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Others are changing, will you?: Dynamic Norms, Collective Pride and Pro-Environmental Behaviour

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Mestrado em,
Ciências em Emoções

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Abstract

Plastic is creating serious environmental concerns. Social norms can help reduce unsustainable behavior, especially when the referent is socially close to the individual. The present study aimed to examine the effect of referent specificity in dynamic norms on intention to reduce plastic use and the role of collective pride as a mediator in this relationship. Social identification was also tested for its moderating effect on the relationship between referent specificity and intention. Participants were randomly exposed to dynamic norms with a specific referent (college students, n =57), general referent (Portuguese, n = 49) or no norm exposure (control group, n = 64) and answered a questionnaire about collective pride and pro-environmental intention. We hypothesized participants in the specific condition would have higher intention compared to the general and control conditions (H1), that this effect would be stronger for high identifiers with the referent (H2), and that collective pride would mediate the link between referent specificity and intention (H3). Results showed the specific referent did not differ from the general referent or the control condition regarding intention to reduce plastic. Intention in the general referent was significantly lower from the control condition. Social identification moderates the impact of dynamic norms on intention - those who identify less with the general referent have higher intention to reduce plastic than those with higher identification. Collective pride was higher in the specific condition compared with the general but did not mediate the relationship between norm and intention. Findings and practical implications will be discussed.

Key words: Pro-environmental behaviour (PEB); dynamic norms; collective pride; social norms

3020 – Group and interpersonal processes

4070 – Environmental Issues & Attitudes

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Introduction

The environment - climate change, greenhouse gas emissions, pollution - has been at the forefront of subjects discussed in recent years, increasingly growing in popularity and urgency amongst governments, scientists, activists and communities around the world. Disposable plastic use and the pollution resulting from it is one of the main issues at hand regarding sustainability. "Responsible consumption and production" is one of the 17 Sustainable Development Goals (SDGs) created by the United Nations Development Programme (Nações Unidas, 2015), which are meant to be a collective call to action on a global scale. The general aim of SDGs is to pressure governments, institutions and organizations to develop initiatives that improve health and education, decrease inequality and stimulate economic growth while combating climate change and working to protect natural life. Goal number 12 – Responsible consumption and production - states that until 2030 it is utterly necessary to significantly reduce waste production through prevention, reduction, recycling and reusage. Reducing the use of plastic is one of the targets, yet plastics are quite entrenched in everyday activities. The purchase of bottled water, using straws and buying plastic bags at supermarkets are examples of behaviors that contribute for the large amounts of plastic in circulation. Even when these items are separated for recycling, it has become clear that many of it ends up not being recycled (Eurostat, 2019). As such, part of the solution is actually avoiding buying these products when they are not necessary. Government strategies have been announced to curtail this problem and several organizations work to try to change the current situation. For example, Smart Waste Portugal Association is leading the Portuguese version of the Plastics Pact led by Ellen McArthur's Foundation - "*Pacto Português para os Plásticos*", which aims to be a collaborative platform gathering different valuable human resources in the plastics value chain, including government officials, to ultimately achieve a set of goals towards circular economy of plastics. (Smart Waste Portugal, 2021). Typical intervention measures frequently use traditional approaches to changing behaviour such as financial incentives, informational campaigns, bans and regulations. In supermarkets, shopping bags stopped being for free (Luís et al., 2018) and disposable items such as plastic cups, plates and cluttery were forbidden, yet single-use plastics are still a prevailing problem. Thus, it is crucial to better understand how such behaviour change might be achievable in new ways and thereby promote more sustainable behaviors.

Alongside the work performed by governments and organizations to deal with environment related issues, social psychology insights can offer understanding for pro-environmental behaviors and help create more targeted and efficient strategies for behaviour change. Social norms, which refer to information about rules and standards that act as behavioral guides for members of a group (Cialdini & Trost, 1998), are one of the mechanisms shown to be effective at fostering behavioural change (e.g., Brent et al., 2015; Cialdini & Trost, 1998; Goldstein & Cialdini, 2007; Loschelder et al., 2019; Mont et al., 2014; Mortensen et al., 2018; Mouro & Castro, 2017; Schultz, 2002; Sparkman & Walton, 2017, 2020).

Cialdini and colleagues (1990) introduced an important distinction between two types of social norms. Descriptive norms, which refer to how other people are behaving, and injunctive norms, which give information about what behavior is seen as morally or socially accepted. The present study will focus on descriptive norms. Descriptive norms have a direct impact on behaviour (Thogersen, 2006) – I tend to do what I see others doing –, making them a very powerful contextual cue in behaviour changing interventions. However, the norm may be an undesired one, i.e., the majority of individuals may be having unsustainable behaviors. In this case stating what most people are doing can be counterproductive and lead to an increase in undesired behaviors because these are the most prevailing (Cialdini et al., 2006) - a phenomenon known as *boomerang effect*. A recent contribution in the literature proposes that leveraging on trends in descriptive norms can help to curtail this boomerang effect (Sparkman & Walton, 2017). This contribution draws on a distinction between static and dynamic (trending) descriptive norms. Static norms describe the frequency of a behavior within a group of people (e.g., 40% of Portuguese separate plastic waste). The setback here is that if the unsustainable behaviors are the most prevalent, it may lead to its reproduction instead of promoting the desired change. Dynamic norms focus instead on the fact that a growing minority is changing their behavior, thus having a descriptive component while avoiding the setback of "what most people do". The impact of dynamic norms on pro-environmental behavior has been studied with promising results (Loschelder et al., 2019; Sparkman et al., 2017; Sparkman & Walton, 2019). Sparkman & Walton (2019) recently led numerous experiments and field studies where dynamic norms increased participants' self-reported interest in reducing their meat consumption, the likelihood of ordering a meatless lunch or of saving water while doing their laundry.

Whether static or dynamic, social norms always have a referent, i.e., to whom the behavior mentioned in the norm refers to. Norm referents that are more effective leverage on the

individual's ingroup (Sparkman et al., 2020). Within the ingroup referents can be more or less specific, e.g., national identity or a local group (Mertens & Schultz, 2021). Some studies have shown that more specific referents have a bigger impact than more general ones (Goldstein et al., 2008; Graffeo et al., 2015; Lede et al., 2019), yet other studies have found the opposite effect or failed to find a difference between the two (Mertens & Schultz, 2021; Schultz et al., 2008). Apart from referent specificity, there is social identification with the referent, which might have an effect on the influence of the social norm (Mertens & Schultz, 2021). Mertens and Schultz (2021) argue that social identification can be higher or lower for specific and generic referents and that even if social identification is lacking, a more specific referent should be more influential. Contradicting evidence and possible overlapping variables in this research area add pertinence to studies aimed at studying the effect of referent specificity on pro-environmental outcomes, such as the present one.

