The Role of Marketing in Reducing Climate Change: An Approach to the Sustainable Marketing Orientation

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Contents

Abstract "Don't buy this Jacket" is the advertising campaign of the clothing brand Patagonia asking customers not to buy its products. In this marketing campaign, the company requested customers to wrest the full life out of every Patagonia product by

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buying used when possible and asking customers to reduce unnecessary consumption. “Baked before sunrise; donated after sunset” is the marketing campaign developed by the bakery company Panera. This company donates all the leftover bread after stores have shut down, and the unsold bread goes toward a great cause, reducing food waste, which is the cause of huge wastage of natural resources.

Nowadays, numerous companies are conscious that the consequences of marketing actions clearly extend beyond the company to society as a whole. Consequently, companies following the *sustainable marketing orientation* consider the environmental aspects in the exchange relationship between the company and the market. This orientation is grounded on the recognition that the best marketing strategy is being coherent with the long-term survival of the company and the natural environment. In this context, the main purpose of this study is the examination of some interesting examples of companies that are developing real marketing actions to reduce the climate change.

Keywords Marketing · Climate change · Sustainable Marketing · Anti-consumption

1 Introduction

We live on a finite planet, and this fact entails major challenges such as the depletion of natural resources, the climate change, or the ecological footprint. Likewise, the unsustainable nature of existing patterns of production, consumption, and development is increasing the actual concern about the environmental effects of companies’ practices. The economic data report that the majority of economic trends continue to move away from sustainability and that consumption patterns and levels are not environmentally sustainable (Peattie and Peattie 2009). Therefore, consumption patterns cannot continue at their current rate; but such practices persist and are increasing due to the continued growth of the global economy (Lim 2017).

This is the main paradox of marketing. On one hand, marketing focuses on an increased consumption and economic development, being the marketing goal to encourage and increase consumption (Gordon et al. 2011). So, marketing is not being inherently focused to deliver sustainability. However, and on the other hand, marketing plays a key role in environmental issues, since marketing can influence and change consumer behavior. Moreover, marketing can encourage individuals to reuse, recycle, or save energy, provide ethical products, as well as address the goal of sustainability, serving consumer and society needs (Gordon et al. 2011). Finally, marketing can provide strategies for radical changes to the unsustainable consumption.

In this context, the present chapter considers and examines the potential of the discipline of marketing to contribute to climate change reduction, through a more sustainable consumption and through changes in consumer behavior.

2 The Sustainable Marketing Orientation

Sustainability embraces both production and consumption; and as a consequence, both sides will be examined: the companies' sustainable orientations and the new ways of consumption.

2.1 Environmental-Conscious Marketing Orientations

2.1.1 Green Marketing Orientation

Peattie (1995) conceptualized the *green orientation* as the management orientation responsible for identifying, anticipating, and satisfying the requirements of consumers and society in a profitable and sustainable way, developing sustainable practices from production to post-purchasing services. Likewise, the *green marketing* orientation facilitates the development and commercialization of more sustainable products and services (Gordon et al. 2011). That is, *green marketing* addresses the gap between the current marketing practices and the ecological and social realities. Later, Papadas et al. (2017) conceptualized the *green marketing* orientation as the extent to which an organization engages in strategic, tactical, and internal processes and activities which aim to create, communicate, and deliver products and services with the minimal environmental impact.

However, keeping a conventional marketing orientation, while encouraging product substitutions in favor of *green products*, has neglected other important environmental issues, such as energy consumption, resource depletion, species extinction, or ecosystem destruction. In this vein, some authors pointed out that the *green marketing* orientation was entirely geared toward trying to persuade consumers to buy more green products or to dispose them more responsibly (Peattie and Peattie 2009), thus not making a substantive contribution toward sustainability.

Therefore, the *green marketing* orientation should imply a much broader adoption of sustainability behavior including product-related decisions to reduce the environmental footprint, tools in order to reduce the negative environmental impact of the company, environmentally responsible packaging, recyclable or reusable content, the re-examination of the product life cycle, and the reverse supply chain approach to recover the product's maximum possible value (Cronin et al. 2011).

2.1.2 Social Marketing Orientation

Kotler and Zaltman (1971) introduced the term *social marketing* as the use of marketing principles and techniques to advance a social idea, cause, or behavior. Later, Lazer and Kelley (1973) noted that the social marketing is concerned with the application of marketing knowledge, concepts, and techniques to achieve social and

economic goals and with the analysis of the social consequences of marketing policies, decisions, and activities. Similarly, the social marketing orientation holds that marketing activities should take into consideration the welfare of society and the interests of consumers and business shareholders (Prothero 1990). Finally, Kotler et al. (2002) defined social marketing as "the use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify or abandon a behavior for the benefit or society as a whole."

So, the *social marketing orientation* involves using the power of marketing in order to encourage sustainable behavior among consumers and to evaluate the impact of current marketing practices on sustainability (Gordon et al. 2011). That is, social marketing seeks to go beyond changing attitudes to changing human behavior, as a way to encourage sustainable marketing solutions for the benefit of the society as a whole. Further, the principles and practices of the *social marketing* orientation provide solutions to environmental problems and to tackle climate change, such as recycling, composting, energy efficiency and sustainable transport use, and the promotion of sustainable lifestyles.

