Environmental Concerns and the Role Played by Civic Moral Disengagement and Time Perspective: a Pilot Experimental Study

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Abstract: In the present exploratory study, our primary aim was to explore whether knowledge about the fast-fashion industry's harmful effects would significantly impact participants' shopping intentions (i.e., eco or fast-fashion items products). Using an experimental approach, we created a virtual clothing shop and allowed participants to win, through a raffle, the contents of their shopping carts. Participants in the experimental group watched a video about the adverse environmental consequences of the fast-fashion industry. In contrast, in the control group, we used a neutral video describing various technical marketing strategies. In the experimental condition, participants chose more eco-friendly products) compared to the control. However, there were no significant differences between the two groups in terms of fast-fashion consumption behaviors, i.e., the choices of buying fast-fashion items. We also found several significant associations between participants' general concern for the environment, consideration of future consequences, civic moral disengagement, and consumption behaviors (buying eco or fast-fashion items following the experimental procedure). Results are discussed concerning their practical implications for sustainable citizenship participation and sustainable education.

Keywords: *fast-fashion; environmental concern; time perspective; moral disengagement.*

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1. Introduction

In today's society, consumerism is continually growing. The harmful ways to meet the high demand (e.g., using artificial, toxic fertilizing products) have significant negative consequences on both our health and the environment (Haward, 2018). For example, 20.000 liters of water have to be used for a single kilogram of cotton. The dumping of chemical waste (such as mercury or arsenic) into rivers significantly pollutes the environment (Claudio, 2007). Through the buy-throw cycle, 700.000 microfibers are thrown into the ocean annually and then eaten by fish, eventually reaching food production.

Moreover, globally, 10% of the current carbon crisis is caused by the clothing industry (Ellen MacArthur Foundation, 2019; UN Environment Programme, 2019). Trade globalization has exacerbated many environmental problems and highlighted the need for global solutions (Yilanci & Gorus, 2020) and a change of perspective to reduce consumerism and its subsequent environmental damaging effects. Though people generally seem aware of this problem and usually explicitly ask for solutions and assurances towards better ecological management, the main reason for environmental pollution remains human activity, i.e., "population size, the level of consumption, and the damage to the ecosystem caused by the technologies used to supply the consumable products and to support a given lifestyle" (Bandura, 1997, p.9). In addition to the adverse effects they have on citizens, the loss of biodiversity and the extinction of some species are significant aspects to consider when referring to pollution (Balaman, 2019; Cunningham et al., 2020; Korten et al., 2017; Wang & Yang, 2016).

Fast-fashion refers to clothing products with a low production cost and a maximized profit. As Bick and her collaborators observed, "while fast fashion offers consumers an opportunity to buy more clothes for less, those who work in or live near textile manufacturing facilities bear a disproportionate burden of environmental health hazards" (Bick et al., 2018, p.1). To gain and keep an increasing number of customers, manufacturers frequently embrace new market trends to maintain consumers' needs (Bick et al., 2018). According to Barnes and Lea-Greenwood (2006), a fast-fashion customer usually looks for new products every three weeks. Thus, the industry continually produces new clothing items for them. The mass fast-fashion industry's primary target group consists of teenagers and young people (Joy et al., 2012). However, to better explain the concept of fast-fashion, it is essential to understand the process of creating products and

their impact on the environment. Globally, 80 billion new clothing products are purchased annually, and 90% of them are part of cotton and polyester production, which generally require large quantities of water and pesticides to meet market demand, while polyester results from oil processing. Thus, large amounts of toxins end up in both water, affecting local ecosystems and the air (Claudio, 2007; Pensupa et al., 2017). Prolonged exposure in an area polluted by textile factories can cause serious diseases, such as cancer (Bick et al., 2018).