One may ask then, what are the underlying mechanisms behind dynamic social norms and referent specificity? Emotions can a have a say here, since they are a quintessential factor in decision making and behavior in general (Lerner et al., 2015) and also have a role as predictors of policy support for climate change (Wang et al., 2018) and intentions to reduce food waste (Russell et al., 2017). Moreover, a particular emotion - collective pride - is associated with higher pro-environmental intention and can act as a mediator in the link between the social norm and behavioral intentions (Harth et al., 2013). Despite these findings, to our knowledge, no studies have yet focused on the emotional impact of norm referent specificity in dynamic norms and the role of emotions in the influence exerted by these interventions on behavior or behavioral intentions. This paper aims to contribute to the literature regarding the promotion of sustainable behaviors by exploring new avenues in this growing area of research. Our goals are therefore (1) to examine the effect of referent specificity in dynamic social norms on intention to reduce disposable plastic use, (2) considering the level of identification with the referent, and (3) the role of collective pride as a mediator in this relationship.

The upcoming chapters will provide a more detailed explanation of the current study's rationale supported by previous research, followed by the study design, how it was conducted and its results, which will be discussed in light of existing research, and a conclusion drawing upon the practical implications of the findings.

Chapter 1 – Literature review

1.1. The plastic problem

When the environment is the topic in discussion, plastic emerges as one of the key problems to tackle. Literature has been reflecting the urgency to deal with this matter by giving increasingly more attention to behaviors related to plastic and disposable, single-use products and ways to promote more sustainable habits (e.g.: Borg et al., 2020; Heidbreder & Schmitt, 2020; Truelove & Nugent, 2020;). In countries where the norm is to excessively buy single-use plastic items and not recycle most of the used material, as is the case of Portugal, understanding the most effective ways to promote more sustainable behaviors is, at this point, crucial. Portugal is in the top 10 European countries with the lowest plastic waste recycling rate, recycling only around 35% of plastic packaging (Eurostat, 2019), In a publication by Plastics Europe, it was amongst the 11 European countries with the highest plastics converters demand in 2018 and 2019 (Europe, 2020). Plastics converters (sometimes called "Processors") manufacture plastics semi-finished and finished products for an extremely wide range of industrial and consumer markets - the automotive electrical and electronic, packaging, construction and healthcare industries, etc. Additionally, the Portuguese Association of Environment stated that Portugal is one of the European countries with a higher percentage of plastic bag use, with an average of over 450 plastic bags used once by each person per year (APA, 2021). Nevertheless, Portugal remains an understudied population in this realm.

Inherent in the problem of plastic packaging consumption, much like in other environmental issues, is the individual contribution of each person put together to generate a wider problem of a collective nature. Considering the need for a collective response, understanding the dynamics of group associated factors for encouraging pro-environmental actions is highly relevant to the issue at hand. In the next section we discuss the potential power of social influence through social norms in promoting sustainable behaviors.

1.2. Social norms

Collective responses are deeply rooted to social influence and our socially oriented nature leads our behavior to be highly impacted by what people around us do and think (Mont et al., 2014). Social norms are the general, shared and accepted behaviors of members of a group according to the situation at hand. They act as a guidance for human behavior, as informal social laws

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notifying individuals about the most common and considered correct behavior to adopt in specific settings (Cialdini & Trost, 1998). In fact, formal laws such as public policies that prohibit certain behaviors (ex.: no-smoking bans) change social norms about the behavior in question over time. The considered correct behavior becomes more prevalent, which in turn creates social influence to further maintain the behavior (Luís & Palma-Oliveira, 2016). Knowing that a significant amount of other people is taking part in a given behavior increases the likelihood that the individual will adopt that same behavior (Mortensen et al., 2018) and this effect can be used to foster behavior change. Within the present study's realm, normative social influence seems to play an important role as a potential tool for promoting pro-environmental behavior and intentions (Goldstein & Cialdini, 2007) such as recycling more (ex.: Lima & Branco, 2018) and reducing energy and water usage (Brent et al., 2015; Schultz, 2002) and has been positively linked to conservation actions (Mouro & Castro, 2017) and work-related sustainable behavior adoption (Mouro & Duarte, 2021). Yet, different types of norms may play a different role, thus, in the next section we describe the tenets of the Focus Theory of Normative Conduct, which explains how norms may work and differentiates between types of norms.

1.2.1. Focus Theory of Normative Conduct

The Focus Theory of Normative Conduct, developed by Cialdini and his colleagues (Cialdini, et al., 1990), proposes that the impact of a social norm on behavior is dependent on its salience. This means that in scenarios where different social norms are simultaneously present, whichever norm or aspect of a norm is more salient has the strongest influence. The concept of normative focus in this theory refers to the relative salience of different social norms in a certain situation, and it helps to clarify which kind of norm will impact one's behavior in a given scenario and why that is the case. Norms can be made salient by having the information about other people's behavior written in a visible manner (e.g., a sign in the self-service coffee machine at a coffee place, Loschelder et al., 2019; or a sign in the menu of a restaurant, Sparkman & Walton, 2017; 2020) or by the simple observation of other individuals' behavior.

The theory distinguishes between two kinds of social norms, descriptive and injunctive, suggesting that the two types might reflect distinct influences on behavior, within the same situation. The distinction made by the authors stems from the notion that human behavior in socially relevant circumstances is derived from two motivational sources. Accordingly, a

person may be influenced by other people because s/he considers them a source of informational social influence – meaning the behavior actually performed by others offers information about the normal, usual or correct way to behave. The Focus Theory of Normative Conduct uses the term descriptive norms to refer to social norms that mention what is the usual behavior of a group. On the other hand, one may be influenced by others because one sees them as a source of normative social influence – other people's expectations offer information about what behaviors are appropriate or desired. This kind of norm stating what should be done is referred to by the authors as injunctive norms (Cialdini et al., 1990). Hence, while descriptive norms inform behavior via example, injunctive norms are said to enjoin it via informal sanctions. Descriptive norms have shown to have a more direct link with behavior (Thogersen, 2006) and to impact on behavior even when one is not aware of its influence (Nolan et al., 2008).

Several studies with interventions based on this theoretical model have shown the efficacy of social norms, namely descriptive norms, in areas such as water conservation and electricity consumption (e.g., Bergquist & Nilsson, 2016; Dywer et al., 2015; Jaeger & Schultz, 2017). However, and as mentioned earlier, descriptive static norms can have an opposite effect to what is desired – a boomerang effect. When the norm states that a majority of people is doing an undesired behavior, this can lead people to adopt the undesired behavior as the norm emphasizes this behavior as prevailing (Cialdini et al., 2006). A field experiment conducted by Cialdini and his associates (2006) showed that a static descriptive norm mentioning that the majority of people took pieces of wood from a petrified forest caused an increase in the number of people doing the same, although the goal was to discourage individuals from adopting this behavior.

