



**LANGUAGE ABSTRACTION AND COMMUNICATION:
FASHION BRANDS' SUSTAINABILITY MESSAGES ON
SOCIAL MEDIA**

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ABSTRACT

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Literature on the relationship between language and social cognition is composed of comprehensive studies from different fields. However, there is no study that addresses language abstraction concept in a sustainable fashion communication context. Therefore, the primary goal of the current study was to examine the linguistic content, language abstractness level namely, of the most valuable fashion brands' sustainable communication messages on social media. In addition, language abstraction level difference among sustainability dimensions were investigated. First, 2021 Brand Finance Global 500 list was examined to identify the most valuable apparel brands, providing a total of 19 brands. After that, 458 sustainable messages shared by these brands on Instagram were analyzed according to the Linguistic Category Model, and then an overall and dimensional language abstractness levels were determined. The results showed that the most valuable fashion brands share

environmental and social sustainability messages on social media communications, whereas do not address economic dimension of sustainability. It was also found that fashion brands use a more abstract language in sustainability communications with consumers. Furthermore, an independent sample t-test analysis demonstrated that a more abstract language is used in social sustainability messages compared to environmental themed sustainability communications.

Keywords: Language Abstraction, Linguistic Category Model, Sustainable Communication, Sustainability Dimensions, Fashion Brands, Social Media



ÖZET

DİLSEL SOYUTLAMA VE İLETİŞİM: MODA MARKALARININ SOSYAL MEDYADAKİ SÜRDÜRÜLEBİLİRLİK MESAJLARI

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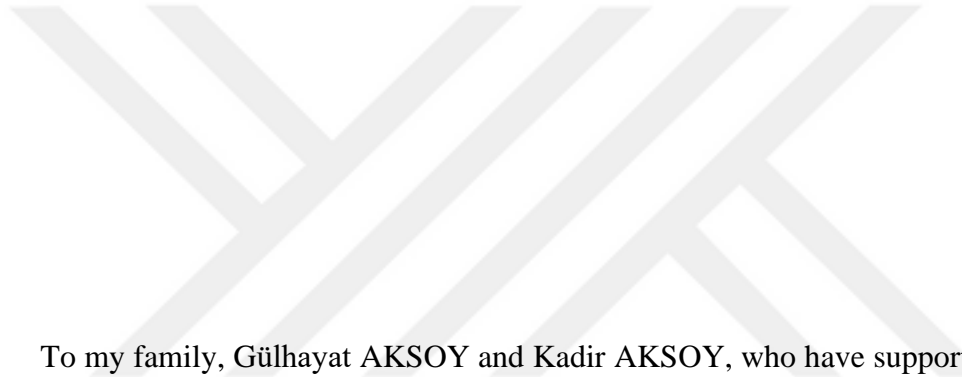
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Dil ve sosyal biliş ilişkisine ilişkin literatür farklı alanlarda yürütülen kapsamlı çalışmalardan oluşmaktadır. Fakat dilsel soyutlama kavramını sürdürülebilir moda iletişimi bağlamında ele alan bir çalışma bulunmamaktadır. Dolayısıyla, bu çalışmanın temel amacı, en değerli moda markalarının sosyal medyadaki sürdürülebilir iletişim mesajlarının dil içeriğini yani, dilsel soyutlama düzeyini incelemektir. Ayrıca sürdürülebilirlik boyutları arasındaki dilsel soyutlama düzeyi farkı araştırılmıştır. İlk olarak, 2021 Brand Finance Global 500 listesi incelenerek en değerli tekstil markaları tespit edilmiş ve toplam 19 marka belirlenmiştir. Daha sonra, bu markaların Instagram’da paylaştığı 458 sürdürülebilirlik mesajı Dilsel Ulam Modeli’ne göre analiz edilmiş, mesajların genel ve boyutsal dilsel soyutluk düzeyleri belirlenmiştir. Sonuçlar, en değerli moda markalarının sosyal medya

iletiřimlerinde evresel ve sosyal srdrlebilirlik mesajları paylařtıđını, srdrlebilirliđin ekonomik boyutuna ise deđinmediklerini gstermiřtir. Moda markalarının tketicilerle srdrlebilirlik iletiřimlerinde daha soyut bir dil kullandıkları da tespit edilmiřtir. İlaveten, bađımsız rneklem t-testi analizi, evre temalı srdrlebilirlik iletiřimlerine kıyasla, sosyal srdrlebilirlik mesajlarında daha soyut bir dil kullanıldıđını gstermiřtir.

Anahtar Kelimeler: Dilsel Soyutlama, Dilsel Ulam Modeli, Srdrlebilir İletiřim, Srdrlebilirlik Boyutları, Moda Markaları, Sosyal Medya





To my family, Gülhayat AKSOY and Kadir AKSOY, who have supported me all my life...

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TABLE OF CONTENTS

ABSTRACT.....	iii
ÖZET.....	v
ACKNOWLEDGEMENTS.....	viii
TABLE OF CONTENTS.....	ix
LIST OF TABLES.....	xi
LIST OF FIGURES.....	xii
LIST OF ABBREVIATIONS.....	xiii
CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: SUSTAINABILITY PHENOMENON.....	5
2.1 Sustainability Dimensions.....	9
2.2 Sustainable Production and Consumption.....	10
CHAPTER 3: SUSTAINABLE FASHION CONCEPT.....	14
3.1 Slow Fashion.....	14
3.2 Ethical Fashion.....	16
CHAPTER 4: SUSTAINABLE FASHION COMMUNICATION.....	17
4.1 Sustainable Fashion Industry.....	17
4.2 Sustainable Fashion Communication on Social Media.....	18
CHAPTER 5: LINGUISTIC CATEGORY MODEL.....	24
5.1 Linguistic Term Classifications.....	25
5.2 Language Abstraction Effects.....	27
CHAPTER 6: METHODOLOGY.....	31
6.1 Sample Selection and Data Collection.....	31
6.2 Quantitative Content Analysis.....	33
6.3 Conceptualization.....	35
6.4 Operationalization.....	35
6.5 Units of Categorization.....	36
6.6 Linguistic Category Coding.....	36
6.7 Abstraction level Index Calculation.....	38
6.8 Sustainability Dimension Coding.....	38
6.9 Linguistic Category Model Coding Examples.....	39
CHAPTER 7: FINDINGS.....	40

7.1. <i>Sample Results</i>	40
7.2. <i>Results for LCM Categorization and Overall Language Abstraction Level</i> ...	41
7.3 <i>Results for Sustainability Dimension Categorization and Dimensional Language Abstraction Level</i>	41
7.4 <i>Results for Pilot and Final Reliability</i>	42
7.5 <i>Results for Abstraction Level Difference between Social and Environmental Dimension</i>	43
CHAPTER 8: CONCLUSION.....	45
8.1 <i>Discussion</i>	45
8.1 <i>Limitations and Future Research</i>	47
REFERENCES.....	48
APPENDICES	63
Appendix A - <i>Codebook</i>	63
Appendix B - <i>Pilot Reliability Analyses Results</i>	65
Appendix C - <i>Final Reliability Analyses Results</i>	67
Appendix D - <i>Overall Language Abstraction Results</i>	69
Appendix E - <i>Dimensional Language Abstraction Results</i>	70
Appendix F - <i>Independent Samples T-Test Analysis Results</i>	71

LIST OF TABLES

Table 1 . Sustainable Fashion Communication Studies	23
Table 2 . The Classification of Linguistic Terms (Source: Semin and Fiedler, 1988; Semin and Fiedler,1989; Semin and Fiedler, 1991).....	26
Table 3 . Top 19 Apparel Brands Listed in 2021 Brand Finance Global 500 (Source: Brand Finance, 2021)	32
Table 4 . Quantitative Content Analysis Flowchart (Source: Neuendorf, 2002).....	34
Table 5 . Sustainability Dimension Key Concepts and Keywords	40
Table 6 . Results for Overall Language Abstraction Level Values.....	41
Table 7 . Results for Dimensional Language Abstraction Level Values	42
Table 8 . Independent Samples T-Test Results	44

LIST OF FIGURES

Figure 1 . Number of Articles about SF between 2000 and 2019 (Source: Mukendi et al., 2019).....	8
Figure 2 . Most Researched Fields in SF Literature between 2000 and 2019 (Source: Mukendi et al., 2019)	9



LIST OF ABBREVIATIONS

ADJ	Adjective
DAV	Descriptive Action Verb
IAV	Interpretive Action Verb
LCM	Linguistic Category Model
SF	Sustainable Fashion
SFC	Sustainable Fashion Communication
SV	State Verb



CHAPTER 1: INTRODUCTION

Fashion industry is one of the fastest growing sectors with industrialization (Orminski et al., 2021). Millions of people around the world, specifically in Asian countries, make a living from this industry. However, aside from the benefits, environmental and social destructive effects of the fashion industry are striking (Caniato et al., 2012). The garment sector, fast fashion brands in other words, causes the 10% of the pollution in the world, 92 million tonnes of waste and 1.5 trillion liters water consumption in one year (Niinimäki et al., 2020). However, despite all these negativities, the sector continues to grow unceasingly. The growing consumption frenzy, particularly with the unstoppable increase in the world's population, reveals the negative side of the industry.

Fast fashion aims to reach more people by making fast and mass production (Fletcher, 2010). Slow fashion, on the other hand, considers both environmental and social benefits (Han et al., 2017). The fast fashion approach, which is in a constant movement and change, is developing every day to make the latest fashion products accessible for consumers and at the most affordable prices (Köse and Aydın, 2020). However, since the current fashion garments are so easily accessible, consumers develop an urge to shop even though they do not need any new clothes. Garment industry, which is one of the sectors where the concept of sustainability is most dominant, causes the destruction of natural resources, the use of highly hazardous chemicals, carbon emissions and tons of waste (Blazquez et. al, 2020). In addition, it draws attention that chain brands employ textile workers under poor conditions and with low wages in order to make the production process cheaper and thus to sell inexpensive clothes (Bindas and Wilson, 1990). Due to all these devastating consequences of the fashion industry, particularly fast fashion, the concept of sustainable fashion (SF) is of critical importance.

In recent years, consumers, who are aware of the fact that fashion should be sustainable for the welfare of future generations, have started to prefer brands that they believe to be sustainable (Morgan and Birtwistle, 2009). The majority of Millennials and Gen-Z consumers prefer to shop from sustainably aware brands (Testa et al., 2021). Consequently, world-famous fashion brands have started to perceive the concept of SF as a marketing tool (Kotler, 2011). Today, brands that want to show that they attach importance to sustainability, perceived as the future of the fashion, are using the power of communication to reach their target audiences (Lee and Weder, 2021).