In addition to processing textiles, which is undoubtedly a central element for pollution, to have a better image of the impact of fast-fashion, we must also consider what happens to clothes after wearing them. The fast-fashion model determines its consumers to consider clothes as disposable (Bick et al., 2018). For example, according to Wicker (2016), "Americans toss each year has doubled from 7 million to 14 million tons, or an astounding 80 pounds per person. The EPA (i.e., the Environmental Protection Agency) estimates that diverting all of those often-toxic trashed textiles into a recycling program would be the environmental equivalent of taking 7.3 million cars and their carbon dioxide emissions off the road". A study conducted by Joung (2014) on a sample of young consumers of the fast-fashion industry suggested that participants had low scores on recycling behaviors. The study's conclusions suggested that producers who support consumerism should at least encourage potential buyers to recycle their clothes after using them to reduce the harmful effects of consuming fast-fashion products (Joung, 2014), as a moral duty towards the environment.

1.1. Moral judgment and environmental attitudes

Several researchers (Frunza, 2016; Sandu, 2017) explored the links between moral reasoning, moral behaviors, and environmental attitudes, emphasizing the influential role played by morality in shaping one's attitude towards the environment. For example, Mazar and Zhong (2010) examined moral judgment in the environmental field and their research results suggested that organic products' consumption might establish enough moral credits to encourage subsequent behaviors such as lying and theft (i.e., moral licensing mechanisms). Kaklamanou et al. (2015) confirmed this association, in line other similar findings e.g., Meijers et al., 2014) suggesting that people who recycle tend to drive more powerful cars (therefore, vehicles that are usually more harmful to the environment). Thus, moral behavior is followed by an immoral one (or a dubious morality), activating a series of moral licensing mechanisms one of the potential explanations that researchers

have found. Basically, people engage in pro-environmental behaviors, but then express inconsistency in the same direction (Lynn, 2014).

Other studies suggested that young people that are attached to plants might have higher levels of morality (Nartova-Bochaver & Muhortova 2020), while Feinberg and Willer (2012) suggested that political views and the type of environmental discourse might impact environmental concerns and attitudes. Finally, other scholars suggested that higher levels of knowledge and recognition of the consequences of environmental degradation might lead to a more moral view on proenvironmental behaviors (Van Liere & Dunlap, 1978), as well as higher levels of altruism (Schultz & Zelezny, 1998).

Moral disengagement describes a series of psychological processes involved in evaluating an immoral action in terms of acceptance by pursuing a form of distance to that specific unethical deed. More specifically, moral disengagement comprises the cognitive mechanisms people activate to justify immoral behavior. Bandura et al. (1996) identified eight mechanisms underlying this process (i.e., moral justification, euphemistic language, advantageous comparison, displacement and diffusion of responsibility, minimizing, ignoring, or misconstruing the consequences, attribution of blame, and dehumanization), and validated a tool to assess this mechanism (The Moral disengagement Scale; Bandura et al., 1996). The same mechanisms were adapted by Caprara et al. (2009) to assess the cognitive mechanisms underlying people's violations of civic duties and obligations.

Bandura (2007) documented the influential role played by selective moral disengagement for the harmful environmental practices people engage in, and offered several examples of unethical behaviors justified through these eight mechanisms. Some of them were related to the tobacco industry, deforestation, gas emissions, and generally to the "extravagant and wasteful consumerism, rooted in a market-driven model" that "degrades ecological systems with massive extinction of species". Examples of such moral disengagement mechanisms are described by Bandura (2007) and several other researchers. For instance, euphemistic language describing the harmful effects on the environment of several economical practices is often used in many contexts. For example, we read about an "energetic disassembly" and not a chemical explosion; about a "rapid oxidation" and not an intense fire, and plutonium contamination is presented as an "infiltration" (Bandura, 2007; Lakoff & Johnson, 2002). Overcrowding is also a significant factor behind pollution, but at the same time, people refuse to adopt a stable and safe contraceptive plan due to several factors (e.g., social, political, economic, or religious justifications), more or less personal

(Hollá et al., 2011). In general, when people perform activities that are beneficial to them but have the opposite effect on the environment, they tend to minimize the effects they cause or try to deal with them through various ethical disengagement mechanisms (Bandura, 2007).

