor people, it was difficult to have a decent outfit, and when they were lucky enough to have one, it was almost impossible for them to keep it for long.

As Peter Stallybras puts it, "*respectability, that central nineteenth-century virtue, was something to be bought and, in times of need, pawned*," and Karl Marx was one of the many who had to pawn clothing to solve his domestic miseries (Stallybrass, 1998, p. 192).

> *"For the Marxes, the pawning of their clothes sharply delimited their social possibilities. In the winter of 1866, Jenny Marx could not go out because all her respectable clothes were pawned. The following year, their three daughters were invited to Bordeaux: not only did they have to calculate all the expenses of the journey but they also had to redeem their children's clothes from the pawnshop to make them presentable."* (Stallybrass, 1998, p. 195)

> *"Without "suitable" clothes, Jenny Marx wouldn't go out on the street; without "suitable" clothes, Marx wouldn't work at the British Museum; without "suitable" clothes, the unemployed worker was in no state to look for new employment."* (Stallybrass, 1998, p. 202)

Given the circumstances of the time, it is not surprising to see that in *News from Nowhere*, William Guest, as a socialist revolutionary like Marx, dreams of a future where all people wear garments mostly made of silk, in addition to linen and wool, which are only available for the upper classes in the 19th century. The table below shows the textile materials used in the descriptions of the characters' clothing:

Table 4. Materials used to describe clothing articles in *News from Nowhere*.

Character	Materials Used in Clothing
A Young Woman	A very handsome woman, splendidly clad in figured **silk**, was slowly passing by, looking into the windows as she went (Morris, 2002, p. 84).
Construction Workers	As I eyed the pile of clothes, I could see the gleam of gold and **silk** embroidery on it, and judged that some of these workmen had tastes akin to those of the Golden Dustman of Hammersmith. (Morris, 2002, p. 95).
A middle-aged man	there goes a middle-aged man in a sober grey dress; but I can see from here that it is made of very fine **woollen** stuff, and is covered with **silk** embroidery (Morris, 2002, p. 181).
Dick and Clara	And in a minute or two Dick and Clara came to me, the latter looking most fresh and beautiful in a light **silk** embroidered gown, which to my unused eyes was extravagantly gay and bright; while Dick was also handsomely dressed in white **flannel** prettily embroidered (Morris, 2002, p. 184)
Ellen	Though she was very lightly clad, that was clearly from choice, not from poverty, though these were the first cottage-dwellers I had come across; for her gown was of **silk**, and on her wrists were bracelets that seemed to me of great value (Morris, 2002, p. 190). Ellen yonder would have been a lady, as they called it in the old time, and wouldn't have had to wear a few rags of **silk** as she does now …slim girl dressed in light blue **silk** that fluttered in the draughty wind of the bridge… (Morris, 2002, p. 194). … a figure as bright and gay-clad as the boat rose up in it; a slim girl dressed in light blue **silk** that fluttered in the draughty wind of the bridge (Morris, 2002, p. 220).
Haymakers	The majority of these were young women clad much like Ellen last night, though not mostly in **silk**, but in light **woollen** most gaily embroidered; the men being all clad in white **flannel** embroidered in bright colours (Morris, 2002, p. 195).
A Woman	…a very pretty woman who was not in the work but was dressed in an elegant suit of blue **linen** came sauntering up to us with her knitting in her hand (Morris, 2002, p. 214).

The details in the novel show that his decision on the characters' clothing is equally affected by his socialist and artistic identity. For example, his emphasis on 'clean' clothing reflects his discomfort with the economic system, compelling workers to wear dirty, ragged clothes.

Also, the small passage about 'printed cotton' indicates his dissatisfaction with the cheap and tasteless textile materials produced with commercial reproduction methods. The dialogue between Mr. Guest and the tobacco seller proves this claim. In the tobacco shop, the salesgirl is surprised by the printed cotton bag he carries and wants to change it immediately with something of better quality, a gaily embroidered red morocco bag:

> *"I fumbled about, and at last pulled out my piece of cotton print which does duty with me for a tobacco pouch. But the girl looked at it with some disdain, and said—"*
>
> *"Dear neighbour, I can give you something much better than that cotton rag."* (Morris, 2003, p. 85)

Here, Morris not only devaluates cotton but also replaces print with embroidery, and this passage clearly reflects his attitude towards the industrial production techniques of his age. It is very well known that Morris, as a renowned textile artist, has always prioritized aesthetic quality and human craft, and he perfected his art throughout the years by experimenting with various printing and painting techniques.[38] Nevertheless, his many years of expertise have shown him that "*no textile ornament has suffered so much as cloth-printing from … commercial inventions*" (Morris, 1888, pp. 24-5). Therefore, he preferred the ancient woodblock printing techniques to the cylinder printing methods adopted by many commercial enterprises in the middle of the 19th century.

According to Morris, the designers should know the characteristics of the material in their hands and use its potential to achieve the best result. They should also benefit from the constraints of the material, which can bring pleasure to the process of working

[38] In 1861, William Morris founded Morris, Marshall, Faulkner & Co. together with seven other names, including Dante Gabriel Rossetti and Ford Madox Brown, both of whom were the prominent painters of the Pre-Raphaelite movement. Together they produced textile designs dedicated to Gothic Revival styles. Morris was "*particularly interested in historic textiles*" (Watt, 2004) as well as the old printing and dying techniques. In that period aniline-based synthetic dyes had replaced the colors obtained from natural materials and mechanical printing substituted hand-block and engraved printing. Morris, on the other hand, made a great effort to reverse that trend by refining old techniques.

and experimenting. For this reason, he disregards the commercial perspectives and practices that concentrate on quantity and speed:

> *"Never forget the material you are working with, and try always to use it for doing what it can do best. If you feel yourself hampered by the material in which you are working instead of being helped by it, you have so far not learned your business, any more than a would-be poet has who complains of the hardship of writing in measure and rhyme. The special limitations of the material should be a pleasure to you, not a hindrance. A designer, therefore, should always thoroughly understand the processes of the special manufacture he is dealing with, or the result will be a mere tour de force."* (Morris, 1888, pp. 28-9).

At this point, it is seen that the author's philosophy of art affects the material properties of textile goods as much as the processes of production narrated in the book.

3.7. Timeliness

The authors of all three books analyzed in this chapter refer to specific historical periods when planning the characters' clothing styles. However, the historical periods they choose and how they interpret them are different from each other. In *Looking Backward*, the men's suit of the late 19th century seems to be acknowledged as a timeless piece of dress that would continue to be used with few alterations in the future. On the other hand, Bellamy's commentaries on women's fashion reveal the need for a reformatory formulation in women's way of dressing. In search of suitable attire for women, Bellamy rediscovers antiquity and suggests a dress form that resembles the ancient classical costume. Although Bellamy finds the views of his contemporaries referring to the cyclical nature of history extreme,[39] it is interesting to see that he still

[39] For Bellamy, on the other hand, that was just one of the extreme opinions, oddly shared by some respectable names. According to the explanatory notes of Matthew Beaumont, who is the editor of Looking Backward, here the author seems to specifically refer to Thomas Carlyle, who "attacked the utilitarian ideology of 'the Age of Machinery'" in the *Signs of the Times.* The first chapter of *Looking Backward*, where he summarized the current ills of the late nineteenth century and the contemporary approaches regarding their solution, he criticized the ones who argued that great developments in the history of civilization brought along great social crisis and that human history have progressed in cyclical nature rather than linear.

> "*Humanity, they argued, having climbed to the top round of the ladder of civilization, was about to take a header into chaos, after which it would doubtless pick itself up, turn round, and begin to climb again… Human history, like all great movements, was cyclical, and*

follows a cyclical logic while envisioning the future of women's attire. Here, the author's decision also relates to the cyclical nature of fashion, which revives the old styles in new forms.

Unlike Bellamy, Morris believes in the cyclical nature of history, and therefore, he consciously benefits from the historical models in constructing his imaginary society and their dressing habits. The detailed analysis of the clothing-related descriptions in the *News from Nowhere* reveals that Morris uses a considerable number of direct references to the Middle Ages and the classical period. These direct references (such as brown leather belts, clasps made of damascened steel, gold, and silk embroideries) are supported by indirect details that would help a knowledgeable reader relate the costumes with these specific eras. Table 5, shown below, presents a concise summary of the time-related keywords and descriptions in the novel:

Table 5. The time-related keywords used in the description of costumes in *News from Nowhere*.

Character	Words with Time References
Waterman	His dress was **not like any modern work-a-day clothes** I had seen, but would have served very well as a costume for a picture of **fourteenth century** life: it was of dark blue cloth, simple enough, but of fine web, and without a stain on it. He had a **brown leather belt** round his waist, and I noticed that its **clasp was of damascened steel beautifully wrought** (Morris, 2002, pp. 57-8).
Women in the Guest House	… their dress was somewhat between that of the **ancient classical costume** and the simpler forms of the **fourteenth century garments** (Morris, 2002, p. 64)
Mr. Boffin (Golden Dustman)	… his real name is not Boffin, but Henry Johnson; we only call him Boffin as a joke, partly because he is a dustman, and partly because he will dress so showily, and get as much gold on him as a baron of the **Middle Ages** (Morris, 2002, p. 71)

returned to the point of beginning. The idea of indefinite progress in a right line was a chimera of the imagination, with no analogue in nature." (Bellamy, 2007, p. 11)

Table 5. (Continued). The time-related keywords used in the description of costumes in *News from Nowhere*.

People	They were all pretty in design, and as solid as might be, but countryfied in appearance, like yeomen's dwellings; some of them of red brick like those by the river, but more of timber and plaster, which were by the necessity of their construction so like **mediaeval** houses of the same materials that I fairly felt as if I were alive in the **fourteenth century**; a sensation helped out by the costume of the people that we met or passed, **in whose dress there was nothing modern** (Morris, 2002, p. 73)
Construction Workers	As I eyed the pile of clothes, I could see the gleam of gold and silk embroidery on it, and judged that some of these **workmen had tastes akin to those of the Golden Dustman of Hammersmith** (Morris, 2002, p. 95)**.**

The historical references Morris used to describe costumes seem to have arisen from his ideological and artistic tendencies, which were rooted in a discontent with the industrial production of the 19th century. According to the political theorist Vincent Geoghegan, Morris's socialism draws inspiration from historical models, especially from the Engelsian concept of primitive communism, which is influenced by Lewis H. Morgan's "*belief that a better, future society would be a revival of primitive communism at a higher level of development*" (Geoghegan, 1992, p. 83). The notes in *The Manifesto of the Socialist League (1885),* which Morris and Belfort Bax wrote in collaboration, reveal that they perceive revival not as a form of regression but a form of a more elevated, distilled form of progress:

> *"All progress, every distinctive stage of progress, involves a backward as well as a forward movement; the new development returns to a point which represents the older principle elevated to a higher plane; the old principle reappears transformed, purified, made stronger, and ready to advance on the fuller life it has gained through its seeming death. As an illustration (imperfect as all illustrations must be) take the case of advance on a straight line and on a spiral, - the progress of all life must be not on the straight line, but on the spiral."* (Morris and Bax, 1885)

Morris's conception of progress diverges from the modernist idea of technological progress, which is always forward-looking. Morris's own words published in his

renowned essay How I became a Socialist (1894), stand as the clear confession of his hatred toward modern civilization, which broke its connection with history:

> *"The study of history and the love and practice of art forced me into a hatred of the civilization which, if things were to stop as they are, would turn history into inconsequent nonsense, and make art a collection of the curiosities of the past which would have no serious relation to the life of the present."* (Morris, 2012, p. 280)

According to English critic Arthur Clutton-Brock, Morris's interest in socialism was also related to his aesthetic discontent. In his book *William Morris: His Work and Influence (*1914), Clutton-Brock argued that Morris and his contemporaries saw the inferiority of the art of their age as a disease infecting the whole society:

> *"No doubt aesthetic discontent has existed before; men have often complained that the art of their own time was inferior to the art of the past; but they have never before been so conscious of this inferiority or felt that it was a reproach to their civilisation and a symptom of some disease affecting the whole of their society."* (Clutton-Brock, 2012, p. 7)

Morris not only diagnosed the disease but also tried to find a remedy for it. Although he congregated and worked together with other socialists, his dreams and hopes were substantially different from his companions, and his distinctive motivations led him to propose different resolutions to the problems of his age. Many of the men around him, who devoted themselves to the reform of society, believed that they could end the inequality between the rich and the poor by reorganizing the economic structure, in other words, with the equal distribution of the available resources. However,

> *"[Morris] desired something far beyond a more equal distribution of wealth, and he would not have been at all content with a world in which men lived and work as they do now but without extreme poverty and riches."* (Clutton-Brock, 2012, p. 17)

The nineteenth century had seen many rebellions arise from the dreadful disparity between the rich and the poor. Yet,

> *"It was not poverty that made Morris rebel so much as the nature of the work… He believed that their work was joyless as it never had been before; and that, not poverty, was to him the peculiar evil of their time against which, as a workman himself, he rebelled and wished the poor to rebel."* (Clutton-Brock, 2012, p. 17)

For Clutton-Brock, one of the most significant failures of their society was that they had thought much of comfort instead of pleasure. Morris's secret desire, on the other hand, was to trigger minds to wish for pleasure more than comfort. In his ideal future, labor was an inseparable part of human life and, at the same time, a joyful act; "*all life and all labor [was] a kind of dance rather than a comfortable and torpid repose*" (Clutton-Brock, 2012, p. 18). Similarly, Norman Kelvin argues, "*the psychological connection between the human desire for pleasure and the human desire to make or enjoy art is at the heart of Morris's socialism*" (Kelvin cited in Arata 2003, 28). His knowledge of history, which provided him with the necessary know-how to make a counter-reform in the fields of arts against the domination of mass-manufactured items of his age, also helped him shape his thoughts on socialism and social reform.

Morris's views were accepted as romantic solutions, which denied the reality of the time, and he was blamed for being closed to innovation by many. On the other hand, more than a hundred years after *News from Nowhere* was written, it seems clearer that the author could foresee the wicked problems we encountered in our day as the inevitable consequences of unplanned industrial growth. The effects of synthetic dyes on water pollution, the exploitation of labor caused by low-cost mass production, and the encouragement of people to consume more through marketing policies emphasizing quantity over quality are crucial problems that need to be urgently solved today. However, the author's recourse to the solutions of the past for the potential problems of the future and the revivalist aesthetic that he followed in the descriptions of his 21st-century visions suggests that his contemporaries may have objected to the material manifestations of Morris's ideas by failing to notice their essence. As a matter of fact, the clothing references used by H. G. Wells while constructing his characters can be considered to target Morris's utopianism.

In *The Time Machine*, the passage in which the Time Traveler compared his garments with that of Eloi bears a strong resemblance to William Guest's commentaries

contrasting his "*rough blue duds*" (Morris 2003, 83) with the cheerful dresses of the 21st-century people:

> *"Several more brightly clad people met me in the doorway, and so we entered, I, dressed in dingy nineteenth-century garments, looking grotesque enough, garlanded with flowers, and surrounded by an eddying mass of bright, soft-colored robes and shining white limbs, in a melodious whirl of laughter and laughing speech."* (Wells, 2002, p. 23)

However, when the reader is provided with more information about the Eloi, it becomes clear that this is an allusive resemblance. This miniature folk possesses a "*Dresden china type of prettiness*" (Wells, 2002, p. 21). Nevertheless, this prettiness is meaningless when one considers the wretchedness of these creatures, who lack many skills humans have acquired and developed in the process of evolution, such as tool-making, farming, crafting, and communicating with an advanced language. Describing the Eloi through a historical example, Wells likens them to the Carlovingian kings (also known as Carolingians), who "*had decayed to a mere beautiful futility*" (Wells, 2002, p. 51). Interestingly, while there is no direct reference to the Carlovingian dynasty in the depictions of the Eloi costumes, it is possible to associate their simple tunics and sandals with Frankish nobles and biblical figures depicted in early medieval European art. Well's description of a male character helps us to draw this parallelism:

> *"He was a slight creature—perhaps four feet high—clad in a purple tunic, girdled at the waist with a leather belt. Sandals or buskins—I could not clearly distinguish which—were on his feet; his legs were bare to the knees, and his head was bare."* (Wells, 2002, p. 20)

The illustration in the *Codex Aureus of Lorsch* (778-820), an important example of Carlovingian art (Figure 26), shows Saint John the Evangelist wearing a simple long blue tunic and sandals beneath it. Also in Robert von Spalart's *Historical Picture of the Costumes of the Principal People of Antiquity and Middle Ages (1796),* depicting two Carlovingian kings (likely to be Lothair of France (954-986) and his son the last Carlovingian emperor King Louis V (966-987), with whom he was co-ruling until his death), both monarchs wear simple tunics that seem to be fastened at the waist with belt (Robert von Spalart, 1796). In another engraving, portraying Carlovingian

royalties, again two kings (most likely the same monarchs) are represented in similar attire, this time clad in short tunics reaching to the knees (Robert von Spalart, 1802). The sandals and buskins mentioned in the novel are also evidence that the author created the appearance of the Eloi inspired by the early-medieval European culture. However, unlike Morris, Wells's references to ancient clothing are not his aesthetic preference but a material indication of the evolutionary decline of the human race.

Figure 26 (left). An illustration depicting Saint John the Evangelist with his simple tunic in Codex Aureus of Lorsch (circa 810) (Wikimedia, 2005).

3.8. Color

As stated in Joan Nunn's *Fashion in Costumes, 1200-2000,* in the second half of the 19th century -after Sir William Henry Perkin invented mauveine (aniline purple) in 1856- aniline dyes began to replace the soft colors obtained by vegetable dyes. In the 1870s and 1880s, new synthetic colors such as "*strident magenta, electric blue or vivid yellow*" (Nunn, 2000, p. 167) were used even together to create contrast in women's clothing. Nevertheless, "*softer*" or "*more muted*" colors remained to be seen in delaine, a silk-wool blend fabric similar to cashmere, as well as serge and tweed fabrics used in dresses and suits (Nunn, 2000, p. 167). Despite the availability of vibrantly colored fabrics, in *Sartorial Facts and Fashions of the Early 1890s*, A. A. Whife suggests that, as with menswear, women's outerwear also showed the use of darker materials with simplified lines (Whife, 1968). When it comes to men's fashion of the period, their "*clothes became even soberer in color; the darkish blues, light fawns, and plaids for trousers of the 1850s and early 1860s faded by the 1870s into a general range of grey and black*" (Nunn, 2000). This trend continued to be influential in the following decades. This change in color trends, especially in menswear, was closely related to the 'Great Masculine Renunciation' underlined in section 3.2.1 Male Body and Dress.

In reference books on fashion history, the Victorian period is characterized by dull and gloomy colors. The literary texts analyzed in this chapter confirm this observation. Following the industrial revolution, with the spread of commercial and domestic sewing machines, the garment structures (of both women and men) started to lack diversity and personal touch; and garments already similar in shape started to look almost identical with the preference for dark colors in outerwear, which led to a mass monotony and solemnity that became more evident in the public space.

When fashion in the second half of the 19th century is revisited by considering the passages about clothing colors in *News from Nowhere*, it becomes evident that Morris is also critical of the sober colors of the nineteenth century. In *News from Nowhere*, William Guest's eyes, accustomed to the solemn grayness of the 19th century, find the brightly colored, cheerfully dressed people of the future strange. However, with Clara's response, he realizes how pleasing these clothes are to the eye when he puts his acquired cultural prejudices aside:

> *"Seeing so many people made me notice their looks the more; and I must say, my taste, cultivated in the sombre greyness, or rather brownness, of the nineteenth century, was rather apt to condemn the gaiety and brightness of the raiment; and I even ventured to say as much to Clara. She seemed rather surprised, and even slightly indignant, and said: "Well, well, what's the matter? They are not about any dirty work; they are only amusing themselves in the fine evening; there is nothing to foul their clothes. Come, doesn't it all look very pretty? It isn't gaudy, you know."* (Morris, 2002, pp. 180-1)

> *"Indeed that was true; for many of the people were clad in colours that were sober enough, though beautiful, and the harmony of the colours was perfect and most delightful."* (Morris, 2002, p. 181)

Re-assessing the people's clothing from a new point of view after his conversation with Clara, Mr. Guest realizes that whether in bright and cheerful or dark and sober colors, everyone looks happy and dignified in tasteful and immaculate clothes made of high-quality materials.

When it comes to *The Time Machine*, this time, the color becomes the powerful symbol of aristocracy. While William Morris erases the traces of the anti-aristocratic bourgeois aesthetic that influenced 19th-century clothing culture in *News from Nowhere*, H. G. Wells recreates the aristocracy of early medieval Europe in a dystopian far-future as a critique of social injustice. The Eloi folk in a purple tunic and 'orange-clad people' mentioned in the novel support this claim as 'purple' and 'orange' -known as yellow-red until the 15th century- were the colors much preferred by the nobility in Early European Christian societies. Especially purple was the color of the emperors, nobles, and clergy until it declined with the fall of the Eastern Roman Empire. The description by the Roman philosopher Pliny the Elder (AD 23/24 - 79) is an important reference for understanding the meaning and historical significance of purple, whose royal association was confirmed by ancient sources and the Bible:

> *"... that precious color which gleams with the hue of a dark rose ... This is the purple for which the roman fasces and axes clear a way. It is the badge of noble youth; it distinguishes the senator from the knight; it is called in to appease the gods. It brightens every garment, and shares with gold the glory of the triumph.*

For these reasons we must pardon the mad desire for purple." (Krafts, Hempelmann, and Oleksyn, 2011, p. 8).

Very difficult and expensive to obtain, many monarchs used dresses dyed in purple for the coronation and other ceremonial events in history. As one of them, Charlemagne of the Carlovingian dynasty, the first Holy Roman Emperor, wore a purple mantle when he was crowned in 800 and was buried in a shroud of the same color when he died in 814. Also, as reported by Lloyd B. Jensen, "*The Byzantines went overboard with the significance of purple*," since *"[t]heir royal babies must be born in purple rooms, i.e., born to the purple*" (Jensen, 1963, p. 116).

3.9. Concluding Remarks

The industrial revolution, which marked the late nineteenth and early twentieth centuries, was a period of massive technological changes transforming society. Within these years, electricity, as the major technological innovation of the era, replaced steam power. Large-scale iron and steel production led to the expansion of railway networks, enabling cheap transportation of raw materials and human labor. With the widespread use of machinery, which significantly increased productivity, the industrialized countries experienced significant economic growth in a short period. However, economic growth did not improve the living standards of all classes. The period witnessing the "*ascendance of a new social elite, the property-owning commercial and industrial bourgeoisie*" (Volti, 2001, p. 44) was also marked by labor unrest. The replacement of manpower with machinery and "*the small manufacturing establishment by the large factory*" increased the unemployment rates (Volti, 2001, p. 22).

When rapid urbanization combined with social injustice, "*social and economic problems [had been] magnified and intensified*" in British and American cities in the earlier decades of the century (Digaetano, 2006, 435). Although the "machine-smashing by riotous crowds [had been] a likely form of labor protest when workers were scattered and lacking in permanent organizational linkages," in this period, factories contributed to the development of "*labor unions and organizational vehicles*" that would provide a suitable basis for the working class to express their demands more systematically (Volti, 2001, p. 22).

Edward Bellamy's *Looking Backward,* William Morris's *News from Nowhere,* and H. G. Wells's *The Time Machine* were written precisely at this moment when the working class began to demand better wages and working conditions through strikes, and urban life was transformed by factory production and labor migration. In American conjecture, Bellamy saw mechanization as a means of rapid economic growth and democratic consumption. In that respect, his conception of the future was in line with technological determinism, a philosophy deeply embedded in American culture starting from the very early stages of industrialization.[40]

As a representative of this view, Bellamy believed that, unlike many revolutions that came with bloodshed, technology could transform society rationally and peacefully without pitting different segments of society against each other. After all, industrialization had already brought rapid economic growth, lowered costs by speeding up production, and removed the physical burden of working by enabling labor-intensive processes to be carried out by machines. So, if the gains from industrialization could be distributed fairly, the gap between rich and poor would disappear. Parallel with this belief, in *Looking Backward,* Bellamy envisioned a system in which production and trade were united under a single organization representing the people and serving their interests. In this centralized system, he described the society as an "industrial army" whose members work in cooperation. In the story, having agreed on the necessity for change, people have learned to act in solidarity, and there was no need for another change since everybody was happy.[41]

Nevertheless, Bellamy's most remarkable success but also failure was his ability to satisfy politically conflicting reader groups with the same vision. The socialists were contented with the principles he put forward since his techno-utopianism prioritizing the scientific management of life promised them wealth, solidarity, and equality. Interestingly, it did not bother anti-socialists much since bourgeois values and the

[40] As 20th-century scholars referred to it, technological determinism was a belief affirming that "changes in technology exert a greater influence on societies and their processes than any other factor" (Smith and Marx 1994, 2). Parallel with this idea, the promises of technology were often seen as a potential antidote to the emerging social conflicts of the late 19th and early 20th centuries.