Most of the sustainability aware brands effectively use social media communication to deliver sustainability messages (Testa et al., 2021). In fact, all brands that want to inform more people about their environmental, social and economic sustainability efforts can benefit from the power of social media, which is an important reality of today. However, if sustainable communication is not performed clearly, it may not be beneficial for both brands and consumers (Evans and Peirson-Smith, 2018).

Instagram is the 6th most used online platform in the world (Kemp, 2020). In the presence of such a large audience, social media communication is of critical importance for brand popularity and communication (Cao et al., 2021). Social media engagement is a very suitable tool for SF brands to achieve success in the market and reach conscious consumers (Testa et al., 2021). Research on SF has received a growing interest within the fields of marketing, communication and management literature (e.g., Testa et al., 2021; Mukendi et al., 2019; Han et al., 2017). However, there is still not enough information to understand the subject comprehensively, such as framing sustainable fashion communication (SFC) of retailers (Mukendi et al., 2019).

Language is significantly important for an effective communication since language affects people's minds (Semin and Fiedler, 1988) and has the ability to persuade people (Brown, 1986). Language is a powerful tool that influences the perception

process and establishes a link between the sender and the receiver (Semin, 2007; 2008). Although language abstraction has become an interest topic for scholarly research (e.g., Hansen and Wanke, 2011; Sar and Anghelcev, 2015; Stapel and Semin, 2007), to the best of the other's knowledge, no research has been conducted in SFC context.

Therefore, the aim of the study was twofold: (1) to examine the linguistic content, the level of language abstractness in other words, of most valuable fashion brands' sustainable communication messages on social media and (2) to investigate the linguistic abstraction differences, if there is any, among the three dimensions of sustainability. Therefore, following research questions are developed.

RQ 1: What is the language abstraction level of sustainable communication messages of the most valuable fashion brands on social media?

RQ 2: Is there any language abstraction differences among the three dimensions of sustainability-themed messages of the most valuable fashion brands on social media?

Current study contributes LCM, SF communication and sustainability literatures by examining the linguistic content of the messages on different dimensions of sustainability in fashion brands social media communications. The contribution of the study to the sustainability literature is to determine which sustainability dimensions apparel brands use in the messages they share on social media. The contribution of the study to the sustainable fashion communication literature is that it examines the social media communications of fashion retailers. LCM has always been used in interpersonal communication until today. But this study focused and examined the communication between the brand and the consumer. This thesis is one of the limited studies focusing on this content.

The following chapters offer a comprehensive, in-depth review of sustainability, SF and SFC concepts. The next chapter on the Linguistic Category Model elaborates on the language abstraction framework upon which the study is anchored. The methodology section throws light on the data collection and analysis methods with which the study conducts. The analysis section revisits the research conducted and makes a critical analysis of the gathered data to answer the research questions. The final section concludes with a discussion and future research agenda.



CHAPTER 2: SUSTAINABILITY PHENOMENON

A reality leaves more and more questions in minds every other day; what happened to the world? As known, human beings were born with the basic instincts for survival, thus people need to produce and consume. However, unfortunately, it is becoming more difficult to meet this need with finite resources. Moreover, the world is struggling to keep up with the increased demands (Gomis et al., 2011). Significant problems, such as climate change and overconsumption, have revealed. Climate change altered the pattern of climate system. For several decades, sea levels started to rise, glaciers started to melt, and numerous animals ceased to exist (Mimura, 2013). Although some of the people do not notice the changes experienced in the climate system, the world has started to call for help. Hansen (2004) highlighted that, in the last 100 years, world's temperature has risen one-degree Fahrenheit, and this caused devastating changes on earth. With the changes in the climate system, a popular notion entered the world stage, namely global warming. Various reasons may cause climate change. For instance, the distance between earth and sun can change the climate, or even a volcano can change our climate (Hardy, 2003). However, it is a fact that humans can change climate as well. Human factor is one of the most obvious reasons of global warming (Cook et al., 2016). Every day, people drive their cars, they cook, they go holidays and above all, people excessively consume. Accordingly, in order to fulfill all these needs, energy is needed. Mass production and never-ending needs of humans cause higher levels of greenhouse gases and they change the world's harmony every passing day. Greenhouse effect is easy to understand because it works just like greenhouses. The logic of a greenhouse is to stay warm inside to grow vegetables or plants (Beck, 2019). Some detrimental gases in the atmosphere such as carbon dioxide keep the heat inside and heat up the surface (Mitchell, 1989). This is called as natural greenhouse effect that people need not to freeze to death. On the other hand, humans caused too much greenhouse effect that leads to global warming. Nature itself will protect people from negative effects of greenhouse gases.

One of the factors that cause climate change and climate crisis is overconsumption (Sturman et al., 2017). Excessive consumption of raw materials, water and energy is exhausting the planet and brings great number of problems. According to Commoner, (1990) overconsumption of natural resources is portrayed as a major threat to the sustainability of the world's environmental systems. People need to change their lifestyles and their shopping routines. Goodwin and colleagues (2003) stated that the world is evolving to become a consumeristic society; people want houses, cars, clothes, computers, mobile phones and services like entertainment or travel. All these reasons have made the concept of sustainability essential.

Although it is hard to believe, the concept of sustainability was not included in human life in the past. Nowadays, when someone enter a market or eat somewhere, he/she can definitely come across the word sustainability. The notion of sustainability has emerged in the 1970's (Caradonna, 2014). Before the 1970's, it was not almost possible to find a book or article in which this word was mentioned. Now, with quick research, it is possible to obtain literally millions of information about this concept. World Commission on Environment and Development defined sustainability phenomenon as:

“the consumption of goods and services that meet basic needs and quality of life without jeopardizing the needs of future generations” (WCED, 1987, p. 36).

World's population is growing day by day, and accordingly production and consumption is growing. Because of the ecological and social harms humans caused, today's consumers want value not only for them but also for the society and future generations. According to Bandura (2007), in order to achieve a sustainable future, environmental problems, overconsumption and social equality must be taken into account.

Many scholars have contributed to the literature by examining the concept of sustainability from different aspects; understanding and practices of sustainability phenomenon (e.g., Walsh et al., 2021), production and distribution phases of sustainability (e.g., Kohtala, 2015), supply chain sustainability concept (e.g., Martins

and Pato, 2019), and SF business models (e.g., Thorisdottir and Johannsdottir, 2019). Research also emphasizes the need for more interdisciplinary sustainability research (Freeth and Caniglia, 2020) which combines different techniques, data and knowledge and approaching a problem from several different perspectives (National Academy of Sciences, 2005).

Many sectors have caused and continue to cause environmental pollution, depletion of natural resources, carbon emissions and unfair production to wreak havoc on the world. Although almost every sector has harmful effects, some of them are too severe and destructive. The rapidly increasing needs for production after the industrial revolution, greenhouse gas emissions and deforestation created primarily by developed countries and then by developing countries, have caused global warming to reach dangerous levels today. Even when the climate crisis is clear as day, people are not truly aware of the causes, especially in underdeveloped countries. Eco Jungle, environmentally oriented community, (2021) recently created a list of most polluting industries, taking into account the harm that industrial wastes cause to humanity and the environment, and the risks it poses to future generations. Five different types of pollution were considered, including air, water, noise, light and soil. The most polluting industries are listed as energy industry, transportation, fashion industry, and agriculture and food retail. Although a lot of research has been done on various industries, such as energy and transportation, and the environmental damages caused (Rabl and Spadaro, 2006), there are relatively few studies on the devastating damage of the fashion industry (e.g., Godart and Seong, 2017; Mukherjee, 2015).

A recent systematic literature review on SF studies shows that research has increased significantly from 2000 to 2019 (Mukendi et al., 2019). Figure 1 shows the increase in the number of articles on SF over the years. According to the study, supply chains, social retail marketing, consumer behavior, consumer practices and communities, social marketing interventions and future leaders and sustainable business models were the most research fields. Figure 2 demonstrates the dominant fields of research and the number of articles published. Moreover, although research on SF has

increased, there are still gaps in the literature including SFC framing in retailing context (Mukendi et al., 2019).

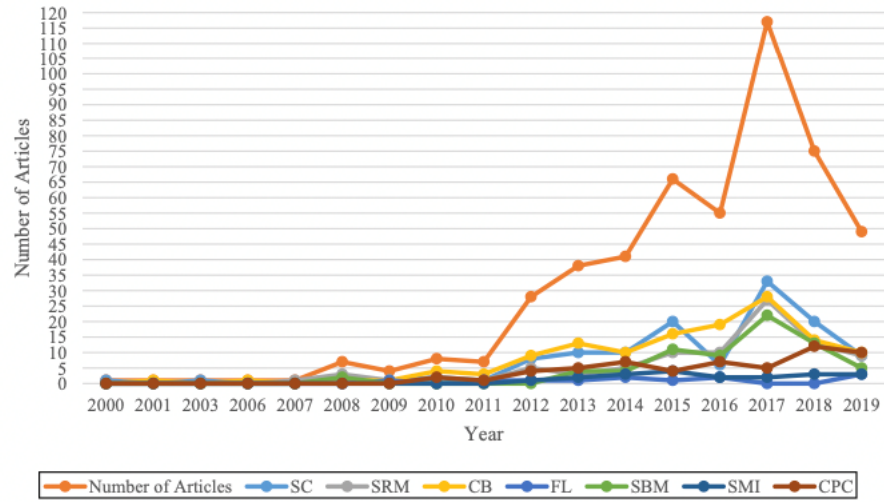


Figure 1 . Number of Articles about SF between 2000 and 2019 (Source: Mukendi et al., 2019)

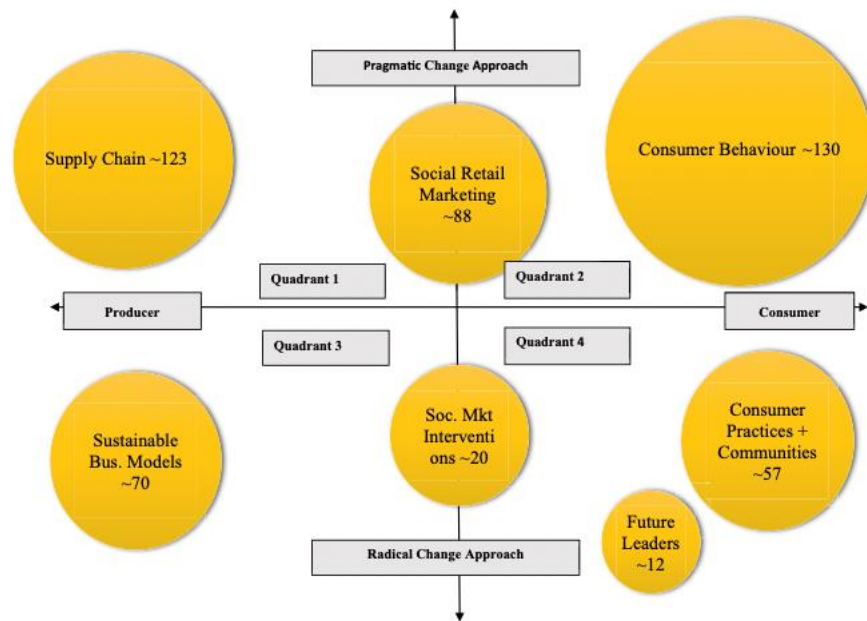


Figure 2 . Most Researched Fields in SF Literature between 2000 and 2019 (Source: Mukendi et al., 2019)

2.1 Sustainability Dimensions

“Triple-Bottom-Line” approach considers sustainability as a three-legged system integrating environmental, social and economic concerns (Elkington, 1998; Morelli, 2011). Similarly, Kuhlman and Farrington (2010) stated that sustainability phenomenon can be represented with three words which are people, planet and profit.