1.2. Time perspective, sustainability, and environmental concerns

Mass industrialization, urbanization, and population growth have had negative effects on the environment and living organisms. Sometimes, these adverse effects might take a rather long to appear (i.e., years), and the most imminent is the destruction of the biosphere. However, people's attitudes can be divided into two broad categories: those who are stimulated by future benefits related to their behavior (the same people who are more willing to postpone their immediate benefits for a higher degree of satisfaction in the future, i.e., to delay gratification), and those who are motivated by immediate satisfaction and are generally stimulated by tangible things, and not by the uncertainty of the future (Strathman et al., 1994). According to Demarque et al. (2013), future orientation is generally associated with an increase in the frequency of pro-environmental behaviors. This can be explained by the fact that the consequences of environmental problems, such as global warming, resource depletion, or population growth, imply expectations and projections in the future (Demarque et al., 2013).

Basically, people's concerns regarding future outcomes are cognitive settings that determine how potential immediate or distant outcomes might influence the individual within their decision process. Thus, people with a low level of behavioral impact assessment focus primarily on immediate needs, while individuals with a high level focus on long-term outcomes (Orbell & Hagger, 2006). According to Ajzen (2001), people act according to their intentions while ultimately influenced by attitudes toward behavior. Schultz and Oskamp (1996) investigated whether situations with a high degree of effort involve attitudes that predict behavior. In their experiment, a significant positive relationship was observed between environmental awareness and participation in a recycling program with a high degree of effort. However, Böhm and Pfister (2005) concluded that „environmental risks, due to their strong moral component, are partly immune to time perspective” (p. 461). Therefore, further studies are needed to better investigate these mixed results.

Education also seems to have important role to play in raising awareness of environmental issues. According to Wells and Lekies (2006), students who participated in environmental courses showed increased environmental awareness and related ecological behaviors. Therefore, we

can assume that educating the population about consumerism and its harmful effects on the environment might positively influence environmental awareness and engagement. According to Omoogun et al. (2016), some of the best practices to increase the population's environmental awareness are related to the introduction of environmental ethics in the school curriculum, focusing on the adverse outcomes of consumerism.

Age is also significant when discussing factors associated with people's attitudes towards the environment. For example, Diamantopoulos et al. (2013) suggested that age is negatively associated with behavior (the younger the age, the lower the interest in sustainable products). The same study suggested that adults are the category most aware of consumerism's adverse effects on the environment and the category most willing to invest in sustainable products. Diamantopoulos et al. (2013) also suggested that a primary reason for young people's low interest in sustainable products is generated by their limited financial resources (which generally do not allow them to purchase more sustainable items, but at a higher price). However, Morrison and Beer's (2017) results on the matter did not provide sufficient data that would clearly indicate which age group (i.e., children, adolescents, young people, adults, or the elderly) has a higher degree of environmental awareness. Given these unclear results, future studies are needed to draw more precise conclusions about the impact of age on environmental attitudes and perceptions.

Regarding the role of gender in the context of environmental attitudes, data from a longitudinal study conducted on a sample of students showed that females generally have a higher level of awareness of the effects of pollution (Szagun & Pavlov, 1995; Xiao & McCright, 2015). At the same time, studies suggested that men engage in more environmental conservation actions (Sivamoorthy et al., 2013), while women showed more seriousness and involvement in protecting the environment - being, at the same time, more receptive to campaigns to promote sustainable products (Lee, 2009). Some researchers explain the difference between the two genders in terms of attitude towards the environment through the fact that women might empathize more with environmental concerns and might have higher levels of altruism (Egan & Mullin, 2012; Goldsmith et al., 2013; McCright & Dunlap, 2011).