[41] However, although it was presented as a rational necessity that emerged over time, such a radical change could not happen naturally without conflict or resistance from private enterprises. Therefore, the smooth and bloodless change he promised was contrary to human nature, which is inherently competitive. This naïve expectation, on the other hand, seems to have arisen from Bellamy's faith in humanism, which is based on the belief that people are intrinsically good. Therefore, in the novel, people have learned to share their wealth justly over time when appropriate conditions are provided.

family structure almost remained untouched in the story. Hence, this model, characterized by some audience groups as a mild fusion, was condemned by other groups for its half-change and inconsistency. Therefore, the novel appealing to a wide range of audiences in its outlines was subjected to severe criticism from more radical intellectuals and careful readers.

As the critics pointed out, this half-change was not in line with the natural flow of life, and the ideological inconsistency affecting the narrative was evident in the material manifestations of the change, particularly in the way characters dress. In *Looking Backward*, widely accepted as a socialist utopia, the portrayal of Leetes was very much dependent on bourgeois values regarding gender roles, clothing preferences, and consumption behaviors. In the novel, despite a time-lapse of a hundred years, men's clothing remained almost unchanged, while women's clothing was simplified and rationalized in parallel with the male-dominant discourses of the period. However, even the limits of this change were aligned with the upper classes' values, seeking a civilized reference to rescue the female body from the extravagant costumes of the late 19th century. This representation was compatible with discourses matching with bourgeois values but conflicted with socialist principles, which proposed more radical solutions for the issues of labor, gender roles, and family.

In the late 19th century, although many people celebrated the capitalist mode of production for its capacity to democratize luxury, there were still opposing commentaries on mass-produced items, especially regarding their poor design qualities. As a socialist and a leading figure of the Arts and Crafts movement, William Morris was one of those who voiced concerns about the aesthetic insufficiencies of industrially made products and joyless production. Therefore, in *News from Nowhere,* he favored labor-intensive craftsmanship over standard machine production, local organizations over centralized systems, and rural landscapes over urban settlements. Instead of putting faith in the promise of technology in constructing a future that will never come true, he embraced historical models, traditional practices, and ecocentric living in his utopianism. Although some blame him for being a romantic, closing his eyes to progress, his ideas about male-female relationships and gender roles were much more progressive than many of his contemporaries.

Despite those who find his views unrealistic, Morris's utopia already existed and was inhabited by him and his close community. Throughout his life, Morris enjoyed living in houses with a medieval spirit, preferably away from city centers. He privileged labor-intensive processes in his art and textile production and protected the rights of his employees in the business. His wife, Jane Morris -an embroiderer and a model- was one of the most influential female figures to embody Pre-Raphaelite ideals of beauty that contrasted greatly with Victorian standards. In this respect, his principles were plausible but unlikely to be widely accepted and practiced.

Morris was an idealist. His political discourse, artistic productions, and literary works were like pieces of a whole, which seamlessly come together. Through his artistic productions, which he crafted with elegant details that could only be made possible by the human hand, he tried to revive the aesthetic values that he thought disappeared during his time. Also, his ideas on socialism were in tandem with his philosophy of art, and he fiercely advocated them through several publications, some of which had been founded and directed by him (such as Commonweal and Hammersmith Socialist Record). However, among them all, *News from Nowhere* occupied a special place in his biography as a unique piece of literature, where he combined his most established ideals on art and politics six years before his death. In *News from Nowhere,* he explained the ideal society he envisioned for the twenty-first century by giving details on administrative issues, politics, labor, love, education, and many other aspects of daily life. While elaborating on his storyline, he prioritized the material manifestation of his imaginary world and used vivid descriptions to portray architecture, furniture, art, and clothing. Especially how he dressed his characters reflected his life philosophy, artistic endeavors, and ideals on humanity.

The dystopian universe presented by H. G. Wells in *The Time Machine,* on the other hand, was a literary response that exposes the shortcomings and inconsistencies of both views with satirical elements. In the novel, when Time Traveler finds nature as a weedless garden adorned with delicious fruits and exquisite flowers; and palace-like buildings as communal dwellings where miniature-size humans in robes dine together, he hypothesizes that he has reached a Golden Age where people are governed by communism. However, after discovering that the lives of these fragile creatures with porcelain-like prettiness are threatened by their half-animal fellows living in

underground factories, he concludes that it is instead an "*aristocracy, armed with a perfected science*" (Wells, 2002, p. 44).

The misconception of the Time Traveler, who hopes to see the great triumph of humanity in the future, indirectly shows that Bellamy and Morris might have also been mistaken in their future imaginings and utopianisms. In the novel, while the portrayal of the Eloi as indolent creatures with the intellectual capacity of five-year-olds is a critique of Morris's dream of second childhood and the impracticality of his socialism, the representations of Morlocks as descendants of the Proletariat alludes to Bellamy's techno-utopia ignoring that the industrial progress is often based on competitiveness, the triumph of one group over another.[42]

H. G. Wells's rather pessimistic portrayal of the future that reverses the positive codes of two humanistic utopias also reminds Braidotti's argument suggesting that the positive doctrines of humanism should be considered together with their negative counterparts. As the critique of the Eurocentric model of progress[43] identified with industrial growth, in *The Time Machine*, scientific advancement and technological innovations, which are the products of rational thought and positivism, serve only one segment of society; and this unbalanced civilization is replaced by a dramatic decline when individual interests override the common good. In other words, the competitive mechanism behind the class divisions leads to the decline of the human race, no matter how advanced human civilization has been once, and this affects not only the vulnerable communities whose lives and labors are mistreated but the whole ecosystem, including both human and non-human, together with the world surrounding them. In this way, Wells also remarks that unbalanced progress, sooner

[42] The body and clothing descriptions Wells used to describe the Eloi and Morlocks have a critical function in the narrative that strengthens this claim. The bright dresses of fine materials, leather belts, sandals, and accessories of fine metal-work that Morris used to dress his characters in *News from Nowhere*, seem to be intentionally borrowed by Wells to portray the Eloi, represented as the miserable survivors of a rotten aristocracy. Also, the portrayal of the Morlocks as white-skinned animals who have lost their dressing habits is a powerful representation displaying the future of the industry workers who had to live ragged and hungry in the late 19th century.

[43] Rieder also supports this argument by suggesting that the way Wells has undone "the future's technological triumph" is an explicit attack on the "identification of progress with industrialized Europe" because the human descendants illustrated in the novel fall into "savagery peculiar to contemporary 'advanced' societies" identified with "the class division between capitalists and laborers" (Rieder, 2009, pp. 24-25).

or later, is meant to create a common ground of fragility, which also coincides with Braidotti's concept of shared vulnerability.

In the narrative, Wells materializes the concept of shared vulnerability with the "*dialectical reversal of the capitalist masters into the slaves*" (Rieder, 2009, p. 25). In this reversal, the capitalists' "*triumph over [n]ature and the fellow man*," which provides them with "*new conditions of perfect comfort and security*," leads to their gradual physical and mental regression and subsequent extinction in the evolutionary process. As Rieder puts it, Wells's

> *"dialectical reversal of the capitalist masters into the slaves, or more precisely the cattle, of their machine-tending former servants [also] obliterates the opposition between nature and culture itself, turning the man-made arrangement of class duties and responsibilities into a grotesque natural symbiosis."* (Rieder, 2009, pp. 24-25)

Here, Wells rejecting the nature-culture dualism also reframe the definition of human by blurring the boundaries separating it from animal and machine. The post-Darwinian posthuman depicted in *The Time Machine* is very much influenced by this definition, reflecting the human's two-fold[44] identity, which is the outcome of inherited (natural) and acquired (artificial) factors.

The concise comparison provided here shows that the future imaginings of Bellamy, Morris, and Wells are closely related to the meanings and values they attribute to the concepts of 'human' and 'progress.' In *Looking Backward,* Bellamy's idea of progress is human-centric, linear, and forward-looking; and his humanism relies on male-dominant logic, which is white, rational, cultured, and bourgeois. In nature-culture dualism, Bellamy, who sees industrialization as a prerequisite for human emancipation and prosperity, stands for culture, an artificial man. Therefore, in his utopia, nature is tamed and controlled; and represented as a part of the urban environment. However, according to Morris, the true line of progress is not linear but moves upward on a

[44] The Wellsian conception of the human had a two-fold identity, the outcome of inherited and acquired factors. According to his description, "*in the civili[ze]d man," there was "the natural man, who is the product of natural selection, the culminating ape, and the type of animal more obstinately unchangeable than any other living creature;*" but also "*the artificial man, the highly plastic creature of tradition, suggestion, and reasoned thought*"… and that was the artificial man making "*the comforts and securities of civili[z]ation a possibility*" (Wells cited in Hale, 2003, p. 264).

spiral. This approach explains the philosophy behind his medievalism and revivalism in imagining the future in *News from Nowhere*. Contrary to Bellamy's technocratic utopia, prioritizing the human-machine relationship in the way of progress, in Morris's pastoral dream, the human-nature relationship is restored and rehabilitated. However, unlike Bellamy and Morris taking a side in nature-culture dualism, H. G. Wells perceives the human as an "*unnatural animal*" equally affected by natural and artificial factors. This understanding renders the human a fluid phenomenon that can be altered by multiple forces; therefore, its boundaries (both physical and conceptual) cannot be taken for granted.

Despite all their differences, *Looking Backward*, *News from Nowhere*, and *The Time Machine,* which have been frequently put in comparison, deserve equal respect and appreciation for their intellectual interrogation of the industrial growth of the late 19th century that would soon come and shape the global society. Regardless of their differences in portraying the future of humanity and the material manifestations of progress, they have continued to contribute to relevant debates in the more than one hundred years since they were written. Although the 21st century has turned out very different from what Bellamy, Morris, and Wells imagined a hundred years ago, their thought-provoking ideas, as the representatives of different schools of thought, deserve new scholarly interpretations.

CHAPTER 4: MASS-PRODUCED BODIES: A COMPARATIVE ANALYSIS OF ZAMYATIN'S *WE*, ORWELL'S *1984,* AND HUXLEY'S *BRAVE NEW WORLD*

In the first half of the 20th century, utopia, as a literary form, lost its progressive nature fostering radical thoughts (Miller Jr., 2012). Consequently, the authors started to compose dystopian narratives to criticize authoritarian systems which purposefully manipulate social utopias to support their ideological foundations. As Gerald Alva Miller Jr. argues, *We (1924), Brave New World (1932),* and *Nineteen Eighty-Four (1949)* became paradigmatic models exemplifying this narrative style (Miller Jr., 2012). Skeptical of the political ideologies of the early 20th century, these three literary works opened the idea of technological progress up for discussion. Although the mainstream science fiction writers mostly tended to be optimistic about progress -and continued to write romance and adventure stories against the backdrop of technocratic heavens or stars- (Mendlesohn, 2009), Zamyatin, Orwell, and Huxley drew attention to the fact that technological progress can also be dehumanizing, particularly when it serves to control society by betraying its liberating core values.

In this chapter, an in-depth analysis of the novels reveals that these three visions of the future, quite different in their material manifestations, have much in common. First, in each of them, the units of society, which are supposed to function in unity, are systematically anesthetized through scientific interventions and technological control. In return, society resembles a machine demanding constant repair to prevent it from falling apart rather than a healthy body whose organs function rightly. In this process, disregarding free will, collective harmony is the absolute result of a scientific management process, preventing the emergence of oppositional thoughts and behaviors through education, physical, chemical, and psychological conditioning, surgical intervention, and, if necessary, torturing. In these particular examples, the narratives establishing a binary opposition between individuality and mechanical collectivism indicate how destructive the human enhancement project could be when it is carried out only in the interests of a small section of society, without questioning what it means to be human and for what purposes it should be enhanced. Therefore, within this study, these three novels are considered valuable sources in addressing the implicit relations between science, technology, and biopolitics through speculative future societies and shedding light on possible forms of the transhuman future.

Secondly, the novels share a substantial similarity in terms of the roles they attributed to clothing in the construction of society. Here, the uniforms, once material manifestations of unity and equality in pre-modern literary utopias, become symbols of state authority and repression, in line with the values ascribed to them in modern societies in search of stability and power. In the works, the concept of uniformity, which stands out with its discriminatory function rather than unifying aspects, becomes an indicator of temporal, spatial, and class distinctions constructed within an ideological framework that does not fit the natural flow of life.

Thirdly, all three novels invite the concept of savagery into the plot as an opposite force against civilization. In the narratives, the protagonists' contact with savages and forbidden districts where natural life still exists allows them to discover their wild or disobedient nature. The discovery of human-other and earth-other also contributes to the debates on posthumanism. Finally, this contact is often initiated by an anti-systemic female character or a violation caused by a woman. Especially in *We* and *Nineteen Eighty-Four*, anti-authoritarian clothing becomes an instrument of resistance; and a site of remembrance, self-discovery, and identity formation in the hands of the female characters who cause significant shifts in the plot. The following chapters will detail the four themes highlighted here, considering the historical background shaping the novels.

4.1. Society as a Body

We, written in the form of a diary narrated by an engineer D-503, becomes a vivid reflection of an oppressed body and mind which was systematically manipulated by an autocratic realm in which the individuals are turned into numbers, names are reduced to codes, and soul is accepted to be the most feared disease of the time. The members of the One State -the imaginary society of *We*- work like the gears of a giant, infallible machine. Trapped in a futuristic city made almost entirely of glass, their synchronized bodies function like clockworks to follow their immutable daily routines. Everything is precise, regular, and calculable, and life is "*mathematically perfect*" in the One State, and this flawless flow becomes a guarantee of their "*Taylorized happiness*" (Zamyatin, 1972, p. 44):

> *"Every morning [says D-503], with six-wheeled precision, at the same hour and the same moment, we— millions of us—get up as one. At the same hour, in*

> *million-headed unison, we start work; and in million-headed unison we end it. And, fused into a single million-handed body, at the same second, designated by the Table, we lift our spoons to our mouths. At the same second, we come out for our walk, go to the auditorium, go to the hall for Taylor exercises, fall asleep…"* (Zamyatin, 1972, p. 12)

Zamyatin's *We* -in addition to many other aspects making it unique for literary history- is a world-renowned political satire smartly building on the debates of Taylorism, a scientific management system fiercely debated in post-revolutionary Russia. This system, initially defined by Lenin as "*the combination of the refined brutality of bourgeois exploitation*" (Lenin cited in Cooley, 1980, p. 60), was later encouraged by him on the grounds that capitalist means could be used to achieve socialist ends (Sochor, 1981). Although Lenin was convinced about this possibility, various groups and intellectuals discussed and criticized his proposition, including Aleksandr Bogdanov, a Russian philosopher and science fiction writer. Although he partially approved some efficient aspects of Taylorism, Bogdanov identified the potential problems that might occur in the long term. From his point of view, parallel with its high standards, Taylorism would lead to segregation among workers with different skills and productivity. "*Moreover, the constant repetition of the same task would lead to a dulling of the senses to be counter-productive*," which was the opposite of what advanced industrialism desired (Sochor, 1981, p. 248). Bogdanov's second point was also a warning indicating that a change in the method and process of production would also transform human nature[45] in an undesired sense.

Despite Bogdanov and other anti-Taylorist voices pointing out the potential dangers of the technocratic mechanism proposed by Taylorism, a group of revolutionists exiled in the Siberian town of Narym started developing a model on how Taylorism could contribute to the transformation of human culture under socialist principles. This group included Aleksei Rykov, Vladimir Kosarev, and Abram Goltsman, who would be

[45] This concern also resonates with Marx's critical comments on the division of labor. As Marx argues:

> *"Labor is, first of all, a process between man and nature, a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature. He confronts the materials of nature as a force of nature. He sets in motion the natural forces which belong to his own body, his arms, legs, head and hands, in order to appropriate the materials of nature in a form adapted to his own needs. Through this movement he acts upon external nature and changes it, and in this way he simultaneously changes his own nature... [the labor process] is the universal condition for the metabolic interaction [Stoffwechsel] between man and nature, the everlasting nature imposed condition of human existence.*" (Marx cited in Fischer-Kowalski, 2002, p. 18)

given important positions in the Soviet regime to be established, and Aleksei Gastev "*soon to become the father of Soviet Taylorism*" (Beissinger, 1988, p. 25). Gastev was a young revolutionist, spending almost 20 years either in exile or on the run. When he was arrested in 1910 to be exiled to Siberia, he found a way to go to Paris and started to work as a motor car manufacturer in Citroën and Clément-Bayard. His working experience at Citroën allowed him to observe "*the first applications of assembly line production*" influenced by Ford[46] (Beissinger, 1988, p. 26). In 1913, Gastev illegally returned to St. Petersburg, and following the February Revolution (1917), he was elected as general secretary of the metalworkers' union.

In the meantime, Gastev and his supporters were searching for a platform to conduct "*systematic research on Taylorism*" (Beissinger, 1988, p. 35). In response to this need, Goltsman proposed establishing an institute under the VTsSPS (Trade unions in the Soviet Union) and Narkomtrud (the People's Commissariat of Labor). Despite the objections, the proposal was accepted, and Gastev was asked to lead the institute. In the Central Institute of Labour, Gastev aimed to rationalize working conditions and processes by studying the forms and muscle movements of the worker's body in a controlled environment (Figure 27). This effort was proof of his faith in the "*new science of social engineering*" in a way to produce "*new people*" (Sochor, 1981, p. 255).

According to Orlando Figes, a historian known for his extensive works on Russian history, for Gastev, machines were superior to humans, so he saw biological mechanization as a rational destination for human evolution. In that sense, his new humans were essentially "*human robot[s]*," a word "*derived from the Russian (and Czech) verb 'to work': rabotat*" (Figes, 2002, p. 464). In the working spaces scientifically designed for work efficiency,

> "*Hundreds of identically dressed trainees would be marched in columns to their benches, and orders would be given out by buzzes from machines. The workers were trained to hammer correctly, for instance, by holding a hammer attached to and moved by a special machine, so that they internalized its mechanical*

[46] As Bessinger stated, Citroën's owner André Citroën had visited America in 1912, where he was impressed by the example of Ford. It was the same year when Gastev started to work at his production facility in France.

rhythm. The same process was repeated for chiselling, filing and other basic skills." (Figes, 2002, p. 464)

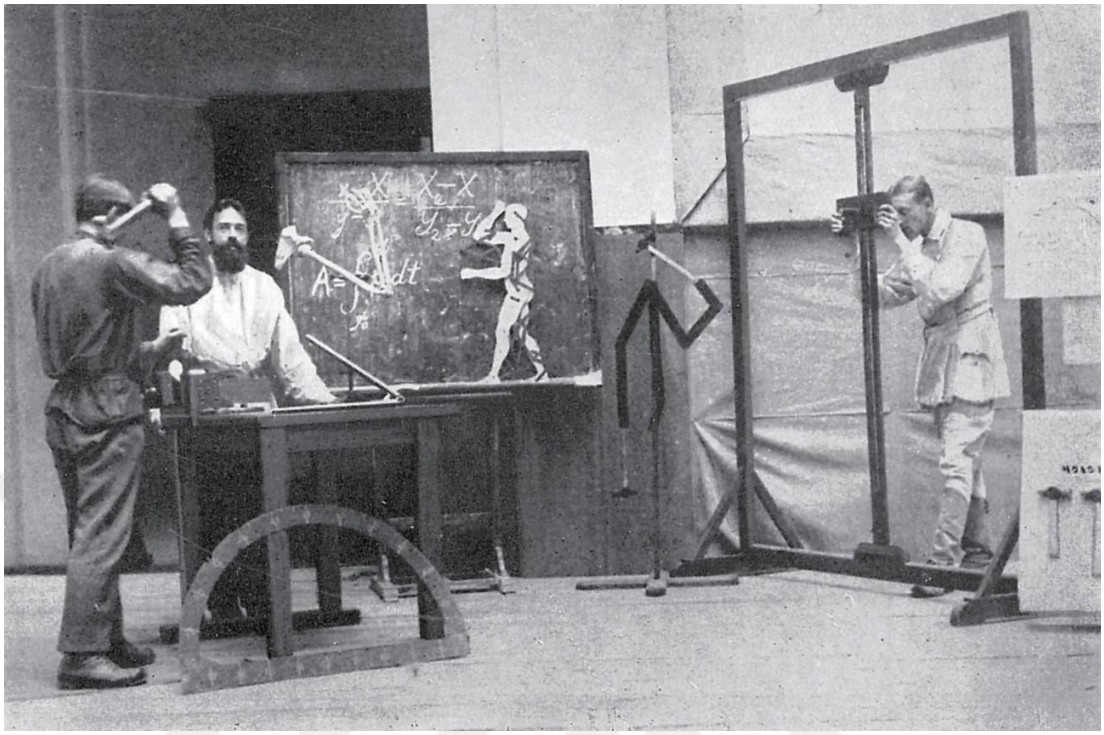


Figure 27. An example of time-motion studies conducted at the Central Institute of Labor in 1923 (Cosmonautmag, 2020).

According to Gastev, the effective management of the assembly line system in production requires not only the division of work into parts but also the classification of workers according to their technical skills and problem-solving abilities. Therefore, he categorized industrial workers into five groups. Kendall E. Bailes describes Gastev's classification system with an example from the machine building industry. According to this classification, the first and the most skilled workers were the machinists and lathe operators whose creative interventions were needed during machine assembly. The second group was the machine workers who could solve a work problem through alternative methods (such as fitters and tuners). The third and largest group were the executors of entirely standardized processes that do not require personal touch or initiative. The fourth group consisted of trainees who had just entered the industry, while the fifth and final group was made of those who did heavy labor that had not yet been mechanized, and it was believed this group would disappear over time with advanced industrialization (Bailes, 1977).

Perhaps Gastev's most controversial anticipation was that his observations of the third group, which included the vast majority of workers, would provide a reasonable basis for identifying "*proletarian psychology*" and developing new proletarian culture (Bailes, 1977, p. 377). In the future, he envisioned, these workers themselves would become "mechanized and standardized" over time and act like the cogs of a machine in a collective sense, and this would give "*to proletarian psychology a striking anonymity, permitting the classification of an individual proletarian unit as A, B, C, or 325, 0'075, o, and so on*" (Bailes, 1977, p. 378). As Figes argues, "*[t]his was the Soviet paradise Zamyatin satirized*" in *We,* which later became an inspiration for George Orwell's *Nineteen Eighty-Four* (Figes, 2002, p. 464) and Huxley's *Brave New World,* as many others proposed.

4.1.1. Bodies under Surveillance

As Figes points out, there are clear parallels between George Orwell's *Nineteen Eighty-Four* and Zamyatin's *We*, particularly in how biopolitical surveillance enables mechanized collectivism. Although it is unknown whether Jeremy Bentham's theories influenced the mentioned authors, the mechanisms of social control they envisioned in their novels correspond to his concept of panoptic surveillance with slight differences. The two phases of surveillance identified by Galič, Timan, and Koops (2017) provide a theoretical framework for understanding how these mechanisms associate with or differentiate from each other in relation to Bentham's theories. In their definition, the first phase of surveillance is architectural, "*where surveillance is often physical and spatial, involving centrali[z]ed mechanisms of watching over subjects*," which parallels Bentham and Foucault's idea of the panopticon (Galič, et al., 2017, p. 9). Within this system, the architectural organization is a reformative management instrument that enables subjects to develop self-control by creating the impression that they are constantly monitored. However, in the second phase, surveillance is infrastructural and achieved through digital means rather than physical, and it "*involves distributed forms of watching over people, with increasing distance to the watched and often dealing with data doubles rather than physical persons*" (Galič, et al., 2017, p. 9).

Surveillance in the One State is architectural; it can therefore be placed in the first category, although it differs from Bentham's prison panopticon[47] in terms of spatial organization and the target audience subjected to surveillance. Bentham's prison panopticon is designed in a circular shape (different from the later examples such as the pauper-panopticon, which is dodecagonal, and constitutional-panopticon, which is oval), having "*an inspector in the central tower who oversees the activities of convicts in their cells*" (Galič, et al., 2017, p. 11). Within this central organization, criminals believe they are being watched by the authorities, even if they are not. In this mechanism, the inspector, on behalf of higher authorities, possesses a disembodied, almost deific omnipresence (Strub, 1989). As Amey argues, architecture serves as a Panopticon performing similar functions in the glass city of the One State, creating the illusion of constant surveillance. However, these systems differ substantially regarding "*the scale upon which they operate*" (Amey, 2007, p. 27). Whereas Bentham's prison panopticon allows a state-authorized inspector to exercise control over only particular subjects, in Zamyatin's One State, the glass walls that make the entire city visible allow everyone to monitor -and thus change the behavior of- the other at any time.