2.1.3 Critical Marketing Orientation

The *critical marketing* orientation entails a critical appraisal of marketing theory and encourages a marketing system in which sustainability is the key goal (Gordon et al. 2011). Similarly, this marketing orientation focuses less on encouraging unnecessary consumption and more toward encouraging sustainability, stimulating sustainable marketing practices, and supporting customers to make informed choices that do not harm societal well-being. That is, critical marketing encourages sustainability, rather than unnecessary consumption.

According to Peattie (2007), the role of *critical marketing* is not only the application of a critical viewpoint to the marketing discipline but also the examination of some of the fundamental principles and concepts of marketing. Thus, critical marketing is involved with the evaluation of the impact of conventional marketing on society (Hastings 2009). Finally, *critical marketing orientation* could be used to challenge the dominant marketing theory and practice, shifting the focus from encouraging consumption to other marketing goals such as satisfaction, sustainability, and quality of life (Peattie and Peattie 2009). So, according to this marketing orientation, marketing should focus on sustainability, quality of life, quality of services and products, and consumer satisfaction (Peattie 2007).

2.1.4 Sustainable Marketing Orientation

Marketing practices today focus on an increased consumption and economic development, being the marketing goal to encourage consumption (Gordon et al. 2011), and in this context, the sustainability marketing orientation could be considered an alternative approach to marketing theory and practice. And it is evident that

extensive environmental damage has been caused by continuous manufacturing, processing, consumption, and discarding (Saha and Darnton 2005).

According to the OECD (2002), the sustainability concept could be defined as "the consumption of goods and services that meet basic needs and quality of life, without jeopardizing the needs of future generations," thus considering both on the needs of current and future generations. Therefore, sustainability could become a key component of marketing theory and practice (Peattie and Peattie 2009).

The concept of *sustainable marketing orientation* recognizes that current consumption patterns are unsustainable and the requirement of changes in consumer behavior (UNEP, 2005). So, sustainable marketing offers products and services marketed in a responsible way that does not adversely impact upon environment sustainability. Further, the sustainable marketing orientation develops strategies and actions so that only items that are considered as "needs" are commercialized and marketed, while those considered as "wants" are not (Schor, 1998), encouraging consumers to develop a more resource-efficient way of consumption (Connolly and Prothero 2003), including the acceptance of consumption reduction, responsible consumption, and sustainable lifestyle (Peattie and Peattie 2009).

More precisely, the *marketing sustainability orientation* is based on three dimensions (Sung and Lee 2011). First one is the social dimension, related to the company's impact on society and the human well-being, including social equity and community relations. Second dimension is the environmental component that focuses on the company's activities relative to natural resources, as well as the company contribution to environmental sustainability. And the last dimension is the economic one, which refers to the value generation and financial performance of companies (Simpson and Radford 2014). The most relevant environmental-conscious marketing orientations are shown in Table 1.

Table 1 Environmental-conscious marketing orientations

Marketing orientations	Actions
Green marketing	Reduced packaging, energy efficient production. Focuses on the marketing mix and the minimization of its negative environmental impact
Social marketing	Marketing activities should take into consideration the welfare of society. Consumers should live an ecological lifestyle, demand of ecological products and local food produce
Critical marketing	Critical viewpoint to the marketing theory and practice Marketing should increase customer satisfaction and quality of life
Sustainable marketing	Integration of environmental, social, and economic concerns and practices into the strategic and marketing activities Sustainable production and consumption. Reduction of consumption and wastage. Development of resource-efficient ways of consumption

Source: Own elaboration from Peattie and Peattie (2009) and Gordon et al. (2011)

2.2 *New Ways of Consumption*

Even though there is a general consensus on the need to reduce resource utilization and energy or reduce carbon emissions as part of sustainable development, a lack of consensus exists on whether consumption should be reduced or just changed and whether individual consumers have the capability to significantly contribute to resource conservation (Banbury et al. 2012). However, major changes in current consumption patterns are required to solve the global environmental issues, such as climate change (Perry 2006; Robinson et al. 2006).

2.2.1 Sustainable Consumption

Many consumers find it difficult to consume sustainably, because the acts of consuming and sustaining are contradictory to each other. Therefore, the concept of *sustainable consumption* itself is a problematic concept, and the reason is that *to consume* something means to use it up or to destroy it. In this context, consumption is being increasingly challenged by consumerist and anti-consumption movements (Lim 2017), and a new perspective of consumption is required. This new perspective could be the so-called sustainable consumption, which is a concept that goes beyond the traditional understanding of consumption.

According to the World Commission on Environment and Development (1987), sustainable consumption should meet current needs and wants without impoverishing future generations and the planet's ability to meet these needs and wants. In this vein, the European Environmental Agency (2005) defined sustainable consumption as "the use of goods and services that respond to basic needs and bring better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations." So, in general terms, the *sustainable consumption* emphasizes the need for a reduction in overall resource consumption and the assumption that changes in consumption levels and patterns are needed in order to achieve sustainability.

Following Cummins et al. (2014), *sustainable consumption* refers to the purchase and use of more efficiently produced goods, and environmentally friendly consumption practices, to address the resource needs of current and future generations. Likewise, *sustainable consumption* includes meeting needs, improving quality of life, improving efficiency, minimizing waste, and taking a life cycle perspective while contributing to reducing environmental damage (Manoochehri 2001). So, *sustainable consumption* is a way of life that rejects consumerism, high consumption, and materialistic lifestyles.