2. Methodology

The aims of the present research were two-fold. First, we aimed to explore, using an experimental approach, the role of information related to

the impact and consequences of the fast-fashion industry on the environment, on students' fast-fashion consumption behaviors. Additionally, we were interested in exploring the associations between a series of demographical variables, personality traits, and the general concern for the environment. Our primary hypothesis was that participants who would have detailed information related to the harmful environmental consequences of the fast-fashion industry would be more willing to buy eco-friendly products (i.e., clothes), instead of fast-fashion ones.

2.1. Participants

Our sample consisted of seventy-four students aged 19 to 35 ($M=20.75$, $SD=4.06$), mostly males (71.6%). They were either studying for a Bachelor's degree (20.3%) or a Master's degree (79.7%). Most of them reported a low income (47.3%), while 45.9 % reported a medium monthly income or a high income (6.8%). They were randomized into two groups (i.e., the control group and the experimental group). Their participation was voluntary, and they were rewarded with course credits for their contribution to the present research.

2.2. Instruments

We used the *Considerations of Future Consequences Scale* (CFC; Strathman et al., 1994) to assess the extent to which participants emphasized short-term or long-term consequences. Participants answered the 12 items using 5-point ratings (1 = extremely uncharacteristic to me, and 5 = extremely characteristic to me). Example items include "*I consider how things might be in the future, and try to influence those things with my day-to-day behavior*" and "*I think it is more important to perform a behavior with important distant consequences than a behavior with less-important immediate consequences*". High scores suggested a high level of awareness and concern for the future consequences of one's behaviors. The internal consistency of the present study's scale, indicated by Cronbach's Alpha, was 0.767.

We used an adapted version of the Civic Moral Disengagement Scale (CMDS - Caprara et al., 2019), containing 24 items. Thus, each of the eight moral disengagement mechanisms was measured using three items on a Likert scale from 1 (totally disagree) to 6 (totally agree). A high score on each dimension, as well as the total score, indicated higher levels of civic moral disengagement. Example items include "*Burning grass or leaves is just a form of fun*" (euphemistic language), "*Non- recycling is not so serious compared to the damage caused by large companies to the environment*" (distorting consequences); "*It's okay to pollute the air if the purpose for which you do it is a noble one*" (moral

justification), or "*It is unfair to condemn a tenant who pollutes the air daily since all residents do the same thing in a building*" (advantageous comparison). The internal consistency of the CMDS was very good (Cronbach's $\alpha = .928$).

The general concern about the environment, i.e., "an affective attitude regarding the severity of environmental problems" (Landry et al., 2018, p.19) was measured using a single item: "To what extent are you concerned about the situation of the environment in general?". Participants answered on a 7-point Likert from 1 (not at all) to 7 (totally) (as previously used by several researchers, e.g., Berenguer et al., 2005; Laundry et al., 2018).

Finally, we created the Margo Shop - an online store built for the current research. When accessed, each participant received a unique code upon registration (i.e., they could use an alias following the data related to gender, age, income, and educational level – Bachelor's or Master's degree). In the online store, there were four categories of products, from which each participant could choose: fast-fashion women, eco-friendly women, fast-fashion men, and eco-friendly men. All clothing items ($N=64$, out of which 32 female products and 32 male products), available in different sizes from XS to XL) were, in fact, doubled: the same item of clothing could be found in both the *eco* or *fast-fashion* versions, the only visible difference being the price and the "eco" or "fast-fashion" tag (the sustainable product, marked with a green label that said *eco*, was priced about three times higher than the same product marked as a *fast-fashion* product).

2.3. Research procedure

First, participants were informed about the general research theme (they were told that the study aimed to explore different marketing strategies related to the fashion industry). Then, they were informed about the time required to complete the procedures (around 40 minutes), as well as the fact that they can withdraw from the study at any time, and the data obtained are confidential and will be used strictly for academic purposes. Then, they were divided into two groups - the control and the experimental. They first answered the CFC and CMD scales, and the general concern about the environment item.