In the One State, the illusion of constant surveillance guarantees the regulation of life by conditioning the numbers to follow the "*table of hours*" (Zamyatin, 1972, p. 12) that determine their biological processes, physical actions, and daily routines. In this sense, Zamyatin's architectural organization does not aim to keep criminals under control but to eliminate the potential of ordinary people to challenge authority. In *We*, any activity conflicting with the table of hours brings discomfort to the individuals who have developed self-control over time. Also, these people are often frightened by the prospect of an unsupervised life since they do not know how life could be otherwise. For example, D-503 -fully committed to the rules of One State initially- "*cannot imagine a life that is not regulated by the figures of [the] Table*" (Zamyatin, 1972, p. 11). For him, even not being able to sleep causes a great deal of guilt, knowing that "*not sleeping at night is a criminal offense*" (Zamyatin, 1972, p. 58).

Like the numbers of the One State, the party members of Oceania are kept under constant surveillance, which is maintained not with the glass buildings but the

[47]The first and the most famous panopticon model, which serves as a template for other panopticons designed for different purposes.

ubiquitous telescreens[48] placed in both public and private spheres. This technology-based system is similar to the infrastructural surveillance described by Galič, Timan, and Koops. However, given its direct effects on physical persons, its operational logic has more in common with the first category. The telescreens, broadcasting Party propaganda, are monitored by Thought Police, who are responsible for detecting thought crimes, and Big Brother,[49] who is the omnipresent leader of the party, in the same way the figure of the inspector positioned in the watch tower of the panopticon monitors prisoners. This passage from the novel reveals the similarity of the surveillance system in *Nineteen Eighty-Four* with Bentham's panoptic control:

> *"There was of course no way of knowing whether you were being watched at any given moment. How often, or on what system, the Thought Police plugged in on any individual wire was guesswork. It was even conceivable that they watched everybody all the time. But at any rate they could plug in your wire whenever they wanted to."* (Orwell, 1949, p. 5)

In Oceania, telescreens are also active control devices that compel party members to participate in collective activities by providing instant commands to subjects under surveillance. In this sense, it performs the function of the 'table of hours' scheduling the daily routines. In this arrangement, the day starts with "an ear-splitting whistle" that sounds from the screen, ensuring all office workers wake up at 07:15 and get ready for the daily exercise called "*The Physical Jerks*" (Orwell, 1949, p. 40). This aspect resonates with Gastev's Taylorist utopia, where the workers move in line with the orders "*given out by buzzes from machines*" (Figes, 2002, p. 464). So, in this respect, the panoptic control described here also targets the continuity of production and, thus, economic sustainability.

[48] A technology resembling television that allows two-sided viewing.

[49] In envisioning the telescreens and the image of Big Brother, Orwell may have been inspired by multiple sources derived from Stalinist Russia, Nazi Germany, or even other totalitarian states in Europe or the United States. However, Douglas Kellner argues that Big Brother is modeled after Stalin and Emmanuel Goldstein -his and the state's archenemy- after Trotsky by referring to Orwell, who suggested that *1984* should be read as a critique of Stalinism (Kellner, n.d.). Nevertheless, the image of Big Brother, possibly modeled after Stalin, also resonates with the image of Hitler and Mussolini considering the totalitarian nature of the fascist ideology they provoked and how they benefited from the broadcasting tools and media power. The diversity of these possibilities shows Orwell's success in narrating the essence of the social traumas created by totalitarian systems.

4.1.2. Bodies with Omnipotent Power

Ignoring the existence of characters who clash with the system in *We* and *Nineteen Eighty-Four*, almost the only difference distinguishing humans (assuming that numbers and party members still fit the definition of human) from the machines is their suffering, showing that they are still made of flesh. In both novels, the body is punished at the point where the state hegemony cannot control the mind, and this punishment often comes from the authorized representative of the state possessing an omnipotent power.

In *We*, where the penalty for defying authority is death, the executions of dissidents are publicly staged and accompanied by ceremonies in which official poets recite odes on the sacrifices. Death, on the other hand, comes from the hands of the Benefactor, who mediates this mission at the will of thousands:

> *"The Benefactor, heavy, stony as fate, walked around the Machine, placed His huge hand on the lever. ... Not a sound, not a breath —all eyes were on that hand. What a fiery gust of exaltation one must feel to be the instrument, the resultant of a hundred thousand wills! What a great destiny."* (Zamyatin, 1972, p. 48)

In the passages describing a public execution, the Benefactor is represented as a divine being with "*superhuman power*" (Zamyatin, 1972, p. 48). His power, accentuated by archaic rituals, contrasts with the victim's figure, gradually becoming fainter on the stage. In this ceremony, the golden badge of the dissident —the only sign of his identity— is removed from his chest, and his arms are tied with a purple ribbon. Under these circumstances, 'the one' being sacrificed is no longer a number; therefore, his disappearance does not deserve any grief but a celebration.

> *"The one. He stood on the steps of the sun-filled Cube. A white —no, not even white, already color-less— face: a glass face, glass lips and only the eyes — black, greedy, engulfing holes. And the dread world from which he was but minutes away."* (Zamyatin, 1972, p. 46)

The death he faced, on the other hand, is purely scientific: a simple process of "*dissociation of matter … splitting of the atoms of the human body*" (Zamyatin 1972, 48):

> *"The prone body enveloped in a light, glowing mist—and melting, melting before our eyes, dissolving with appalling speed. Then nothing—only a small puddle of chemically pure water, which but a moment ago had pulsed redly, wildly in the heart ..."* (Zamyatin, 1972, p. 48)

In *Nineteen Eighty-Four*, O'Brien's narrative function is similar to that of the Benefactor in terms of how he embodies state authority and represents power. O'Brien is the character responsible for Winston's arrest and all the humiliations he suffered during his interrogation. When Winston is arrested, he is first subjected to a routine investigation. Knowing that every crime that occupies his mind makes him equally guilty, he admits all accusations directed at him, even if he did not commit them all. When Winston has nothing to confess, he is taken to a cell where he is "*strapped into a chair*" (Orwell, 1949, p. 307). In front of him is O'Brien, who he once thought was a secret dissident.

Spying on Winston for seven years, O'Brien knows everything about him, including his fears and hopes; and this knowledge is the source of his ubiquitous power. In the power-play staged in the interrogation room, all-seeing, all-knowing O'Brien keeps his hand over a "*dial with a lever on top*" (Orwell, 1949, p. 309). With a very slight movement of his hand, Winston feels a terrible pain generated from an unknown source that makes him feel like his spine is almost severed. Before O'Brien's interrogation begins, Winston's body learns to fear, fear that now prevents him from lying. At this point, Winston realizes that:

> *"It was O'Brien who was directing everything. It was he who set the guards on to Winston and who prevented them from killing him. It was he who decided when Winston should scream with pain, when he should have a respite, when he should be fed, when he should sleep, when the drugs should be pumped into his arm. It was he who asked the questions and suggested the answers. He was the tormentor, he was the protector, he was the inquisitor, he was the friend."* (Orwell, 1949, p. 308)

The Benefactor and O'Brien are the disciples, defenders, and protectors of the disembodied collective brain that is always right. In the narratives, their bodies remotely controlling machines gain superhuman power with the ability to destroy

those who stand against the state authority. This updated brutality also shows how modern technologies can mediate death as instruments of necropolitical power.

4.1.3. Degraded Bodies

As Braidotti argues with reference to Achille Mbembe, biopolitics and necropolitics are "*two sides of the same coin*" (Braidotti, 2013, p. 9). While Foucault's concept of biopolitics focuses on the political management of life, Mbembe's concept of necropolitics refers to the exercise of power through the control and manipulation of death and mortality. As Mbembe puts it:

> *"Necropolitical power proceeds by a sort of inversion between life and death, as if life was merely death's medium. It ever seeks to abolish the distinction between means and ends. Hence its indifference to objective signs of cruelty. In its eyes, crime constitutes a fundamental part of revelation, and the death of its enemies is, in principle, deprived of all symbolism. Such death has nothing tragic about it."* (Mbembe, 2019)

Necropolitical power often justifies death by marginalization or different forms of exclusion, as in the dystopias of Zamyatin and Orwell. This justification, on the other hand, averts the tragedy of death. In *We* and *Nineteen Eighty-Four*, the tragedy of death is prevented when the enemy is reduced to a form unworthy of human dignity. In We, it happens when the golden badge is removed from the victim's chest. The absence of this little star, which symbolizes loyalty and belonging to the One State with its presence, makes one worthy of death as this absence converts him to 'the other,' the enemy.

Similarly, the multi-stage torture orchestrated by O'Brien is designed not only to harm Winston but also to strip him of his human appearance. Therefore, after months of torture and humiliation, Winston is asked to take off his clothes to see the miserable condition of his body. "*You are the last man*," says O'Brien. "*You are the guardian of the human spirit. You shall see yourself as you are. Take off your clothes*" (Orwell, 1949, p. 341):

> *"'Look at this filthy grime all over your body. Look at the dirt between your toes. Look at that disgusting running sore on your leg. Do you know that you stink*

> *like a goat? Probably you have ceased to notice it. Look at your emaciation. Do you see? I can make my thumb and forefinger meet round your bicep. I could snap your neck like a carrot. Do you know that you have lost twenty-five kilograms since you have been in our hands? Even your hair is coming out in handfuls. Look!' He plucked at Winston's head and brought away a tuft of hair. 'Open your mouth. Nine, ten, eleven teeth left. How many had you when you came to us? And the few you have left are dropping out of your head. Look here!'"* (Orwell, 1949, p. 343)

In the mirror, Winston faces the miserable state of his unclothed figure. This rotten, impaired, stinking body belongs to him. This dramatic encounter is designed to show him that the humanity he glorifies is already defeated, just like his impotent body. After describing Winston's position in the most humiliating words possible, O'Brien asks if he can "*think of a single degradation that has not happened to [him]*? (Orwell, 1949, p. 344); and "*I have not betrayed Julia*," says Winston, with bitter happiness. In fact, he has already betrayed Julia, confessing all the crimes they had committed together. Nevertheless, his love for her is still real.

In *We* and *Nineteen Eighty-Four*, the state has the authority to decide who lives and dies, but the individuals are not quite sure where they stand between life and death. This uncertainty is a source of great anxiety for those who cannot keep their minds entirely off crime. In the novels, this ambiguity manifests itself in the sudden release of arrested people while they await punishment or in the inexplicable treatment and healing of tortured bodies.

As Winston waits for death under arrest, his living conditions suddenly start improving. There is no violence or hunger. He is given a clean "suit of overalls" and an opportunity to wash his body. "*They [dress] his varicose ulcer with soothing ointment, [and] pull out the remnants of his teeth and [give] him a new set of dentures*" (Orwell, 1949, p. 346). He is served three meals a day, one of which contains meat. His body gets stronger and is almost restored to its former shape. In the meantime, he understands that he has been defeated, so there is no need to fight anymore. *"[H]ow could the immortal, collective brain be mistaken?*" he thinks (Orwell, 1949, p. 349). So, he decides to train his mind to think as they think. He picks up the whiteboard and pencil placed in his cells and starts writing: "*FREEDOM IS SLAVERY*," "*TWO AND*

TWO MAKE FIVE," and "*GOD IS POWER*" (Orwell, 1949, p. 350). Winston learns to control his thinking. If a dangerous idea appears, his mind should instinctively create a blind spot to avoid the crime. It is called crimestop in Newspeak.

In the World State, however, the vitality and integrity of the body are only guaranteed as long as thought can be controlled, and any criminal act or tendency can lead to unexpected punishment or even death. Since there are no laws or written rules, subjects never know what punishment awaits them, and the crime that will lead them to this punishment can occur beyond their control. Consciousness is relatively easy to control; it knows what it should accept and accepts it. However, dreams can betray consciousness by unfolding the secrets of the mind. One day Winston wakes up screaming Julia's name. No matter how much he tries, his love for Julia is real as his hatred for the Party. First, he hears the sound of boots approaching him, then O'Brien enters the cell and asks him what his true feeling for Big Brother is. Winston says "*hate*," knowing that lying is pointless. It is not enough for Winston to obey Big Brother, "*[he] must love him*" (Orwell, 1949, p. 355). Therefore, he is brought to Room 101 as the final stage of his recovery.

Room 101 is where the victims face their most gruesome fears. For Winston, it is rats. After seeing a cage full of rats approaching his face, he realizes there is only one way out of this torture: put Julia between him and the cage. Then he starts shouting "*frantically*": "*Do it to Julia! Not me!*" (Orwell, 1949, p. 362). At that moment, he betrays the only real thing he has ever clung to, his love for Julia.

4.1.4. Bodies to be Cured

In *We* and *Nineteen Eighty-Fou*r, humans' acceptance of the superiority of machines over themselves results in a misconception where the concept of humanness is associated with imperfection. In this context, thoughts and emotions that contradict the system are regarded as abnormalities that disrupt the logical flow of daily life; therefore, they need to be cured immediately.

4.1.4.1. Imagination as a Disease

The most prominent example of this in *We* is Zamyatin's representation of 'soul' and 'emotion,' which was likely influenced by Gastev's discourse on Taylorism. This

striking resemblance manifests itself in how Gastev treated these concepts while commenting on mechanized collectivism:

> *"The manifestations of [the] mechanized collectivism are so foreign to personality, so anonymous, that the movement of these collective complexes is similar to the movement of things, in which there is no longer any individual face but only regular, uniform steps and faces devoid of expression, of a soul, of lyricism, of emotion, measured not by a shout or a smile but by a pressure gauge or a speed gauge."* (Gastev cited in Bailes 1977, p. 378)

In *We,* where 'soul' and 'imagination' are considered diseases that must be treated, Zamyatin seems to satirize the Soviet dreams of Taylorism explicitly. In the story, D-503, who loses control of his emotions after falling in love with I-330, helplessly accepts his illness with these words: "*I am imprudent, I am sick, I have a soul, I am a microbe*" (Zamyatin 1972, 131). Having learned to love and desire, D-503 discovers that there can be an alternative life to the one imposed by the One State. However, when his sickness of mind distracts him from fulfilling his duties, his fears and anxieties begin to grow. Aware of the bitter end that awaits those who disobey the system, he often thinks of the Benefactor's punishing hand and the stairs leading to the Machine where his life might end one day. At a moment when he has almost given up hope of recovery, the front page of One State Gazette heralds the discovery of a new scientific method that will free him from his imagination, the cause of all his suffering:

> *"REJOICE!*
>
> *For henceforth you shall be perfect! Until this day, your own creations—machines—were more perfect than you.*
>
> *How?*
>
> *Every spark of a dynamo is a spark of the purest reason; each movement of a piston is a flawless syllogism. But are you not possessors of the same unerring reason?*
>
> *The philosophy of cranes, presses, and pumps, is as perfect and clear as a compass-drawn circle. Is your philosophy less compass-drawn?*

The beauty of a mechanism is in its rhythm—as steady and precise as that of a pendulum. But you, nurtured from earliest infancy on the Taylor system-have you not become pendulum-precise?

Except for one thing:

Machines have no imagination.

Have you ever seen the face of a pump cylinder break into a distant, foolish, dreamy smile while it works? Have you ever heard of cranes restlessly turning from side to side and sighing at night, during the hours designated for rest?

No!

And you? Blush with shame! The Guardians have noticed more and more such smiles and sighs of late. And—hide your eyes—historians of the One State ask for retirement so that they need not record disgraceful events.

But this is not your fault—you are sick. The name of this sickness is

IMAGINATION.

It is a worm that gnaws out black lines on the forehead. It is a fever that drives you to escape ever farther, even if this "farther" begins where happiness ends. This is the last barricade on our way to happiness.

Rejoice, then: this barricade has already been blown up.

The road is open.

The latest discovery of State Science is the location of the center of imagination—a miserable little nodule in the brain in the area of the pans Varolii. Triple-X-ray cautery of this nodule—and you are cured of imagination—

FOREVER.

You are perfect. You are machinelike. The road to one hundred percent happiness is free. Hurry, then, everyone— old and young—hurry to submit to the Great Operation. Hurry to the auditoriums, where the Great Operation is being

> *performed. Long live the Great Operation! Long live the One State! Long live the Benefactor!"* (Zamyatin, 1972, pp. 179-80)

According to the proclamation, everybody can get rid of their dreams, leaving them sleepless at night just with a "*[t]riple-X-ray cautery*" of a nodule located in the pans Varolii region of the brain, which is the center of the imagination. This operation, promising everyone to be perfect like a machine, guarantees peace and happiness that will last forever. Therefore, all numbers are invited to register for the Great Operation to take advantage of this scientific opportunity. Although he initially sees the Great Operation as a glimmer of hope to end his suffering, D-503 realizes the dehumanizing aspect of the procedure after witnessing its effects on the first group of volunteers:

> *"In the auditorium at the corner the door is gaping wide, and a slow, heavy column of some fifty people emerges. "People?" No, that does not describe them. These are not feet—they are stiff, heavy wheels, moved by some invisible transmission belt. These are not people—they are humanoid tractors. Over their heads a white banner is flapping in the wind, a golden sun embroidered on it; between the sun's rays, the words: "We are the first! We have already undergone the Operation! Everybody, follow us!"* (Zamyatin, 1972, p. 189)

Looking at the passage above, one can see that the promise of the Great Operation has come true in all senses. With the help of science, humans are finally freed from all sorts of irrationalities (a soul, imagination, and emotions) that could disrupt their collective actions. However, this scientific procedure, which transforms numbers into perfect machines in human forms -humanoid tractors described in the novel- shows that being human necessitates individuality and free will besides the ability to produce and work collectively. The perfection and happiness promised by the Great Operation in *We* brings to mind Francis Fukuyama's remarks about the ambivalence of medical technologies:

> *"Medical technology offers us in many cases a devil's bargain: longer life, but with reduced mental capacity; freedom from depression, together with freedom from creativity or freedom; therapies that blur the line between what we achieve on our own and what we achieve because of the levels of various chemicals in our brains."* (Fukuyama, 2002, p. 8)

Although Fukuyama wrote these sentences referencing *Brave New World*, it is noteworthy that the ideas he expresses are also valid for *We*, which was written long before.

4.1.4.2. Memory as a Battlefield

Parallel to the One State, where imagination is seen as a disease, in Oceania, those who question the reality constructed by the Party are diagnosed with "*defective memory*" (Orwell, 1949, p. 310). So, Winston -similar to D-503- is arrested not to be punished but to be cured:

> *OB: "And why do you imagine that we bring people to this place?*
> *WS: "To make them confess."*
> *OB: "No, that is not the reason. Try again."*
> *WS: "To punish them."*
> *OB: "No!" exclaimed O'Brien. His voice had changed extraordinarily, and his face had suddenly become both stern and animated. "No! Not merely to extract your confession, not to punish you. Shall I tell you why we have brought you here? To cure you! To make you sane!""* (Orwell, 1949, p. 319)

The only acceptable reality in Oceania is the one approved by the Party, which requires a comprehensive organization regarding the control of the collective memory of the past. For this purpose, the party blacks out all historical facts that conflict with its interests and appropriates remnants of great value built in the pre-revolutionary period by manipulating their names and historical contexts. In this way, it devalues the centuries dominated by capitalism and establishes a glorious history for itself:

> *"Anything large and impressive, if it was reasonably new in appearance, was automatically claimed as having been built since the Revolution, while anything that was obviously of earlier date was ascribed to some dim period called the Middle Ages. The centuries of capitalism were held to have produced nothing of any value."* (Orwell, 1949, p. 124)

Any opposition to this history, whose details are meticulously rewritten by the Party, is prevented by destroying sources published before 1960. Even in prole quarters, where control is diminished, it is almost impossible to access these sources. This systematic manipulation creates a delusion for those who still remember the past in fragmented memories, in which they cannot be sure of the accuracy of any information

in circulation. Under these circumstances, the only shelter where one finds reality is in one's own memory.

In the novel, one of Winston's main preoccupations is to expand the boundaries of this shelter. The most dramatic example supporting this argument is his decision to write a diary. Writing a diary is not against the law, as there is no law in Oceania. However, the detection of such acts can result in the death penalty or at least 25 years of exile. Despite this reality, Winston, unable to resist the urge to write, risks punishment and attempts to record his memories. First, he writes April 4, 1984, in clumsy handwriting (probably not properly handwritten because speak-write is used to write) at the top of the page, but he is not sure of the accuracy of this date. His desperate urge to remember the date makes him question his desire to write a diary because he already knows that it is impossible to communicate with a future where the past will not be remembered:

> *"How could you communicate with the future? It was of its nature impossible. Either the future would resemble the present, in which case it would not listen to him: or it would be different from it, and his predicament would be meaningless."* (Orwell, 1949, p. 10)

During interrogation, O'Brien asks Winston to recall memories that made him question his belief in the Party, and he argues that these memories do not exist. For O'Brien, the past is no longer happening anywhere. Controlling the present, the Party is also capable of rewriting the past. So any data that contradicts the history the Party has built is false and is the product of a sick mind.

> *OB: "Is there somewhere or other a place, a world of solid objects, where the past is still happening?"*
> *WS: "No."*
> *OB: "Then where does the past exist, if at all?"*
> *WS: "In records. It is written down."*
> *"In records. And- ?"*
> *"In the mind. In human memories."* (Orwell, 1949, p. 313)

Winston's conversation with O'Brien reflects his trust in human memories in accessing the truth. Unlike the sources materializing data such as books or artifacts, human memory is an unembodied database recorded in the brain. Even if the suffering

body submits to the tyranny of power, the disembodied thought can resist, albeit in disguise, and if there is resistance, there is still hope for a change. Perhaps Winston's biggest confession and the crime is his belief in the human spirit, which he sees as the only force to defeat the Party:

> *"Then what is it, this principle that will defeat us?"*
>
> *"I don't know. The spirit of Man."*
>
> *"And do you consider yourself a man?."*
>
> *"Yes."* (Orwell, 1949, p. 340)

4.1.5. Breeding New Generations

Where the impulse of duty, obligation, or fear replaces real emotions, it becomes much easier for states to control the population by disciplining sexuality and breeding new generations. In *We*, the Table, organizing daily routines also keeps sexual life under control since unregulated sexuality is considered absurd and unscientific. According to the state norms, "*[e]ach number has a right to any other number, as to a sexual commodity*," and the pairing of the numbers is only "*a matter of technology*" (Zamyatin, 1972, p. 21). In this technology-enabled scientific process, each number is "*carefully examined in the laboratories of the Sexual Department*" and given "*an appropriate Table of sexual days*" according to "*the exact content of sexual hormones*" in their blood (Zamyatin, 1972, p. 22). After declaring which number they wished for these days, they receive a pink coupon, a sort of ticket approving coupling. In this conjuncture, marriage does not exist, and the children are the state's property. Different than the numbers of the One State, the party members can get married and have children in Oceania. However, these actions are still part of their duty to the state.

In *We* and *Nineteen Eighty-Four*, the passages referring to the family and child-rearing regulations parallel the discourses produced in post-revolutionary Russia. According to Glass and Stolee (1987), whose work focus on family law in Soviet Russia between 1917-1945, in the first decade following the revolution, there were three diverse opinions among the members of the new Soviet government regarding the future of the family institution. The first view advocated the complete abolition of the family, declaring that child-rearing should be the state's responsibility and conducted in "*state-run homes and boarding institutions*" (Glass and Stolee, 1987, p. 893). Proponents of this view argued that the proposed arrangement was compatible with

Marxist ideology. According to the second view, it was practically impossible to abolish the family, and its existence was no threat to socialism. Besides, it could contribute to society by reinforcing the principles of collective living among new generations. Accordingly, the state's duty would be to provide the parents with the necessary education and counseling to raise healthy and happy children following the principles of collectivism. The third and final idea was that children should be trained as agents of the revolution in their own homes. Children who returned home after training in Soviet institutions would educate their families and prevent possible tendencies toward the old regime.

Considering Glass and Stolee's classification, the relevant practices of the One State, which abolishes the family by assuming custody rights of children, are pretty similar to those proposed by the first group. However, in Oceania, where children are trained to spy on their parents, the ideas of the third group are put into practice:

> *"The family could not actually be abolished, and, indeed, people were encouraged to be fond of their children, in almost the old-fashioned way. The children, on the other hand, were systematically turned against their parents and taught to spy on them and report their deviations. The family had become in effect an extension of the Thought Police. It was a device by means of which everyone could be surrounded night and day by informers who knew him intimately."* (Orwell, 1949, p. 168)

In the novel, children who witness any criminal speech or behavior of family members often report them to Thought Police. For example, Parsons' 7-year-old daughter, who enjoys playing spy games with her older brother, one day listens to her father at a keyhole and denounces him to the patrols for a conversation that she finds suspicious. This example shows that the state ranks far above the family in the hierarchy of importance. In this structure, where children are used for adult supervision, the organic ties that hold the family together have dissolved, and privacy is abolished in domestic environments. In this way, the system forces people to live with the reality that they can be followed anywhere and at any time and denounced by those closest to them.