The first pillar of sustainability is environmental dimension. The well-being and continuity of the human race are directly linked to the environment. Industrialization and increased production have led to a critical reduction and destruction of natural resources (Page, 2015). Environmental pollution, air pollution, water pollution and carbon emissions are seen as the most frightening consequences of industrialization (Chen et al., 2008). This change in natural life reaches a level that endangers the lives of both people and living things. Environmental sustainability can be defined simply as leaving a healthy environment for humanity and future generations, protecting non-renewable natural resources and using renewable natural resources

correctly (Güner, 2020). In an ideal system, it is critical to take care of the proper use of resources to be environmentally sustainable. The environmental dimension highlights ecosystem integrity (Kong et al., 2021).

The popularization of social sustainability began in 1987, after the Brundtland Report published (Vallance et al., 2011). Although the environmental dimension is still the first aspect that comes to mind when sustainability is mentioned, social sustainability is in fact equally critical. Güner (2020) stated that social sustainability requires elements such as people, especially employees, to have the high standards they deserve, people from different cultures to have equal conditions in the society and to educate people to contribute to society. Social sustainability requires that all members of a society be provided with equal conditions and their vital needs are met (Bilgili, 2017). The social dimension also refers to participation, empowerment and cultural preservation (Kong et al., 2021).

Until the recent past, it was predicted that the world had unlimited resources and production was carried out with this thought (Goodland, 2002). In order to achieve sustainable development, the economic dimension is as important as environmental and social factors (Pearce, 1988). Therefore, Repetto (1987) highlighted that for the realization of the idea of sustainability, economic systems must be managed correctly. Economic sustainability can be defined as not wasting future generation' capital upfront (Solow, 1992). Gedik (2020) argued that companies must pay attention to the environmental consequences of their decisions while performing their economic activities in the context of economic sustainability. The economic dimension focuses on household needs, labor efficiency, and industrial/agricultural development (Kong et al., 2021).

2.2 Sustainable Production and Consumption

While neo-classical economy aims to grow continuously, it has been revealed that economic empowerment alone is not sufficient for the welfare of people and nature. The environment, which ensures the survival of human beings, is experiencing

significantly difficult times due to this vicious production approach. Satir (2014) stated that both environmental and social problems are observed in countries where consumption is thought to be directly proportional to the level of welfare. While the world is growing economically, new approaches are needed in order not to harm both humanity and the environment. This new production system is called sustainable production.

Sustainable production means manufacturing by using natural resources consciously. Environmental sustainability approach also recommends companies stop using non-renewable natural resources irresponsibly and create new alternatives. Likewise, it is expected that the wastes caused by the companies while producing are recycled and made choices that will protect the natural life (Güner, 2020). Economically, sustainable production aims at healthy growth for both workers and consumers. It also obliges all employees to work under the right conditions and to be treated equally. In other words, sustainable production is related to the entire product cycle. It is aimed not only to manufacture using sustainable materials, but also to make the entire production process sustainable (Manufacturing, 2021). To summarize, the aim of the manufacturing sector should not be just to get rich and make a profit, and sustainable development must be supported (O'Brien, 1999). Addressing social concerns in sustainable development and production is also critical. According to Eizenberg and Jabareen (2017), sustainable production should be a social model as well as its economic and environmental dimensions. For instance, it cannot be mentioned without eliminating the injustices in the production phase. Thus, providing equal conditions to employees, ensuring that they work in a safe environment and eliminating discrimination are essential for ensuring sustainable production.

Overconsumption is seen as one of the dangers that hinder a sustainable future (Brown and Cameron, 2000). Francois-Lecompte and Roberts (2006) argued that consumption and consumer behavior are directly related to environmental problems. In order to achieve a sustainable future, the consumption habits of consumers must be changed. Therefore, the practices of sustainable consumption need to be promoted.

The fact that production has become easier with industrialization, and that many people can access so many varieties very easily, has increased the habit of shopping even if it is not needed (Hayta, 2009). However, the increasing environmental, social and economic crises have gradually caused consumers to become conscious. Roberts (1995) stated that ethical criteria are of great importance in the decision mechanism of consumers while shopping. On the other hand, he also mentioned that criteria such as price, quality and suitability of a product are always prioritized. If a product meets all these requirements, then the possibility of sustainable consumption can be mentioned. In addition, Hayta (2009) suggested that to adopt a sustainable consumption approach, consumers must first be aware of its importance and then get involved into the process. Therefore, education and sustainability communication of brands play a significant role. In order to achieve a sustainable future, both having conscious consumers and making conscious production are essential.

According to Roy and Singh (2017), a sustainable production and consumption transformation for the business environment is of great importance, and thus, companies are obliged to turn their business focus accordingly. Niesten and Lozano, (2015) argued that for a sustainable life, both production and consumption systems should be integrated. It is critical for the business world to actively participate in the transformation of production and consumption to a more sustainable form. Therefore, the first thing the business environment can do is to provide more information and raise awareness about this transformation through education (Roy and Singh, 2017). In addition to training, strategic solution sets should be prepared for practical purposes. A number of strategies should be determined for the organization to undergo a more sustainable transformation and to adopt the philosophy. The organization should also determine a number of methods for its target audience to adopt this. Companies should take sustainability-oriented decisions while considering their economic gains and taking steps in this direction (Barber, 2007).

Both the economic systems and societies have been in constant change, which makes it difficult for consumers to keep up with the change and to continue old consumption habits (Spangenberg et al., 2010). In the fashion industry, there is an

understanding of design for sustainability that aims to find sustainable solutions while designing products that consumers are used to and demanded (Spangenberg et al., 2010). In the light of this information, a large share falls on SF for the transition to a sustainable system, production, consumption and world.



CHAPTER 3: SUSTAINABLE FASHION CONCEPT

Mukendi and colleagues (2019) stated that SF is a combination of various behaviors and understandings. For example, a garment to be sustainable, it must have many characteristics. Some of these features can be defined as being ethical, recyclable and going through sustainable processes. The main purpose here is to use natural resources as little as possible, to prevent clothes from becoming a waste, to reduce carbon emissions and to be able to wear clothes for a longer period of time. According to Black (2011), there are some methods to benefit while producing sustainable clothing. These methods are recycling, up-cycling, using organic resources, using organic dyes, producing enduring clothes and using new technologies. Today, many brands design with these applications. Jestratijevic and Rudd (2018) defined SF as an understanding that covers the entire business model. This includes the conditions under which the production is made, by whom it is made, and even how it is packaged. To sum it up, SF refers to:

“ecological integrity, social quality, and human flourishing through products, action, relationships and practices of use” (Fletcher, 2008, p.18).

Although SF has similarities with slow fashion and ethical fashion concepts, they have different meanings (Mukendi et al., 2019).

3.1 Slow Fashion

It is an ever-changing world. In real terms, production does not stop for a second. This dizzying speed may not have been able to tire the consumption freaks, but it is an undeniable fact that the planet is tired. In the past (in fact, in the recent past) being fast was seen as a strength. Everything that was achieved quickly reduced the business of modern life to some extent. First, the concept called fast food entered human life thanks to McDonalds. Then everything suddenly became even faster. Meals prepared with the freshest meat, vegetables and fruits were replaced with fast products that were on your table in just 3 minutes. As such, the spread of the slow culture movement is an inevitable end (Fletcher, 2010).

Consumers, whose eyes are slowly starting to open up, then set their eyes on the fashion industry. It began to be understood that this “speed”, being able to buy a dress anywhere in the world, in an infinite number of times and at a very affordable price, comes at a price. The concept of fast fashion is one of the expressions that this speed adds to people’s lives. Fletcher (2010) underlined that fast fashion approach is similar to the fast food movement. As in the food sector, cheap, fast and mass production is aimed in the fashion sector. Clothes purchased from big chain brands are usually made of fabrics of very low value and durability. Thus, the dress or jeans one buys cannot withstand even a few washings and will immediately become out of shape or fall apart. When people encounter such a situation, they throw that product in the trash and buy a new one because it was already cheap. Thus, consumers become an instrument of an endless consumption cycle, albeit unintentionally.

The slow fashion movement is a vision that was initiated, even built, to stop this cruel cycle (Štefko and Steffek, 2018). In its simplest form, slow fashion is the exact opposite of fast fashion. Aiming primarily at raising awareness, this trend encourages an understanding of which stages and resources are used while producing an outfit. Although many people think that the “slow fashion” trend recommends not shopping, in fact, it’s all about buying better quality products (Jung and Jin, 2014). These better-quality garments are much more durable and can be used for years, unlike products that deform and break down in a single wash. Being able to use a dress for years has a positive effect on both consumers’ budget and nature.

Slow fashion movement promotes slow fashion brands to use organic, durable and high-quality garments during the production phase (Jung and Jin, 2014). Fast fashion is built on ever-changing trends. An outfit goes out of fashion within a season, and new trends emerge in its place. Slow fashion, therefore, encourages making more timeless products (Štefko and Steffek, 2018). Consequently, the same product can be used even if times change and new trends emerge. Moreover, clothes produced in accordance with the slow fashion movement are usually produced using local fabrics, with much less energy consumption and sold in local shops (Cataldi et al., 2017).