2.2.2 Responsible Consumption

The seminal work of Fisk (1973) explored the potential role of consumption reduction in his *Theory of Responsible Consumption* and referred to responsible consumption as the "rational and efficient use of resources with respect to the global human population"; similarly, focusing on the demand side, responsible consumption could be considered as a consumer behavior. According to Mohr et al. (2001) the *responsible consumption* means the acquisition, usage, and disposition decisions based on the desire to minimize or eliminate any harmful effects and maximize the long-term beneficial impact on the society and the environment. Other definitions of responsible consumption report that ethical, social, and environmental dimensions should be incorporated into the term of responsible consumption (Lim 2017).

2.2.3 Anti-consumption

The anti-consumption movements highlight the excessive unsustainable consumption.

Further, the anti-consumption orientation makes some propositions such as "we need to consume less," "you don't buy happiness in a shop," "new is not always better," or "maintaining and repairing products is smart" (Peattie and Peattie 2009), seeking to move individuals away from an intensive form of consumption.

More precisely, this new way of consumption considers three dimensions. In the first place, it considers the importance of *non-purchase* elements of consumer behavior including product use and disposal. Second, it considers the potential importance of non-purchase-*based behaviors* as the means for consumers to meet their needs and achieve satisfaction. Finally, this way of consumption considers the social and environmental concern to encourage a *reduction in the total level of consumption* (Peattie and Peattie 2009).

Numerous authors defined the concept of anti-consumption. Zevestoski (2002) refers to anti-consumption as an act of resistance to, distaste of, or even resentment of consumption. Later, Lim (2017) conceptualized anti-consumption as a subjective consumer practice motivated by personal interests or social or environmental concerns, in which the consumer rejects the consumption of a particular product/brand on both a personal and societal level. Similarly, according to Lee et al. (2011), anti-consumption includes rejection, restriction, and reclamation. First, in the process of rejecting, consumers intentionally exclude particular products/brands from their consumption. When total anti-consumption is not possible, consumers can chose to restrict consumption of particular products/brands. Then, reclamation represents an ideological shift to a holistic process that includes acquisition, use, and dispossession.

In addition, the anti-consumption orientation creates savings rather than expenses. So, the costs of changing behavior into anti-consumption are not financial, and costs may be in terms of psychological barriers, related with not keeping up with

Table 2 Alternative ways of consumption

	Alternative ways of consumption
Sustainable consumption	Consumers concern about the environment, social, and economic issues Consumers' evaluations regarding companies sustainability practices
Responsible consumption	Consumers are aware of the negative effects of consumption. Social, environmental, and ethical concerns can be translated into consumers' decisions
Anti-consumption	Increase of non-purchase behaviors and non-purchase elements. Reduce the total level of consumption. Alternative consumption choices include restriction and reclamation
Mindful consumption	Great consumer awareness for oneself and the entire ecosystem, which may dampen the effects of unsustainable practices

Source: Own elaboration from Lee et al. (2011) and Lim (2017)

fashion or trends or matching the consumption patterns and levels of peers (Peattie and Peattie 2009). However, it is difficult to make consumption reduction appealing to consumers, and in developed countries, promoting consumption reduction goes against the highly consumption-orientated dominant social paradigm (Kilbourne and Beckman 1998). Further, consumption is far easier to portray and communicate than frugality or a simplified lifestyle.

2.2.4 Mindful Consumption

Mindfulness could be conceptualized as the open and receptive attention to and awareness of what is occurring in the present moment (Brown and Ryan 2004). Similarly, the seminal work of Sheth et al. (2011) offers the first extensive conceptual integration of the notion of mindfulness with consumption. More specifically, these authors define *mindfulness consumption* as the behavior of the consumer who guides his/her consumption behavior on whether to consume sustainably or unsustainably. Later, authors like Lim (2017) suggested that the core attribute of mindfulness consumption is consumer temperance in consumption, with the goal of enhancing personal well-being in a way that is consistent with personal values. So, consumers who engage in mindfulness consumption make conscious choices fully understanding the consequences of their consumption choices and practices.

These alternative new ways of consumption are shown in Table 2.

3 How the Sustainable Marketing Orientation Helps Reducing Climate Change

Any act of consumption will inevitably have some impact on the environment. In this vein, marketing could be used to change consumers' attitudes and activities: if consumers do not change their consumption behavior to become more sustainable,

then little will be achieved. Likewise, marketing could help in shifting the cultural values of consumption to address environmental issues, making consumers understand and become aware about the environmental impact of consumption, while promoting sustainable ways of consumption.

However, the relationship of marketing to sustainability is complex. On one hand, marketing has developed a role in stimulating unsustainable levels of demand and unsustainable consumption patterns. And on the other hand, marketing has developed mechanisms to tackle environmental issues (Peattie and Peattie 2009). More precisely, through *sustainable marketing*, companies could introduce sustainability into the core marketing strategies and actions, ensuring that product design and development, manufacturing, distribution, and promotion are made sustainable and, further, reduce consumption and waste (Gordon et al. 2011).

This chapter supports that marketing holds many potential solutions to some of the challenges around sustainability faced today and that marketing actions and strategies could help companies to face the new environmental challenges.