4.1.6. Machine-Born Bodies

In contrast to *We* and *Nineteen Eighty-Four*, where totalitarian systems use scientific knowledge and technological advances for the body's constant surveillance, discipline,

and punishment, in *Brave New World*, social control is maintained not with repression but with the fulfillment of bodily desires. In the speculative future societies envisioned by Zamyatin and Orwell, authorities consolidate their power with force, but in return, they are challenged by opponent forces. In short, oppression brings resistance, risking the perpetuity of the prevailing social structure at the slightest moment of weakness. However, in *Brave New World*, "*the Controllers [realize] that force [is] no good*" (Huxley A., 1994, p. 45). Therefore, instead of turning the world into a prison without physical boundaries, they create a false paradise where "*everybody is happy*" (Atwood, 2007) with the life they have been given. The "*slavish happiness*" (Kass, 1985, p. 35) portrayed here, on the other hand, is made possible with the utilization of scientific methods such as ectogenesis, hypnopedia -sleep teaching- and Neo-Pavlovian conditioning.

4.1.6.1. Ectogenesis

In *Brave New World*, where control over the population is the key to social stability, babies are not naturally born but grown in laboratories inside the "*bottles moving along assembly lines*" (Atwood, 2007). This speculative scientific method, called ectogenesis, which allows embryos to be fertilized and develop outside the womb, leads to the disappearance of concepts such as mother, father, and family. In the study, these concepts are often associated with savagery and ridiculed by those who pride themselves on being civilized. In the country, only thirty percent of female embryos are allowed to become fertile since breeding is considered animal-specific, and fertility is often considered a risk.

In the World State, The Central London Hatchery and Conditioning Center provides the necessary human source by intervening with embryos at different stages of the production line. In this facility, through various physical and chemical processes, the embryos are given certain qualities which determine their physical/mental characteristics, intellectual abilities, and emotional reactions to certain stimuli (such as fears, likes, and dislikes) so that they can fit into the caste they are assigned to. In the five-tier caste system, while Alphas having the highest level of intelligence, improved social skills, and physical strength are designed to undertake administrative tasks, Betas constitute the class of qualified workers supporting Alphas in institutional works. Alphas and Betas are followed by Gammas, Deltas, and Epsilons, respectively,

according to their level of intelligence. However, unlike Alphas and Betas, these lower classes are clones with very low intellectual capabilities.

For the system's proper functioning, "*standardized Gammas, unvarying Deltas, and uniform Epsilons*" are needed as much as Alpha-Pluses. So, their embryos' oxygen intake is reduced on purpose to keep them "*below par*" (Huxley A., 1994, p. 11). Bokanovsky's Process is another scientific application applied to Gammas, Deltas, and Epsilons. This method, which ultimately applies "the principles of mass production" to biology, allows up to ninety-six human beings to be raised from a single egg. This development could even make it possible to produce the entire staff of a small factory from a single bokanovskified egg.

The five-tier caste system described here is similar to the taxonomy proposed by Gastev to classify the proletariat according to their intellectual, physical, and organizational skills. However, despite the similarity of approach in the classification logic, the mechanism functions the other way around in *Brave New World*. Here, people are not classified according to their intellectual and physical skills. Instead, the necessary human source is designed with a scientific intervention targeting embryo formation. In this scenario, the human body is both the product and the means of production.

4.1.6.2. Hypnopaedia (Sleep-Teaching)

In the World State, hypnopaedia, or the "*sleep teaching*" (Huxley A., 1994, p. 41) principle, is a scientific method used for moral education. According to the narrative, the technique, accidentally discovered years ago, comes into practical use only in A.F. 214[50] due to the false presumption of the early experimenters who argued that hypnopaedia could be an effective tool for intellectual education. Based on this early assumption, experimenters installed information into children's minds while they were sleeping. In this experiment, although the children could remember all the sentences they had been taught, they failed to develop the ability to make inferences. This failure resulted in the abandonment of the experiments until it was realized that hypnopedia, unsuitable for intellectual education, could be used effectively in moral education, as it was never meant to be rational.

[50] After Ford.

In hypnopaedic education, the children hear one hundred repetitions of the same expressions "*three nights a week for four years*" (Huxley A., 1994, p. 42) before the instructed knowledge is consolidated in their memories. In the narrative, the working principles of hypnopaedia are explained through the narration of the Director of Central London Hatchery and Conditioning Center, who informs a group of children visiting the institution. Together, they observe Beta children in the "*Elementary Class Consciousness*" course (Huxley A., 1994, p. 23), where they are conditioned to certain behaviors with the help of repetitive voice instructions coming under their pillows. The voice recording, broadcasted through a megaphone for everyone to hear at the principal's command, clearly reveals how the consciousness of being a Beta is implanted in the children's minds:

> *"Alpha children wear grey. They work much harder than we do, because they're so frightfully clever. I'm really awfuly glad I'm a Beta, because I don't work so hard. And then we are much better than the Gammas and Deltas. Gammas are stupid. They all wear green, and Delta children wear khaki. Oh no, I don't want to play with Delta children. And Epsilons are still worse. They're too stupid to be able …" The Director pushed back the switch. The voice was silent. Only its thin ghost continued to mutter from beneath the eighty pillows."* (Huxley A., 1994, p. 24)

The 'hypnopaedic proverbs' frequently used in the dialogues indicate the application's success, which mechanizes the acceptance of moral codes by disabling rational thinking and personal judgment. For example, Lenina, a Beta, hates the khaki color worn by Deltas, and this impulse to dislike is the product of the hypnopaedic prejudice imposed on her mind.

4.1.6.3. Neo-Pavlovian Conditioning

In the World State, Neo-Pavlovian Conditioning shapes children's behavioral patterns using physical stimuli. In the narrative, the students visiting The Central London Hatchery and Conditioning Center take the opportunity to observe how Neo-Pavlovian conditioning is practiced on Delta children. In this experiment, Delta children are taken to a room where infant nurses place books and roses. These eight-month-old babies, who look almost identical (therefore, appear to be from the same Bokanovsky group), are left on the floor. For a while, the crawling babies are allowed to explore the

"*uncertainty*" by "*unpetaling the transfigured roses, crumpling the illuminated pages of the books*" (Huxley A., 1994, p. 17). However, this happy scene is interrupted by the sound of explosions and sirens when a nurse presses down a lever with the director's hand gesture. At that moment, the silence is broken by the baby's cries and screams. With a new signal, the nurse lowers a second lever. This time, the dose of fear is boosted by the pain coming from the electrified floor. The bodies of the little infants "*twitched and stiffened; their limbs move jerkily as if to the tug of unseen wires*" (Huxley A., 1994, p. 18). With 200 repetitions of this lesson, babies associate the books and roses with fear.

According to the plot, this process intends to condition lower castes to dislike books and nature. So that the time they will devote to reading can be transferred to the Community service. Also, the method eliminates the potential dangers of books since the information they contain may affect the conditioned reflexes unexpectedly. Roses, however, are associated with the love of nature, and being in nature reduces the motivation to work in factories. Although the love of nature was previously encouraged among lower castes to increase their transportation expenses, the current application conditions them to hate the countryside but love nature sports, thus spending on both sports equipment and transportation.

4.2. Uniforms

When *We*, *Nineteen Eighty-Four*, and *Brave New World* are compared in terms of clothing culture portrayed in the narratives, the most obvious similarity is the use of uniforms. In *We*, all numbers wear blue uniforms, associated with "*reason, entropy, and conformity"* (Hutchings, 1981, p. 100). Considering that the author imagines the entire city made of blue glass, he likely desired to create a continuous relationship between body and space with the support of blue uniforms. This choice reinforces the sense of monotony and ideological unity established with force. In *Nineteen Eighty-Fou*r and *Brave New World*, uniform colors vary according to one's position in the hierarchy.

In Oceania, inner party members wear black, and outer party members wear blue. On the other hand, the World State has a broader spectrum for using colors. According to their caste system, the Alphas at the top of the hierarchical order wear gray, while the Betas are depicted wearing mulberry-colored uniforms. Considering Lenina is Beta

wearing green, the upper castes seem more flexible about the dress code. However, Gammas, Deltas, and Epsilons -wearing green, khaki, and black, respectively- do not seem to have this privilege.

Especially in Zamyatin's *We*, reflecting the mechanized collectivism that Gastev dreamed of, the uniform mediates the visualization of the anonymous proletarian culture in the readers' minds. In the novel, industrial collectivism, unable to break its bond with militarism, gains a visual identity that permeates almost the entire urban space, especially in the passages depicting the march of numbers. In their pale blue unifs, all the numbers become 'one' with the cold blue city built almost entirely of glass, and the golden badges that they carried on their breasts mutely display their State Numbers, the only sign which makes them distinct from the others:

> *"Downstairs, the avenue was full. In such weather, the afternoon personal hour is used for an additional walk. As always, the Music Plant played the "March of the One State" with all its trumpets. The numbers walked in even ranks, four abreast, ecstatically stepping in time to the music-hundreds, thousands of numbers, in pale blue unifs*, with golden badges on their breasts, bearing the State Number of each man and woman."* (Zamyatin, 1972, p. 5)

The march of numbers described by Zamyatin is reminiscent of the parades of the early 20th century, where young men and women filled the Red Square or the stadiums in their uniforms on national celebration days (Figures 28, 29 and 30). However, in One State, this is not just a ritual celebrated on certain occasions but part of a mechanical cycle repeating every day.

Figure 28 (left): Aleksandr Rodchenko, Marching across Red Square, 1936 (Rolf, 2009, p. 609).

Figure 29 (upper right): Aleksandr Rodchenko, Sportsman's Parade, 1932 (Minneapolis Institute of Art, 2023).

Figure 30 (bottom right): Aleksandr Rodchenko, Dynamo Stadium, 1932 (Artnet, 2023).

In the novel, the uniform -or unif as it is called in the narrative- expresses rationality, functionality, simplicity, and unity. It is the renunciation of one's individual differences for the One State, the break off from the past, and the rebirth of the new human with a new visual identity.

The critical position of the uniform in the novel becomes more evident when one considers the social functions of clothing in post-revolutionary Russia. As Galina Ignatenko argues, "*[r]econstructing the role of clothing in human life was part of the* '*life building concept of the early 20th century*" (Ignatenko, 2020, p. 56). In the Russian context, the constructivists believed that artists should abandon their craft function and assume an active role in creating new people of the new world to be built in line with the trends of progress. This transformative function attributed to art required the invention of a new visual language that could communicate easily with the onlooker. For this cause, fashion, which has a multi-layered and nuanced language,

especially in the Western world, was detached from class/gender codes and decorative elements in the hands of constructivist artists. Although the search for rational clothing in the Russian conjuncture started primarily with workers' clothes, the main goal was to develop a universal clothing model that would eliminate class differences in daily life and develop a design system suitable for the logic of industrial production. This project was technically, ideologically, and artistically challenging but became an excellent opportunity for "*the practical embodiment of the new productivist art*" (Ignatenko, 2020, p. 56).

In the early twentieth century, experimental overall designs of Russian constructivists such as Varvara Stepanova, Aleksandr Rodchenko, and Lyubov Popova became the material proof of the artistic desire to build a future where the organic connection between art and industry would permeate the material forms of life. According to Stepanova, the "*[w]orking clothes [was] the clothing of [their age]*"*(*Stepanova cited in Ignatenko, 2020, p. 59). They had to be designed in line with the logic of industrial production and to facilitate the productive activities of workers wearing them. In response to this need, the overalls designed by Stepanova had simple structures of basic geometric shapes. These clothing items, having "*an almost identical base, like Popova's*" (Ignatenko, 2020), were customized according to specific tasks and occasions. Freed from the complexity of irregular patterns that made production difficult, these garments were industrially reproducible and could be easily sewn by people with average skills.

The proposed designs were aimed at the masses, not individuals. In this sense, they were not simple instruments representing allegiance to the revolution but active agents that secured and maintained its legitimacy. This situation gave the uniforms -or overalls, in that case- a militant identity systematically consolidated by artistic efforts. Besides, this effort was prominent not only in the productive activities of the artists but also in how they dressed themselves. For example, Rodchenko's highly original style provided by garments of simple yet sharp cuts was in line with the values of the new man that the revolution aimed to create. The commentaries of Galina Chichagova, one of Rodchenko's students at VKhUTEMAS, reveal that the artist was an exemplary model corresponding to the ideals of the new state:

> *"A man walked into the studio, he looked from his appearance like a combination of pilot and motorist. He was wearing a beige jacket of military cut, Gallifet-breeches of a grey-green color, on his feet were black boots with grey leggings. On his head was a black cap with a huge shiny, leather peak… I immediately saw that this was a new type of man, a special one."* (Margolin, 1997, p. 87)

Although the designers of the garments described here are unknown, the garments and how they were put together create the impression that Rodchenko created a highly stylized soldier's look on his own body. Although there was no war then, he seemed to have voluntarily accepted his role in the national cause and manifested this through his dressing style. Here, the interpretation is based on the description of an observer. However, Michail Kaufman's photograph of Rodchenko wearing the overalls *(prodezodezhda)* of presumably one of his own design leaves a similar impression regarding the meaning and aesthetic approach the artist wants to establish with the clothing (Figure 31). By referring to the artist's portrait dated 1922 (likely to be Kaufmann's photo), Loscialpo reveals how the connection between the human body, clothing, and ideology was embodied in Rodchenko's overall:

> *"The single-piece overall worn by Rodchenko, in particular, is defined by a rigorous geometry that relies on an absolute stylization of the human form; it presents the artist as a worker, dressed in an everyday garment that would be familiar to the majority of people and at the same time embodies the collective nature of Soviet society."* (Loscialpo, 2014, p. 235)

Figure 31: Portrait of Aleksandr Rodchenko wearing an overall by Michail Kaufman, 1922-23 (Chervonik, 2020).

The interpretations of Rodchenko's appearance, one by his student and the other by Loscialpo, have one more thing in common. Despite being a recognized public figure, the garment's presence almost overrides the artist's presence in both cases. It brings to

mind the question posed by Jennifer Craik in her essay *The Cultural Politics of the Uniform:* "*Do bodies wear uniforms or do uniforms wear bodies?*" (Craik, 2003, p. 129). In the given conjuncture, the latter proposition is more likely to reflect the truth, given that the uniform is not just an article of clothing but an oath of allegiance to an ideology and a mission accepted by Soviet society.

One of the essential points in the narrative is that the reductionist approach in the descriptions of the human body and clothes in *We* affects the language and, thus, the naming of clothing articles. Here, similar to human names, which were reduced to codes, the word 'uniform' is transformed into 'unif'[51] to describe an overall worn by the numbers in One State. Here, Zamyatin's wordplay possibly targets two different yet related groups. The first of these is the futurist poets, whom he often criticizes in his essays (which is evident in many points of *We*) (Hutchings, 1981), and the second is the avant-garde artists who invent new names for the garments they designed. For example, the word 'prozodezhda' used by Constructivist artists to define production clothing has been "*derived from the merging of the Russian words 'industrial' (proizvodstvennaya) and 'clothing' (odezhda)*" (Loscialpo, 2014, p. 227).[52]

William Hutchings' S*tructure and Design in a Soviet Dystopia: H. G. Wells, Constructivism, and Yevgeny Zamyatin's We* (1981) is an essential source for shedding light on Zamyatin's ideas about avant-garde artists, more specifically, Futurist poets. Considering the shortened words and the language that reflects a rather mechanical

[51] When describing the etymological origin of the word 'unif,' D-503 adds a footnote explaining that it was possibly derived from an ancient word, "uniform" (Zamyatin, We 1972, 5).

[52] Although not Russian, a very similar approach is also observed in Italian Futurists. In 1919, Italian futurist Ernesto Michahelles, commonly known as Thayaht, designed an overall *tuta*, which he described as "*the most innovative, futuristic garment ever produced in the history of Italian fashion*" (Edwards, 2015, p. 176). Indeed, *tuta*, which has a special place in the history of Italian fashion, was essentially the product of an anti-fashion project. The artist's own statements reveal that the *tuta* was designed to respond to a social need in 1919 when the majority of the public could not afford new clothes due to the economic crisis that emerged after the First World War. Although the fabric prices are considerably high, Thayaht, after "*having found some pieces of bright cotton and hemp*," designed a "*universal*" outfit with his younger brother Ruggero Alfredo Michahelles (Loscialpo, 2014, p. 231). This outfit, with its loose structure, was designed for everyone. Moreover, the *tuta*, consisting of basic geometric shapes and simple joining details, could be easily produced by anyone. Having received support from the Italian newspaper *La Nazione, the* Michahelles brothers promoted their invention publicly with the slogan "*Tutti in tuta*," which means "*Everybody in tuta*" (Erjavec, 2017, p. 26). After this call, "*more than 1000 people in Florence had adopted the tuta, which was considered the most provocative garment of the summer of 1920*" (Loscialpo, 2014, 232). The tuta was an anti-bourgeois project, born as a protest against the high prices of the post-war period and the obsolete stylistic conventions. Thayaht's aim was to 'initiate a transformation similar to an "*industrial revolution*" of fashion, making the masses feel well dressed and cultured' (Michahelles, 2014).

way of thinking in *We,* one might think that Zamyatin, like H. G. Wells, envisioned the people of the future as a race with low intellectual capacity and language skills. However, in the case of *We*, the simplification of language is not the result of human evolution that lasted thousands of years but the product of an ideological project that systematically imposed a single -and mechanical- way of thinking on humanity.

As Hutchings notes, Zamyatin, like the avant-garde artists, believed in the importance of experimentation in art. However, he was not particularly in favor of the Futurists abandoning their artistic independence and serving the newly established Soviet government.[53] Like the Italian Futurists, the Russian Futurists identified themselves as "*proletarian writers*" but "*glorified*" mechanization by ignoring its dehumanizing side:

> *"By glorifying the machine rather than guarding against its potentials for dehumanization, by becoming officially sanctioned poets of the new regime rather than remaining in the necessarily heretical and revolutionary avant-garde, the former Russian Futurists and "proletarian poets" abdicated (in Zamyatin's view) their fundamental responsibility as artists to seek constantly new methods for their art; in failing to do do, they had forsaken their original purposes, to which Zamyatin continued to adhere."* (Hutchings, 1981, p. 89)

Exploring the effects of the Constructivist and Futurist approaches of the early 1920s on clothing culture, Loscialpo points out that the rationalization of clothing also results in the elimination of gender differences based on appearance. To support her arguments, she suggests that the "*peculiar neutrality*" in Stepanova and Popova's production wear 'prozodezhda' is also seen in their theatre costumes, where the difference between men and women has reduced the alternative use of skirts and trousers (Loscialpo, 2014, p. 236). In the early 20th century, uniforms have become the symbol of egalitarianism, devotion to a national cause, or even the equal role of men and women in establishing a new world order. Yet, these designs ignored the gender factor and achieved equality between men and women by either ignoring or

[53] Citing the work of Christopher Collins, Hutchings argues that in his writing of We, Zamyatin satirizes the poems of Vladimir Kirilov, a proletarian poet, such as "My (We, 1917) and Zeleznyi Messija (The Iron Messiah, 1918)" (Hutchings 1981, 89). This also reflects the author's literary and political attitude.

masculinizing feminine attributes in clothing items. For some groups, it was another way of oppression.

4.3. Dress as a Site of Remembrance, Self-Discovery, and Identity Formation

As Geoghegan argues, the dystopian writers, including Zamyatin, Orwell, and Huxley, were aware that the collective memories of the past threatened the modern autocratic states due to the liberating values they provoked. Therefore, these states tended to control people's access to it by either erasing or ridiculing history (Geoghegan, 1992). The future societies described in *We*, *Brave New World* and *Nineteen Eighty-Four* are established after global wars that caused significant casualties. On the other hand, no one in the society knows what happened before, during, and after the wars since all the historical facts are concealed or manipulated by the totalitarian regimes in power. The novels' protagonists can mostly reach the traces of the past by contacting communities or historical artifacts that have been marginalized or whose existence is long forgotten. This interaction enables the characters to discover an alternative reality different from their own and gain a new intellectual and bodily consciousness.

As it was explained in the novel, the safe and smooth life secured by the One State is a reward for a drastic "*Two Hundred Years' War*," after which "*only 0.2 of the earth's population survived*" (Zamyatin, 1972, p. 21). However, the sovereignty of the One State -gained with great destruction rather than reconciliation- is destined to be re-tested by resistance forces, which were suppressed but could not be eradicated. In the novel, resistance is embodied by I-330, a female number who mysteriously comes into D-503's life. In *We*, I-330 is an error, a disease, which activates long-forgotten collective memories and human traits; a passionate rebel willing to initiate a new revolution against the last revolution that resulted in tyranny. In the novel, where all numbers are obliged to wear pale blue unifs, her obsession with the early 20th-century fashion items becomes a material manifestation of her rebellious identity, femininity, and human desires; and her contact with the long-forgotten savage tribes living behind the Green Wall reflects her wild, fearless nature.

By D's definition, I-330 is no different than "*an irresolvable irrational member that has somehow slipped into an equation*" (Zamyatin, 1972, p. 8); therefore, her presence initially affects him unpleasantly. Although D tries to avoid I-330, confusing him with

her distinctive character, strange coincidences continue to bring them together. However, their encounter in Auditorium 112 takes this oddness to another level. In the auditorium, there is a scientific event where the guests are informed about ancient artifacts from the 20th century unearthed during a recent archaeological excavation. In these demonstrations, where the objects of the 20th-century material culture become the subject of ridicule and humiliation, a working principle of a musical instrument called the "*royal box*" (Zamyatin, 1972, p. 17) is shown to the audience with a performance given by I-330. On stage:

> *"She [wears] the fantastic costume of the ancient epoch: a closely fitting black dress, which sharply emphasized the whiteness of her bare shoulders and breast, with that warm shadow, stirring with her breath…"* (Zamyatin, 1972, p. 17)
>
> *"Then she [sits] down and [begins] to play."* (Zamyatin, 1972, p. 17)

D-503 describes this music as something "savage, spasmodic, variegated;" also, the method has "*nothing rational and mechanical*" that will please his ears (Zamyatin, 1972, p. 17). After a while, everybody in the room starts laughing except for an insignificant minority, including D. This performance, presented to the contemptuous gazes and the humiliations, fails to make D laugh. Instead, the music evokes precisely the feelings that I-330 evokes in him. It is different than what he has listened to so far, something unfamiliar and irregular, therefore disturbing. What he sees, on the other hand, is utterly mesmerizing, although he is not ready to admit it at that moment. This woman standing before him is genuine with her body, soul, dress, and musical instrument that has become an extension of her arms. It is a reality of a past whose existence is now embodied by I-330.