3.2 Ethical Fashion

Ethical fashion refers to the process of producing garments in an ethical way and at the same time providing equal and fair standards to the workers (Joergens, 2006). Stanton, (2021) explained ethical fashion as the consideration of both the environment and humanity in the production and distribution stages of a product. Thus, it is an understanding that has the purpose of creating an ideal world for today and the future.

The importance of the concept of ethics in the fashion industry is increasing gradually. While awareness of SF is taking the world by storm, consumers know that using only organic fabrics does not make a brand sustainable. Most people want to think that the brand they shop from treats their employees well and provides the working conditions they deserve (Gam et al., 2010). In the past, this situation did not affect consumers decision-making much while shopping. But now for many people, the ethical values of brands affect their decision-making processes. It can be observed that consumers reward brands that treat their employees well, and punish brands that behave badly, especially thanks to the awareness that occurs after tragic events, such as the Rana Plaza accident (Reinecke and Donaghey, 2015).

Today, many people want to learn about the production stages of the apparels they buy and demand that brands be transparent about their policies. For this reason, many chain brands act become more transparent to their target audience and attach importance to manufacturing fair trade products (Shen et al., 2012). To summarize, to comply with the ethical fashion approach, production, product and others subsequent activities of a brand must be carried out in a way that do not harm the environment. Likewise, employees are expected to receive the treatment they deserve under decent conditions (Shen et al., 2012).

CHAPTER 4: SUSTAINABLE FASHION COMMUNICATION

4.1 Sustainable Fashion Industry

The traditional fashion industry involves constant change, an endless variety of products and an ever-increasing demand (Sen, 2008). Fashion industry is one of the oldest, most established and prolific sectors in the world (Orminski et al., 2021). It seems that fashion industry's impact on humanity and environment will continue to increase. This sector requires a very polluting process among which a lot of chemicals, water and natural resources are used (Kozłowski et al., 2012). According to NCGreenPower report (2017: 1):

“at least 8,000 chemicals are used to turn raw materials into textiles and 25% of the world's pesticides are used to grow non-organic cotton. This causes irreversible damage to people and the environment, and still two-thirds of a garment's carbon footprint will occur after it is purchased”.

Fashion industry is one of the most polluting industries and accounts for almost 8% of the carbon emissions and 79 billion cubic meters of water consumption every year (Ganz, 2020).

The market value of fashion sector is exorbitant but unfortunately, the negative impact of fast fashion is higher. Especially in the Middle East and Asian countries, the main income of many women and families comes from the fashion industry (Bhattacharjee, 2019). In these countries, production is carried out very quickly and with low wages. These garments are then exported to developed countries. Inexpensive garments are exported to chain brands and these clothes are sold all over the world. Having access to these clothes at a much more affordable price triggers people's motivation to shop. Niinimäki (2013) argued that this process is the basis of acquiring unsustainable shopping habits. Moreover, unsustainable decisions result in purchased clothes becoming waste in a short time. Nowadays, while production and consumption are at the peak levels, the concept of SF is aiming to extend the lifespan of garments (Hall, 2018).

On the other hand, in this sector where trends are constantly changing, a long-worn outfit can mean old fashioned, creates a paradox for consumers. Although it is obvious that a new outfit is no different from the previous season, fashionable clothing attracts most of the consumers. And as a result, tens of kilos of clothes a head are literally garbage every year in big countries like America and England (Siegle, 2011). After all this process is clearly revealed, the concept of SF comes into play and consumers gradually begin to become conscious.

Many people think of SF as a strict shopping diet. Although shopping less is a method, it is definitely not a sustainable solution (Chan and Wong, 2012). Primarily, the main task for a SF industry falls upon the producers before the consumers. Although some big fast fashion chains try to increase their sales by creating a new consumption understanding under the guise of sustainability, production and consumption should be slowed down consciously according to the SF concept (Johansson, 2010).

The first steps of the fashion industry towards sustainability started with the anti-fur groups and their campaigns that emerged in the 1980s (Kutsenkova, 2017). Later, some leading luxury fashion brands started to produce with sustainable methods and attracted attention (Dach et al., 2014). Moreover, in 2013, Rana Plaza collapsed in Bangladesh and 1,132 workers lost their lives (Land and Zakaria, 2019). There were accidents like that before and it happened again after, but the Rana Plaza accident considered as awakening about poor conditions of labors and the negative impacts of fashion industry. With the echo of this tragic event, it turned out that social sustainability has a very critical place in the fashion industry.

4.2 Sustainable Fashion Communication on Social Media

With the spread of the SF movement, brands have made a big change in both their marketing strategies and communication methods (Lee and Weder, 2021). Even fast fashion brands known for their fast-changing creations have come under the influence of the sustainability movement and have promised to make changes to their

production cycles. Consumers' adoption of an eco-friendly perspective has also prompted textile brands to be more sustainable. In other words, as the demand for eco-fashion increased, sustainable media communication became more significant.

Goworek and colleagues (2013) claimed that consumers can make sustainable decisions with the sustainability strategies. In other words, if consumers are made aware of the consequences of their fashion decisions, a change in their behavior can be observed (Morgan and Birtwistle, 2009). Consumers also feel less guilty about their unsustainable decisions when they have not enough information about the production processes of products (McCreech et al., 2018) Therefore, it is very important to inform consumers comprehensively. Han and colleagues (2017) stated that brands should provide clear information and explanations about their products in order for consumers to make more sustainable decisions. Thus, the destructive effects of the fashion industry, both environmental and ethical, can be reduced, albeit slowly.

The most challenging part of SFC for brands is to talk about the negative effects of fast fashion and overconsumption while continuing to sell their products (Black, 2011). Therefore, it is necessary to reach the right target audience and share messages that will attract the attention of consumers. Da Giau and colleagues (2016) argued that brands should provide information about their environmental and social behaviors and efforts in order to show their sustainability approaches to their target audiences. Social media seems to be one of the best tools to achieve this goal. Since social media platforms are one of the most preferred communication tools and they offer opportunities to appeal to a large audience all around the world (Strähle and Gräff, 2017).

Nowadays, brands and consumers interact on social media which also increases the purchasing motivations of consumers and even influences their close circles with positive word of mouth (Ko and Megehee, 2012). For instance, it was shown that retailers' sustainability efforts cause positive word-of-mouth (Sánchez-González, et al., 2020). Apparel brands also have realized the importance of building brand loyalty and communicating with their target audiences using social media platforms (Kim and Ko, 2010). Recently, Instagram has become a platform where textile

brands directly communicate with their consumers (Testa et al., 2021). O'Connor (2018) stated that Instagram is the most preferred platform for fashion brands to deliver their messages to their target audiences. The more positively consumers respond to retailers' green communication, the greater their sustainability behavior (Lee et al., 2012).

Considering that social media has such a great impact, it is very important for brands to pay attention to the interests of their target audience (Kong et al., 2021). Therefore, fashion brands should share content with sustainability messages on online platforms and exchange value with consumers (Strähle and Gräff, 2017). Brands experiencing green transformation have to use the power of social media and communication in order to show this process to their consumers with all its clarity. This is because derivational words about SF can already be quite confusing (Thomas, 2008). Along with SFC, "eco", "green", "organic", "reuse", "up-cycle" and many similar words entered the lives of consumers. Consumer' behavior can only be changed when they understand what these concepts mean and what they serve. In other words, brands need not only to overcome the competition in the market, but also to keep up with the new reality of SF business concept (Da Giau et al., 2016). Accordingly, it is vital to determine a successful SFC strategy on social media.

Today, all luxury brands, global chain brands and small and local businesses make a great effort to differentiate themselves from their competitors. Therefore, a variety of SFC strategies are determined. However, as Gibson (2005) stated, it is not easy for brands to attract attention and differentiate themselves, as consumers are exposed to 3,500 marketing messages every day.

Since the target audiences of luxury fashion brands and chain fashion brands are quite different, the reactions of these people to situations also vary (Lee et al., 2018). Lee and colleagues (2018) revealed that luxury brands share less sustainable messages on social media. However, it has been found that the reactions they receive from consumers provide more consumer engagement. This ultimately proves that luxury fashion brands have a major role in SF communication (Lee et al., 2018). According to Tugrul and Gocer (2017), brands that appeal to a wide audience on social media should use this power to raise awareness. Mosca and colleagues (2018)

suggested luxury brands to convey “responsible luxury” messages in social media communication. Moreover, Kong and colleagues (2021) argued that both luxury and non-luxury fashion brands should pay attention to their awareness cultural settings when sharing sustainability-related content. In addition, it was found that sustainability communication of non-luxury fashion brands is more effective than luxury fashion brands. Moreover, cultural and environmental claims were highly effective on purchase intentions for non-luxury brands. Therefore, beside environmental dimension, cultural sustainability is promising research area for sustainable communication studies (Kong et al., 2021). Similarly, Dickenbrok et al., (2018) highlighted that it is necessary to choose the right communication strategies when addressing consumers from different cultures. Furthermore, Evans and Peirson-Smith, (2018) argued that if the terminology preferred by fashion brands is not understood by the target audience, it causes a big problem rather than a positive result and thus does not contribute to the sustainability efforts of consumers.

For successful social media marketing, properly executed social media communication is of great importance. That’s why companies invest heavily in their social media strategies (Wu et al., 2020). Brands that want to achieve consumer engagement with their contents and posts can instantly see the rewards of their efforts and communicate directly with their target audiences. Today, since consumers are more conscious, fashion brands are more likely to benefit from sharing sustainability messages by using social media platforms.

Among the most prominent of these strategies is environmental advertising (Minton et al., 2012). When environmental marketing studies are examined, it has been observed that environmental advertising affects the decision mechanisms of consumers (Kim and Lennon, 2008) According to Moser (2015), a great majority of consumers are now experiencing “climate anxiety”. Therefore, they do not want to harm the environment when making shopping decisions. Segev and colleagues (2016) stated that when consumers understand the green efforts of brands through environmental advertising, they are more likely to believe these messages, make purchases and recommend these brands (Strahle and Graff, 2017). Pittman and colleagues (2021) suggested that as environmentalism become more prominent, consumers will tend to buy green products if they perceive the brand’s sustainability

claims are sincere. In addition, Kim and colleagues (2017) highlighted that these advertisements increase consumers' positive feelings towards brands. Thus, fashion companies should carefully understand reactions and evaluations of consumers to sustainable advertising activities on online platforms (Kong et al., 2021). Studies on SF are presented in Table 1.