3.1 Slow Food and Slow Fashion Movements

3.1.1 Slow Food

Environmental problems are closely related to the dominant food production practices, and there are great links between food consumption practices and climate change. In fact, a large proportion of greenhouse gas emissions are caused by food production through the use of chemical fertilizers and pesticides, as well as by consumer habits (IFOAM 2009). Additionally, the localization of food production affects climate change and, more specifically, the long physical distance between the food production and the food consumption in the global food system (Soler 2012).

In this context, the American Public Health Association (2007) defines sustainable food production as "one that provides healthy food to meet current food needs while maintaining healthy ecosystems that can also provide food for generations to come with minimal negative impact on the environment, while encouraging local food production." Likewise, sustainable food is related to food that is minimally processed, organically produced, regional and seasonal, and fairly traded and packed in an environmentally friendly way, entailing the recycling of soil nutrients and the circulation of energy (Soler 2012).

Nowadays, the dominant food production system in agriculture is the conventional method of production and distribution that relies heavily upon high inputs of fertilizers, pesticides, and fossil fuels to cultivate large monocultures. Further, it could be considered a large-scale industrial food production system dependent on inputs of energy and nutrients, globally sourced and nonseasonal (Soler 2012). However, as a result of the increasingly negative impacts of conventional agriculture on the environment, alternative agriculture movements have emerged that propose

alternative methods of production, distribution, and consumption. One of these movements is the *slow food movement*.

The main concern of the *slow food* movement is that agribusiness and food industries are standardizing taste and leading to the annihilation of thousands of food varieties (Stille 2001). As a consequence, this movement promotes food quality, environmental and cultural sustainability, and biodiversity (Sassatelli and Davolio 2010), through unique local foods prepared with locally grown ingredients, from local food producers and suppliers. More precisely, local food production is based on small-scale food production of seasonal food for the local market, following local-regional food production. Finally, slow food must be produced or harvested sustainably, without genetically modified plants or transgenic breeds. Finally, one major issue is that consumers cannot directly perceive the direct impact of climate change or global warming of unsustainably produced food, which makes the marketing of sustainably produced food more complex in terms of credibility (Soler 2012).

3.1.2 Slow Fashion

The fashion industry is considered as not a sustainable industry, with business activities creating pollution, gas emissions, and hazardous waste. The deep environmental impact of fashion activities is due to the volume of processes dependent on the massive use of natural resources. In addition, the fashion industry promotes overconsumption and fashion waste, mainly due to the short and seasonal product life cycle, the high volatility and low predictability of product's demand, and the high purchasing impulse, since many fashion purchase decisions are influenced by emotional factors (Fletcher 2007). Overconsumption and fashion waste have become important environmental issues in the fashion industry. More specifically, the *fast fashion* industry, focused on the capability to quickly respond to fast-changing fashion trends offering low prices, enhances overconsumption, which is a direct cause of unsustainability and climate change. Similarly, the *fast fashion* industry makes consumers purchase clothes at a certain time and discard them not long after by shortening the life span of clothing deliberately, resulting in huge resource consumption and fashion waste (Fletcher 2010).

In this context, and being in line with the slow food movement, Fletcher (2007) first introduced the concept *of slow fashion* which broadens the sustainability perspective to include the pace of fashion cycles, emerging as an alternative to environmentally unsustainable practices resulting from the fast fashion. *Slow fashion* products are manufactured slowly and in small quantities, reducing the consumption of natural resources and the amount of waste (Cline 2012) and emphasizing the product quality through a slower production and consumption cycle. Consequently, the prices of *slow fashion* products are higher in general terms than fast fashion products—which are produced through mass production systems (Jung and Jin 2016). Likewise, slow fashion encourages consumers to buy less products at a higher price and more durable quality (Fletcher 2007), offering designs that are

less influenced by fashion trends, so consumers can wear the garments for a long time and keep the garment longer, rather than discarding it shortly after purchase (Fletcher 2010; Jung and Jin 2016).

Therefore, slow fashion makes individuals to buy less at a high quality, underlying a shift in the consumer mind-set from quantity to quality and shifting consumption patterns to reduce the consumption levels. However, even the slow fashion sustainable production can become unsustainable, when garments are worn only a few times and then discarded quickly.

4 Methodology

The methodology developed is the case study method. Case studies illustrating practice from the world of business are widely used and have become an integral part of the methodology for business studies that draw on reality. More specifically, case studies are useful when a case represents a special set of circumstances or phenomena that warrant intensive study or when researchers do not have sufficient knowledge of a case to place it in theoretical perspective (Bradshaw and Wallace 1991).

This case study analysis focuses on environmental aspects. The companies were selected for the study according to their innovation and originality in reducing climate change and according to their special circumstances that deserve analysis. Likewise, the companies selected may help inform general theory and explain conditions that deviate from conventional theoretical foundations, since the selected cases deviate from conventional marketing strategies. Consequently, in this study some companies belonging to different sectors have been selected to examine their contribution to climate change reduction, through a sustainable marketing orientation.

5 Companies Developing Sustainable Marketing Actions

5.1 Panera: Reduction of Food Waste Through Donations

The bakery company Panera addresses the challenge of food waste through the donation of usable food that remains on their shelves at the end of the day. As a bakery-cafe, this company addresses two main types of food disposal, packaging and food waste, which are generated in the guest areas and back of house. Regarding packaging, waste ranges from paperboard, plastic, and aluminum, all of which are recyclable. The other main issue is the food waste generated in the bakery-cafes. To address this issue, Panera created the *Day-End Dough-Nation* program, which provides leftover bread and other foods to local charities, through the donation of unsold

baked goods—that otherwise would go to waste—to food banks, organizations, and other charities.