In the following chapters, I-330's engagement with historical clothing items reveals her desire to distinguish herself from the anonymity of the mass and express her femininity by abandoning genderless uniforms. One day, I-330 invites D to the 'Ancient House,' located next to the Green Wall separating the urban dystopia of the One State and the unknown wilderness. In this heterotopian space, resembling an antique shop, artifacts from different cultures and historical periods unexpectedly coexist. Here, D-503 finds himself in "*a jumble of colors and forms*" (Zamyatin, 1972,

p. 26) accompanied by the frantic music he had heard in the auditorium. Among all this chaos, I-330 appears in an old, yellow dress made of fine silk fabric:

> *"[Here, I-330 wears] a short, old, vivid yellow dress, a black hat, black stockings. The dress [i]s of light silk. [He can] see the stockings, [which are] very long, much higher than the knees. And the bare throat, and the shadow between."* (Zamyatin, 1972, p. 28)

Here, D blames I-330 for her attempt "*to be original*," knowing that it violates equality (Zamyatin, 1972, p. 28). I-330 is well aware of the rules and values of the One State. Nevertheless, it does not stop her from enjoying the small rebellions she initiates wearing old clothes. For her, uniformity is banality, as the ancients say it:

> *"[t]o be original is to be in some way distinct from others. Hence, to be original is to violate equality. And that which in the language of the ancients was called 'being banal' is with us merely the fulfillment of our duty."* (Zamyatin, 1972, p. 28)

Despite I-330's request that he stay with her, D almost runs away from the Ancient House to avoid violating the rules. However, after receiving an official notification that she registered for him, his subsequent visits to the Ancient House becomes an obligation. Since *"[e]ach number has a right to any other number, as to a sexual commodity*," he goes to the ancient house at the time specified. This time I-330 appears in another old garment:

> *"[This time, she is] in a light, saffron-yellow dress of the ancient model. [D thinks it is] a thousand times more cruel than if she [wears] nothing. [He feels desperately defenseless against) two pointed tips through the filmy silk, glowing pink-two embers through the ash. Two delicately rounded knees."* (Zamyatin, 1972, p. 54)

In both *We* and *Nineteen Eighty-Four*, female characters activate the male protagonists' repressed sexual impulses to help them to restore their consciousness (Gheran, 2013). Interestingly, in both examples, clothing items of the past play a significant role in making this happen since a well-chosen dress can be more seductive than a naked body. A similar pattern also appears in *Nineteen Eighty-Four*, where

Winston and Julia secretly meet in prole quarters. These visits, especially for Julia, create an opportunity to get rid of her uniform and practice beauty rituals forbidden to party women. In the novel, Winston describes how Julia changes after she applies the cosmetic materials which he supposed she found in one of the shops in proletarian quarters:

> *"The improvement in her appearance was startling. With just a few dabs of colour in the right places she had become not only very much prettier, but, above all, far more feminine. Her short hair and boyish overalls merely added to the effect."* (Orwell, 1949, p. 179)

Although Winston thinks that her overalls do not steal much from her femininity, Julia's next plan is to get rid of her trousers:

> *"I'm going to get hold of a real woman's frock from somewhere and wear it instead of these bloody trousers. I'll wear silk stockings and high-heeled shoes! In this room I'm going to be a woman, not a Party comrade."* (Orwell, 1949, p. 179)

Both in *We* and *1984*, uniforms become the symbol of political repression, social segregation, and standardization. Therefore, in the novels, the female anti-characters' engagements with fashion items are a rebellious act against state regulations that systematically suppress their femininity and identity. It is against the anonymous proletarian culture mechanizing society through standardization; the misconception of equality that prioritizes uniformity by ignoring individuality; the patriarchal values that constantly reform the female body, which is systematically pushed to the realm of 'wild,' 'irrational,' 'emotional,' and 'superstitious;' and the state hegemony that builds an empire of fear to ensure social control.

4.4. Reclaiming Savage

In all three novels analyzed in this section, there is a binary opposition between the civilized and the uncivilized world. In *We*, the physical/spatial signifier of this opposition is the "*Green Wall*" (Zamyatin, 1972, p. 3). Inside the Green Wall, there rises a modern city made entirely of blue glass, and this giant machine is activated with the mechanical movements of an anonymous population wearing uniforms of the same color. In this urban landscape, almost the only thing that disturbs the infinite blue is

the irregular shape of clouds that sometimes appear in the sky. Beyond the Green Wall is the home of the 'other,' the 'unknown,' the 'uncontrollable,' and the 'wild.' As it is explained in D-503's narration, civilization had only reached its current level of sophistication when it built the Green Wall and completely separated itself from the wilderness:

> *"Man ceased to be a savage only when we had built the Green Wall, when we had isolated our perfect mechanical world from the irrational, hideous world of trees, birds, animals."* (Zamyatin, 1972, p. 93)

Later in the novel, it becomes clear that there are not only birds, trees, and animals behind it but also a wild human community. During the counter-revolution initiated by the anarchist group called Mephi, this community breaks through the wall and blends in with the crowd of numbers wearing gray-blue unifs. For D-503, the dramatic confrontation bringing the people of two worlds together is confusing, if not shocking. At first, he can hardly call these creatures "*people*" (Zamyatin, 1972, p. 156) since their naked, furry bodies resemble animals rather than humans. Then he realizes that they exactly look like how their ancestors are portrayed in Prehistoric Museum:

> *"A second more, and there, among the unifs, clearly and simply—black, red, golden, bay, roan, and white people—they must have been people. All were without clothing and all were covered with short, glossy fur, like the fur that can be seen by anyone on the stuffed horse in the Prehistoric Museum. But the females had faces exactly like those of our women: delicately rosy and free of hair, as were also their breasts—large, firm, of splendid geometric form. The males had only parts of their faces hairless— like our ancestors."* (Zamyatin, 1972, p. 156)

In a world where highly sterile, smooth, and disciplined bodies are considered normal, fur is an undesired redundancy that takes humans backward in their evolutionary process, something bringing them closer to animals.

Cultural prejudices that treat body hair as a form of crudeness also explain why D-503 dislikes his hands. One of the remarkable details about D-503's physical characteristics is his "*hairy, shaggy*" hands, which he cannot bear for others to see (Zamyatin, 1972, p. 7). For him, these hands, which are more like "*an ape's hands*," are the result of

"*stupid avatism*" (Zamyatin, 1972, p. 7). On the other hand, the "interesting conjunction" of a "classical" nose with these archaic hands attracts the attention of I-330 since it is the only incongruous detail on his body revealing his savage side, and she finds it unique and precious.

In *Nineteen Eighty-Four*, a similar contrast is provided with the existence of prole quarters. According to the narrative, eighty-five percent of Oceania's population comprises the working class, or proles as they are called in the novel. This group, which constitutes the lowest stratum of society, lives a harsh life in poverty, hunger, and filth. However, they also enjoy small privileges that party members cannot. First of all, proles can stretch the Party's rules since there is less control in the areas where they accommodate. Therefore, in these neighborhoods, it is possible to find pre-revolutionary items considered forbidden or inconvenient for the party members' use. For example, the double bed on which Julia recklessly sleeps -even though she knows it is full of bugs- can only be seen in prole houses.

Visiting the prole settlements with Julia, Winston is struck by the fact that the people living here succeed in remaining human. The women he sees here are exhausted and monstrous from work and childbearing. Nevertheless, they are alive enough to sing while working. This scene contrasts significantly with his wife Katherine's "*white body, frozen for ever by the hypnotic power of the Party*" (Orwell, 1949, p. 86).

> *"[The proles] were not loyal to a party or a country or an idea, they were loyal to one another. For the first time in his life he did not despise the proles or think of them merely as an inert force which would one day spring to life and regenerate the world. The proles had stayed human. They had not become hardened inside. They had held on to the primitive emotions which he himself had to re-learn by conscious effort."* (Orwell, 1949, p. 208)

In both *We* and *Nineteen Eighty-Four*, the binary opposition between the civilized and the uncivilized world unfolds the ambivalent existence of humans trying to position themselves somewhere in-between animals and machines. In these narratives, the people of the modern world have become mechanized, standardized, and hardened in a way to adapt to the requirements of the machine empires, which are creations of their

own. Based on its dehumanizing effects, miserable freedoms beyond the wall or in the prole quarters are preferred to the lifestyle imposed by the monstrous civilization.

At this point, Huxley creates a similar opposition with the 'savage reservations,' but unlike Zamyatin and Orwell, he suggests that no one can be happy in a system that goes wrong. Therefore, the civilized world and its marginalized others are equally oppressive and inhuman. In *Brave New World*, "*savage reservations*" (Huxley A., 1994, p. 39), located outside the One World, are described as isolated settlements where primitive ways of living, religions, languages, and customs are still practiced. The residents of the World State can visit these settlements with official permits if they wish to observe these extinct cultures and make an exotic holiday away from the civilized world. In the novel, dramatic contrast between these conflicting worlds is given with Bernard Marx's (an alpha plus sleep-learning specialist) strange discovery in the Malpais Savage Reservation. According to the plot, Bernard Marx arranges a holiday with Lenina Crowne (a beta fetus technician) to Malpais. Here, they find Linda, a beta-minus who once had visited the savage reservation with Thomas Grahambell (The Director of Hatcheries and Condition) and then accidentally got lost in a storm. Although Linda had taken the necessary precautions, in Malpais, she became pregnant with the Director's son, whom she would later name 'John.' However, ashamed of her pregnancy, she cannot dare to return home.

However, her new life in Malpas is worse than living in hell. In Savage Reservation, Linda is exposed to men's abuse and women's hatred because of her unmatching morality, and her son John is excluded from society because of her mother. As a beta-minus, Linda is unable to communicate with the savages. In the World State, she has been taught that "*civilization is sterilization*" (Huxley A., 1994, p. 108) but in Malpais, everything is filthy. She cannot convince people of the essentialness of hygiene where there is no hot water or even handkerchiefs.

After years of obscenity, she cannot stop herself from touching Lenina's clean clothes made of acetate, which is so much different from the beastly wool worn in Malpais, where the life of clothes never ends. Indeed, Linda has never been taught how to mend her torn clothes since "*[e]nding is [always] better than mending*" (Huxley A., 1994, p. 46) and "*[t]he more stitches, the less riches*" (Huxley A., 1994, p. 109). In a place without hot baths, vibro-vacuum massages, and perfumes, she cannot take care of her

body. Unable to mend his clothes, he starts wearing rags and is mercilessly ridiculed by the children in town.

After this discovery, Bernard makes the necessary arrangements to take them back home. However, in the World State, they are treated like exotic animals. Unlike the other two novels, which represent civilization as bondage and savagery as a costly freedom, *Brave New World* approaches them at equal distances since they create different forms of oppression, deprivations, and miseries.

4.5. Concluding Remarks

In the first half of the twentieth century, the concept of mass production, which was influenced by Frederick Winslow Taylor's theories on scientific management and Henry Ford's assembly line applications in Highland Park, revolutionized manufacturing by reducing costs, increasing work efficiency, and minimizing human error.[54] Ford's innovation, which brought vitality to the transportation sector, changed the prevailing perception of time and distance by enabling long distances to be covered in a shorter time, democratized travel, and increased mobility.

In this period, witnessing widespread use of communication technologies such as the telephone, which made long-distance voice transmission possible by the end of the 19th century, enabled simultaneous communication across nations and even continents, thus increasing the speed of information dissemination, facilitating international trade, and making interpersonal communication independent of physical distances. Similarly, radio, popularized in the 1920s, has become an effective mass communication tool, informing and entertaining millions. The ability to broadcast news, music, and entertainment directly into homes united communities, shaped public opinion, and laid the foundation for future mediums of mass media. Finally, the television invented by Philo Taylor Farnsworth in 1927 heralded a new technology that would enable the transmission of images in addition to sounds, although it had not yet become widespread.

[54] Ford's moving assembly line, introduced in 1913, was a groundbreaking innovation, especially for the automotive industry. This system, which minimized workers' movement, reduced the iconic Model T's "assembly line from 12.5 to 1.5 hours" (Company Timeline, n.d.) and its price from $850 to $260, making it affordable for a middle-income family (Highland Park, n.d.).

Interestingly, many civilian applications that marked the first half of the 20th century, especially in the fields of communication and transportation, were the outcomes of the resources and R&D support that countries allocated to the military industry. In this period, the demand for weapons, ammunition, and other military supplies stimulated the growth in war and defense-related industries and increased employment opportunities. However, when male employment in the defense industry was redirected to the army with the outbreak of world wars, the workforce required for production had to be filled with female employees. The national struggle, which required the support of all segments of society, changed women's social roles and occupational tendencies. Women were no longer just wives and mothers. As citizens and comrades, they played essential roles in their countries' defense strategy and the building of nation-states.

However, in parallel with investments in military innovations, wars have become much more destructive than in the past. Therefore, the first half of the 20th century witnessed some of the greatest tragedies in human history. Two world wars, between the world's most civilized countries, led to the deaths of millions of people and the destruction of hundreds of cities. In addition to the devastating consequences of advanced technology, which has made killing less direct but much easier with machinery, the period has also witnessed many inhumane applications conducted in the name of science. Significantly, the human experiments by Nazi doctors in Auschwitz created "*the worst example of premeditated and unmitigated medical evil in the last century*" (Halioua and Marmor, 2020, p. 747).

Yevgeny Zamyatin's We, Aldous Huxley's Brave New World, and George Orwell's Nineteen Eighty-Four were written in this period when the world was torn apart by political turmoil, the populations were threatened by wars, and groundbreaking innovations in science and technology were used to destroy the positive values and achievements of human civilization. Aware that civilization is often built on the gains from the devil's bargain, these three names opposed the practices of autocratic states, which derived their power from oppression and marginalization, and criticized the inhumane applications of science and technology incompatible with the principle of the common good. Based on their bold remarks, their novels, known to be masterpieces of science fiction literature today, were banned in various countries and received

intense criticisms from science fiction reviewers, as it was uncommon at that time to question the achievements of science and technological innovation within the genre.

Prior to writing their novels, Zamyatin, Huxley, and Orwell were known for their non-fiction works and essays on literature, politics, and culture. However, it was their science fiction novels making them world-renowned. It was due not only to their mastery of fictional writing but also to the critical power of science fiction that would only come to the fore with the New Wave. This critical function of science fiction, which comes from the dialectical relationship between estrangement and cognition, has helped them to estrange their readers to the strange nature of the world. Although these novels invited their readers to imaginary realms that do not exist, these non-places where the tragedies of the early 20th century had been recreated in another form had something to say about oppressive governments, wars, necropolitical violence, the vulgarity of mass consumerism, and mechanized collectivism.

Of course, in the novels, authors' messages were often influenced by their backgrounds, which determined how they made sense of the physical world. For example, Zamyatin, known as the forerunner of Huxley and Orwell (Parrinder, 1973), was not only a modernist writer but an engineer, just like D-503, the protagonist of *We*. Both as a writer and an engineer, Zamyatin was greatly influenced by the "rush and dynamism" marking his milieu like many artists and writers he admired. And, according to Hutchings, it was very much related to modern automotive transport imposing a "*mechanized speed*" (Hutchings, 1981, p. 83). Zamyatin knew that the mechanized speed of cars and airplanes was about to change the nature of perception because this speed, permitting viewers to capture only the "*essential form[s] and prominent features*" of the objects, was very much different from the "*leisurely pedestrian pace*" allowing scenes to be recognized in full detail (Hutchings, 1981, p. 83). For Zamyatin, this new perception, which found its expression in the visual arts, had to find its way into literature (Hutchings, 1981, p. 83).[55]

[55] A passage from Zamyatin's essay *On Synthetism* reflects his ideas about this new form of expression that he found necessary to address contemporary audiences and readers:

> "Not a single secondary detail, not a single superfluous line, not a word that can be crossed out. Nothing but the essence, the extract, the synthesis, revealed to the eye within one one-hundredth of a second, when all sensations are gathered into focus, sharpened, condensed… Today's reader and viewer will know how to complete the picture, fill in the words—and what he fills in will be

Zamyatin's search for new expression, which influenced his writing style in *We*, was particularly evident in the depiction of architectural spaces, objects, and characters. Although the letters, basic geometric shapes, and colors he used to portray the characters' physical features present a highly abstract and reductionist aesthetic similar to that of futurist paintings, his abstract expressions, without almost any exception, powerfully reflected the essence and core values they represent. In *We*, sometimes just the letter 'O' was enough to convey roundness, fullness, softness, and gentleness; 'X' to recall rebellion, hostility, resistance, and chaos; or 'I' to evoke individualism, independence, and self-consciousness. Whereas 'blue' embodied reason, entropy, and conformity, 'pink' symbolized warmth, vitality, and love.

However, this modernist aesthetic he found necessary to address contemporary readers also reflected his critical pose against futurist writers who glorified "*the machine rather than guarding against its potential for dehumanization*" (Hutchings, 1981, p. 89). In his view, the futurists and proletarian poets, who should have remained in the "necessary heretical and revolutionary avant-garde," suddenly had become the sanctioned poets of the new regime, and this was contrary to the spirit of revolution they had once voluntarily served.

According to Tony Burns, Zamyatin's abstract language, reflecting a highly mechanistic way of thinking, was also related to his critical approach to modern science and politics. Although known to be a modernist writer, his approach, rejecting objective truth and universal validity, was more likely to be built on postmodernist tenets. Also, his "*critique of the established view of science*" was "*intimately associated with*" his "*commitment to radical individualism*" and "*rejection of the politics of totalitarianism*" (Burns, 2000, p. 76). Zamyatin's critique of modern states seeking universal solutions in the control of society was evident in his portrayal of the numbers in uniforms. In the story, the pale blue unifs that conceal the physical differences between the numbers were powerful elements representing militarism, rationalism, and anonymous culture, but more importantly, entropy, which he found equal to death. As a constant reminder of one's social identity, these clothing items

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etched far more vividly within him, will much more firmly become an organic part of him." (Zamyatin cited in Hutchings, 1982, p. 83)

signified the individual's death with all the positive values it embodies, such as diversity, difference, creativity, and change.

For Zamyatin, the individual's skepticism and the rebellious impulse to question existing dogmas were the driving forces behind scientific and political revolutions. These individuals, whom Zamyatin described as 'heretics,' were catalyzers of social change, energy, and life (Burns, 2000). In *We*, this energy (against entropy) was embodied by a female number, I-330, who represented the structural other of modernity with her irrationality, passion, and affection for change. In that sense, the chaos she inspired generated the 'crisis of Humanism' in an imaginary realm long before Braidotti framed it within her posthuman discourse.[56] According to Braidotti, the global movements aiming at diversity, inclusion, and equity (such as feminist, anti-racist, and environmentalist movements) were "*the voices of the structural Others of modernity*" (Braidotti, 2013, p. 37). And I-330, as a female character, who intended to break the Green Wall separating the modern world from the wilderness, was a voice raised for the human-other forced to live beyond the wall, for the earth-other whose existence has long been forgotten, for the animal-other is barred from entering the One State, and her own identity and freedom suppressed by the government. Therefore, the ancient dresses she secretly wore in the ancient house were the flags of her rebellion, reflecting her will to be original, different, and herself.

Although Huxley vehemently denied this claim, *We* and *Nineteen Eighty-Four* exhibited fundamental similarities in form and content. However, the most obvious of these similarities was the one between their female protagonists: Julia and I-330. Julia, like I-330, was very different from the other female members of the society or the Party women, to be more precise, and, like I-330, she used to find pleasure in breaking the Party's dressing rules when she could find some privacy. So, the forbidden clothes and make-up she wore in prole quarters were symbols of her secret rebellion against the Party that controlled gender roles and suppressed sexuality. These two female characters, facilitating change without sacrificing their identities, revealed the power of dress in contributing to critical discourse and action. Also, by embracing their irrational, sensual, volatile, and wild nature, marginalized by modernity, they became

[56] By Braidotti's definition, "the crisis of Humanism means that the structural others of the modern humanistic subject re-emerge with a vengeance in postmodernity" (Braidotti, 2013, p. 37).

the driving force for revolution. In that sense, these two novels, respectively written after World War I and II, challenged the women archetype endorsed by the autocratic states, forcing women to renounce their feminine sides to be recognized as equal citizens. By making clothing an active agent of change, they also confronted the modern clothing discourse encouraging masculinity and uniformity.

Despite its remarkable similarity to *We* in terms of plot and characters, the novel to which *Nineteen Eighty-Four* is most often compared has been *Brave New World*. According to Francis Fukuyama, the future visions of Orwell and Huxley were,

> *"far more prescient than anyone realized at the time because they were centered on two different technologies that would in fact emerge and shape the world over the next two generations"* (Fukuyama, 2002, p. 3).

Orwell's *Nineteen Eighty-Four* was about information technology and its potential to be used as a tool of propaganda and surveillance. Huxley's *Brave New World*, on the other hand, was about biotechnology, another great revolution that could soon take humanity into the "*posthuman stage of history*" (Fukuyama, 2002, p. 7). In Fukuyama's view, both books were startlingly accurate in their technological predictions, whereas *Nineteen Eighty-Four*'s political calculations were entirely wrong. As he argues, when IBM's personal computers hit the market in 1984, Orwell's prediction about telescreens was almost accomplished. However, despite their functional similarities to telescreens, these computers enabling worldwide communication were more likely to challenge centralized politics instead of being an instrument of political oppression. So as Fukuyama argues, it was describing a new condition where everybody watched Big Brother instead of Big Brother watching everybody (Fukuyama, 2002).

Of course, when Fukuyama wrote his book in 2002, AI-based surveillance systems were not being used in mass surveillance. Therefore, the technology most associated with telescreens at that time was the computer, which started to make its way to every home. However, today, the collective brain described by Orwell is more likely to relate to AI, and telescreens to AI-based imaging technologies that enable real-time monitoring. When Orwell's telescreen prediction is re-evaluated in light of this new development, it becomes clear that his political predictions were not entirely wrong

and that he predicted a more advanced technology at a very early date. Today, AI-assisted surveillance in China, if not in the West, shows the possibility of Orwell's dystopian future coming true, albeit with a time difference.[57]

How we interpret Orwell's telescreen has changed and will change over time, and it is not related to Orwell but the very nature of technology that will develop to find new forms and uses in line with emerging social needs and political purposes. These new forms and uses, on the other hand, are likely to be influenced by geographical, cultural, and ethical differences, since today, in a technologically interconnected but ideologically conflicted world, there is hardly an objective truth to standardize our perception and acceptance of innovation.

Although "*Orwell was committed to objective truth*" during his lifetime, he was also aware that the very notion of objective truth was about to fade out (Cain, 2007, p. 83). In his view, the disbelief in objective truth that marked one of the most substantial crises of modernism was a consequence of the totalitarian tendencies inherent in modern ideologies that demanded the constant alteration of the past (Dickstein, 2007). His personal life experience, on the other hand, was the source of his deepened disappointment and suspicion of modern ideologies. Orwell was an Englishman born in eastern India and spent almost "*five years as an Imperial policeman in Burma*" (Rossi, 2007, p. 88). So, this experience was where his great "*distaste for the effect of imperialism*" was grown (Williams, 2007, p. 101). Also, as a socialist fighting against Franco's regime in the Spanish Civil War, he was aware of the totalitarian impulses inherently found in fascism and communism. Finally, his "*wartime experience in the BBC*" increased his distrust regarding intellectuals, "*coming to be more interested in power and place than in free thought*" (Crick, 2007, p. 155). So, as Rossi and Rodden claim, it was all these experiences that gave birth to *Nineteen Eighty-Four* as a world-renowned dystopia:

[57] The technology-driven systems, such as "*GPS tracking, voice and facial recognition technologies, machine learning algorithms, and other software and hardware*" (Leibold, 2019, p. 46) that China used to control Uyghur Muslims in the Xinjiang region are unfortunate proof of this.

> *"His Spanish experiences, his frustrations wit BBC's bureaucracy and his growng conviction that the idea of objective truth was being undermined by totalitarianism all played a part in giving birth to Orwell's dystopia."* (Rossi and Rodden, 2007, p. 9)

While Fukuyama failed to see the advent of AI-enabled surveillance technologies and was therefore partly wrong in his interpretation of *Nineteen Eighty-Four*, he was quite right to distinguish between the two different kinds of evil described by Orwell and Huxley. According to Fukuyama, in Orwell's dystopia, evil was visible, therefore, more preventable. In *Brave New World*, however, it has disguised itself in the promise of happiness. In Fukuyama's view, the invisible evil described by Huxley was related to the very nature of biotechnology, which "*mixes obvious benefits with subtle harms in one seamless package*" (Fukuyama, 2002, p. 5).

Despite the dehumanizing effects of eugenics evident in *Brave New World*, Huxley believed that science could significantly impact the enhancement and management of human life, and his trust in science was very much related to his family bonds. Aldous Huxley was born into an intellectual family highly associated with science. His grandfather was an English biologist Thomas Henry Huxley, who greatly inspired H. G. Wells in his writing of *The Time Machine*, and his younger brother, Julian Huxley, was an evolutionary biologist. Although he intended to be a medical researcher when he was young, an eye disease leaving him almost blind for several years ended his dream. However, his engagement with science profoundly influenced his writing practice when he pursued a career as a reviewer and a novelist (Woiak 2007). As Prof. Joanne Woiak argues, Huxley was questioning whether scientific knowledge and advanced technology could help to improve human life and end the "*social and economic chaos*" in post-war Europe by assisting the establishment of well-arranged states (Woiak, 2007, p. 110). Moreover, his essays showed that he was quite convinced about the power of science to achieve social progress. According to Woiak, for Huxley, "*eugenics was not a nightmare prospect but rather the best hope for designing a better world if used in the right ways by the right people*" (Woiak, 2007, p. 106). Therefore, he was not against the use of eugenics in improving the physical and intellectual skills of future generations to breed responsible citizens.