Table 1 . Sustainable Fashion Communication Studies

Main Research Theme	Sustainable Fashion Communication Studies
Remanufacturing and Retailing Communication	Şirin Gizem Köse, Kenan Aydın, 2020; Sanchez-Gonzalez, Gil-Saura, Ruiz-Molina, 2020; Straehle, Jochen and Kreuzhermes, Sarah, 2017;
SF Communication Across Different Cultures	Blazquez, Henninger, Alexander, Franquesa 2020; Candelo, E., Casalegno, C., Civera, C., & Mosca, F. 2018; Corinna Dickenbrok, Luis F. Martinez, 2018; Morgan, L.R. and Birtwistle, G. 2009
Green Communication	Black, S. 2011; Kim, M., Chun, E., Ko, E., 2017; McCreesh, Jones, McIntosh, Storey, 2018; Moser, Andrea K. 2015; Radclyffe-Thomas, N. 2018; Segev, Sigal, Juliana Fernandes, and Cheng Hong. 2016; Thomas, S., 2008
Customer Communication Through Different Channels	Da Giau, A., Macchion, L., Caniato, F., Caridi, M., Danese, P., Rinaldi, R. and Vinelli, A. 2016; Gibson, O. 2005; Ko and Megehee, 2012; Kong, H. M., Witmaier, A., Ko, E. 2021; Lee and Weder, 2021; O'Connor, T. 2018; Jeanette Orminski, Edson C. Tandoc Jr., Benjamin H. Detenber, 2020; Pittman, M., Oeldorf-Hirsch, A., Brannan, A. 2021; Strahle, Graff, 2017; Wu, C. W., Guaita Martínez, J. M., Martín Martín, J. M. 2020

CHAPTER 5: LINGUISTIC CATEGORY MODEL

Communication is one of the most substantial tools that people use throughout their lives (Semin, 2008). In other saying, communication is required for everything from the most basic needs like feeding ourselves to defending our thoughts. Words are highly effective in changing people's perceptions, thoughts and decisions. The link between communication and social cognition is interpreted in two different ways. One group argues that language affects the thought system, while the other says that language has developed and continues to develop thanks to social cognition (Semin, 2008).

Since this is an era of production and consumption frenzy, and people actually allow the language of others to influence their ideas every day, there is an undeniable link between the language used by brands and our shopping habits (Hansen and Wänke, 2011). But the marketing industry noticed this relationship a long time ago and started to take advantage of it. Specifically in advertisements, language and images are used as a tool to attract people's attention (Han et al., 2017). Brands have discovered the importance of using the right words and phrases to increase product sales. It would not be wrong to say that this is a successful invention for the marketing industry. While the brands that succeeded in establishing bonds with users through their successful advertising projects gained a very important place in the sector, those that failed unfortunately lagged behind the industry (Vinerean, 2017).

Throughout history, the communication between language and social cognition has always been a subject worth investigating (Markmann et al., 2021). Numerous studies on communication proved that there is an important link between social cognition and language (Semin, 1995). As Semin (2007) explained, language is functional. In addition, it has a great influence on the mindset of the recipients (Reitsma-van et al., 2007). Therefore, apparel brands must use language to engage and establish a bond with consumers in a desirable way. In other words, language is as critical as the presence of apparel brands on social media.

There is a dialogic link between language and social cognition. Semin (1988) proved this important link, which affects actions and decision-making mechanism, with Linguistic Category Model (LCM). LCM is emerged from the questions of “what is language for?” and “does language shape the way we think?” (Semin, 2008). In terms of LCM, words are both a tool used to represent thoughts and have the power to shape those thoughts. LCM is defined as a language model developed to explain social situations and events (Semin, 2007).

5.1 Linguistic Term Classifications

LCM separates word groups according to the meanings they represent, rather than the meanings of words themselves. According to this model, there are four different word groups which are “Descriptive Action Verb” (DAV), “Interpretive Action Verb” (IAV), “State Verb” (SV) and “Adjective” (ADJ).

DAVs are words that can be used for the verbs, which can be observed and do not need an interpretation. Examples of these are the following words include “fly”, “dance”, “walk”, “open”, and “play”. IAVs are open to interpretation. Although used to describe behaviors, just as DAVs, these words can have negative or positive connotations, such as “push”, “annoy”, and “help” (Maass et al., 1989). SVs have a much more abstract meaning. It is used to express the emotional state of people rather than a situation. For instance, “hate”, “love”, and “envy”. Finally, the most abstract ones are ADJs, which are completely open to interpretation; reflect the personal characteristics of the people. Examples of this are the words “adorable”, “aggressive”, and “open-minded”. The classification of linguistic terms and their characteristic features are provided in Table 2.

Table 2 . The Classification of Linguistic Terms (Source: Semin and Fiedler, 1988; Semin and Fiedler,1989; Semin and Fiedler, 1991)

Category	Examples	Characteristic Features	Classification Criteria
Descriptive Action Verbs (DAV)	Call Meet Kiss Kick	Refers a behavioral event; can be seen by an observer; has a definite beginning and end	Require a physically invariant; generally, have a neutral meaning.
Interpretive Action Verbs (IAV)	Help Cheat Hurt Excite	More than a mere description; refers to single behavioral events	Have a positive or negative meaning; require interpretation.
State Verbs (SV)	Explore Hate Admire Love	Refer to enduring states; refer to psychological state of the subject	Cannot be seen by an observer, they are situations that only the subject of the situation can know; no definite beginning and end.
Adjectives (ADJ)	Happy Honest Helpful Reliable	Refer to highly abstract personal features; enduring states; high disputability	Have a general meaning; do not refer to a specific situation.

Semin and Fiedler (1988) proposed that the classification of linguistic categories depends on five different cognitive implications. These are enduringness, subject informativeness, situation informativeness, verifiability and disputability. Enduringness allows people to generalize about a person or topic, and there are differences in enduringness in all four categories. DAVs describe events that can be observed by an observer at that moment and have a beginning and an end. And this is not enough to form a general judgment about a person's character. ADJs and SVs, on the other hand, are more enduring states because they make a general judgment about personality. Subject informativeness, which is another classification criterion that allows distinguishing categories from each other, focuses on how much information the linguistic category gives about the subject. DAVs are the category that gives the least information about the subject. It is generally used to describe an event. ADJs, SVs, and IAVs provide more information about the subject. The examples to support this proposition are “John loves (SV) Penny”, “Leonard is stubborn (ADJ)”, and “Anna manipulates (IAV) her friends”. Situation informativeness focuses on how

much information is given about the subject's situation. DAVs have high situational informativeness as they indicate a specific and concrete situation. On the contrary, ADJs do not provide situational informativeness, as they only provide information about the personal characteristics of the subject. The fact that the sentences can be verified by an observer or not also helps to understand which linguistic category the verbs belong to. Both DAVs and IAVs refer to a visible action. But IAVs are more open to interpretation. It can still be verified by an observer. SVs, on the other hand, cannot be verified by an observer, and the only person who can verify is the subject himself. The same is true for ADJs, and even the subject's status is open to discussion as it lacks clarity. Another criterion that determines linguistic categories is disputability, and as abstraction increases, so does disputability. Adjectives can be said to be the category with the highest disputability, followed by SVs, IAVs, and DAVs, respectively.

5.2 Language Abstraction Effects

Huang (2020) stated that people opt for abstract or concrete language during communication. It was observed that the phraseology preferred when describing an event causes different inferences from a message. Schellekens and colleagues (2010) suggested that an event can be represented by both a concrete and abstract language. Using a concrete language explains and reveals the situation very clearly. Preferring an abstract language causes a more generalizing expression.

Linguistic abstraction level of words is seen as the most important criterion to make a distinction between four linguistics terms. According to the abstraction level, DAV is the most concrete and ADJ is the most abstract lexical terms. Semin and Fiedler (1988) argued that different categories lead to different meanings formed in the mind of the receiver of the message. While highly concrete words, such as DAVs, are used to describe a current event, highly abstract words, such as ADJs, reveal a general judgment. For example, when it is said "Jennifer is dancing", it is understood that Jennifer is dancing at that moment, but when it is said "Jennifer is a dancer", she is thought to be doing it professionally. Johnson-Grey and colleagues (2020) stated that actions are more concrete because they provide only situation-specific, instantaneous and observable information. Reitsma-van and colleagues (2007) showed that positive

in-group and negative out-group situations are described using more “abstract” language. While people tend to explain the positive behaviors of people close to them using an abstract language, they prefer a concrete language to people with whom they are not close. The opposite is true for a negative behavior. For example, “John is helpful” is used when talking about someone close or feeling positive feelings, while “John is helping” is used about someone felt distant from. Reitsma-van and colleagues (2007) stated that a positive and abstract message creates a more sincere feeling than a positive and concrete message. Conversely, a negative abstract message feels like there is more distance between the sender and the receiver. In addition, linguistic abstraction also defines whether a situation is temporary or permanent (Reitsma-van et al., 2007). When an abstract description is made, situation or behavior referred is thought to be permanent, such as “John is helpful” narrative. From another point of view, making a concrete description makes someone think that the situation is momentary, temporary or accidental, such as “John is helping” description. According to Hayakawa (1949), the conscious use of abstract language is a method that reveals the fact that knowledge is not accidental. Ledgerwood and colleagues (2010) argued that abstract messages provide more aggregate and general information and perceived as more reliable. In addition, Flesch (1948) highlighted that abstractness makes a text more readable. Moreover, Carrera and colleagues (2017) remarked that high abstraction has a greater effect on achieving the desired behaviors.

According to Hung (2020), marketers use both abstract and concrete messages in their social media marketing strategies, but consumers’ perceptions vary according to the degree of abstraction of the message. Another study on language abstraction conducted by Semin (2005) examined the effect of conscious use of abstract and concrete language on the behavior of individuals. The results revealed that individuals have two different tendencies, promotion focus and prevention focus. Some people are sensitive to positive outcomes, while others are sensitive to negative outcomes. People with promotion focus get the best results from when abstract language is used, while people with prevention focus are more influenced by concrete language.

Hansen and Wanke (2011) examined the link between luxury goods and linguistic abstraction. It was shown that people explain the products by using an abstract language when they perceive psychological distance to be distant. Moreover, it was revealed that the perception of luxury caused the use of an abstract language as expected. In addition, when products are explained using an abstract language, it causes people to think that the product is more luxurious. From the point of view of consumers, it has been revealed that general information given in an abstract language positively affects the purchasing mechanism of consumers. In addition, it has found that abstract information is internalized more by individuals.