Later, Panera developed the "Food For Thought Outreach" program with the goal of providing wholesome food to the Walton Academy in Florida—a charter school with a large at-risk student population. In this school, 90% of the students are eligible for free breakfast, since they do not get enough food to eat at home, arriving at school hungry. However, this school did not have a cafeteria, making it unable to meet this need. Today, this school partners with Panera, providing breakfast to 100% of the most at-risk children they attend: Panera provides breakfast food and snacks every week, donating much-needed nourishment to these kids and making a significant difference in their lives at school. So, in 2014, Panera donated a retail value of approximately $100 million worth of unsold baked goods to those in need, food that otherwise would go wasted.

5.2 *Patagonia: "Everything We Make Costs the Planet More Than It Gives Back"*

Patagonia developed downstream consumption, intending to influence consumer behavior to lower the environmental strain from the growing consumption levels. This outdoor clothing company aims to reduce the environmental and social impact of disposable fashion, developing an *alternative marketing* approach emphasizing fashion maintenance, repair, and recycling, thus discouraging consumption and the disposability of clothes. More precisely, Patagonia is putting sustainability ahead of profit and actively asking and encouraging consumers to *buy less*.

The company soon realized that their business has potentially harmful impacts on the environment, since Patagonia jackets come with an environmental cost higher than their price—one jacket requires 135 l of water to be manufactured and generates 20 pounds of carbon dioxide. So, the company believes that "we design and sell things made to last and be useful. In addition, we ask customers not to buy from us what they do not need or cannot really use, since everything we make costs the planet more than it gives back." For this reason, when the jacket comes to the end of its life cycle, the company offers customers to take it back to recycle into a product of equal value. To put the idea into action, Patagonia is partnering with eBay to provide consumers a way to resell their used Patagonia apparel. So, the Patagonia's message is that consumers should buy high-quality apparel that will last a very long time and such apparel should command a premium price, relative to lower-quality garments.

More surprisingly, on Black Friday, Patagonia launched an advertising campaign "Don't buy this jacket" (Fig. 1) asking consumers to rethink their purchasing decision if they really needed this jacket and encouraging them to repair their jackets instead. The advertisement was part of an initiative communicating to consumers: "Reduce what you buy, repair what you can, reuse what you no longer need, recycle what's worn out," attempting to close the loop of the product life cycle.

Fig. 1 Patagonia advertising campaign

5.3 Levi Strauss & Co.: Reducing Water Consumption

The production of jeans comes with a considerable environmental footprint. In fact, some of the most significant environmental impacts of making jeans come from fabric mills, which use a great deal of water, chemicals, and energy during the dyeing and finishing process.

In this context, the fashion company Levi Strauss & Co. introduced various environmental strategies to reduce the negative impact of this fashion industry on the marketplace. In the first place, Levi Strauss & Co. developed a green strategy which consisted of a line of jeans crafted with organic cotton. In year 2007, Levi's began to deeply research the overall sustainability of jeans, conducting the *first life cycle assessment* to better understand the environmental impact of a pair of jeans (Fig. 2). Many important aspects of the life cycle and ripple effects of the production of Levi's denim jeans were examined, focusing on the effects of resource extraction, production, shipping, packaging, and afterlife of jeans when they are thrown away as waste. The company soon realized that every step of the process to create a pair of jeans made of cotton requires water—from the cotton fields to manufacturing facilities. More precisely, making one pair of jeans required almost 920 gallons of water—which means an average of 12.6 l of water per pair of jeans—and expelled 32 kg of carbon dioxide.

Surprisingly, their analysis showed that while the overall water consumption in a jean's life cycle is largely accounted for in the cotton growing stage (49% of water consumption), the consumer phase comes representing the 43% of water consumption in the jean's life cycle. Moreover, the *consumer phase* could have the greatest overall impact on climate change, compromising 58% of its total estimated environmental impact, based on an average life span of 2 years with one washing per week.

Fig. 2 Life cycle of a pair of jeans and Levi's waterless advertising

Since then, the company Levi's tried to reduce the water consumption and its environmental impact in three ways. First, the company creates the *WaterLess*™ process that reduces water in the finishing process of denim jeans by up to 96%. This manufacturing process is based on the addition of a chemical which causes the dye to more readily fix to the fabric, resulting in less water needed for rinsing the fabric. The process results in 75% water savings and up to a 96% compared to traditional jeans' dyeing (Fig. 2).

Second, the company implemented a marketing campaign "Care Tag for the Planet" to teach and educate consumers about caring for their jeans in a more responsible way in order to reduce their footprint. The main purpose of this marketing campaign was to educate consumers in not washing jeans so frequently, given that by decreasing the number of times people wash their jeans, they can significantly reduce the consumer impact on environment. Finally and third, the company joined the "Better Cotton Initiative" to educate farmers on water efficiencies in order to reduce water consumption in the production process.