Following along the distinction between different norms and the boomerang effect found for static norms, next we will address the contribution of a specific type of norms that seems to be of special value when it comes to encouraging environment related behaviors.

1.2.2. Dynamic norms

Amongst the aforementioned descriptive norms, a specific kind of social norm has been recently receiving attention in the sustainability research field – the dynamic or trending norms. Instead of focusing on the fact that a percentage of people does a certain behavior (which conveys a static norm), dynamic norms highlight the fact that a growing minority is changing or starting to change its behavior (Sparkman & Walton, 2017). For example, a dynamic norm could be a

statement saying that a growing number of people are reducing their meat consumption, regardless of the fact that the total percentage of vegetarians can be less than 10% in a given country, which would be the static descriptive norm.

Social norms in general appear to work well in promoting behavior change. Nevertheless, its effect is dependent upon the fact that the behavior one wants to promote is already normative, i.e., adopted by a significant number of people. Dynamic norms can be applied when the desired behavior is not the most prevalent. This is one of the reasons why these norms are suitable to foster sustainable behavior, given that in most cases involving pro-environmental decisions the most common behavior often is unsustainable.

Dynamic norms have been studied in the pro-environmental behavior area and show promising results. From meat consumption (Sparkman & Walton, 2017; Sparkman et al., 2020), to water use (Sparkman & Walton, 2017; Mortensen et al., 2017) or disposable cups' use (Loschelder et al., 2019), studies conducted both online and in the field have been showing the potential of dynamic norms in reducing behaviors with environmental impact. Loschelder et al. (2019) used dynamic norms to promote using reusable coffee mugs instead of disposable containers and found the intervention effective, with customers having their use of reusable alternatives increased by around 17%. Sparkman and colleagues have been studying the effect of dynamic norms on different pro-environmental behaviors in the past years and consistently found that dynamic norms are a hopeful means to promote this type of behaviors. In one of their studies, they placed a dynamic norm message in the menu of a restaurant emphasizing the fact that Americans' behavior was changing, and they were starting to ask for more plant-based dishes. The dynamic norm led to a significant increase in the quantity of vegetarian dishes ordered (34%), compared to a static norm and control group without norm intervention (Sparkman & Walton, 2017).

In the present study, we will evaluate the impact of dynamic norms on intention to reduce disposable plastic use. The following sections will further detail the study's aim.

Besides evaluating the impact of dynamic norms, compared to static norms, the literature has also been interested in disclosing the processes linking these norms to behavior change.

1.3. Referent specificity and Social Identification

When describing the behavior of others, one must identify who performs the behavior. In this sense, normative messages are always about someone, usually a group, known as the norm referent.

Social norm information can have its chances of causing an impact on behavior increased when the referent mentioned in the norm is somehow relevant for the person receiving the message (Cialdini & Jacobson, 2021; DeDominicis et al., 2019; Goldstein et al., 2008; Lede et al., 2019), either because the referent is like the receiver or socially proximate (e.g., Lede et al., 2019) or because the receiver identifies with the referent group (Masson & Fritsche, 2014; for a review see Cialdini & Jacobson, 2021). Social identities have been shown to be good predictors of pro-environmental behavior and people seem to be more likely to adopt sustainable behaviors if their perceived in-group norms are pro-environmental (eg., Fielding & Hornsey, 2016; Gatersleben et al., 2014; Reynolds et al., 2015).

For example, Goldstein and colleagues (2008) found that normative information was most impactful in promoting towel reuse in hotels when it mentioned 'other hotel guests who stayed in this room', compared to the more wide-ranging group of 'fellow guests'. In parallel, in a study about household energy consumption, Nolan and colleagues (2008) concluded that perceived social norms were more powerful when the referent groups were closer and more similar to the participants. In this study, the norms of others from the same community had a bigger impact on conserving energy than those from the same city or state in general. Graffeo and colleagues (2015) also investigated energy consumption. They manipulated the referent in energy consumption feedback comparing the effect of using a household from the same neighborhood as the participant with that of mentioning a different neighborhood. The results indicated that intentions to save energy were higher when the feedback mentioned a household from the same neighborhood. In another context, an investigation conducted with farmers about sustainable agricultural practices found that the intention to engage in such practices was influenced by perceived ingroup norms (Fielding et al., 2008). The farmers who thought their fellow community landholders (vs landholders from another community) supported an agricultural sustainable practice were more likely to intend to take part in the practice. The degree to which the participants identified with their rural landholder community also played a role in the effect of the norms, which was stronger for those highly identified with the local group.

More recently, Lede and colleagues (2019) showed the power of using ingroup norms appeals on water conservation intentions and behavior. By comparing people in general with a more specific ingroup (college students where the experiment took place) as the referent, they gave evidence that a social norm with a more specific referent is more effective at promoting water conservation behavior. Further, Sparkman and colleagues (2020) led a study with

dynamic-norm messaging in menus of a university café to promote vegetarian choices. The norm referent was "other customers" and effects were found to be positive among participants who were affiliated with the university (had a university ID card) and thus were possibly more connected to or identified more with the norm referent (Sparkman et al., 2020).

The studies mentioned above propose that referent group specificity plays a role in social influence. However, other studies have found no difference between specific and generic referents of social norms. For instance, in a recent study Mertens & Schultz (2021) compared the effectiveness of social normative feedback at increasing waste diversion across four referent groups varying in their degree of specificity and found no effect of norm referent specificity on behavior. In studies about towel reuse in hotels such as the one mentioned above by Goldstein and colleagues, norm referent specificity manipulation has not been proven effective. Schultz and colleagues (2008) introduced either referent specific, generic, or control messages about the norms for participation in a hotel's towel reuse program. The effects of both the specific and generic referent norm messages were significantly different from the control condition, but the two normative messages did not differ from each other. Bohner and Schlüter (2014) provided hotel guests with descriptive norms suggesting that 75% of guests had reused their towels, varying in the referent group proximity ("hotel guests" vs "guests in this room", and compared these with a standard message appealing to environmental concerns. The authors concluded that descriptive norms were not more effective than the standard message and effects of proximity were inconsistent. The inconsistencies in this research field make it pertinent to continue studying these effects and trying to better understand what is behind their occurrence.