Next, in the control group, participants watched a neutral, rather technical video related to various marketing strategies used in the fashion industry. In the experimental group, participants watched a video about the adverse consequences of the fast-fashion industry for the environment. Both videos had similar durations (about 10 minutes). Subsequently, the participants were told that they could access an online store and use a budget around 65 euros, which they could spend in the Margo Shop at will. They

were also told that they have to spend their budget within the next 10 minutes by choosing the products they wanted and adding them to the shopping cart.

Participants were also informed that, following their participation in the study, they will have the opportunity to win a raffle, the prize being the products they choose to add in their shopping cart. At the end of the research (one week), they were also told that they would win the ordered products (i.e., products in the shopping cart) through a raffle. Upon accessing the link, each participant received a unique code that they wrote down for further identification. Eco-friendly products were priced around 10 euros, and the same fast-fashion product cost about three times less, around 3.5 euros. When exiting the shop (i.e., when they had to submit their order), they entered the unique codes they received upon entrance. Our dependent variable was, therefore, formed by the number of eco or fast-fashion items added to each participants' shopping cart. At the end of the procedure, the experimenter revealed the real purpose of the research, and a debriefing session took place, in which they were able to ask additional questions about the fast-fashion industry and its consequences for the environment.

3. Results

We first explored the potential associations between participants' demographical variables (i.e., gender, age, educational level, monthly income) and their general concern for the environment, regardless of the experimental condition. The only significant association we found was related to age: younger participants were more concerned about the environment, compared to older ones ($X^2=7.24, p=.007$) (see Table 1).

Table 1. Chi-square tests results (both experimental conditions)

General concern for the environment	Pearson χ^2
Gender	1.32
Age ($Mdn=20$)	7.24*
Educational level	3.70
Monthly income	1.81

* $p<.05$

Source: Author's own conception

Generally, participants chose more eco items ($M=3.62$), compared to fast-fashion ones ($M=1.75$) ($t(73)=3.60$, $p=.001$). In the experimental condition ($N=37$), participants chose more eco products ($M=4.21$), than in the control condition ($M=3.02$) ($t(72)=-2.45$, $p=0.017$). However, there were no significant differences between the groups in terms of fast-fashion consumption behaviors, i.e., the choices of buying fast-fashion items ($t(72)=1.70$, $p=0.093$) (see Table 2).

Table 2. Means and standard deviations eco and non-eco items

	<i>M</i>	<i>SD</i>
Experimental condition		
Eco-items	4.21	1.88
Fast-fashion items	1.16	1.92
Control condition		
Eco-items	3.02	2.26
Fast-fashion items	2.35	3.79

Source: Author's own conception

When exploring the correlations between the main variables (see Table 3), we found several significant associations between participants' general concern for the environment, consideration of future consequences, civic moral disengagement, and consumption behaviors (buying eco or fast-fashion items following the experimental procedure).

Table 3. Means, standard deviations, and Spearman correlations between the main variables

Variabiles	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. EV concern	5.27	1.19	1	.044	-.079	-.235*	.251*
2. Eco items	3.62	2.15		1	-.505**	-.125	.073
3. Fast-fashion items	1.75	3.04			1	.208	-.239*
4. CMD	48.01	18.25				1	-.398**
5. CFC	42.04	7.28					1

* $p<0.05$ (2-tailed); ** $p<.001$ (2-tailed)

Source: Author's own conception

Results suggested significant associations between participants' environmental concern and civic moral disengagement. More specifically, higher levels of environmental concern were associated with lower levels of

civic moral disengagement ($r=-.235$, $p=.04$). Moreover, participants' environmental concern was also significantly and positively associated with consideration of future consequences ($r=.251$, $p=.03$). Results suggested a negative, significant associations between participants' fast-fashion buying behaviors and consideration of future consequences ($r=-.239$, $p=.04$), as well as fast-fashion items and eco-items virtually bought in the Margo shop ($r=-.505$, $p<.001$).