Although Woiak supports this claim by referring to various essays by Huxley, *Brave New World*, displaying the potential dangers of eugenics in shaping the human population, tells us another story. Although Huxley believed in science, he seems to have felt threatened by the idea that science could easily be manipulated to serve the upside-down morality promoted by advanced capitalism and administrative mechanisms that tend to monopolize power. Margaret Atwood's preface to *Brave New World* puts evidence to this claim. According to Atwood,

> *"Huxley himself still had one foot in the 19th century: he could not have dreamed his upside-down morality unless he himself also found it threatening. At the time he was writing Brave New World he was still in shock from a visit to the United States, where he was particularly frightened by mass consumerism, its group mentality and its vulgarities*." (Atwood, 2007)

In *Brave New World,* life is entirely organized according to the principles of mass production and consumption. In the imaginary society described by Huxley, babies are not born but grown in laboratories through a scientific method called ectogenesis. In this process, the necessary human resource is determined by the state in quality and number and then produced in an arrangement resembling an assembly line. In this method, embryos are subjected to a series of processes to acquire specific physical characteristics and intellectual skills in accordance with their caste. Here, lower castes for routine jobs are produced through a cloning technology called the 'Bokanovsky Process,' which is seen as an adaptation of the principles of mass production to biology. The consumption-based economic model described by Huxley also ensures that individuals acquire certain consumption habits at the embryo stage. They are thus conditioned to love new clothes and avoid mending. In this social structure encouraging consumption-induced happiness, people can access everything they want. Here, everything includes everyone since 'everybody belongs to everyone else' as an object of desire.

Although these three novels have been frequently compared and discussed in terms of how accurately they predict the future, it is not their accuracy that measures their success. What makes these novels equally unique and precious is their ability to display how political decisions could determine our relationship with technology. Technology is an instrument, therefore, can serve opposing purposes. It is this

instrumentality that makes the same technology simultaneously an element of both utopian and dystopian contexts.

CHAPTER 5: BODY IN THE AGE OF TECHNOLOGICAL EMBODIMENT/DISEMBODIMENT: REPRESENTATIONS OF THE BODY IN WILLIAM GIBSON'S *NEUROMANCER* AND PAOLO BACIGALUPI'S *THE WINDUP GIRL*

This chapter aims to explore the forms of technological embodiment/disembodiment in William Gibson's 1984 novel *Neuromancer and* Paolo Bacigalupi's *The Windup Girl* by considering how those themes relate to the current discussions on the posthuman. It is argued that against the backdrop of *Neuromancer*'s fictional urban environment Sprawl, a vast dystopian cityscape with its own artificially controlled environment blurring the day and night cycles, the human body is envisioned as a fluid entity that has to adapt itself to a corrupt, post-industrial society. Gibson's novel addresses certain themes of posthumanism, particularly in reimagining the human body as a decentered, malleable entity open to change and technological mediation. Paolo Bacigalupi's *The Windup Girl*, on the other hand, is a well-established story speculating on a distant future where human populations are threatened by food-borne diseases called 'cibiscosis' and 'blister rust.' Meticulously expressing the fragile state of the human race in the face of microscopic organisms, the novel also raises the problems caused by the concept of the 'other human' by including the struggle between the different communities polarized in the context of religious, cultural, and ethical values. The 'other human' concept takes on a dramatic dimension, especially in parallel with the events Emiko -a bioengineered New Person- goes through.

5.1. Body as the Home of Pain

The micro-stories that make up Gibson's novel enable the reader to observe the co-existence of various body forms, which have been technologically enhanced to varying degrees yet remain equally vulnerable. In *Neuromancer*, while the physical body is defined as 'flesh' and associated with pain, limitedness, and death, the virtual body is characterized as an immortal, fluid phenomenon that has the capacity to transcend spatial boundaries. This contrast between the physical and virtual body is especially established through the story of Case, the protagonist of the novel. According to the narrative, Case is a 24-year-old cyberspace cowboy who learned the secrets of his trade from the legendary McCoy Pauley and Bobby Quine. As a thief, stealing for wealthier thieves, Case penetrates the "*walls of corporate systems*" with the software provided by his employers (Gibson, 1984, p. 5). During this high-adrenaline mission, his body

is "*jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix*" (Gibson, 1984, p. 5). However, one day he makes a life-changing mistake by stealing from his employers, and in return, his nervous system is damaged as a payoff. Unable to return to cyberspace, Case is prisoned in his own flesh (Gibson, 1984).

In search of a remedy, Case decides to go to the black clinics of Chiba, hoping to find someone to help him recover. However, admiring "*the expertise with which he'd been maimed*" (Gibson, 1984, p. 6), the black clinic surgeons cannot repair him despite two months of consultations. When he loses his final hope, Case is introduced to Armitage, a former Colonel, by a street samurai named Molly. Later, his nervous system is restored by Armitage in exchange for accepting the job he offered to him. During the operation, his pancreas is replaced with a new one preventing him from enjoying the narcotic drugs, and fifteen toxin sacs are attached to his arteries to ensure his loyalty to the plan.

This story indicates the instrumentality of the body in the *Neuromancer* universe. For Case, the body, which is merely flesh, is an instrument that allows him to re-enter the matrix. The same body is used, regenerated, or transformed by third parties to serve particular purposes. As the narrative unfolds, it becomes apparent that both Molly and Armitage, his companions in the story, undergo similar procedures. When Case does research based on what he knows about Armitage's past, he realizes that his story strongly resembles that of a Colonel named Willis Corto. According to the reports, Corto is involved in a secret military operation called Scream Fist. However, his adventure ends after his plane is shot off the coast of Finland, during which he loses his eyes, legs, and a significant part of his jaw. After this incident, he is found by Finnish paramedics and transported to a military unit in Utah, where he has been tied to machines for eleven months, waiting for Congressional officials to find him. During this time, his testimony is needed for a very critical case involving Pentagon's interests, and his body is repaired to make a good impression during the trial, which is closely followed by the media. After the trial, he becomes unwanted in Washington. He changes cities, kills many people, deals with illegal jobs, and ends up in a mental hospital diagnosed with schizophrenia. Finally, Wintermute (AI) creates the personality of Armitage out of this broken body and mind.

The novel includes a variety of examples illustrating the concept of the cyborg body, which Donna Haraway defines as "*a hybrid of machine and organism*" (Haraway, 2000, p. 291). However, Molly is one of the characters who best fits Haraway's definition. Molly transforms her body of her own free will to adapt to the conditions of the world she lives in and to survive. Molly especially comes to the fore with her extensive body modifications. She has "*four-centimeter scalpel blades*" (Gibson, 1984, p. 25) under her fingernails and enhanced reflexes required to control them. Molly finds the money needed for these modifications by working as a 'meat puppet,' in other words, as a prostitute. With the aid of a cut-out chip, Molly does not reside in her body during contact with the clients. Although her body is subjected to sexual abuse and sadistic violence at extreme levels, she does not feel and remember any of these moments. However, when the cut chip is damaged during the operation in which the circuitry for the blades is implanted in his body, the images of these painful stories appear in her memory.

Many scholars, including Katherine Hayles (1999), criticize this dualistic Cartesian conception of the human body projected into the future. Hayles argues that the posthuman subject needs to embrace the possibilities of information technologies "*without being seduced by the fantasies of unlimited power and disembodied immortality*" (Hayles, 1999, p. 5). Otherwise, in a posthuman future, the human body can be regarded as a fashion item instead of a ground of existence. *Neuromancer* precisely projects this undesirable posthuman condition, in which the body is transformed into an object of crime and consumption through the manipulations of patriarchal capitalist systems and military organizations.

5.2. Clones

Haraway defines cyborgs as the "*illegitimate offspring of militarism and patriarchal capitalism*;" however, as she argues, "*illegitimate offspring are often exceedingly unfaithful to their origins*," since "*[t]heir fathers, after all, are inessential*" (Haraway, 2000, p. 293). Although the clones are exact copies of humans, and they differ from cyborgs based on the formation of their bodies, this definition of cyborg directly applies to the clones described in the novel. In *Neuromancer*, the most dramatic clone stories are found in the sections which relate to the Tessier-Ashpool family. The family and the corporation which they lead are established after the marriage of Mr. Ashpool

and Mrs. Tessier. The couple have two children: Jane and Jean, and the continuity of the family lineage is ensured by the cloning of these two children. Due to a conflict of interest, Ashpool kills her wife, Mrs. Tessier. Apart from the company, we cannot observe any bond which holds the family together. It is better understood when Ashpool sexually abuses and kills one of his cloned daughters, and 3Jane, another clone, attempts to kill his father, who already survives in miserable conditions due to the impacts of cryogenic sleep. Here Gibson problematizes two fundamental issues related to cloning ethics: possible abuse of cloned humans and their adaptation problems in family and society. In the Tessier-Ashpool family, both can be observed. The genetic father and creator of the clones, John Ashpool, does not have a sense of love and responsibility towards his cloned children. In return, clones, seen as a piece of meat, lack a sense of loyalty towards their creator.

5.3. Bodies with Elongated Lives

Gibson's *Neuromancer* also problematizes the obsession with long life and immortality. Some of the methods described in the novel show resemblance to the scientific extrapolations of significant names, especially those investigating the possibilities of human enhancement and machine learning, such as Marvin Minsky, Rodney Brooks, Hans Moravec, and Ray Kurzweil. Minsky, an expert in artificial intelligence, believes that science can extend human life by producing artificial substitutes which perform the functions of the injured or absent organs, including the brain. Dinello defines this method requiring the fusion of organisms and machines as 'cyborgization' and suggests that many of us are already cyborgs, having been repaired scientifically with various body augmentation technologies. In *Neuromancer*, this technique is frequently applied to characters whose organs are damaged for various reasons.

This method proposes solutions for the renewal/healing of the body after the problem occurs in time. However, Rodney Brooks argues that scientists are on a revolutionary path, which will allow them to change the human genome in profound ways. This condition putting science in charge of preventing inherited illnesses and undesired qualities coded in human DNA can result in the production of an upgraded human breed with the rewriting of the spiral. In the book, this idea matches the story of Julius Deane, a trader who is one hundred and thirty-five years old. Deane invests a fortune

in serums and hormones every week to regulate his metabolism, and every year he visits Tokyo "*where genetic surgeons re-set the code of his DNA*" (Gibson, 1984, p. 12).

Ashpool, on the other hand, is over two hundred years old, spending most of his time in cryogenic sleep, similar to other family members, excluding 3Jane. The family members thaw when needed and rule their companies alternately. Although this method cannot be applied to individuals who are alive, today, a considerable number of dead bodies are preserved with this method. People registering for this service believe that the physical dysfunctions causing their deaths can be repaired in time, together with scientific developments. In the plot, Deane skips life by spending the majority of his time being young and alive; and Ashpool literally exists as living dead.

5.4. Digital Immortality

The scientific extrapolations mentioned so far present plausible solutions to enhance and prolong human life to a certain extent, but none of them genuinely ensures immortality because, as long as the physical body exists, humans continually confront their ephemerality. In the novel, mortality is overcome by the digital transfer of consciousness into cyberspace. McCoy Pauley, once known as a legendary cyberspace cowboy, "gets his brain fried" when he pushes the limits too much in cyberspace. However, somehow his consciousness is preserved digitally. In the story, This disembodied personality supports Case during the mission as his mentor. This story reminds the future visions of Moravec and Ray Kurzweil, who elaborate on digital immortality that will be achieved through a mind transfer. As Dinello describes,

> *"the theory of digital mind transfer depends on unproven assumptions: a person's mind consists of neuronal patterns that can be identified and precisely mapped and coherently transferred into a computer, which itself is running a stimulation of the person's brain structure."* (Dinello 2005, 23)

This scientific vision of the future also relates technology with mysticism, because, Technologism actually offers a techno-heaven, which simulates the prevailing religious doctrines. However, although its promise is nearly the same, techno heaven unlocks its doors to completely different residents. According to Dinello,

> *"the baptism of mind transfer … makes posthuman heaven a matter of consumer preference and sufficient funds, rather than a reward for leading a morally good life. So, even the most evil rich person will be granted digital divinity, while the most saintly poor person will not."* (Dinello 2005, 24)

The current difficulties of data protection and preservation also raise some other questions about the reliability of the method; because it is estimated that the digital immortality provided by mind transfer can be problematic since it can make the uploaded minds open to copying, manipulation, and misuse. The realization of mind transfer, in fact, introduces a new condition for human evolution by envisioning a future where humanity digitally "*unif[ies] itself in One Big System… as disembodied, information-processing network nodes, linked together in some massively distributed computer system*" (Bendle, 2002, pp. 52-53). This condition, defined as "digital singularity," constitutes one of the novel's main themes since the storyline revolves around the actions of Wintermute, who manipulates the characters' activities to unite himself with *Neuromancer* to achieve superintelligence. This unification transforms them into what he calls Matrix.

5.5. Bioengineered Bodies

In Paolo Bacigalupi's novel *The Windup Girl*, there is no artificial intelligence controlling humans, no cowboys adventuring in cyberspace, and no street samurai with augmented visions and prosthetics. However, in the novel, the theme of bioengineering is intricately woven into the fabric of the narrative, creating a dystopian world where genetic manipulation and biotechnology affect the evolutionary paths of humans, animals, and plants in unprecedented ways. The narrative presents several examples of the unforeseen social impacts of bioengineering, the most striking of which is revealed through the story of Emiko, a bioengineered human designed to serve a high-profile client in Japan. Emiko's story presents a mise-en-scène in which science establishes a new master and slave relationship, where New People are treated as commodities exclusively designed to please their masters.

According to the background story given in the novel, Emiko is a well-trained windup, designed as a "*pillow companion, secretary, translator and observer*" (Bacigalupi, 2009, p. 101). Therefore, her DNA mixture has been adjusted to make her physically beautiful, with high social and intellectual skills. Since she performs all the services

expected of her so admirably, she is initially honored and cherished by his owner Gendo-sama. In Gendo-sama's words, "*she [is] more than human*," except for her mechanical body movements that will "*never be smooth*" (Bacigalupi, 2009, p. 34). Emiko has "*perfect skin*," "*perfect eyesight*," and genes that protect her from cancer and diseases. Gendo-sama, on the other hand, is destined to age despite all the "*surgeries*," "*pills*," "*ointments*," and herbal miracles, unlike her, whose bright black hair would never turn gray (Bacigalupi, 2009, p. 35).

Despite all their unique features and the impeccable services they provide, New People are seen by their owners as disposable commodities that can easily be replaced with upgraded versions, and this is precisely how Emiko's adventure in Thailand unfolds. According to the narrative, Emiko is left in Bangkok after a business trip since buying an upgraded model in Osaka is more economical for Gendo-sama than paying for her return ticket. Consequently, the windup girl discarded as an outdated toy becomes an illegal immigrant in Thailand after her residency permit expires. Thailand presents an entirely new and extremely brutal setting for Emiko, given its climate and cultural prejudices targeting New People. Scared of being caught and killed by the Ministry of Environment, she starts working in a club, where her difference gives her an advantage for survival. However, after she learns that a community of her kind is living in northern Thailand, she decides to escape North by paying off Raleigh, the club's owner.

Emiko's journey revolves around her quest for autonomy and the desire to break free from the shackles of her engineered existence. As a windup girl, Emiko is programmed to obey, but her evolving consciousness and emotions propel her toward seeking a life of her own. However, the passage leading her to a new life is full of dangers. In Kyoto, where she used to live, the "*New People [are] common*" and mostly "*well-respected*" (Bacigalupi, 2009, p. 35) because Japan, with an aging population, needs "*young workers in all their varieties, and if they [come] from test tubes and [grow] in crèches, this [is] no sin*" (Bacigalupi, 2009, p. 35). However, this is not the case in Thailand, where people of many ethnicities and religions live together. In Thailand, the windups are "*the devils that the Grahamites warn against at their pulpits,… the soulless creatures*" that Buddhist monks claim to come out of hell, and the affront to the

religious book "*that the Green Headbands believe*" (Bacigalupi, 2009, p. 35). Therefore, in Thailand, she is not only an illegal immigrant but also an object of hatred.

Emiko's experiences highlight the inherent dangers of bioengineering, resulting in the discrimination and exploitation of bio-engineered species. Despite being a complex and emotional being, Emiko, as a New Person, is treated as an 'empty vessel' without a soul, subjected to all sorts of abuse. However, her struggle is not just against the cultural and religious prejudices making her life worthless for the rest of society but also against her bioengineered existence, which makes her feel incomplete and physically vulnerable. Emiko is substantially different from real people. Her skin is designed to have tiny pores since it is a feature adding to her beauty and desirability in Japan. However, this feature preventing her from sweating becomes a vital problem in Thailand, having a tropical climate unsuitable for her genetic structure:

> *"Even with her augmented vision she barely spies the pores of her flesh. So small. So delicate. So optimal. But made for Nippon and a rich man's climate control, not for here. Here, she is too hot and sweats too little."* (Bacigalupi 2009, 35)

In addition, the "*stutter motion of her body*" (Bacigalupi, 2009, p. 103), making her feel physically and mentally uncomfortable, puts her life at risk as a marker of her identity. However, what upsets her the most is that she is not fertile and cannot breed her own kind (Bacigalupi, 2009).

Emiko has been designed without ovaries since the breeding of New People is assumed to be dangerous after the generippers' experience with the *cheshires*, the bio-engineered cats, which spread to every continent within two decades, causing *Felis domesticus* almost extinct from the world. In the narrative, although she does not say anything directly, Emiko's dialogues about *cheshires* show that she secretly envies them, knowing that her life would be much different if she had been designed before them:

> *"She doesn't say anything else, but Anderson can guess what's in her mind. If her kind had come first, before the generippers knew better, she would not have been made sterile. She would not have the signature tick-tock motions that make her so physically obvious. She might have even been designed as well as the*

> *military windups now operating in Vietnam—deadly and fearless. Without the lesson of the cheshires, Emiko might have had the opportunity to supplant the human species entirely with her own improved version."* (Bacigalupi, 2009, p. 114)

Emiko's story, which initially presents her as a victim, becomes a journey of self-discovery as she overcomes new threats that make her stronger and meets new people who help her realize her untapped potential. Although trained as a docile and compliant companion who gently presents feminine graces through her beauty and behavior, the brutal conditions pushing her physical and emotional limits show her that she can turn into a deadly weapon, an assassin who can destroy her target in the blink of an eye. This experience helps her discover that she is more than she thought and was taught to be.

Emiko's struggle raises profound questions regarding free will, self-determination, and the fundamental rights of designed beings. However, it also points to a future in which Homo Sapiens, who have survived among other human species in the evolutionary process, could be wiped out by the New People, which they designed to gain profit and power. The book signals that this could happen due to natural selection and interspecies warfare. In *The Windup Girl*, Bacigalupi clearly shows that the New People, which are resistant to cancer and diseases caused by viruses, are more likely to survive in the evolutionary process compared to natural humans, who can hardly cope with climate change and new epidemics emerging before cure has been found for the old ones. Therefore, in this universe where ecological disruptions caused by bioengineered organisms lead to biodiversity loss, the extinction of humans is presented as a highly probable and even expected situation.

The narrative strengthens this prospect by hinting at the possibility of a rebellion, an interspecies war initiated by the New People who start gathering in the North. Although it is not explicitly stated which species made their way into the northern jungles, a community of New People with different physical and intellectual skills would likely have an advantage in a struggle with natural humans. Indeed, these possibilities include the military models fighting in Vietnam (which often change sides during the war), the factory models resembling Hindu Gods with their ten arms, and eight-foot giants designed as laborers.

In the novel, the New People's inability to reproduce is the only safeguard that prevents the extinction of real people. However, the dialogue between Emiko and Gi Bu Sen, one of the masterminds behind the generipping, signals that this problem can be overcome in favor of the New People. At the end of the novel, Emiko learns that with new scientific methods, she can have children even if she does not have ovaries, and these children can be designed to be fertile. Gi Bu Sen tells Emiko that limitations are there for safety reasons and can be "*stripped away*" at any time needed. Therefore, "*[n]othing about [her] is inevitable*" (Bacigalupi, 2009, p. 358).

Although it is the windup girl who gives the novel its title, perhaps the most compelling character in Bacigalupi's fiction is Gi Bu Sen, aka Gibbons. As the world's number one generipper, he is a ghost who has convinced everyone that he is dead, an egotist who likes to flaunt his expertise, and a scientist who is in the habit of playing God. This new kind of Prometheanism represented by Gi Bu Sen brings to mind the Dr. Frankenstein story mentioned at the beginning of this study. Unlike Dr. Frankenstein, who feared the ugliness of his monster and therefore abandoned him to an unknown world, Gi Bu Sen is a proud father who likes to play with his children. He perceives genetic manipulation as a means of survival, therefore, seems unconcerned about how genetically modified species can change the balance of the ecosystem. Instead, for him, the limitations seem to be unnecessary measures that complicate the arrival of what is already coming; and when these measures are removed, he knows that all people will be 'New People' (Bacigalupi, 2009).

In the story, Gi Bu Sen is not so much a villain as an egotist fascinated by what he can do with the possibilities of bioengineering. However, the methods that he develops are open to misuse. The existence of calorie monopolies that control the food market through 'genehacked' seeds indicates that science is more likely to serve power and profit rather than a struggle for survival. In that sense, Bacigalupi's thought-provoking narrative serves as a cautionary tale, reminding us that what science will mediate is always a question of power, and this power tends to sacrifice the underprivileged groups for the favor of the minority, which holds the capital.

5.6. Dressing the Body Unbound

As Delgado et al. argue, "*[d]isembodiment being a key topic, Neuromancer provides multiple images of enhancements in a future society, the Sprawl, in which the body has*

become a matter of free choice" (Delgado, et al., 2012, p. 211). Therefore, in *Neuromancer*, the body turns into a dress, a "*malleable accessory*" (Vint, 2007, p. 23) that can be modified and discarded at any moment, either by the individual's free will or by the intervention of third parties who will take advantage of it. The artificial skins displayed on the windows of surgical boutiques are one of the most striking examples reflecting the transiency and the fragmented nature of the body in this fictional environment.

> *"The place was a surgical boutique, closed for renovations. With his hands in the pockets of his jacket, he stared through the glass at a flat lozenge of vatgrown flesh that lay on a carved pedestal of imitation jade. The color of its skin reminded him of Zone's whores; it was tattooed with a luminous digital display wired to a subcutaneous chip."* (Gibson, 1984, p. 140)

However, in this universe where the body is transformed into a dress, the dress acquires new functions with the new possibilities provided by technology. Gibson's narrative presents a hyperconnected world where technology is ubiquitous, and fashion is intertwined with the spectacle of technology. In *Neuromancer*'s cyberculture combining high-tech with a low-life, youth subcultures prefer futuristic garments incorporating advanced materials. Lupus Yonderboy, as the leader of Panther Moderns, wears a "*polycarbon suit with a recording feature that allowed him to replay backgrounds at will*" (Gibson, 1984, p. 67). These technology-integrated outfits are often accompanied by extraordinary hair and makeup choices that are compatible with punk style:

> *"His hair was pink. A rainbow forest of microsofts bristled behind his left ear; the ear was pointed, tufted with more pink hair. His pupils had been modified to catch the light like a cat's. Case watched the suit crawl with color and texture."* (Gibson, 1984, p. 67)

The technological fashion choices often reflect a desire for visibility and signify the characters' integration into this advanced technological world. However, in this highly fragmented and stratified society, there is also room for more conventional or outdated styles. In particular, characters whose lifespan has been extended through various scientific methods adopt more classical attires, even ancient looks. As one of them, Mr. Ashpool embodies wealth and privilege through his extravagant and ostentatious

clothes, mostly handcrafted with exclusive materials, which emphasize his status within the high-tech elite:

> *"He wore a heavy robe of maroon silk, quilted around the long cuffs and shawl collar. One foot was bare, the other in a black velvet slipper with an embroidered gold foxhead over the instep."* (Gibson, 1984, p. 182)

Julius Deane's wardrobe, on the other hand, seems to consist entirely of successful imitations of the clothes of the previous century:

> *"Julius Deane was one hundred and thirty-five years old, his metabolism assiduously warped by a weekly fortune in serums and hormones. His primary hedge against aging was a yearly pilgrimage to Tokyo, where genetic surgeons re-set the code of his DNA, a procedure unavailable in Chiba. Then he'd fly to Hongkong and order the year's suits and shirts. Sexless and inhumanly patient, his primary gratification seemed to lie in his devotion to esoteric forms of tailor-worship. Case had never seen him wear the same suit twice, although his wardrobe seemed to consist entirely of meticulous reconstructions of garments of the previous century. He affected prescription lenses, framed in spidery gold, ground from thin slabs of pink synthetic quartz and beveled like the mirrors in a Victorian dollhouse."* (Gibson, 1984, p. 12)

The clothing preferences of the characters with extended lives show that the dress is a sociological phenomenon closely related to identity and memory, even in a highly futuristic, imaginary realm. Although their bodies may hide their age, Ashpool, and Deane's experiences, habits, and tastes over a lifetime spanning more than a hundred years seem to compel them to reproduce the past through clothing.