Sar and Anghelcev (2015) investigated the link between positive and negative mood in global and local processing. LCM was used to detect global and local processing. It is stated that abstract language causes global processing and concrete language causes local processing. In the study, two different movies, positive and negative, were watched to determine the mood. As a result of the study, it was revealed that people with a positive mood prefer an abstract language, and people with a negative mood prefer a concrete language.

Stapel and Semin (2007) remarked that language affects people's consciousness and has a persuasive feature. This study investigates how linguistic categories affect people's perceptions. It was shown that abstract language causes global focus whereas concrete language causes local focus.

Semin (2008) claimed that language is a functional tool that establishes a link between sender and receiver. LCM categories are thought to attract people's attention in different directions. Based on the use of language, positive or negative features of a situation are channeled. It was demonstrated that the use of a concrete language allows channeling the specific features and details of an event, but an abstract language attracts more attention.

Schill and Shaw (2016) examined the relationship between sustainability behavior, namely recycling, psychological distance and language. Results demonstrated using a concrete language in messages about recycling causes consumers to understand the

process more clearly, reduces psychological distance and causes individuals to take action.

All these studies on language abstraction have made a great contribution to the literature, but there has been no study on SFC language and sustainability.



CHAPTER 6: METHODOLOGY

6.1 Sample Selection and Data Collection

2021 Brand Finance Global 500 (Brand Finance, 2021) list was examined to determine the top global, apparel brands, providing a total of 19 brands. Table 3 represents the ranking, country and brand value information of these brands. The sample was composed of sustainability messages posted by these most valuable 19 apparel brands on Instagram from January to September 2021. All posts were downloaded on the first week of October 2021.



Table 3 . Top 19 Apparel Brands Listed in 2021 Brand Finance Global 500 (Source: Brand Finance, 2021)

2021 Ranking	Apparel Brand Name	Country	2021 Brand Value*
47	Nike	United States	\$30,443M
117	Gucci	Italy	\$15,599M
123	Louis Vuitton	France	\$14,858M
126	Adidas	Germany	\$14,342M
137	Chanel	France	\$13,240M
139	Zara	Spain	\$13,156M
140	Uniqlo	Japan	\$13,071M
146	H&M	Sweden	\$14,4M
151	Cartier	France	\$12,087M
156	Hermes	France	\$11,656M
237	Rolex	Switzerland	NA
242	Dior	France	NA
362	Tiffany & Co.	United States	NA
375	Chow Tai Fook	China	NA
416	Coach	United States	NA
424	The North Face	United States	NA
467	Anta	China	NA
471	Victoria's Secret	United States	NA
491	Omega	Switzerland	NA

*USD (\$)

NA: Brand value is not provided on the website.

6.2 Quantitative Content Analysis

Krippendorff (2004) defined content analysis as a research technique used to produce replicable and valid inferences from the texts being analyzed. Words, themes, and concepts within the texts can be summarized in a qualitative or quantitative way. Therefore, it is a type of analysis which can be used with qualitative and quantitative data (Collis and Hussey, 2003). Quantitative content analysis, which is the focus of many researchers, means collecting numerical data about a subject, and then, analyzing the data using a number of mathematical methods (Apuke, 2017). The aim is to express the phenomenon to be explained mathematically. By conducting quantitative analysis, a numerical data can be assigned for different groups to be compared, and thus, a statistical relationship can be examined. Quantitative analysis of message characteristics should meet the standards of a scientific method in the context of justification (Neuendorf, 2002). Quantitative content analysis has been frequently conducted in studies using linguistic category model (e.g., Semin et al., 2005; Beukeboom and Jong, 2008; Hansen and Wanke, 2011); Sar and Anghelcev, 2015, Schill and Shaw, 2016; Carrera et al., 2019).

A typical content analysis has nine steps: theory and rationale, conceptualization, coding scheme, sampling, training and pilot reliability, coding, final reliability and tabulation and reporting. Theory and rationale step discuss the content to be examined, research questions and hypothesis. Conceptualization provides conceptual definitions of the variables of interests. Operationalization step defines the measurements of variables and unit of analysis. Coding scheme details codebook and coding form materials. Sampling section presents sample size and sampling technique. Training and pilot reliability requires different coders worked together to develop valid, useful and reliable coding schemes. Coding steps includes data coding conducted separately by different coders. Final reliability step ensures the inter-coder reliability. Tabulation and reporting step presents the results. Table 4 represents the steps followed in conducting a quantitative content analysis

Table 4 . Quantitative Content Analysis Flowchart (Source: Neuendorf, 2002)

1. Theory and Rationale :	What content will be examined, and why? Are there certain theory or perspectives that indicate this particular message content is important to study? Library work is needed here to conducts a good literature review. Will you be using an integrative model, linking content analysis with other data to show relationships with source or receiver characteristics? Do you have research questions ? Hypotheses ?
2. Conceptualizations :	What variables will be used in the study, and how do you define them conceptually (i.e., with dictionary-type definitions)? Remember you are the boss ! There are many ways to define a given construct, and there is no one right way. You may want to screen some examples of the content you're going to analyze, to make sure you've covered everything you want.
3. Operationalizations (measures) :	Your measures should match your conceptualizations (this is called internal validity). What unit of data collection will you use? You may have more than one unit (e.g., a by-utterance coding scheme and a by-speaker coding scheme). Are variables measured well (i.e., at a high level of measurement, with categories that are exhaustive and mutually exclusive)? An a priori coding scheme describing all measures must be created. Both face validity and content validity may also be assessed at his point.
4. Human Coding :	Coding schemes: You need to create the following materials: A. Codebook (with all variable measures fully explained) B. Coding form
5. Sampling :	Is a census of the content possible? (If yes, go to #6) How will you randomly sample a subset of the content? This could be by time period, by issue, by page, by channel and so forth.
6. Training and pilot reliability :	During a training session in which coders work together, find out whether they can agree on coding of variables. Then, in an independent coding test, note the reliability on each variable. At each stage, revise the codebook or coding form as needed.

7. Coding :	Use at least two coders to establish intercoder reliability. Coding should be done independently, with at least 10% overlap for the reliability test.
8. Final reliability :	Calculate a reliability figure (percent agreement, Scott's pi, Spearman's rho, or Pearson's r, for example) for each variable.
9. Tabulation and reporting :	See various examples of content analysis results to see the ways in which results can be reported. Figures and statistics may be reported one variable at a time (univariate), or variables may be cross-tabulated in different ways (bivariate and multivariate techniques). Over-time trends are also a common reporting method. In the long run, relationships between content analysis variables and other measured may establish criterion and construct validity.

6.3 Conceptualization

Neuman (2014) indicated that conceptualization is the process of explaining abstract ideas clearly, precisely and systematically by giving it a conceptual definition. In this study, it is aimed to analyze whether the sustainability-related posts shared by brands have an abstract language or a concrete language. Language abstraction refers to the abstractness level of words used in describing actions, feelings, or traits ascribed to a logical subject.

6.4 Operationalization

Neuman (2014) remarked that operationalization links the conceptual definition to a set of measurement techniques, procedures or indicator by developing an operational definition. Thus, the methods used to collect and analyze the data are explained in the following sections.

6.5 Units of Categorization

Following Schmid and colleagues (2017) suggestions, sustainability-content posts are divided into its basic units consisting of a logical subject and some action, feeling, or trait ascribed to that subject. Following issues are considered in determining the units to be analyzed.

- 1) Not every action is coded in sentences, only actions that are relevant to the target person are coded. What is meant by the target person is actually the subject of the sentence. The sentence to be coded must have a subject. In addition, parts of the sentence that are not related to the subject are not coded. In other words, in order to be able to code, the subject is determined first and then only the verbs related to the subject are coded.
- 2) If a verb has two or more meanings, the meaning used in the sentence should be taken into account and coded accordingly.
- 3) If there is more than one subject in a sentence, then the verb related to both subjects must be coded.
- 4) Adjectivals are verbs used as adjectives in sentences. Therefore, adjectives derived from the verb are not coded as ADJ. Adjectivals are considered as subordinate clauses and thus categorized consequently.
- 5) If the “How often?” questions can be probed to the verb, then it is more likely to belong to the IAV or DAV categories. On the other hand, “How long?” and “Since when?” tend to associate with SVs.

6.6 Linguistic Category Coding

In this study, LCM was used to determine linguistic categories and abstraction levels. According to the LCM, verb classes can be categorized in four groups: Descriptive Action Verbs (DAV), Interpretive Action Verbs (IAV), State Verbs (SV) and Adjectives (ADJ) (Semin and Fiedler, 1988). Each category is separated from each other according to the level of abstraction.

Considering the “John is kicking Jess” sentence, it can be observed that the “kick” action is not open to interpretation. It also has a very concrete meaning. It is an action with a definite start and end time. Therefore, it is included in the DAV group which is the most concrete category. The verb “cheat” in the “John is cheating Jess” sentence requires interpretation rather than just explaining the situation directly. Thus, this action is not directly visible and placed in the IAV category. Although descriptive action verbs and interpretive action verbs are easy to confuse, IAVs tells much more than a mere description. The sentence “John likes Jess” is an example of the SV category that has a much more abstract meaning than DAV and IAV and focuses on the psychological state of the person rather than the action. SVs are not actions that can be seen by an observer. Rather, it describes how the subject feels. Finally, cruel in the “John is cruel” sentence represents the last and the most abstract category, ADJ. It defines the personal characteristic of the subject and is completely open to interpretation. It is interpreted by looking at a behavior pattern.

In defining the general properties of categories which may be difficult to categorize sentences, the following details are considered (Semin and Fiedler, 1988)

- 1) To distinguish state verbs from interpretive action verbs and descriptive action verbs, whether the sentence has a clear beginning and ending can be discussed. IAVs and DAVs are observable actions with a beginning and end while SVs are not observable actions with no clear definition of beginning and end.
- 2) DAVs and IAVs are the most difficult categories to distinguish. This is because DAVs usually have a neutral meaning, but sometimes have a negative or positive meaning. Therefore, the fact that DAVs are a physically invariant feature needs to be considered. For example, “foot” is always required to perform “kick” action. But IAVs do not require a physically invariant.
- 3) In terms of causality, the cause of the action is attributed to the subject in the IAVs category, while it is attributed to the object in the SVs. For example, in the sentence “John is cheating Jess (IAV)”, the cause of the action is John. But in the sentence “John likes Jess (SV)”, the reason for the “like” action is Jess’s character and similar features. On the other hand, IAVs describe the situation while SVs describe one’s emotions and psychology.