4. Discussion

Our primary aim in the current study was to explore the impact of the accurate and specific information related to the fast-fashion industry impact on the environment might have on participants' purchasing intentions (i.e., eco-friendly products or fast-fashion products). We first explored the potential associations between participants' demographical variables and their general concern for the environment. The only significant association we found suggested that younger participants were more concerned about the environment than older ones. This specific result contradicts previous findings (e.g., Diamantopoulos et al., 2013), which suggested that the younger the age, the lower the interest in sustainable products. Future studies might want to explore further these associations, in more extensive and more heterogeneous samples of participants.

Our main finding was related to the fact, in the experimental condition (i.e., students who watched a video explaining the adverse consequences of the fast-fashion industry on the environment, opposed to eco-friendly industrial practices), participants chose more eco-friendly products compared to students in the control condition. These particular results suggest that increasing people's awareness concerning the impact of fast-fashion might generate lower fast-fashion consumption rates. We consider the related implications as highly important in terms of sustainability, given the adverse environmental consequences that might be reduced through information and education. Our pilot study suggests that the more information people have related to harmful environmental practices, the lower the chances to buy their related harmful products.

We found no significant differences between the two experimental groups in terms of fast-fashion consumption behaviors, but participants generally chose more eco-friendly items instead of fast-fashion. This result is also interesting, given that all students knew that they could win the contents of their shopping cart. The two categories of products were basically identical; therefore, the more they chose fast-fashion items, the more items they might have received. However, most participants chose eco-friendly

items, and the number of the selected fast-fashion items was significantly and negatively correlated with their consideration for future events. More specifically, the higher their preoccupation for future consequences, the lower the number of fast-fashion items added to their shopping cart. Once again, these results emphasize the need for informational and educational programs concerning the long-term consequences of harmful industrial practices on the environment.

Furthermore, we found a series of significant associations between participants' general concern for the environment, consideration of future consequences, civic moral disengagement, and their shopping behaviors. More specifically, our results indicated that lower levels of civic moral disengagement correlated with higher levels of concern for the environment, an outcome similar to those suggested in previous studies in the environmental area (e.g., Van Liere & Dunlap, 1978; Schultz & Zelezny, 1998). Another interesting significant association was observed between EMD and consideration of future consequences, our results suggesting a negative relationship between the two. Therefore, participants in our sample with higher levels of EMD seemed to be less interested in future consequences. Thus, the programs related to the pro-environmental practices and strategies might also include information and educational modules on moral principles and, generally, on ethical values and behaviors.

Though we consider the present results and worthy of future exploration, several limitations need to be addressed. The most important one is related to the sample size, which was small and lowered the present exploratory findings' generalizability. However, future studies should comprise larger and more heterogeneous samples to clarify the relationships we observed in the current research. Additionally, the lack of significant associations with participants' gender, age, income, and educational level might also result from small sampling and imbalanced experimental groups. Furthermore, though we pretested all our instruments, the EMD scale still needs further exploration to better assess its psychometric properties.

5. Conclusions

We consider the present pilot study necessary for future explorations related to the impact that pro-environmental education and informational programs might have in shaping people's attitudes towards the environment and increasing sustainability. Our findings support the need for educational programs concerning the long-term consequences of harmful industrial practices on the environment, such as the fast-fashion industry, and

highlight the benefits of including educational seminars related to civic moral education in students' general education curricula.

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Ethics statement: This study's protocol was designed in concordance with ethical requirements specific to the Faculty of Psychology and Educational Sciences, "Alexandru Ioan Cuza" University (Iasi, Romania) before beginning the study and supervised by Alexandra Maftei. All participants voluntarily participated in the study and gave written informed consent following the Declaration of Helsinki and the national laws from Romania regarding ethical conduct in scientific research, technological development, and innovation.

Conflict of interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. The authors declare no financial interests/personal relationships, which may be considered as potential competing interests.

Data Availability Statement (DAS): The raw data supporting this article's conclusions will be made freely available by the authors, without any reservations.

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