Two different factors may come into play here and their distinction is important to disentangle possible concomitant processes taking place when social norms are made salient. On one hand, there is norm referent specificity (Mertens & Schultz, 2021), which refers to the social proximity between the group and the individual. A normative referent that is more specific derives from a group that holds closer connections to the individual, such as one's immediate neighbors. A more generic normative referent stems from a referent group that has less of a connection to the individual, such as all residents of one's city.

On the other hand, there is social identification. According to Tajfel (1982), social identity is, within one's self-concept, a construct that stems from one's notion of oneself as a member of a social group or various social groups, combined with the emotional meaning attached to that membership. Tajfel's Social Identity Theory states that if the individual's social identity is salient, it will have an effect on her/his behavior consonant with the norms and beliefs

associated to the referent group. Social identification is distinct from specificity in that it can be higher or lower for both specific and generic referents. To illustrate, a student could identify or not with his classmates, regardless of the fact that they are socially proximate because they are in the same class or school. The main principle is that even when there is no subjective social identification with the group, norms with a more specific referent could be more influential than a generic norm (Mertens & Schultz, 2021).

Another aspect worth mentioning is that studies often mention analyzing the impact of ingroup norms, yet what they are manipulating is how specific that ingroup is, since there is usually no condition with an outgroup but one with a more general ingroup and/or a control condition instead (e.g., Mertens & Schultz, 2021; Lede et al., 2019).

The study developed in the present work adds to this subject and to the recent literature developments by trying to disentangle the effect of referent specificity from the one of social identification. For this, social identification with both a specific and a general referent group will be evaluated in order to examine possible interactive effects of these variables. This means that we expect a significant effect of dynamic norms on behavioral intention, particularly when they have a more specific referent, following recent studies by Sparkman and colleagues (Sparkman et al., 2019; 2020; Sparkman & Walton, 2017), and will moreover analyze the potential moderating effect of social identification on this relationship.

Additionally, we will take into consideration that groups with whom we identify with or feel closer to have an impact in our emotions, and since emotions impact our behaviour the next section focuses on emotions and how emotional processes might contribute to the success of norms in influencing pro-environmental behaviors.

1.4. Emotions, dynamic norms and pro-environmental behavior

But why do dynamic norms work? What are the processes behind their effectiveness? The psychological mechanisms subjacent to the effect of dynamic norms have been studied in the context of behaviors not related to the environment (such as quitting cigarette smoking: Sparkman et al., 2019) and also environment-related behaviors such as reducing meat consumption (Sparkman & Walton, 2017). Regarding meat consumption, it has been shown that when people believe that eating less meat will be the norm in the future they will (pre) conform to this norm, a process named pre-conformity. Additionally, knowing that other people have changed causes individuals to think that reducing meat consumption must be important to others (an effect similar to that of an injunctive norm), which in turn motivates individuals to

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change. However, no research has yet focused on the impact of dynamic social norms on emotions, either of individual or collective nature, and the contribute of this process in the influence exerted by dynamic norms on behavior. The underlying effect of emotions in decision making and behavior in general is well established (Lerner et al., 2015) and there is also evidence pointing to emotions being predictors of policy support for climate change (Wang et al., 2018) and intentions to reduce food waste (Russell et al., 2017).

Although the majority of studies in the pro-environmental domain has focused on negative emotions, such as guilt (Elgaaied, 2012; Ferguson & Branscombe, 2010; Rees et al., 2015; Truelove & Nugent, 2020; Wonneberger, 2018;), positive affect has also received some attention (Berenguer, 2007, 2010; Bissing-Olson, 2016; Corral-Verdugo et al., 2011; Pfattheicher et al., 2016). More specifically, pride is positively associated with the adoption of positive behaviors towards the environment (Bissing-Olson, et al., 2016; Schneider et al., 2017). Bissing-Olson and colleagues (2016) concluded that pride (and not anger) predicted pro-environmental behavior when participants' descriptive normative beliefs (regarding their social network's attitude and behavior towards the environment) were positive.

It seems plausible to assume that knowing that a growing number of people is starting to change their behavior towards a positive environmental outcome could induce the feeling of positive emotions, and that the emotions felt could strengthen the intention to engage in pro-environmental behavior. Therefore, in this study emotions will be considered as a potential mediator in the relationship between dynamic norms and pro-environmental behaviors.

Given that social norms have as referents social groups or social categories, we opted by examining the role of collective emotions, instead of individual emotions. Collective emotions - emotions experienced by group members related to their ingroup's circumstances or actions - have been shown to also have a role in behavioral intentions regarding the environment (e.g., Ferguson & Branscombe, 2010; Harth et al., 2013). Concretely, collective pride appears to be associated with a higher adoption of pro-environmental behaviors (Harth et al., 2013; Onwezen, 2015). Harth & colleagues (2013) manipulated participants' in-group responsibility for environmental protection and this increased participants' group pride, which in turn mediated the link between in-group responsibility for environmental behavior and behavioral intentions to protect the environment. The aforementioned literature points to the importance of group-based emotions in processes related to environmental behavior. In the present study, we will examine the mediating effect of collective pride in the link between the dynamic social norm and the participants' reported intention to reduce plastic items' use in the future.

In order to feel certain emotions towards a group, assumably there has to be some form of proximity between the individual and the group. This proximity can be related to how socially close the individual is with the group (referent specificity) and therefore a norm referent that is more socially close to the target should exert more influence.

The next section details this study's goals and what we have hypothesized the results to be.