- 4) Considering the implicitness of the causal information, IAVs often refer to controllable and voluntary behaviors, whereas SVs characteristically refers to uncontrollable affects or cognitive states.

6.7 Abstraction level Index Calculation

To determine the abstraction level, action, feeling, or trait ascribed to that subject in each unit were given a score. A linguistic abstraction index is calculated by summing up the frequency (number) of descriptive-action verbs (multiplied by 1), interpretive-action verbs (multiplied by 2), state verbs (multiplied by 3), and adjectives (multiplied by 4). Finally, the results were divided by the total sum of linguistic categories used in each description to derive a standardized measure, which ranges from 1 to 4 (Semin and Fiedler, 1989). It was ranged between 1 (very concrete, only descriptive action verbs) and 4 (very abstract, only adjectives).

6.8 Sustainability Dimension Coding

Sustainability dimension was coded into three categories: environmental, economic and social. Environmental sustainability refers to the practices to prevent the depletion of natural resources or aims to ensure that future generations have the natural resources of today (Goodland, 1995). Keywords for this category includes, such as, environment, green, organic, ecologic, waste, carbon, emission, energy, environmental, pollution, warming, water consumption, resource, climate change, eco-, recycle, environmentally friendly, renewable, plant-based, bio-based, reuse, vegan, regenerated, and up-cycle. Social dimension includes ensuring social equity, providing social support or equal opportunities to all members of the society (Eizenberg and Jabareen, 2017). Keywords for this category includes, such as, welfare, child labor, labor union, fair, harassment, safety, health, corporate social performance, NGO, human rights, charity, voluntary, rights, donation, corporate social investment, equality, education/training, discrimination, cultural value, animal-free, representation, inclusiveness or diversity. Economic sustainability is related with the economic development or aims to make the system economically sustainable (Spangenberg, 2005). Keywords for this category includes, such as, economic, stakeholder, shareholder, value added, GDP, GNP, investment, efficiency,

consumption, finance, capital, cost, profit, revenue, share, income, stability, ROI, growth, transparency, risk, crisis, competitiveness, investment profitability

6.9 Linguistic Category Model Coding Examples

Unable to determine

Pride is more than pretty colours. This year, discover the true meaning of the Pride flag and hear the stories beyond. #HM #Beyondtherainbow

Passive Coding

Nécessaires à Parfum are designed to be **refilled** time and time again with scents from the Cartier fragrance library. (No Coding)

Unable to determine Sustainability Dimension

JOIN LIFE. Working (IAV) towards **sustainability**. At Zara, we understand (SV) **sustainability** as an ongoing effort. We develop specific programs from a holistic approach.

Environmental Sustainability Dimension

We believe in second chances. Like giving (IAV) these pre-owned bags a one-of-a-kind upgrade. (Wear it, love it, pass it on.) Link in bio to shop (DAV) our **Upcrafted** bags, part of our Coach (Re)Loved program. #CoachReLoved #CoachNY

Social Sustainability Dimension

We at Dior stand in solidarity (IAV) with our Asian community and their families, not just in this moment, but at all times. Dior **opposes** (IAV) all forms of discrimination and is **committed** (SV) to an inclusive culture.

CHAPTER 7: FINDINGS

7.1. Sample Results

After validated by both coders, a total of 458 sustainability messages were determined. It was found that three (Omega, Anta and Chow Tai Fook) of the 19 brands did not share any messages about sustainability.

Table 5 . Sustainability Dimension Key Concepts and Keywords

Sustainability Dimension	Key Concepts	Keyword Examples
Social Sustainability	Health equality, Children, Traditional heritage, Gender Equality, Black Community, Asian Community	Disability, LGBTQ+, Diversity, Inclusion, Racism, Black woman, Equity, Unity, Sexism
Environmental Sustainability	Emission, Biodiversity, Energy, Recycling, Recycled Products, Renewable Materials	Eco-solarized, naturally-dyed, carbon-neutral, recycled, waste, plastic waste, refillable
General Sustainability	Product Responsibility, Sustainable Materials,	Sustainable, Sustainably-conscious, Sustainability, Sustainable Materials, Responsible Sourcing

7.2. Results for LCM Categorization and Overall Language Abstraction Level

Following the Linguistic Category Model classification guidelines (Schmid et al., 2017), 47 sustainability messages out of 458 were assigned to the category of unable to determine because of the passive voice categorization criteria. As presented in Table 5, the mean value of language abstraction for a total of 411 messages was 2.4067 with a standard deviation of .66494. Results for overall language abstraction level analysis are provided in Appendix D.

Table 6 . Results for Overall Language Abstraction Level Values

	Number of Messages	Abstraction Level Values	
		Mean	Std. Deviation
Sustainability	411	2,4067	,66494

7.3 Results for Sustainability Dimension Categorization and Dimensional Language Abstraction Level

Regarding sustainability dimension categorization, if different sentences refer to different dimensions in one post, each sentence was coded separately. Therefore, a total of 426 units were analyzed; 63.8% (n = 272) were related to social sustainability, 30.3% (n = 129) were related to environmental sustainability and 5.9% (n = 25) were assign to unable to determine category since it could not be determined to which dimension of sustainability the keywords in the sentences were referring to. In addition, the mean score of linguistic abstraction for social sustainability messages was 2.4775 with a standard deviation of .58974. On the other hand, the mean value of linguistic abstraction for environmental messages was 2.2401 with a standard deviation of .74217. Table 6 provides the number of messages and language abstraction values for each dimension of sustainability. Results for dimensional language abstraction level analyses are presented in Appendix E.

Table 7 . Results for Dimensional Language Abstraction Level Values

Sustainability Dimension	Number of Messages	Abstraction Level Values	
		Mean	Std. Deviation
Social	272	2,4775	0,58974
Environmental	129	2,2401	0,74217
Unable to Determine	25	2,5372	0,78401
Total	416	2,4091	0,65955

7.4 Results for Pilot and Final Reliability

Pilot and final reliability analyses were conducted to ensure intercoder reliability. As suggested by Neuendorf (2002), before analyzing all the messages of the 19 apparel brands, the pilot reliability assessment was done on a randomly selected 10 % of the total sustainability messages to create a valid and reliable coding scheme. Among the 458 sustainability themed posts to be examined, 47 were selected by using systematic sampling. Systematic sampling is a probability sampling method in which sample elements are selected using a skip interval (McDaniel and Gates, 1998). Firstly, a skip interval of 10 was determined by dividing the total population by the sample size (458/47). Then, every tenth post was chosen from the sampling list. Two separate judges independently coded the entire units in the subsample.

Reliability coefficient of agreement controlling for the impact of chance agreement was calculated by using Cohen's *kappa* measure. Banerjee et al., (1999) proposed the following guideline for interpreting Cohen's *kappa*: coefficients of .75 and above can be stated as to excellent agreement beyond chance, coefficients between .40 and .75 as fair to good agreement beyond chance; coefficients .40 and below as poor agreement beyond chance. For both linguistic category and sustainability dimension coding, there was an excellent agreement beyond chance between the two coders, $\text{kappa}_{\text{pilot-linguistic category}} = .896$ (95% CI, .831 to .960), $p < .001$ and $\text{kappa}_{\text{pilot-sustainability dimension}} = .961$ (95% CI, .885 to 1.037), $p < .001$. The disagreements were solved by discussion.

In the final reliability analysis, first all the posts were coded independently by the same coders. Then, the codings were compared and the disagreements were solved by discussion. Inter-rater reliabilities were computed by using Cohen's *kappa* for both linguistic category and sustainability dimension codings. Excellent agreements between two coders were found, $\kappa_{\text{final-linguistic category}} = .936$ (95% CI, .920 to .952), $p < .001$ and $\kappa_{\text{final-sustainability dimension}} = .841$ (95% CI, .794 to .888), $p < .001$. Results for pilot and final reliability analyses are provided in Appendix B and C.

7.5 Results for Abstraction Level Difference between Social and Environmental Dimension

An independent samples t-test was conducted to compare the language abstraction scores for social sustainability and environmental sustainability messages. Language abstraction distributions were sufficiently normal for both sustainability dimension groups (skewness_{social sustainability} = 0,471, kurtosis_{social sustainability} = 0,872; skewness_{environmental sustainability} = 0,309, kurtosis_{environmental sustainability} = -0,013) to conduct a t-test (skewness < |2.0| and kurtosis < |9.0|; Schmider et al., 2010). Results are provided in Appendix F.

The assumption of homogeneity of variances was tested but was not satisfied via Levene's *F* test, $F(df1, df2) = \text{Levene statistic } 207,357, p = 0.002$. Therefore, the Welch's t-test result was consulted which is a modified independent samples t-test (Welch, 1947) that does not require equal sample size (Ramsey, 1980).

As shown in Table 6, there was a significant difference in scores for social sustainability ($M = 2.477500, SD = 0.589741$) and environmental sustainability messages ($M = 2.240078, SD = 0.742168$), $t(399) = -.3.187, p = .002$. Results for independent samples t-test analysis are presented in Appendix F.

Table 8 . Independent Samples T-Test Results

t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
			Lower	Upper
-3,187	207,357	,002	-,38427	-,09057

The magnitude of the differences in the means (mean difference = -0,237422, 95% CI: -0,384274 to -0,090571) was small to medium (Hedges' $g = .369$). Power for a t-test with unequal sample sizes was calculated by using the guideline of Gignac (2019) and it was estimated at .931, which is above the .80 value recommended by Cohen (1988).

CHAPTER 8: CONCLUSION

8.1 Discussion

The unconscious use of non-renewable natural resources has led to significant environmental problems (Goodland, 2002). In fact, with the Our Common Future Report in 1987, the phenomenon of sustainability has entered human life (Eşkin, 2019). Today, the importance of sustainability in all sectors can be seen clearly. However, the fashion industry has the responsibility to be more sustainable than other sectors due to the damages it causes (Grazzini et al., 2021). It is of great importance to have the accurate SFC strategies to encourage SF and to show a brand's sustainability efforts to the target audiences. In this context, Semin and Fiedler (1991) suggested that there is a link between social cognition and language. They proposed that the language used influences the way people think. Words both represent and impact the patterns of communication, thoughts and cognitive functions (Semin and Fiedler, 2008). The processes of language use, comprehension, communication strategies or social inferences are varied across these linguistic categories due to the changes in attributional domain (Semin and Fiedler, 1991). Previous studies showed that there is a relationship between the level of concreteness and abstractness of the language that used in message and content of the message (e.g, Stapel and Semin, 2007; Sar and Anghelcev; 2015, Hansen and Wanke, 2015; Schill and Shaw, 2016). While there is a quite large amount of research on SF (e.g., Niinimäki, 2013; Henninger et al., 2016; Shen, 2014) little attention has been given to linguistic nature of SFC (e.g., Evans and Peirson-Smith, 2018). Therefore, this study aimed to analyze the abstraction level of the sustainability messages shared by the apparel brands on their social media accounts for an accurate SFC. Current study aimed to contribute LCM, fashion communication and sustainability literatures. Therefore, firstly, the abstractness of the language used by fashion brands in SFC was determined. Then, messages referring different dimensions of sustainability were compared based on linguistic abstractness levels.