Gibson's mastery in using the dress as a means of expression and construction of identity is evident in the portrayals of almost all his characters. As a hacker and outsider, Case mostly wears simple jeans and windbreakers. Armitage usually prefers clothes that emphasize his military background and physical strength. Standing out with her passion for fashion, Molly is characterized by black leather jeans, fishnet blouses, and flashy accessories that emphasize her femininity and distinctive style. Although *Neuromancer* presents highly individualistic styles, the dress is also a marker of group identity. Similar to Yonderboy representing Pantern Moderns, Maelcum, as a Rastafarian from the Zion cluster, takes attention with "*his dreadlocks bagged in a*

net cap crocheted from purple cotton yarn" (Gibson, 1984, p. 191). Although few in number, clothing also serves to characterize conservative groups. To emphasize the contrast they create, Gibson deliberately crosses their paths with youth groups. The French teenagers and Japanese conservatives create such contrast in the hotel Intercontinential:

> *"A burst of French from a nearby table caught his attention: the golden children he'd seen gliding above river mist the evening before. Now he saw that their tans were uneven, a stencil effect produced by selective melanin boosting, multiple shades overlapping in rectilinear patterns, outlining and highlighting musculature, the girl's small hard breasts, one boy's wrist resting on the white enamel of the table. They looked to Case like machines built for racing; they deserved decals for their hairdressers, the designers of their white cotton ducks, for the artisans who'd crafted their leather sandals and simple jewelry. Beyond them, at another table, three Japanese wives in Hiroshima sackcloth awaited sarariman husbands, their oval faces covered with artificial bruises; it was, he knew, an extremely conservative style, one he'd seldom seen in Chiba."* (Gibson, 1984, p. 128)

Although the characters portrayed in *The Windup Girl* are highly different from those in *Neuromancer*, the dress still possesses similar functions in portraying the fragmented nature of society on both local and global scales. In both narratives, the world is fragmented to such a degree that each country almost seems to live in a different period.

In *Neuromancer*, differences between countries and cultures are reflected in Case, Armitage, and Molly's travels. As one of their destinations, Istanbul is portrayed from a very orientalist point of view and represents the 'other' in the capitalist world (Myers, 2001). The "*enormous Turk*" Mahmut and Armenian Terzibashjian embodies the non-Western other with their appearance. Especially Terzibashjian, with his white shirt open at the collar and hairy chest, create a contrast with the techno culture of the Sprawl.

> *"Terzibashjian proved to be a young man in a gray suit and gold-framed, mirrored glasses. His white shirt was open at the collar, revealing a mat of dark hair so dense that Case at first mistook it for some kind of t-shirt. He arrived*

with a black Hilton tray arranged with three tiny, fragrant cups of thick black coffee and three sticky, straw-colored Oriental sweets." (Gibson, 1984, p. 89)

In *The Windup Girl*, on the other hand, the story brings the characters of different nationalities, ethnicities, and religions together in Thailand, which becomes a center of interest with its unmodified seed reserves. In the novel, "*Anderson and Richard Carlyle along with other westerners, are called 'farangs'*" (Zaidi, et al., 2022, p. 316), and they represent the 'others' as being white imperialists and capitalists exploiting the East. Especially the portrayal of Richard Carlyle fanning himself in his "perfectly pressed linen suit" and hat shows that he leads a leisurely life and does not compromise on elegance, even when coping with the tropical climate (Bacigalupi, 2009, p. 93). This 'perfectly pressed' linen suit is almost the only thing that has remained 'perfect' in this world where everything has gone wrong. Therefore, it implicitly points to a future where those who control the capital are not affected by the miseries into which they drag the world. Parallel with this claim, another privileged group in the novel is the Japanese executives, who often deal with calorie companies such as AgriGen. In the novel, the silk garments worn by their wives signify the wealth they acquired from genehack calories:

"Look at all this important cargo that must be protected!" He flips over a bundle of kimonos. Probably shipped to a Japanese manager's wife. He stirs through lingerie worth more than his month's salary." (Bacigalupi, 2009, p. 49)

The depictions of the workers' bodies and dress in Anderson's factory show how uneven income distribution, cheap labor, poor working conditions and the pandemic affect the lives of ordinary people. They express their gratitude to their employers for the injustice of the world they live in through their body language:

In *The Windup Girl*, unlike the minority holding the capital, the rest of society lives in misery and hunger. The body and clothing depictions of workers in Anderson's factory are quite striking in portraying how unequal income distribution, cheap labor, poor working conditions, and the pandemic affect the lives of ordinary people:

"Women and children wearing triple-filter masks look up and tear away their breathing protection to wai deeply to the man who feeds them. Their faces are streaked with sweat and pale powder. Only the skin around their mouths and noses remains dark where the filters have protected them… The sweating line

> *techs are stripped to nearly nothing—just shorts and tanks and protective head gear."* (Bacigalupi, 2009, p. 9)

Despite their underprivileged positions, Thai workers are still lucky compared to the Chinese inhabiting in Thailand after the Malaysian purge. Although these people are allowed to reside in the country with a yellow card, they do not have work permits. Therefore, many of those starve on the streets. The luckiest among them are those who remain alive and find work illegally. However, even those carry the hardships of their lives on their scrawny and half-naked bodies.

> *"The old Chinese man is nothing but a scarecrow, dressed in rags, but still, he is lucky. Alive, when most of his people are dead. Employed, while his fellow Malayan refugees are packed like slaughter chickens into sweltering Expansion towers. Lao Gu has stringy muscle on his bones and enough money to indulge in Singha cigarettes. To the rest of the yellow card refugees he is as lucky as a king."* (Bacigalupi, 2009, p. 4)

One of Bacigalupi's remarkable narrative decisions in depicting dress is his emphasis on color, which he used to characterize certain groups having occupational, religious, or political affiliations. In the story, the armed forces of the Ministry of Environment are referred to as 'white shirts' because of the white uniforms they wear. Military uniforms are black, and union handlers appear in "*red and gold*" (Bacigalupi, 2009, p. 8). Buddhist monks are characterized by their saffron robes, radical Islamist groups by their green headbands, and protesting students by the yellow armbands they wear. AgriGen people, on the other hand, have "*long sweeping black cloak[s]*" with "*red wheat crest logos*" (Bacigalupi, 2009, p. 348). In this universe filtered by dirt, dust, and rust, using uniforms and clothing articles with distinct colors is a clever decision in conveying society's fragmented structure. Especially in the final chapters, where the physical struggles between these groups increase, the movement and flow of uniformed bodies in the streets offer a city panorama painted with the body. Under these circumstances, while genetic interventions provide human differentiation at the species level, dress becomes the marker of social distinction to define the 'other-human' among real people.

5.7. Concluding Remarks

At World Economic Forum 2018 held in Switzerland, Prof. Yuval Noah Harari gave a speech entitled *Will the Future Be Human*? In his speech, he noted that:

> *"We are probably one of the last generations of Homo Sapiens. Within a century or two, Earth will be dominated by entities that are more different from us, then we are different from Neanderthals or from chimpanzees. Because in the coming generations, we will learn how to engineer bodies, and brains and minds."* (Harari, 2018, 2:43)

These future-oriented inferences made by Harari in parallel with the current developments in science and technology are likely to happen even earlier than he expected. However, it is difficult to predict in which kind of world conjunctures these possibilities will unfold and in which direction the human body and mind will evolve.

Despite the difficulty of predicting the future, the narrative space provided by science fiction offers creative grounds to contemplate different possibilities, and these possibilities, though different, can point to common concerns. At first glance, William Gibson's *Neuromancer* and Paolo Bacigalupi's *The Windup Girl* present two diverse future scenarios. In *Neuromancer*, the posthuman future unfolds within a cyberpunk setting, blurring the distinction between physical and virtual reality. Here, the 'posthuman' is depicted through the fusion of humans with technology. Bacigalupi's *The Windup Girl*, on the other hand, portrays a posthuman future set in a biopunk world. Here, bioengineering, or generipping as referred to in the novel, provides a transitivity, a fusion between humans and animals.

However, despite all their differences, these two novels point to a future where some humans are "*more mortal than others*" (Braidotti, 2013, p. 15) as Braidotti critically argued in *The Posthuman*. The significance of this argument becomes evident in both narratives, where the privileged minority having the opportunity of designing their custom-made evolutions and extending their life spans, left the underprivileged groups to their own destiny. In both conditions, the existence of genetically/technologically enhanced human forms equipped with advanced skills renders the survival of the human-others unnecessary, making them vulnerable to discrimination, exploitation, and even extermination.

CHAPTER 6: CONCLUSION

The emergence of 'posthuman subjectivity' is a critical historical moment that radically deconstructs what we know of humans. By acknowledging the human of humanism as a "*normative convention*" that can be "*instrumental to practices of exclusion and discrimination*," critical posthumanism rejects antagonistic dualisms and the binary logic of identity, which constantly pushes non-normative subjects into the realm of otherness (Braidotti, 2013, p. 26). In this study, science fiction literature is defined as a "*privileged arena*" in the questioning of posthuman ethics "*debated across many discursive and institutional sites*" (Gomel, 2011, p. 340). Particularly the genre of social science fiction, with its affinity to utopian and dystopian thinking, contributes to current debates by dramatizing the possible consequences of technological/scientific progress on collective change of humanity and producing systematical speculations as a form of social commentary.

In this study, the human is investigated both as a social construct and an active subject of its own evolution. Despite its relatively long biological existence on earth, dating back 300,000 years, the human is a recent invention as a subject of knowledge. As the limits and the scope of knowledge expand, the human rediscovers itself in a new light but, more importantly, develops brand-new methods to push the boundaries of its own body and mind. Therefore, the very notion of the human is inherently ephemeral. This assumption echoes Michel Foucault's remarkable statement suggesting that:

> "*man is only a recent invention, a figure not yet two centuries old, a new wrinkle in our knowledge, and that he will disappear again as soon as that knowledge has discovered a new form."* (Foucault, 2005, p. xxv)

This dissertation, written in the field of Design Studies, argues that science fiction narratives, which encourage future-oriented thinking, produce valuable insights into the possible new forms the human body might take in the future. By grasping the literary representations of the bodies in the selected works as design products structured with narrative tools, this study presents a retrospective view of how significant technological changes in history affect the concept of human perfectibility/progress in seminal science fiction novels in a century. The role attributed to dress in the human body's design is another significant aspect of the study.

The detailed analysis of the works proves that the dress (including body modification and body supplements), contributing to the construction of the social/individual identities of the characters, also possesses a significant role in the definition of the discriminated or dehumanized others. In that sense, the literary illustration of the clothed body helps readers visualize the imaginary realm of science fiction and supports the critical function of the narratives.

6.1. Human as an Incomplete Invention

The detailed analysis of the novels has shown that the idea of human perfectibility, which often fosters forward-looking progress, is one of the central ideas rooted in humanism and a recurring theme in science fiction. The eight novels analyzed with a critical reading reveal the diversity of approaches toward the concept of the human. Although each narrative conceives of the human body as an open notion that can change at specific rates, the directions, forms, and causes of the change differ in each example. For instance, the slight change in the human body depicted in Edward Bellamy's *Looking Backward*, and William Morris's *News from Nowhere* is not surprising, given that the future the authors imagined was only a hundred years ahead of their time. However, it is also not surprising to see a radical change in the portrayal of humans in *The Time Machine* since Wells had rationalized the change with a time-lapse of thousands of years.

In the first group of books, the speed of change affecting the human body is relatively slow compared to the other five science fiction novels written since the 20th century. Here, the slowness of the change is very much related to 19th-century humanism, which aligned the notion of human perfectibility with humanistic learning, suggesting that human nature can be improved, tamed, and controlled by the progress of civilization. In this stage, labeled as a 'convergence phase' in the study, the effects of technology on the human body are imagined to be indirect and limited, and the body's health, beauty, and longevity are assumed to be proportional to improving living conditions. Especially in the first two novels (*Looking Backward* and *News from Nowhere*) following the utopian tradition, the ideal society is achieved when people abolish the state and private ownership, resolve the problems of labor and industrialization, and enable their citizens to live equally based on socialist principles. However, despite this similarity in approach, the meanings and values the authors ascribed to the concepts

of ‘human’ and ‘progress’ lead them to portray two conflicting lifestyles in their material manifestations.

In *Looking Backward,* the advanced civilization that Bellamy describes is greatly affected by his faith in industrialization, which he thought to increase economic growth and gradually enhance the living conditions of all segments of society. In this future described by Bellamy, the machine takes over the work requiring physical labor, leaving more time and opportunity for people to educate and take care of themselves. Here, Bellamy’s visions are in line with the idea of technological determinism, which recognizes technology as the most significant element of social change. However, unlike Bellamy, Morris perceives production as a fundamental human trait and opposes the idea of technology-driven progress. Therefore, in *News from Nowhere*, he envisions an arts and crafts paradise where production becomes a source of happiness rather than a burden. In the imaginary society portrayed by Morris, human civilization shows progress when people repair their relationship with nature and reorganize life by revisiting old systems that have worked well in history. In *Looking Backward,* Bellamy’s idea of progress is human-centric, linear, and forward-looking; and his humanism relies on male-dominant logic, which is white, rational, cultured, and bourgeois. This belief, on the other hand, creates a great contrast with Morris’s conception of progress, which he illustrated as a line moving upward on a spiral. This illustration explains the philosophy behind his medievalism and revivalism in imagining the future in *News from Nowhere*.

The authors’ contrasting views that influence the plot are also reflected in how they portray their characters. In *Looking Backward,* although the number of characters is quite a few, it is mentioned that they are vigorous, healthy, and beautiful and grow old late compared to the people of the late 19th century. However, the improvement described here seems to be related to the fact that these characters (the members of the Leete family, in particular) do not contribute to physical labor and have sufficient time for leisure activities (such as shopping, dining outside, etc.) and idling. In this future, where Bellamy democratizes luxury by extending bourgeois habits to society at large, there is no startling change in menswear, for it was already considered rationalized and perfected in the late 19th century. However, womenswear is simplified to rescue the female body from extravagant clothing articles of the Victorian era, which were found

unhygienic and restricting. Although Bellamy does not give much detail in describing women's clothing, the reasonably draped costume he portrays is a relief for Victorian bourgeois society, which was considerably disturbed by the image of the masculine woman proposed by feminists of the period.

In almost all early science fiction narratives that adhere to the utopian tradition, the human body is 'improved' to a certain degree. However, what makes the difference between these works is the way they define 'improvement.' In *Looking Backward*, Bellamy's standards for the ideal body are largely based on Western upper-class ideals (blue eyes, delicately tinted complexion, purity of skin, etc.). However, in *News from Nowhere*, Morris intends to reverse the codes of class-based beauty by honoring the sunburned skins of laborers and embracing variety. His body positivist approach, which is quite progressive for the late 19th century, resonates with the Pre-Raphaelites' unorthodox views, suggesting that "*there is no ugliness… except deformity*"[58] (Haweis, 1883). Morris's approach, which prioritizes diversity in the depiction of the physical characteristics of his characters, also influences how he dresses them. In his classless future society, characters dress according to their tastes and preferences, independent of aesthetic judgments determined by society. These choices are sometimes influenced by climate and weather conditions, as the way of life described by Morris requires a close-knit relationship with nature.

The Time Machine, the third novel analyzed in this group, has a significant position in this study as it brings a third alternative to the existing discussion between Bellamy and Morris. Unlike his contemporaries offering solutions to the problems of industrialization, labor, and class in utopian contexts, Wells, in *The Time Machine*, demonstrates what human civilization might look like in the distant future if current problems gradually deepen. In Wells's dystopian narrative, mechanization, which Bellamy thinks will play a significant role in the development of human civilization, not only fails to create a classless society but also causes humans to evolve into two inferior species, and Morris's hopes for the world's second childhood dramatically end when it becomes the happiness of indolent folk with the intellectual capacity of 5-year-olds.

[58] This probably refers to the bodies deformed by the corset.

This story, which makes *The Time Machine* one of the pioneers of dystopian science fiction, also introduces the very early conception of the posthuman. Wells' post-Darwinian posthuman is an artificial animal that evolves in two diverse directions, parallel to the human activities affecting the planet and the physical divisions that reduce the interaction between rich and poor. In this representation, *The Time Machine* challenges the utopianism of *Looking Backward* and *News from Nowhere* in several ways. Firstly, it subverts the humanist view suggesting that humans are intrinsically good and, given the right conditions, can share the world's resources fairly; secondly, it undermines the belief that advanced civilization will benefit all humanity; and finally, it challenges the anthropocentric perception of the universe by reversing the evolutionary process of humans and ending their superiority over non-human species.

Wells's depiction of the Eloi and Morlocks (two different portrayals of his post-Darwinian posthuman) also seems to respond to Bellamy and Morris. In *The Time Machine*, Morlocks, who abandon the habit of dressing and add the Eloi to their diet to survive, recall the 'ragged' and 'hungry' (Bellamy, 2007) people that Bellamy describes to bring up the income inequality of the 19th century, and the Eloi, living communal lives in monumental buildings in their soft robes, seem to allude to Morris' socialism and medievalism. These similarities support the view that Wells constructs his critical discourse in *The Time Machine* by satirizing two seminal works of late 19th-century literature, which follow the utopian tradition.

By the 20th century, the totalitarian practices of modern states restricting individuality and freedom revealed the hidden dangers inherent in utopias, and the concept of 'human enhancement' took on a new form when the soft technologies of education failed to fulfill their promise of creating an advanced society. In the second group of novels, different than the first group, science and technology become active agents capable of transforming humans' cognitive and behavioral characteristics. In *We* and *Nineteen Eighty-Four*, the population is controlled with technology-aided surveillance and state propaganda. When these methods are insufficient to ensure social stability, the people whose thoughts and actions cannot be controlled in the present system are treated as 'sick' personalities that need to be cured immediately. These treatment

processes involve surgical interventions (such as the Great Operation in *We*), technology-aided punishment mechanisms, and executions.

In *Brave New World*, on the other hand, after realizing that force is no good for the subjugation of people, the controllers invent new scientific methods to eliminate the possibility of political resistance. Therefore, the necessary human resource is developed in hatchery and conditioning centers, subjected to ectogenesis, sleep-teaching, and neo-Pavlovian conditioning. Despite the differences in the control mechanisms described in narratives, in all three novels, the actions of human beings are systematically mechanized to secure the maintenance of totalitarian systems. However, in this stage, labeled as the 'resemblance phase,' the technological interventions directed at the body's physical integrity primarily concern the mind.

In the second group, the concept of 'resemblance' refers to the resemblance of humans to machines, but at the same time, to mass culture, compelling people to look and behave alike. Therefore, the uniforms embody universal human subjectivity, politically-enforced self-discipline, and collective mechanization. In the portrayals of the uniforms, the emphasis on color helps to distinguish one group from another and to represent unity within the same group. In *We*, the pale blue *unifs* and the gold badges carried on the chests represent one's belonging and loyalty to the One State. With this choice, Zamyatin renders the body an extension of the urban environment dominated by the same color. In *Nineteen Eighty-Four* and *Brave New World*, on the other hand, the uniforms consolidate the hierarchical divisions and rank in society. In *Nineteen Eighty-Four*, the inner party members wear black overalls, whereas the outer party members appear in blue. In the five-tier caste system of *Brave New World*, Alphas, Betas, Gammas, Deltas, and Epsilons wear gray, mulberry, green, khaki, and black, respectively, from highest to lowest rank.

The third group, labeled as 'co-existence/mergence,' on the other hand, presents two different future scenarios where the body is subjected to a dramatic change with technological and scientific interventions. The first novel, William Gibson's *Neuromancer*, depicts a future in which the human body can be continuously regenerated by genetic surgeons who intervene in the DNA sequence, cryogenic sleep can extend life by hundreds of years, and the body acquires new functions and properties through various technological implants and body extensions. In this

imagined society, the operations to which bodies are subjected can be carried out either by individual will or through the intervention of third parties such as military, political, and illegal organizations. In *The Windup Girl*, on the other hand, Paolo Bacigalupi illustrates a profoundly inhumane future where bio-engineered new people are exposed to cultural prejudices, humiliations, and physical abuse of all kinds in a world shaped by food-borne epidemics, racism, and terrorism. In this world, new people are designed and educated to serve their owners; therefore, the physical characteristics of each model vary regarding their potential uses, customer expectations, and environmental conditions of where they possibly will live. The common point of these two narratives, which differ significantly in terms of the future scenarios they put forward, is that they both reveal the instrumentality and fragility of the body to a certain degree, and this fragility is shared not only by humans but also the other species in the ecosystem.

Although they present two diverse scenarios about the posthuman future, both novels render the body a malleable entity, a dress that can be given new functions and morphologies with technological and scientific interventions. In these future scenarios, where the distinctions between humans, animals, and machines (biologically, physically, and conceptually) are largely blurred, humans remain heavily dependent on science and technology to adapt to their social conditions and physical environments. In these narratives, the dress also significantly contributes to highlighting the fragmented nature of the world and human subjectivity. In geographically, culturally, ideologically, and economically shattered worlds

The three novels analyzed in the first group (*Looking Backward*, *News from Nowhere,* and *The Time Machine*) provide significant materials in terms of reading the 'direction' of change in the human body through its relations to 'machine,' 'nature,' and 'animal' that draw parallel to the three processes of posthuman subjectivity defined by Rosi Braidotti, including 'becoming-machine,' 'becoming-animal' and 'becoming-earth.' However, in the second group, where *We*, *Nineteen Eighty-Four,* and *Brave New World* are analyzed, the change is realized in a single direction since human perfection becomes equal to mechanization under the repression of totalitarian states. Nevertheless, in all three narratives, the totalitarian systems' urge to produce universal human subjectivity based on modern tenets is challenged by non-modern subjects,

which reminds humans' natural and animal sides embracing wildness, sensuality, and chaos in search of balance. Finally, in the third group analyzing *Neuromancer* and *The Windup Girl*, the human body is opened to genetic and technological interventions, and the distinctions between humans, animals, and machines start disappearing.

6.2. Dialogues with the Non-human and the Human Other

Despite all these differences mentioned so far, the eight books analyzed in the research have certain things in common. First, in each of them, the concept of 'human' (together with all its material and immaterial manifestations) is shaped by its dialogue with the non-human and human-other. The trueness of this argument can be observed in each category with diverse examples. In *The Time Machine*, human evolution is presented as the outcome of industrial progress and scientific knowledge that once enabled them to triumph over nature and non-humans. However, the shape of this evolution, designed as an unexpected devolution, is a clever twist by Wells, opening anthropocentrism into the discussion. With this twist, Wells shows that the presence and permanence of any human activity on Earth depend on humans' ability to make artifacts.[59] However, the same ability, which once gave the weak children of the jungle the strength to survive by making primitive tools, later enables them to invent more advanced devices to help them first recognize, then understand, and finally change the world to suit their needs. In this Wellsian future, on the other hand, this power revealing the distinctive position of Homo Sapiens among other species in intervening in the evolutionary process turns into a curse that gradually leads them to their own extinction.

If Wells' literary style embellished with satirical elements is left aside, the cause-and-effect relationship that he established in the imaginary realm of *The Time Machine* is not genuinely detached from the causality of the physical world. In this realm, Wells' speculations about the future of humanity are based on the principles of Darwinian evolution, in which the rules of natural selection apply to humans as to other species living on Earth. However, since the human of Wells is an 'unnatural animal' that has transformed the ecosystem into an autopoietic system generated by the interplay of nature and culture, even the rules of natural selection are affected by artificial

[59] It is not a coincidence that prehistoric periods are named after the most-common tool-making technologies.

parameters. These artificial parameters, once giving humans an advantage in the evolutionary process, result in their physical and intellectual decline when they leave the act of production to machines and thinking to the living system of nature. This tragic end, written by Wells, reminds Darwin's assertion that human evolution does not necessarily entail progress but can regress to the point where the qualities distinguishing humans from animals are entirely lost. This message explicitly challenges the anthropocentric perception of the universe by ending the superiority of humans over other species.

In many aspects, *The Time Machine* is a valuable early science-fiction text to elaborate on posthuman discussion. It is not just because it confronts the Eurocentric idea of progress or challenges anthropocentrism by redefining 'the human' as an open notion but because it draws attention to the 'human-other' excluded by humanist norms. In the narrative, Morlocks, as the descendants of the Proletariat, represent the dehumanized other. Described as wild, uncanny creatures that bear little physical resemblance to humans, they are the monsters created by civilization, which once forced them to lead a secluded life in underground cities. In this example, the norms of culture defined by an advanced society become the markers of discrimination and part of a discourse that relegates socially neglected and economically fragile groups into the realm of the non-human to secure the interests of a privileged minority.