5.4 Ecoalf: "Because There Is No Planet B"

Ecoalf is a pioneer business into the high-end fashion market. This company production process is based on *reverse logistics*, since the manufacturing process is based on collecting wastage and recycled plastic to offer fashion garments and accessories. So, this company is strongly focused in sustainability and technological innovation, as well as on reducing resources, consumption, and waste. More precisely, Ecoalf manufactures products such as clothing, handbags, luggage, and accessories exclusively from recycled materials that include PET plastic bottles,

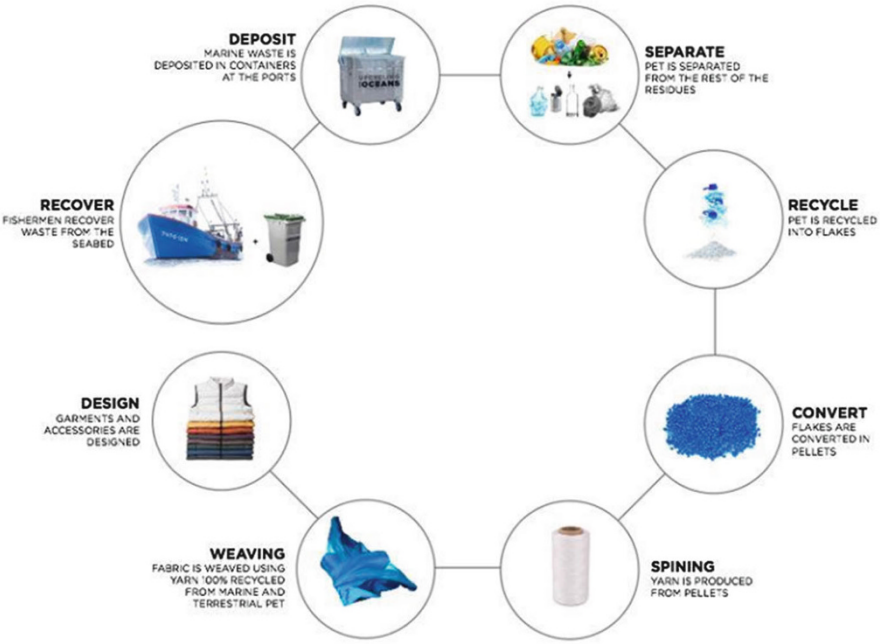

Fig. 3 Ecoalf recycling process

fishing nets, or rubber tires, among other materials upcycled or reused. Consequently, this company helps in reducing plastic waste and cleaning the sea.

What is going on in the oceans and seas? Over 500,000 million plastic bags are used every year, 200 million plastic bottles are not collected every year around the world ending in the oceans, and 650,000 tons of plastic fishing nets is left at the bottom of the oceans. Unfortunately, fishermen have to change their nets every 5–6 years, and they need to pay to leave those nets in the ports; so often nets are thrown in the ocean creating a lot of damage to marine life. In addition, this waste is growing and it is very difficult to recycle.

In this context, Ecoalf founded "Upcycling the Oceans," a revolutionary project to collect the discarded plastic bottles that are harming the Mediterranean Sea and turn it into top-quality thread. Using sophisticated research and design processes to recycle bottles from the ocean floor, the project's main objective is to develop production technologies that will allow the company to create textile products made with marine debris. Fortunately, the fishermen agreed to participate in the project and place plastic containers in the ports where they could put all the waste they caught in their nets.

Nowadays, the company recycles discarded fishing nets, plastic bottles, used tires, post-consumer coffee, postindustrial cotton, and postindustrial wool and has developed over 98 different recycled fabrics through an innovative recycling process (Fig. 3). Today, the company needs 80 plastic bottles to make one their our jackets.

Fig. 4 Ecoalf advertising campaigns

Ecoalf was born with the idea of creating a truly sustainable fashion company that wanted to develop the "trashion" concept, since each recycled material is processed and turned into new fashion products. The company believes that the most sustainable thing to do was to not use natural resources, so it focused on recycling to create fashion products. More interestingly, the company aims to collect the plastic before it enters the oceans and is converted into micro-plastic. This way, the company could demonstrate that it is possible to transform what other people call waste into amazing products, so that the company thinks of waste of something that has great value (Fig. 4).

5.5 Tide: Laundry Washing in Cold Water

Promoting consumer behaviors that can decrease current greenhouse gas emissions can provide great benefit for the environment and decrease consequences of climate change. Nowadays, laundry is becoming a more sustainable practice, due to a variety of innovations in products, and the increasing consumer awareness has also led to the introduction of detergents that are readily biodegradable, phosphate-free, or made from vegetable-based ingredients, instead of being petroleum-based. In this context, a range of products have emerged that market themselves specifically based on the absence of harmful chemicals. The success of Seventh Generation or Method Laundry illustrates the rise of detergents with new formulations that represent sustainable alternatives that are playing their part in reducing the environmental impact of each laundry cycle.

However, many consumers may not be aware that washing clothes is responsible for 341 kWh of electricity consumption and 0.24 metric tons of greenhouse gas emission per household per year. More precisely, if just one load of laundry per week