1.5. Goals and hypotheses

Our main objective is to examine the effect of group referent specificity in dynamic norms on the intention to reduce disposable plastic use. We expect an effect of norm specificity, in that the dynamic norm with a specific referent will be more effective at promoting pro-environmental intention, when compared to a more generic dynamic norm (H1). Additionally, we will test the moderating effect of social identification and hypothesize that the effect of norms on pro-environmental intention will be stronger for those who identify more with the referent group (H2). We also hypothesize that collective pride will be higher in the specific referent condition compared with the general and control conditions (H3a) and will mediate the relationship between the specific dynamic norm and the pro-environmental intention (H3b). Furthermore, past behavior and individual pride will be controlled for in all the analyses. The next chapter will introduce the current study's design and procedure.
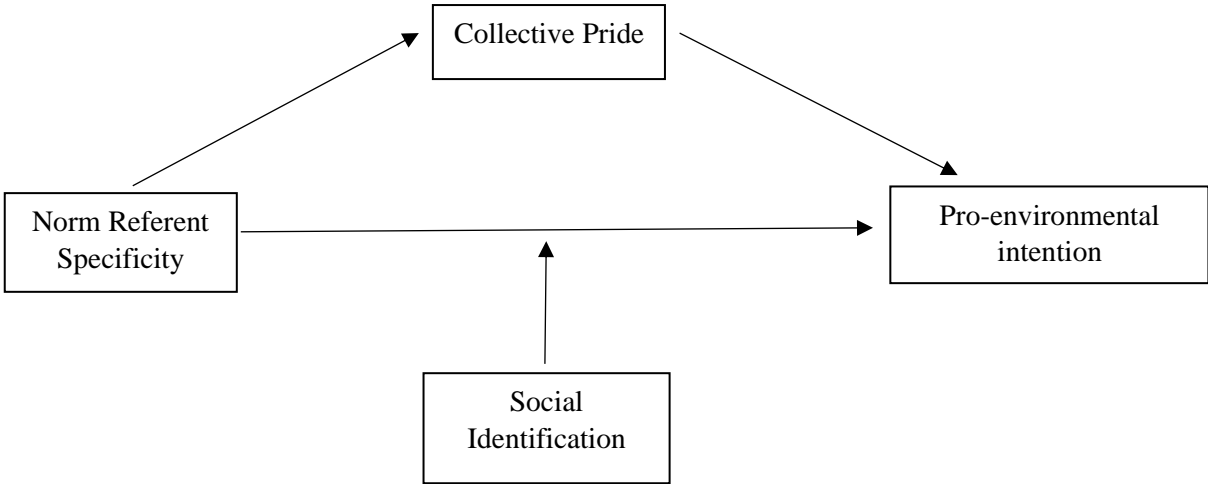

Figure 1.1. Investigation model

Chapter II – Method

2.1. Participants

The criteria for participating in the study was being a Portuguese college student, because of the referents used in the experimental conditions. 270 college students accessed the study's questionnaire. 81 participants were eliminated due to not having fully completed the questionnaire, 6 were eliminated due to not being Portuguese and 13 were eliminated because they answered incorrectly to the manipulation check item. From a total of 170 Portuguese college students (M_{age} = 22.03; SD = 3.93) eligible for the study, 64.7% were female, 26.5% had completed a bachelor's degree, 5.3% had a master's degree and 2.9% had a post-graduation. Participants were recruited through Iscte Psychology Lab, for course credits, dissemination of the survey in social media platforms and in-person recruiting around different universities.

2.2 Procedure and measures

The study's design and materials were reviewed and approved by ISCTE's Ethics Committee. Data was collected online using the Qualtrics platform. The participants were informed about the research goal being about how people form impressions about others in different social contexts. Upon providing their consent, participants proceeded to fill out the questionnaire. Participants were randomized between the following three conditions: *referent specific dynamic norm* (n = 57), *referent general dynamic norm* (n = 49) and *control group (no information)* (n = 64)**.** The dynamic norms appeals were based on Sparkman & Walton (2017), as we could not find information about plastic related behavior in Portugal that could be used as a dynamic norm. We created a news article using a well-known Portuguese newspaper logo, as to give the information some credibility. The participants in the referent specific condition read a Portuguese version of the following text:

"Recent research has shown that, in the last 5 years, 30% of college students have started to make an effort to limit their use of disposable plastic. That means that, in recent years, 3 in 10 college students have changed their behavior and begun to use less plastic than they otherwise would."

In the referent general condition "college students" was replaced by "Portuguese". The participants in the control condition responded to the same measures as participants in the experimental conditions but were not exposed to a norm intervention (Appendix A).

2.2.1. Measures

2.2.1.1. Manipulation check

To verify if participants had retained the information provided, an item was introduced asking what percentage of people the news article mentioned. Answer options included 25%, 30% and 50%. Respondents were considered eligible for the study if they answered the correct percentage (30%).

2.2.1.2. Engagement check

In both experimental conditions, to help ensure engagement with the condition material, participants were then asked to write down why they thought the facts in the article were happening (Sparkman & Walton, 2019).

2.2.1.3. Collective pride

Group-based pride was assessed by asking participants how they felt in the moment, with two items based on Harth, et al. (2013): "I am proud of college students' / Portuguese people's environmental behavior" and "I feel good about college student's / Portuguese people's environmental behavior". Answers were given on a scale from 1 (strongly disagree) to 7 (strongly agree). The participants answered the items concerning the referent target group (specific or general) of the condition they were allocated to; participants in the control condition responded about both referents. Correlation coefficients were calculated separately for the collective pride items answered about *college students* (specific condition: $r = .86$; control: $r = .84$, $p < 0.001$) and about the general group *Portuguese* (general condition: $r = .85$; control: $r = .80$, $p < 0.001$). Correlations are positive and high, thus an index of collective pride was calculated for each referent.

2.2.1.4 Individual pride

Previous research has shown that the effects of positive collective emotions are diluted when individual emotions are included in the analysis (Onwezen, 2015). Therefore, when individual emotions are not controlled, the effects of collective positive emotions may be overestimated.

This led us to collect data and include in the analysis one item of individual pride adapted from Bissing-Olson & colleagues (2016): "I feel proud about my environmental behaviour". Answers were given on a scale from 1 (strongly disagree) to 7 (strongly agree).

2.2.1.5. Social identification

To assess the extent to which participants identified with the norm referent groups two items were used, based on Moya et al. (2018): "I feel part of this group", "I feel committed to this group". Answers were given on a scale from 1 (strongly disagree) to 7 (strongly agree). All participants answered the social identification items about both referent groups; the participants in the experimental conditions responded to this measure before being exposed to the news article.

Due to the social identification measure being composed by 2 items, we analyzed the correlation coefficient for the items referring to the specific referent (college students) and to the general referent (Portuguese) separately. Correlation coefficients were $r = .50$ and $r = .44$ ($p < 0.001$) respectively and since correlations are positive and moderate, an index of social identification was calculated for each referent.

2.2.1.6. Pro-environmental intention

In order to measure intention to engage in pro-environmental behavior, participants responded to three items, based on Sparkman & Walton (2019): "How likely are you to reduce the following behaviors in the near future? Use of plastic bags, …plastic bottles, …plastic straws" Answers were given on a scale from 1 (not at all) to 7 (certainly). Reliability was moderately high ($\alpha = .75$), so an index of pro-environmental intention was calculated.

2.2.1.7. Past pro-environmental behavior

Participants were asked about the frequency of pro-environmental behavior in the previous two months with 3 items regarding the use of disposable plastic, created purposefully for this study: "Thinking about the past two months, indicate how often you have adopted each of the following behaviors? Use of plastic bags, plastic bottles, plastic straws". Answers were given on a scale from 1 (never) to 5 (always). Lower levels in this measure indicate higher past pro-

environmental behavior. This variable was included as covariate in the analysis, to control for the effect of people's usual behavior. Reliability was acceptable (α= .65).