This pattern repeats in the second and third groups in different ways. Especially in the second group of novels, where Bellamy's idea of the industrial army was borrowed and used in dystopian contexts, civilization creates its counterparts. In these narratives, modern society is imagined as a body functioning like an impeccable machine. Since the perfect functioning of a machine is only possible through the harmonious and uninterrupted operation of its constituent parts, in the imaginary realms of the One State, the World State, and Oceania, the individuals are expected to accept their societal roles without any question or doubt, like cogs in a machine freed from all the conflicting emotions the soul brings. Under these conditions, where people are essential as long as they serve the stability of the autocratic states in power, the system is ready to discard the unfitting. For this very reason, the administrative mechanisms of these modern states utilize advanced technology first to detect, then repair, and

finally to weed out the broken wheels or loose screws that can interrupt the system's functioning.

Especially *We* and *Nineteen Eighty-Four* offer remarkable stories of how the system coerces non-conformists into line and excludes them from the system permanently if they persist in their dissenting views. In *Nineteen Eighty-Four*, the bodies are skillfully sculpted with torture to give shape to the unorthodox minds until they lose their integrity and dignity; and in *We*, where humans are encouraged to achieve machine-like perfectness, the ones whose minds are contaminated with imagination, are executed in publicly staged ceremonies. Here, the executions are not just normalized but also turned into spectacles, where the dissidents are marginalized and humiliated. In this process, where the killing is skillfully justified by a mastermind, the executions are carried out with the help of a machine that allows the human body to be dismembered without human touch, which makes the killing not just easy but also more civilized. Although the social control in *Brave New World* is not maintained through the politics of oppression, a similar system of marginalization is also present here. In the narrative, individuals who fail to conform to the norms of their castes are exiled and cut off from their homes physically and mentally. So, physical isolation is used as a form of social exclusion.

In the imaginary societies of the novels mentioned above, the system labels and excludes the 'human-other' by defining them as different, disobedient, and heterodox. However, in all three novels, there are also those who have never been involved in the system. They are the ones who have completely severed their ties with the modern world and crossed over into the realm of the savage, the uncivilized. Therefore, the presence of the 'Green Wall' in *We*, 'savage reservations' in *Brave New World*, and 'prole quarters' in *Nineteen Eighty-Four* signify the ideological tension and physical separation between the savage and the civilized, animal and machine but in a broader sense, nature and culture. Although expressed differently, these binary oppositions established in the narratives bear a solid resemblance in their search to locate the human somewhere in between.

In *We*, the free folk of the outside world (ones living beyond the Green Wall), resembling wild animals rather than humans in their physical features and attires, appear far more human than the numbers of the One State, disciplined and standardized

through repression. Although the wild is praised in the novel for its capacity to challenge the machine empire with the values it represents, such as freedom, natural wisdom, imperfectness, and anarchy, Mephi's revolution still intends to create a balance through fusion rather than the absolute victory of one group over another. In that sense, it favors creative chaos over inertia, diversity over sameness, and freedom over obedience. Therefore, the revolution against the One State is not only a political attempt to break down the Green Wall and reunite the people of these two opposing worlds but also a philosophical gesture to reconstruct the definition of 'human' by re-establishing its dialogue with the animal and the machine, the nature and the culture, the body and the mind.

Like those living beyond the Green Wall in *We*, the proles embodying the uncivilized other in *Nineteen Eighty-Four* are segregated from the Party members with their settlements. The prole quarters resembling today's slums are characterized by poverty, hunger, dirt, and struggle. However, they are at the same time the only places in Oceania where one can enjoy the little freedoms of life without being watched by Big Brother and the thought police. Nonetheless, this freedom granted to the working class is not a privilege but proof that they are the equivalent of animals; because "*[a]s the Party slogan put it: [only] '[p]roles and animals are free'*" (Orwell, 1949, p. 92). Although the novel implies that living like proles associated with animals might be better than living like machines controlled by the Party, neither of these worlds promises an ideal life as both societies are dehumanized in different forms and degrees.

Also, in Huxley's *Brave New World*, societies built on opposing values marginalize each other in parallel with their social identity and sense of belonging. This situation, reinforced by the discriminatory rhetoric of the rulers of the World State, consolidates the distinction between the modern world and the savage reservations; and secures the five-tier caste system they invented to achieve social stability. In Huxley's *Brave New World*, savage reservations represent the earth-other as being places that have "*not been worth the expense of civilizing*" due to their "*unfavorable climatic or geological conditions, or poverty of natural resources*" (Huxley A., 1994, p. 146). In these settlements surrounded by electric fences, the communication of impoverished communities with the modern world is entirely cut off, and the citizens of the World State can only visit these territories with official permission given for holidays and

scientific observations. Under these circumstances, the people of the savage reservations are treated as exotic animals presented to the watchful gaze of civilized society. Here, the savages represent the dehumanized other from the perspective of modern people. However, the citizens of the modern world, who have been scientifically designed and industrially manufactured in hatchery centers, characterize a new form of dehumanization made possible with science. However, as argued by Kass, "*[u]nlike the man reduced by disease or slavery, the people dehumanized á la Brave New World… don't know that they are dehumanized, and, what is worse, would not care if they knew*"; and it makes them "*the happy slaves with a slavish happiness*" (Kass, 1985, p. 35)

The world, divided into modern and non-modern in the second group, is shattered into pieces in the third, especially in *The Windup Girl*, set in Thailand. In Bacigalupi's post-apocalyptic universe, global capitalism fails to provide safety for people in a world threatened by climate change, deficiency of natural resources, and invasive plagues caused by genetically modified seeds (Capdevila, 2020). In this setting, Thailand becomes the target of calorie companies with its disease-resistant seed reserves, and these companies' effort to take over Thailand's seed bank leads to a clash between the country's Ministry of Agriculture and the Ministry of Trade. However, this clash only shows the tip of the iceberg since the country is home to a diverse population differentiated by ethnicity (Thai, Malayan refugees, Chinese yellow cards, western foreigners known as farang), religion (the Green Headbands, Buddhists), political inclination (the supporters of White Shirts and the Ministry of Trade), and social rank. In this future, where human life is worthless and death is easy, marginalization based on racism and fanaticism leaves the human body open to all kinds of abuse, such as lynching, rape, and murder. The ongoing conflicts between different communities, sometimes bordering on genocide (as in the Incident targeting Malayan Chinese), depict a world where brutality is normalized and practiced at unimaginable levels.

However, survival in this cruel world is most difficult for Emiko, the windup girl who is a bioengineered New People, especially in Thailand, where windups are considered "*empty vessels*" without souls (Bacigalupi, 2009, p. 174). In the story, she is represented as a hybrid creature with the genetic traits of multiple species in her DNA. However, how she is named and portrayed by Bacigalupi also creates the impression

that she is equally machine-like. Although there is no indication that Emiko has a mechanical appendage in any part of her body, her stutter-stop motion giving her identity away and her body heating up when she moves quickly shows that she also possesses qualities associated with machines. Although her body is deliberately created to be fragile at certain points, her story and character development show that Emiko, as a bioengineered product, has advanced features that exceed the purpose of her production.

6.3. Designing Body with Narrative Tools

One of the arguments of this study is that in the science fiction narratives examined within the research, the authors go through a creative process similar to that of designers since they use various design elements such as color, form, and material consistently to construct the future in a way that supports the main idea of the narratives. The following section provides a concise summary of how the authors use color, form, and material in relation to dress to materialize their literary ideas:

Color:

In literary texts, color is a powerful element in the portrayals of dress, contributing to the narrative in various ways. In most cases, it is a marker of difference, distinguishing one group from another or, conversely, a symbol of unity, conformity, and sameness. In the novels examined in this study, the color definitions used by the authors are the outcomes of careful decisions concerning the message that will be delivered to the reader. For example, in *News from Nowhere*, the bright colors used to describe characters' clothing greatly contrast with the dark and gloomy colors of the Victorian Era, which Morris severely criticized; and in *The Time Machine*, the purple and orange tunics worn by the Eloi reflect Wells' attempt to represent the declining human civilization of the future with the material signs of the collapsed Early European aristocracy.

In the second group of novels, on the other hand, color is used to characterize the uniforms. In *We*, the pale blue unifs worn by the numbers of the One State are signs of entropy, conformity, and mechanical collectivism, making the body a part of the built environment, the machine empire dominated by the same color; and in *Brave New World* and *Nineteen Eighty-Four*, it becomes the symbol of hierarchy by

highlighting the difference between the castes and the social ranks. However, in these male-dominated modern states, the female characters benefit from color to manifest their secret rebellions when they find little privacy. In *We*, I-330, who appears in yellow or saffron-colored dresses in the ancient house; in *Brave New World*, Lenina, who wears green although she should be wearing mulberry as a Beta-minus; or in *Nineteen Eighty-Four*, Julia, who colors her face with make-up even though it is forbidden for Party women, show how color can contribute to the embodiment of resistance as an element of design with its ability to create a contrast.

Finally, in the third group, color becomes a marker of difference, contributing to the efforts of both individuals and communities to be visible in society. Especially in *Neuromancer*, where the characters stand out with their individual differences, the bold colors preferred especially by techno subcultures help both the formation of group identity and the easy differentiation of the subculture from the rest of the society. Also, in *The Windup Girl*, the depiction of groups associated with different religions, political views, and professions in dress with different colors (such as Buddhist monks in saffron robes, radical Islamists in green headbands, protesting students in yellow armbands, the armed forces of the Ministry of Environment in white and the military in black uniforms) makes the fragmented state of society visible.

Form:

Literary portrayals of dress in all of the eight novels under review here in this thesis demonstrate a direct correlation between form and identity. Here the term ‘identity’ refers to both individual and group identity, which are occasionally given in conflict. This conflict is often expressed in the stories through the characters’ communication with the clothing articles. For example, in *News from Nowhere*, although Morris is inspired by medieval costumes in general, he mentions that the clothing styles of his characters are largely related to their lifestyles and personal tastes. In this future scenario, where living conditions are heavily influenced by nature and climate, clothing is a facilitator of adaptation to natural conditions and a means of communication that expresses individual differences, in other words, identities. His emphasis on individuality, on the other hand, is very much related to his distaste for Victorian dressing culture, disfiguring the female form with artificial extensions and encouraging standardization through industrially-made fashion items.

In the first group, another thing deserving attention about the dress forms is that the authors tend to borrow them from historical costumes, although each focus on a different period. These narrative choices revealing the timeliness of dress also show its potential to revive the collective memories of the past together with the values it puts forward. Bellamy's portrayal of dress reminiscent of ancient Greek costumes shows the author's urge to find a civilized form for the female body. Morris's emphasis on medieval costumes, on the other hand, is associated with the aesthetic values of the Pre-Raphaelites, and the Artistic Dress Movement they inspired. Lastly, Wells' decision to use simple tunics similar to the ones worn in the early European period is to illustrate the decay of human civilization. These approaches implicitly show that fashion has the potential to repeat itself in history and that these repetitions are not only about forms but also about the values these forms represent.

In the second group, the dress mostly appears in the form of uniforms, emphasizing the individuals' complete subjugation to the collective. Especially in *We* and *Nineteen Eighty-Four*, the uniformity of dress signifies the eradication of individual expression and reinforces the idea that one's existence is only necessary as long as it serves society. However, in both stories, the female characters challenge established norms and encourage individuality through their unconventional choice of clothing, often emphasizing the feminine qualities of their bodies. In the novels mentioned above, the embodiment of resistance by female characters is related to the fact that male-dominated culture enforced by totalitarian systems suppresses women's sexuality, and the uniform eliminates the gender-based differences of the female body. In these novels, where I-330 enjoys wearing antique dresses from the previous centuries, and Julia urges to find a "real woman's frock" to replace her "bloody trousers" in prole quarters, the past meticulously erased by the modern states is resurrected in the form of dress in search of originality and truth.

In the third group, where the number of characters is relatively high, and the rapidly changing plot is quite complex, almost every character and community has a unique way of dressing. In these postmodern works, where the human body is often deconstructed physically and conceptually, the dress is an instrument increasing the visibility of different human subjectivities and community presence in complex worlds shaped by chaos and fragmentation.

Material:

This study reveals that the material is a critical parameter in representing the evolution of dress in science fiction narratives. Although science fiction often incorporates high-tech materials into the narrative, this study shows that the authors' material preferences are influenced not only by their predictions about the future of technology but also by their expectations about the availability of natural resources. For example, in the 19th century, cotton began to replace woolen and linen fabrics due to its suitability for industrial production and printing methods. This situation, closely related to the development of the Manchester cotton industry in England, must have taken the attention of Morris, who was himself a textile designer. So, it does not seem like a coincidence that in *News from Nowhere*, Mr. Guest's printed cotton bag is not much appreciated by the future citizens of England, who are portrayed in beautiful garments mostly made of silk, wool, and linen. So, Morris seems to deliberately reverse the existing situation in his imaginary society to criticize capitalist production, which sacrifices diversity and quality for the sake of fast production and high profit.

In the second group, industrialization, which Morris was skeptical about, leads to the standardization of clothing culture to a great extent. In *Brave New World*, which contains the most vivid descriptions of clothing in this group, anything natural is considered uncivilized. While wool, which is only mentioned to have existed in savage reservoirs, is described as 'beastly,' the natural textile materials have been entirely replaced by their artificial counterparts in the civilized world. Therefore, new materials such as acetate silk, viscose-woolen, or viscose-linen represent not only what the future brings but also what it takes away.

Lastly, in the third group, where the novels portray highly fragmented worlds, the material choices for dress vary depending on the characters and the communities they represent. Particularly in the cyberpunk setting of *Neuromancer*, Gibson envisions futuristic materials that acquire new functions with technology. In particular, Gibson makes materials such as ultrasuede and mimetic polycarbon, which have no equivalent in real life, a part of the narrative, generating speculative ideas about the future of clothing and material technologies.

Neuromancer and *The Windup Girl*, the two novels in the last group, also have one thing in common regarding the materials used in the depictions of the dress. In both stories, the textile materials made of natural fibers seem less accessible in line with the scarcity of natural resources. In the universe of *Neuromancer*, where real meat and trees are apparently rare, it is possible to think that the use of plant and animal-based textile materials has decreased. A similar situation is also observed in *The Windup Girl*, where the global climate crisis has reached its peak. In the story, it is understood that natural silk can still be produced in Japan, which still has natural silkworms, but its production looks limited. Indeed, clothes made of silk are only worn by the wives of wealthy businessmen, and the cost of these clothes exceeds the salary of an ordinary civil servant.

6.4. Dress as a Narrative Instrument

In all eight novels analyzed across three chapters, the literary portrayals of dress contribute to the critical function of science fiction as a powerful instrument of social commentary. The present study thus highlights the multifaceted role of dress as a narrative tool.

Firstly, in these fictional worlds, dress materializes the social structure, cultural norms, and aesthetic values, serving as a significant narrative tool that contributes to the construction of alternative visions for the future of humanity. These alternative visions often challenge and transcend the normative conventions prevalent in our physical world, providing intriguing insights into potential societal transformations. Also, the speculations regarding the future evolution of dress offer glimpses into potential changes in fashion, materials, and functionality, thereby pushing the boundaries of what is conceivable and stimulating the readers' imaginations to envision new possibilities and expand their perception of what dress could become.

Secondly, the way in which the protagonists are dressed in science fiction narratives contributes to cognition and estrangement, two critical functions emphasized in Darko Suvin's definition of science fiction as a literary genre. It serves as a narrative tool of estrangement, effectively distancing the readers from the norms and material forms of their physical world and society, allowing them to explore and question established conventions. In a similar vein, it is a pivotal plot device that profoundly impacts how the stories unfold. It plays a crucial role in representing temporal, spatial (including

real and virtual worlds), situational changes, character transformations, and social conflicts and problems manifested in the narrative.

Lastly, dress is also essential for materializing the concept of ‘otherness,’ which is the subject of both science fiction and posthuman discussion. By depicting the possible forms the human body might take in the future, it helps to take the discussion beyond the limits of traditional Humanism.

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Although using the first person singular in an academic text is not my preferred way of writing, I find it essential to conclude this thesis by putting my personal design experience to the center to illustrate better what I urged to find in this study and what I found in return. Shortly before starting the Ph.D., I simultaneously engaged in two different design practices with vastly different motivations, methods, and materials. The first was sustainable fashion practices, which helped me develop a deeper understanding of the multiple meanings of dress by considering the cultural, economic, and ecological impacts of the textile industry on micro and macro scales; and the second was the textile innovations, which made me aware of the endless possibilities of technology-integrated textiles.

The academic studies I pursued in the field of sustainability showed me that the rampant consumer culture fueled by the fast fashion industry has gradually changed our perception of the dress by degrading it into a mere consumer good and deepened the problems of waste, climate change, labor, and pollution. This problem, on the other hand, was the outcome of a series of mistakes and miscalculations made since the early stages of industrialization, and its magnitude was a testament to how long it has been overlooked. Feeling that the global community was too late to notice a self-evident danger made me think that humanity may have been convinced of a false promise with a well-narrated story. This revelation prompted me to distance myself from future concepts shaped by the design discipline, driven predominantly by industrial expectations and consumer demands, and to adopt a perspective informed by critical narratives approaching the future with a more discerning outlook. At this point, I decided to explore the imaginary territories of science fiction, hoping to understand how they mirror the reality of their respective periods, resonate with the present, and provide valuable insights into the design discipline.

While writing this thesis, I embarked on a time travel through eight science fiction novels I examined chronologically. In this journey, I looked at the past from the lens of the present and explored the future with the visions of the past. This study has revealed that the novels, particularly the ones examined in the first two categories, offered insightful comments illuminating the origins of present-day challenges, while the last two books initiated new discussions regarding potential future predicaments.

The study has revealed the significant value of the three novels analyzed in the first group, as they offer valuable insights into the potential implications of industrial production, which have become more evident in our present understanding. Within this category, the significance of *News from Nowhere*, authored by the globally acclaimed textile artist William Morris, stands out as it profoundly reflects a producer's perspective. In Morris's vision of the future, the dress is a unique element of material culture, which reflects a society's advancements in sartorial sophistication, a product of a creative and labor-intensive process; and a personal signature revealing the wearer' distinctive taste and identity. Therefore, in many aspects, *News from Nowhere* is an artisanal utopia, prioritizing quality over quantity and drawing attention to the significance of the productive knowledge of preindustrial cultures and the necessity of carrying it to the future.

Considering the core ideas it promoted, this study argues that News from Nowhere, often regarded as the product of a naïve reaction against industrialization and modernity, paves the way for discussing various concepts in contemporary sustainable fashion discourse. Although considered revivalist, Morris's aesthetic approach in visualizing the dressing styles of the characters is an essential gesture to achieve cultural sustainability. While he may not have accurately envisioned the evolution of styles, his description of the clothing articles, reminiscent of historical costumes yet not mere imitations, aligns with the current design approaches that put the past and the future in a continuum rather than in opposition. Today, this approach is particularly evident in the sartorial tradition of well-established fashion houses using history and its know-how to invent contemporary silhouettes. In this practice, embracing slowness, the sense of discovery motivating the maker (an artist, craftsman, or designer) to produce is not sacrificed to industrial speed and greed for profit. This approach also dignifies humans' intellectual and physical labor and mastery in creating artifacts.

Strangely enough, these values Morris drew attention to more than a century ago are more meaningful today than in the past. Today, the clothing items Morris dreamed of, where quality material meets craft, are designed only for the elite buyers who make up a small percentage of the total population and are marketed at very high costs. However, middle and lower-income buyers, who make up the majority of the population, are encouraged by the global fashion industry to buy low-cost imitations of these looks. This trade, seen as profitable at first, paves the way for unnecessary

consumption due to the fast fashion cycle that encourages more purchases and products lacking durability, which multiply the problems of waste, environmental pollution, and climate change in the long run.

Another critical concern underscored in this study is the problem of labor, which resonates with contemporary challenges within the textile industry. In the 19th century, the inhumane working conditions of the textile industry had significant impacts on labor movements and the political theories of the revolutionists such as Friedrich Engels. Engels, who co-authored *The Communist Manifesto* with Karl Marx, was acquainted with the textile industry as his father was a manufacturer. His visit to Manchester, the heart of the cotton industry at the time, left him appalled by the prevalence of child labor, environmental damage, low wages, poor health conditions, and alarming mortality rates.

Considering their affinity to socialist thought and the locations where their stories are settled, it is highly likely that Morris, Bellamy, and Wells drew inspiration from the working and living conditions of textile workers while addressing the labor problem. The fact that the Morlocks produce the clothes of the Eloi in their underground factories serves as evidence supporting this claim. Wells's radical separation between the Upperworlders (the Eloi) and Subterraneans (Morlocks) also offers a significant critique regarding the capitalists' handling of the labor problem in the late 19th century. In this grotesque representation, the privileged minority holding the means of production attempts to conceal the present problem by carrying it out of sight rather than resolving it. In this scenario, the underground settlements not only isolate the unpleasant noise, waste, and ugly appearance of the factories but segregate the laborers from the people of the civilized world, who are uncomfortable with their presence.

The social conditions resulting in such a great divide between the rich and the poor in the imaginary future portrayed in *The Time Machine* also resonates with Bellamy's 19th-century portrayal. As described in *Looking Backward,* in the late 19th century, the laborers moving to the urban areas for job opportunities were seen as a problem of social distance and security for urbanites, causing the old settlements, suddenly occupied by tenement houses and manufactories, to lose much of their charm. In response to the emerging problem, the former residents of the cities found the solution by moving to decent settlements.

Currently, the problems addressed by Bellamy and Wells in the late 19th century unfold in different forms. Today, international fashion brands outsource production by establishing new working sites in underdeveloped countries where the production costs are much lower, without paying attention to the inhumane working conditions of employees without job security and social insurance. While the lives of textile workers who produce clothes with heavy chemicals in unhygienic conditions are wasted in workshops, production by-products inadequately treated by companies are often disposed of in the environment without considering their ecological impacts. Therefore, today, the global fashion industry unites humans, animals, agricultural lands, water resources, and essentially everything interconnected on the Earth's surface on the basis of vulnerability.

While discussions about the 19th-century labor issue often center on Marxist perspectives, it is essential to scrutinize it through the lens of posthuman discourse, as it inherently involves the question of human-other and necropolitics. From its early stages, industrial production has changed the human work and life cycle by synchronizing it with the mechanical rhythm, reducing it to a mere tool instead of being the subject of production. Nevertheless, this understanding, identifying the laborers with the machines and thus marginalizing them as the human-others, has made their lives more dispensable. Today, as in the past, some humans are more mortal than others. An unfortunate illustration of this is evident in the lives lost in the harsh working conditions of Manchester cotton mills during the 19th century and the tragic incident of the collapsed Rana Plaza in 2013. In both cases, these lives were deemed dispensable in economic and political terms. Now, it is apparent that this vulnerability does not just impact the laborer's body but progressively extends to the entire ecosystem, encompassing all living beings within it. Hence, this state of vulnerability, as defined by Braidotti as inter-species, is also inter-temporal.

The social structure that turns a dress into a tool of social segregation is another critical issue that the research highlights. This issue, prominently depicted in dystopian narratives, also serves as a powerful reminder of the risks posed by contemporary political narratives that exploit clothing for segregation and humiliation, and the political nature of design and its role in shaping societal perspectives. Especially in *We*, *Brave New World*, and *Nineteen Eighty-Four*, in which the modern world creates the non-modern other as an opposing force, are essential to reminding the need for a

world and a design culture in which nature and culture are handled in a continuum rather than a contradiction and empower each other. In a similar vein, The Windup Girl, in which dress becomes the marker of conflicting ethnic, religious, and political tendencies, demonstrates the need for a world in which design culture, with its global influence, promotes diversity, equality, and inclusion. It holds particular significance in a posthuman future, in which the human body can be designed with the possibilities of science and technology, as hinted by *Neuromancer* and *The Windup Girl.*

Considering these factors, a crucial point highlighted in this thesis is the importance of maintaining a critical outlook when embracing posthuman technologies, expected to transform our bodies and connectedness to the world in profound ways. The failure of industrialization to deliver on its early promises provides a compelling reason to question the future of humanity by looking at today's technologies, especially when their ability to create innovation paves the way for their unconditional acceptance, particularly by the fashion industry, where 'newness' is considered a value.

CURRICULUM VITAE

Elif Tekcan is a fashion designer and academic working at the İzmir University of Economics (IUE), Department of Textile and Fashion Design, since 2012. She received her bachelor's degree in Fashion Design (2012) and master's in Design Studies Program (2015) at IEU. Her research interests include sustainable fashion, circular design practices, and fashion technologies. Since 2012, her design projects have been exhibited in several international events (mixed/group exhibitions, biennials, etc.) held in Turkey, Russia, and China.

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Articles

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