Brand Finance Global 500 Report 2021 list was searched to determine most valuable fashion brands. Instagram accounts of the 19 apparel brands identified were scanned

to determine whether they shared sustainability messages. As a result, three were excluded because of not sharing any messages about sustainability. Regarding the other brands, sustainability-content posts shared in January 2021 and September 2021 were analyzed further, providing 458 messages. A codebook was created (see Appendix A) and coding was done using LCM to determine the sustainability dimension and abstraction level of all the messages. Two coders individually coded all the messages. Both pilot reliability and final reliability tests presented sufficient inter-coder reliability levels.

While calculating the overall language abstraction level, it was determined that passive voice was used in 47 messages in total, and these sustainability messages were not coded. In the remaining 411 sustainability messages, the overall abstraction level was determined to be 2.41. This revealed that an abstract language was used when all messages were taken into account. Then, dimensional language abstraction levels were calculated for environmental and social sustainability. The average abstraction level of social sustainability messages was determined as 2.48 while it was 2.24 for environmental-themed posts. The independent t-test results indicated that relatively a more abstract language is used in messages for social sustainability compared to environmental ones.

According to the study by Agerström and Björklund (2009), moral principles and values often lead to a more abstract style of expression. It has been noted that people make a more abstract interpretation of moral concerns such as a sustainable future. The findings of the current study supported the results of Agerström and Björklund (2009) research in SF brand communication context. In specific, environmental sustainability and moral concerns of most valuable fashion brands were communicated by using a more abstract language. In addition, the study conducted by Hansen and Wanke (2011) revealed that a more abstract language was used in the promotion of luxury products. Similarly, the result of the current research showed that most valuable apparel brands preferred a more abstract language. In addition, as a result of the study conducted by Schill and Shaw (2016), it was emphasized that the use of a concrete language by organizations in messages about recycling will eliminate confusion and the message to be conveyed will be reflected more clearly.

However, the current results demonstrated that a relatively more abstract language is used in both environmental and social sustainability messages.

8.1 Limitations and Future Research

The present study had several limitations. Sustainability messages of most valuable 19 apparel brands were examined within a limited time period. Future research should investigate more brands and more messages covering a longer time interval.

Another limitation is the sustainability dimensions investigated. Since the messages of the apparel brands examined did not related to economic sustainability, this dimension could not be examined. Further studies should examine the linguistic abstractness of economic sustainability of apparel brands, such as sustainability reports.

Moreover, only the language abstractness of sustainability messages shared by brands was examined. However, customers' responses may enlarge our understanding of the perceived effectiveness of linguistics nature of communication strategies. For example, studies by Evans and Peirson-Smith (2018) and Schill and Shaw (2016) focused on the consumers' perspective. Results suggested using a more concrete language to understand the sustainable communication made by fashion brands and the green lexicon more clearly. Thus, effects of linguistic abstractness of sustainability messages need to be explored. A more abstract language is used in social sustainability messages. Future studies may investigate why a more abstract language is used in the social dimension.

Finally, sustainability messages of most valuable apparel brands were examined. However, sustainability levels of these brands were not considered. Testa and colleagues (2021) indicated that SF brands are established based on at least one sustainability policy. Sustainably aware brands, on the other hand, strive to be sustainable, even if they are not established for this purpose. The linguistic communication differences between sustainable and sustainably aware fashion brands provide a valuable research area.

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APPENDICES

Appendix A - Codebook

Unit of Categorization: The sustainability-content posts are divided into its basic units consisting of a logical subject and some action, feeling, or trait ascribed to that subject. Within each post, sentences that do not present sustainability approach, interests, and/or intends are not coded.

Post ID: Indicate the number given to each sustainability-content post. If a post contains more than one unit of data collection, the same Post ID is used.

Language Abstraction: Linguistic Category Model is used to determine language abstractness in sentences. Each category was given a score of 1, 2, 3, 4 or 9.

1. *Descriptive Action Verbs (DAV):* Refer to mental or emotional states; no clear definition of beginning and end; do not readily take the progressive form; not freely used in imperatives
2. *Interpretive Action Verbs (IAV):* Refer to mental or emotional states; no clear definition of beginning and end; do not readily take the progressive form; not freely used in imperatives
3. *State Verbs (SV):* Refer to mental or emotional states; no clear definition of beginning and end; do not readily take the progressive form; not freely used in imperatives
4. *Adjectives (ADJ):* Refer to a person and allows a classification; highly abstract and interpretive; do not readily take the progressive form; not freely used in imperatives

9. *Unable to determine:* Refers to the verbs in passive voice sentences

Sustainability Dimension: Indicate whether the sustainability-content post focuses on environmental, social or economic dimension of the sustainability. Each category was given a score of 1, 2, 3 or 9.

1. *Environmental*: Refers to practices to prevent the depletion of natural resources and aims to ensure that future generations have the natural resources of today.
2. *Social*: Refers to ensuring social equity, providing social support or equal opportunities to all members of the society.
3. *Economic*: Refers to supporting continuous economic development and aims to make the system economically sustainable.
9. *Unable to determine*: Refers to overall sustainability without an emphasis on any of the dimensions or highlighting more than one dimension



Appendix B - Pilot Reliability Analyses Results

Linguistic Category Coding Rater1* Rater2 Crosstabulation

		Rater2					Total
		1,00	2,00	3,00	4,00	9,00	
Rater1	Count	19	0	0	0	0	19
	1,00 Expected Count	3,3	6,7	5,4	2,5	1,1	19,0
	Count	1	38	1	1	0	41
	2,00 Expected Count	7,1	14,5	11,7	5,3	2,5	41,0
	Count	0	0	32	0	1	33
	3,00 Expected Count	5,7	11,7	9,4	4,3	2,0	33,0
	Count	0	0	0	12	0	12
	4,00 Expected Count	2,1	4,2	3,4	1,6	,7	12,0
	Count	0	3	0	2	6	11
	9,00 Expected Count	1,9	3,9	3,1	1,4	,7	11,0
	Count	20	41	33	15	7	116
	Total Expected Count	20,0	41,0	33,0	15,0	7,0	116,0

Symmetric Measures

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Measure of Agreement Kappa	,896	,033	17,510	,000
N of Valid Cases	116			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Sustainability Dimension Coding Rater1 * Rater2 Crosstabulation

		Rater2			Total	
		1,00	2,00	9,00		
Rater1	1,00	Count	28	1	0	29
		Expected Count	17,3	8,6	3,1	29,0
	2,00	Count	0	13	0	13
		Expected Count	7,7	3,9	1,4	13,0
	9,00	Count	0	0	5	5
		Expected Count	3,0	1,5	,5	5,0
Total	Count	28	14	5	47	
	Expected Count	28,0	14,0	5,0	47,0	

Appendix C - Final Reliability Analyses Results

Symmetric Measures

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Measure of Agreement Kappa	,936	,008	60,334	,000
N of Valid Cases	1312			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Symmetric Measures

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Measure of Agreement Kappa	,841	,024	21,260	,000
N of Valid Cases	473			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Sustainability Dimension Coding Rater1 * Rater2 Crosstabulation

		Rater2			Total
		1,00	2,00	9,00	
Rater 1	Count	137	6	16	159
	1,00				
	Expected Count	48,7	99,2	11,1	159,0
	Count	5	286	5	296
	2,00				
	Expected Count	90,7	184,6	20,7	296,0
9,00	Count	3	3	12	18
	Expected Count	5,5	11,2	1,3	18,0
Total	Count	145	295	33	473
	Expected Count	145,0	295,0	33,0	473,0
	Count				

Appendix D - Overall Language Abstraction Results

	N	Minimum	Maximum	Mean	Std. Deviation
Language_Abstraction	411	1,00	4,00	2,4067	,66494
Valid N (listwise)	411				

Appendix E - Dimensional Language Abstraction Results

	N	Minimum	Maximum	Mean	Std. Deviation
Language_Abtractness	129	1,00	4,00	2,2401	,74217
Valid N (listwise)	129				

a. Sustainability_Dimension = Environmental Sustainability

	N	Minimum	Maximum	Mean	Std. Deviation
Language_Abtractness	272	1,00	4,00	2,4775	,58974
Valid N (listwise)	272				

a. Sustainability_Dimension = Social Sustainability

	N	Minimum	Maximum	Mean	Std. Deviation
Language_Abtractness	25	1,00	4,00	2,5372	,78401
Valid N (listwise)	25				

a. Sustainability_Dimension = Unable to Determine

Appendix F - Independent Samples T-Test Analysis Results

Descriptives

Sustainability Dimension		Statistic	Std. Error	
Language Abstractness	Environmental Sustainability	Mean	2,2401	
		Lower Bound	2,1108	
		95% Confidence Interval for Mean		
		Upper Bound	2,3694	
		5% Trimmed Mean	2,2131	
		Median	2,0000	
		Variance	,551	
		Std. Deviation	,74217	
		Minimum	1,00	
		Maximum	4,00	
		Range	3,00	
		Interquartile Range	,66	
		Skewness	,309	,213
		Kurtosis	-,013	,423
Social Sustainability	Mean	2,4775	,03576	

	Lower Bound	2,4071	
95% Confidence Interval for Mean	Upper Bound	2,5479	
5% Trimmed Mean		2,4584	
Median		2,5000	
Variance		,348	
Std. Deviation		,58974	
Minimum		1,00	
Maximum		4,00	
Range		3,00	
Interquartile Range		,75	
Skewness		,471	,148
Kurtosis		,872	,294

Group Statistics

Sustainability Dimension		N	Mean	Std. Deviation	Std. Error Mean
Language Abstractness	Environmental Sustainability	129	2,2401	,74217	,06534
	Social Sustainability	272	2,4775	,58974	,03576

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Language Abstractness	Equal variances assumed	8,037	,005	-3,456	399	,001	-,23742	,06870	-,37247	-,10237
	Equal variances not assumed			-3,187	207,357	,002	-,23742	,07449	-,38427	-,09057