Participants also answered some demographic questions (age, gender, nationality, school degree), at the beginning of the survey, along with the social identification scale. Then, they read the dynamic norms news articles and gave their opinion on them, followed by the pride measures, the pro-environmental intention measure and past pro-environmental behavior report. The order of the items within measures was counter-balanced.

Chapter III - Results

Data was analysed using the program IBM SPSS Statistics 26 for calculating descriptive statistics, correlations, one-way ANOVA and t-tests. In addition, we used the macro Process, version 3.5 from Hayes (2018), to run the mediation and moderation models.

Results will be presented in the following section, starting with descriptive statistics and correlations among variables, followed by the test of the hypothesis regarding pro-environmental intention and group pride levels across conditions and mediation and moderation processes.

3.1. Descriptive and Correlational Results

Intention to reduce plastic use was globally high ($M_{intent} = 4.99$, $SD = .97$), considering that the maximum scale level was 7 and 64.7% of participants answered 5 or higher in this item. Reported past behavior (of disposable plastic use) was low ($M_{pastbehaviour} = 2.28$ $SD = .84$), indicating most participants do not use a lot of disposable plastic in their daily lives and intent to reduce it in the future. Reported levels of collective pride ($M = 4.88$, $SD = 1.38$), individual pride ($M = 5.02$, $SD = 1.15$) and social identification ($M = 5.93$, $SD = .99$) were also high.

Correlation coefficients were calculated using Spearman's *Rho*, considering the categorical nature of some of the socio-demographic variables. Regarding correlations among variables (Table 3.1), the results show that pro-environmental intention is negatively correlated with past behaviour (*rho* = -.41, *p* < .001) and sex (*rho* = -.19, *p* < .05). This means that the lower the levels of past pro-environmental behaviour, the higher the levels of intention to reduce plastic use and vice-versa. Regarding sex differences, women seem to have more intention to reduce plastic use ($M = 5.13$, $SD = .88$) than men ($M = 4.70$, $SD = 1.08$). Intention was positively correlated with age (*rho* = .21. *p* < .005), education level (*rho* = .19, *p* < .05), and individual pride (*rho* = .46, *p* < .001), indicating that the older, more educated and prouder participants reported an higher intention to reduce use of plastic items. Past behavior is positively correlated with sex (*rho* = .21, *p* <.05) and negatively correlated with individual pride (*rho* = - .23, *p* < .005). The higher the level of past behaviour, the lower the level of individual pride and vice-versa. Women had lower levels of past behavior ($M = 2.15$, $SD = .78$) than men ($M = 2.40$, $SD = .84$), indicating that women in this sample responded in a more environmentally friendly way.

We found no significant correlation between collective pride in the experimental conditions and any of the remaining variables.

We also found no significant correlation between social identification and any of the variables. Table 3.1 summarizes the correlation coefficients' results.

Table 3.1. Correlation coefficients' results

	Variables	*M*	*DP*	1	2	3	4	5	6	7	8
1	Pro-environmental intention	4.99	.97	-							
2	Past Behaviour	2.28	.84	-.41**	-						
3	Age	22.03	3.93	.21**	-.00	-					
4	Sex	-	-	-.19*	.21**	.04	-				
5	Education level	-	-	.19*	-.02	.54**	-.07	-			
6	Individual pride	5.02	1.15	.46**	-.23**	.17**	.13	.11	-		
7	Collective pride (a)	5.23	1.29	.19	-.13	-.02	.00	-.11	.19	-	
8	Social identification	5.93	.99	.02	.05	-.03	-.02	-.02	.01	.04	-

The variables that were significantly correlated with intention, i.e., past behavior, age, sex, education level and individual pride were included in the subsequent ANOVAs and regression analyses. Since social identification takes the role of moderator variable, a significant correlation with the dependent variable was not required. Therefore, the fact that social identification was not significantly correlated with intention did not prevent proceeding with testing the study's hypothesis.

3.2 Mediation and moderation results

Before testing the mediation and moderation effects predicted in the model through macro Process, preliminary analysis were performed to examine main effects of the experimental conditions over intention, group pride and social identification.

To test our first hypothesis, stating that participants in the specific referent group condition would have higher levels of intention compared to the general referent group, we conducted a one-way ANOVA to determine if intention levels differed across conditions. There was a significant main effect of condition, indicating a difference between intention levels across conditions (F (2,162 = 3.918, $p < .05$. Pairwise analysis with Bonferroni test showed a significant difference only between the general condition and the control condition, with participants in the general condition showing less intention to reduce plastic use than participants in the control condition ($M_{general} = 4.70$, $SD = 1.20$, $M_{control} = 5.10$, $SD = .86$, $p < .05$). This suggests that, concerning intention levels, using a specific referent ($M_{specific} = 5.11$, $SD = .80$) in the normative message was not different from using a general referent or not providing any norm intervention at all (control condition). The first hypothesis was, therefore, not confirmed. Results of the regression analysis performed to test the model (Figure 1) confirm this conclusion (Table 3.3). Only participants in the experimental conditions (and not the control condition) were considered in the test of the model ($N = 106$). The total effect of condition on intention was negative and not significant ($B = - .33$, $p < .05$). This means that there is no relationship between the referent used and the intention to follow pro-environmental behaviors.

Before testing the second hypothesis, we assessed whether social identification levels were different between experimental conditions *a priori*. We conducted a paired-samples t-test to determine if social identification was different for the specific group compared to the general group. A significant difference was found in the level of social identification between groups, with participants in the general condition showing higher levels of social identification with the referent group ($M = 5.98$, $SD = .91$) than participants in the specific condition ($M = 5.66$, $SD = 1.02$; t (169) = -4.058, $p < 0.001$).

Considering that a mediation effect was also part of the model, Model number 5 from Process was used to verify if social identification had a moderating role in the link between referent specificity and intention (H2).

Regarding our second hypothesis about social identification moderating the relationship between referent specificity and intention to be more pro-environmentally friendly, there is a tendentially significant interaction effect of condition by social identification (F (1, 96) = 3,194, $p = .077$). The relationship between condition and intention is significant at the lowest level of social identification ($B = -.61$, 95% CI = -1.12, -.11) and non-significant in the medium and higher levels (Table 3.2). The moderation effect increases by 2 % the explained variance of the

model ($\Delta R^2 = .022$). The results partially corroborate our third hypothesis. Figure 3.1 presents reported pro-environmental intention in the two experimental conditions, by social identification levels.