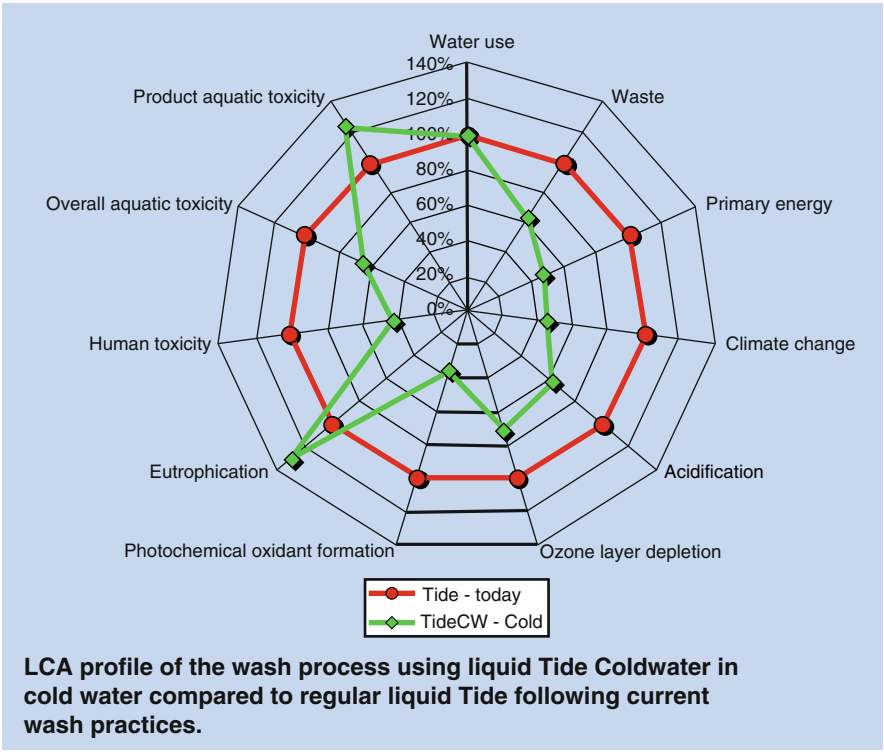

Fig. 5 Life cycle assessment profiles of conventional versus cold-water laundry soap

was shed on *cold instead of hot or warm* cycles, over the course of a year, 2007 million kWh of electricity, 166 million tons of natural gas, and 2.3 million metric ton of greenhouse gas emissions could be averted (Fig. 5). Therefore, small changes in wash temperatures are able to generate significant savings in energy consumption. Further, changes in washing machines, particularly in making cold the default for most cycles, will contribute to greater sustainability. When looking at laundry process, the choice of the machine wash temperature is the single biggest driver of the environmental footprint, since the most important impact is from the electricity used to heat the wash water. In this vein, public campaigns in some European countries encouraged the reduction of wash cycle temperatures among consumers.

In this context, DuPont and Procter & Gamble designed and launched a washing powder to work at cold-water and low water temperatures with less harmful chemical additives through the inclusion of enzymes that improved detergent cleaning performance: "Tide ColdWater" (Fig. 6). So, with an adequate cold-water detergent, it is easier for consumers to make a small change in their habits to care for the environment, through energy saving, and a transition to lower temperature washing could be enabled by laundry product innovations.

Fig. 6 Tide ColdWater advertising

5.6 Carrefour: Removal of Disposable Plastic Bags

Single-use disposable plastic bags used to carry goods from supermarkets and other shops—these bags are usually only used for one shopping trip—and often provided free of charge. So, plastic bags have facilitated a more convenient shopping experience for consumers, since plastic bags are light and inexpensive.

However, the use of disposable plastic bags entails negative environmental externalities that are not taken into account in the prices paid by retailers or end users. First, plastic bags in landfill can take decades or longer to degrade, since depending on the type of bag, they persist in the environment for a long time—biodegradable plastic bags do not last as long in the environment as non-biodegradable bags; however, they will only degrade within a reasonable time if disposed of in appropriate conditions. Second, additives in plastic bags can contaminate soil and waterways and, if ingested by animals, can enter the food chain. Many species accidentally ingest plastic bags because they confuse them with prey species, and to some extent, ingestion by marine mammals may occur indirectly as a result of ingesting fish that have eaten plastic. Other particular concern emerging in the marine environment is the giant masses of plastic waste known as *plastic soup*

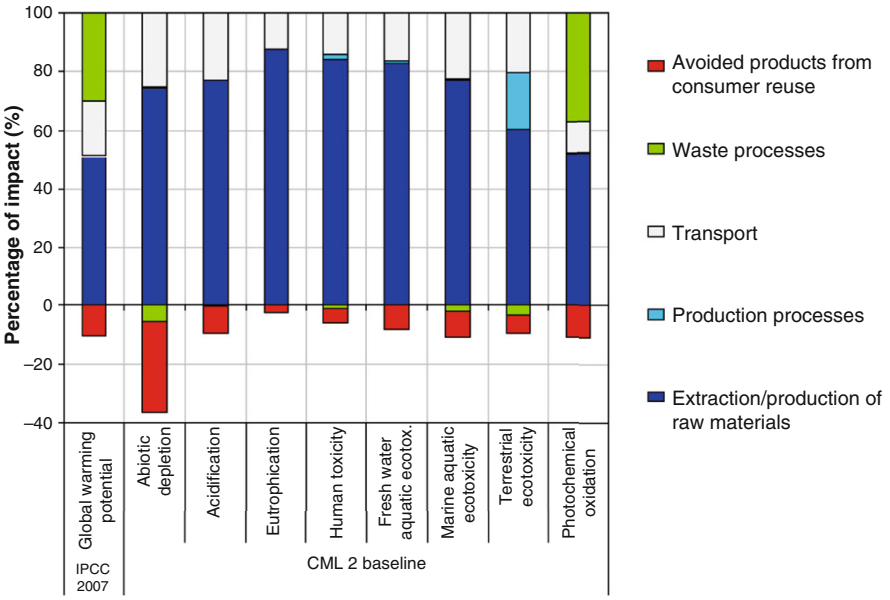

Fig. 7 The life cycle impact of starch-polyester plastic bags

that have been discovered in the oceans (European Commission 2011), and substantial quantities of plastic bags are accumulating in natural habitats worldwide. Finally, other environmental issue is that plastic bags are likely to end up as litter, and once littered they are visually intrusive and persistent, due to their lightness and mobility. Therefore, the reduction in the use of single-use plastic bags would have a highly positive influence on all environmental indicators, including energy use and greenhouse gas emissions (Fig. 7).