Table 3.2. Conditional effects by social identification levels

Social identification	Effect	SE	LLCI	ULCI
Low	-.61*	.25	-1.12	-.11
Medium	-.28	.18	.64	.08
High	.05	.26	-.47	.57
	$\Delta R^2 = .022$, $F(1,96) = 3.194$, $p < .077$			

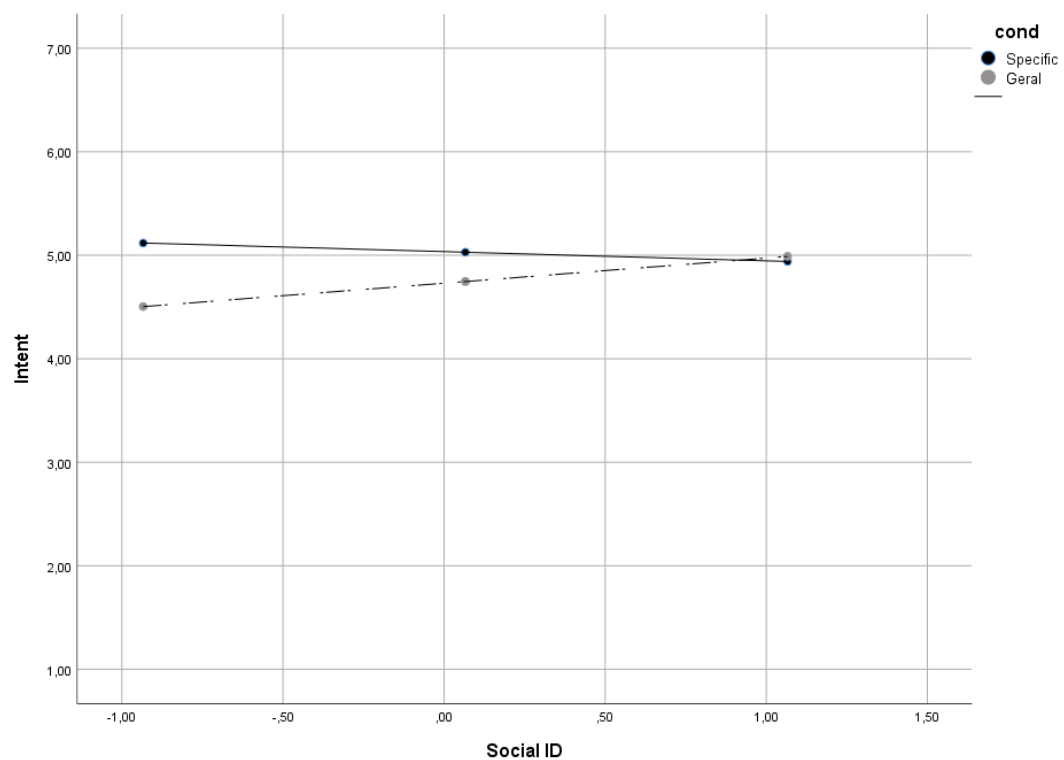* p < 0.05. **p < 0.01.*** p < 0.001. No * – not significant (n.s.).

Figure 3.1. Moderation of Social Identification on the relationship between intention and condition

In order to test hypothesis 3 a), that collective pride would be higher in the specific condition compared with the other conditions, a series of t-tests was performed to evaluate if collective pride differed between conditions. The results indicate that collective pride is different between conditions (Figure 3.2). The specific referent activated higher levels of group pride ($M = 5.54$, $SD = 1.14$), compared to the general referent ($M = 4.88$, $SD = 1.37$; $t (104) = 2,699$, $p < .05$) Moreover, activating the norm referent lead to higher levels of collective pride, compared with the control condition both for the specific condition ($M = 4.29$, $SD = 1.33$; $t (119) = 5.512$, $p < .001$) and the general condition ($M = 3.60$, $SD = 1.34$; $t (111) = 4.61$, $p < .001$).
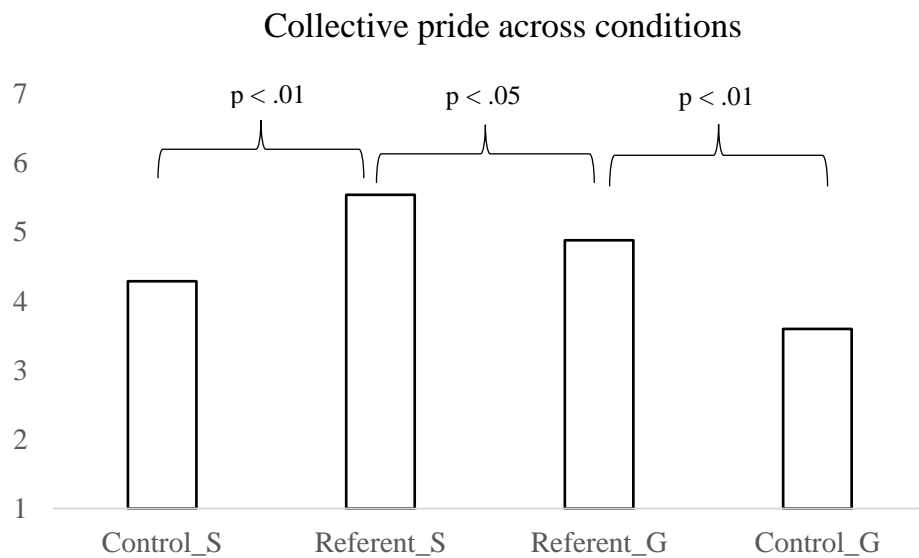

Figure 3.2. Levels of Collective pride across all conditions

Hypothesis 3b) referred to collective pride mediating the relationship between condition and pro-environmental intention. Results show a significant main effect of condition on collective pride ($B = -.63$, 95% IC = -1.12, $-.15$), corroborating the previous t-test findings (Table 3.3). However, the indirect effect is negative and not significant ($B = -.04$, 95% IC = $-.14$, $.04$), indicating collective pride did not mediate the relationship between referent specificity and behavioral intention.