But how is the scale of this environmental issue? The number of plastic bags used in trade in year 2010 is about 98.6 billion plastic bags, of which 89% were the single-use type, the vast majority non-biodegradable. Plastic bags have a high calorific value, and this energy can be recovered in waste-to-energy plants for use in heating and electricity generation; however, the share of plastic bags going to energy recovery in the EU is only the 39% (European Commission 2011).

In this context, many countries have introduced strong policies to reduce single-use plastic bag use, and such initiatives have proved popular. The fact that many retailers still distribute plastic bags for free is the main driver behind their use and thus an important lever for change. So, pricing measures requiring that a price be placed on all plastic bags would result in both a reduction in their use and a shift from single-use to multiple-use plastic bags, thus having an almost immediate effect on consumer behavior and being a highly effective measure (European Commission 2011). In addition, other policies to reduce the use of plastic bags would be to switch to multiple-use plastic bags, since many consumers prefer to use multiple-use bags made of plastic or other materials, instead of paying for single-use plastic bags.

Nevertheless, whatever type of bag is used, the key to reduce its environmental impact is to reuse it as many times as possible.

In 2008, the Carrefour Group decided to take action and adopt an effective strategy aimed at identifying and reducing their environmental impact. This retailer group aimed to reduce CO_2 emissions from its stores by 40%. Later, in year 2012, Carrefour decided to completely stop giving out free disposable plastic checkout bags in its stores. This has come into effect in hypermarkets and supermarkets in France, Belgium, Spain, Greece, or Argentina, and in these countries, the company now offers alternative solutions to their customers, such as reusable shopping bags. This is a pioneering initiative that has been accompanied by a major customer awareness-raising campaign called "No more plastic bags" in partnership with local authorities.

5.7 *Bulk Purchase: The Removal of Food Packages in Grocery Shopping*

Consumers are increasingly looking for *convenience foods* that reduce preparation and cooking time, such as fresh produce that is prepacked, for example, cut and washed lettuce leaves, as well as foods that are ready to eat, for example, frozen meals, and this trend is expected to continue. However, food packaging has a great environmental impact, increasing the amounts of packaging waste requiring disposal or recycling at the household level and being a great source of pollution.

Food packaging is wasteful and mostly unnecessary, and consumers may probably love the idea of a package-free grocery store. In this context a recent trend has emerged, the *bulk purchasing*, which consists on the removal of food packaging by offering some food product categories in large containers or bins through bulk purchase. These bulk bins usually offer dry foods from dried fruit to nuts, dried beans, grains, teas and coffees, or spices.

Bulk food requires less packaging than individual serving packaged food items, resulting in less waste; and consequently when consumers purchase bulk items, they are reducing their carbon footprint. Therefore, buying in bulk eliminates the need for wasteful packaging and lessens the amount of trash, and the transportation of food products is simplified, easing the burden of CO_2 emissions. In addition, bulk purchase also reduces food waste, since this method of purchasing allows the portion control by customers, who will only purchase the needed quantity, decreasing the quantity of food wasted when using prepackaged products.

The store will offer many items from gravity bins, which do the work of dispensing the food (Fig. 8). Customers will often have plastic and/or paper bags available to them for transporting their food bulk items home. However, using these bags will produce a tremendous amount of waste, negating one of the benefits of bulk purchasing. Therefore, most of these grocery retailers allow customers bring their own containers or reusable bags.

Fig. 8 Examples of bulk purchase in grocery food retailers

Ingredients, in Austin (Texas), was the first store to apply this concept, offering local food and beverages that were filled in customers' own containers. Today, some retailers such as *Whole Foods* and *Auchan* offer bulk purchase, covering the walls in the store with clear bins stocked with grains, beans, and dried goods.

6 Conclusion

In general terms marketing focuses on encouraging increased and unsustainable consumption. However, marketing can influence and change consumers' behavior, helping in the shift of cultural values of consumption to address environmental issues, making consumers become aware about the environmental impact of consumption, and promoting sustainable ways of consumption. Similarly, there is a general consensus on the need to reduce resource utilization, energy consumption, and carbon emissions, but a lack of consensus exists on whether consumption should be reduced or just changed and whether consumers have the capability to contribute to resource conservation. In this context, the sustainability marketing orientation could be considered an alternative approach to marketing theory and practice. Through *sustainable marketing*, companies introduce sustainability into the core marketing strategies and actions to ensure the reduction of consumption and waste and to encourage consumers in developing a resource-efficient way of consumption, which includes the acceptance of consumption reduction.

The present study supports that marketing can provide strategies and actions for radical changes to the unsustainable consumption system. Therefore, marketing holds potential solutions to some of the challenges of sustainability faced today, such as the climate change.

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