Table 3.3. Regression analysis for collective pride mediation

Variables	Collective pride				Intention			
	B	SE	LLCI	ULCI	B	SE	LLCI	ULCI
Total effect								
Constant					3.61	.86	1.9	5.32
Condition					-.33†	.18	-.68	.02
Past behaviour					-.22†	.12	-.451	-.02
Age					.03	.02	-.02	.08
Sex					-.33†	.19	-.71	.05
Education level					.12	.12	-.11	.35
Indiv. pride					.31***	.08	.16	.47
Social ID					.04	.09	-.14	.22
					$R^2 = .31$, $F(7, 98) = 6{,}194$, p < .001			
Direct effect								
Constant	5.67***	1.05	3.59	7.74	3.57***	.84	1.89	5.24
Condition	-.63**	.24	-1.12	-.15	-.30†	.18	-.66	.05
Past behaviour	-.16	.16	-.49	.17	-.19	.12	-.43	.04
Age	.00	.03	-.06	.07	.03	-.02	.02	.07
Sex	-.13	.27	-.41	.66	-.39*	.19	.77	-.01
Education level	-.15	.16	-.48	.17	.13	.12	.01	.36
Indiv. Pride	.18	.11	-.05	.39	.32***	.08	.16	.48

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		B	SE	LLCI	ULCI
Social ID		-.42	.27	-.96	.12
Collective pride		.06	.07	-.08	.10
Int_cond x Social ID		.33†	.19	-.04	.70

$R^2 = .12, \ F(6,99) = 2.156, \ p = .05$

$R^2 = .33, \ F(9,96) = 5.361, \ p < .001$

		B	SE	LLCI	ULCI
Indirect effect		-.04	.04	-.14	.04

Notes: Condition refers to referent specificity, 1=specific, 2=general; B = non-standardised coefficients; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval ; † p <.10. * p < .05.** p < .01.*** p < .001.

Chapter IV – Discussion and conclusion

The current study investigated whether a dynamic norm with a specific normative referent was more effective at promoting pro-environmental intention to reduce plastic items use compared to a more generic referent. We also investigated whether social identification had a moderating role in the relationship between norm referent specificity and intention and if collective pride mediated the link between the norm and pro-environmental intention.

Results showed that a dynamic norm with a specific referent did not lead to higher levels of intention to reduce plastic use when compared to a more generic referent and a control group without a norm. The participants exposed to the general referent actually had lower levels of intention than those in the control condition who were not exposed to a norm intervention. Possibly, this result is related to the way Portuguese college students feel about their nationality. Studies with Portuguese individuals have shown that nationality is not the main factor they think of when asked about the most important groups for their self-definition (e.g., Leal, 2010). Using another generic referent could have led to different results. Pre-testing the norm to ensure participants have some connection to the norm referent used, so that the note is interpreted to be for and about people like them would be a way to minimize the risk of using an ineffective

referent. This main finding is in line with other studies that have failed to find an effect of referent specificity on pro-environmental intention and behaviour (Schultz et al., 2008; Bohner & Schlüter, 2014; Mertens & Schultz, 2021). Sparkman & Walton (2019) found no difference between using different referents (such as non-vegetarians, community, and other costumers) in dynamic norms messages about meat consumption in restaurants. We are not sure that the *college students* referent group was perceived as more specific or proximate to our participants. A possible alternative interpretation is that college students are found everywhere in the world, whereas Portuguese people are mainly in Portugal, so *college students* might have been perceived as more general than the referent we used as general. The fact that the specific referent is not significantly different from the control condition regarding its effect on pro-environmental intention, could also be explained by this fact. The baseline levels of intention were quite high across all conditions, which may have also led to a ceiling effect.

The on-going question presented by Mertens & Schultz (2021) about the distinct effect of referent specificity and social identification can be discussed in light of the present study's findings. If we ask if it's the level of social identification with the referent group or its specificity that has an effect on pro-environmental intention, the current results suggest that it depends. When social identification was high, intention was high on both groups, regardless of the referent being used. When social identification was low, the results showed a different scenario. In the general referent condition, we found that the level of social identification had a moderating effect on intention. When identification with the referent *"Portuguese"* was low, intention to be more eco-friendly tended to be higher after seeing the norm which stated that this group is doing more and more for the environment. This effect was present only in the general condition. *Why would you have more intention to adopt a behavior after knowing it comes from a group with whom you do not identify yourself with much?* It is possible that it is not about identifying with the group, or at least not in this case. This finding seems to be in line with research that has shown that the impact of group identification on the influence of social norms differs between injunctive and descriptive norms. The effect of injunctive norms on behaviour is more dependent on the strength of group identification (Nigbur et al., 2010; Terry et al., 1999), while descriptive norms have a more direct pathway on observable behaviour thus depending less on group level mechanisms to be effective on behaviour (Göckeritz et al., 2009; Nigbur et al., 2010). Other research such as Lima & Branco's (2018) study on place identity, descriptive norms and recycling behavior suggests it is when the individuals are less connected with others in their neighborhood that normative insights about their neighbors' behavior

matters most. The fact that the norm does not have such a strong effect when social identification is high could also eventually mean that the information was not perceived by the participants as something positive, i.e., that the group effort was not very high. There might also be some other variable taking part in this process that was not measured in the current investigation. Place identity, for example, has been linked to pro-environmental behavior in a Portuguese sample, namely recycling, and was shown to depend on descriptive social norms (Lima & Branco, 2018).

Collective pride was higher in the specific referent condition compared with the general condition. Yet pride did not seem to be one of the paths to get to pro-environmental intention in this sample, as there was no mediating effect of collective pride on the link between the norm and intention to be more environmentally friendly. As there was also no effect of condition on intention, it is possible that collective pride has a mediating role in other scenarios. The fact that collective pride did not have an influence on pro-environmental intention is in accordance with Owenzen's findings (2015), that when it comes to collective emotions, negative emotions such as guilt or anger are more influential in pro-environmental behaviors compared to positive group emotions. Additionally, perhaps feedback about the referent group's pro-environmental action over a longer period of time or about larger, more impactful behaviors is required to elicit feelings of pride that are strong enough to trigger subsequent intention (Bissing-Olson et al., 2016).

Another factor to consider is that people from different countries and contexts differ in their appraisals regarding climate change, the emotions they feel towards the environment and in what influences their intentions to be more pro-environmental (Caillaud et al., 2018). In the case of a Portuguese sample, it could be that individual emotions are more influential than group-based emotions in guiding intentions to be more eco-friendly. Individual pride was positively associated with intention, but a causal relationship cannot be inferred in this study as we did not manipulate individual pride.

4.1. Practical implications

Research such as the present one is quintessential to inform effective strategies to help curtail environment related issues that are utterly augmented by people's behaviour. As a matter of collective action, group level and emotional processes are a crucial field of investigation to pursue, in order to optimize messaging approaches in general and for particular population

segments. This is the first study to examine norm referent specificity in dynamic norms as well as its emotional impact. Thus, it adds to the on-going literature about sustainable behaviors and the use of social norms to increase their prevalence.

The work developed here suggests that the role of social identification needs to be considered, as it has an effect on behavioral intention in certain cases. When addressing Portuguese college students, using Portuguese as the norm referent does not seem to be an effective way to increase the adoption of the behaviour described in the norm. Emotions are also a research avenue worth following in the realm of pro-environmental behaviors. The present study found different norm referents influence group-level pride and so there might be other socio-emotional paths leading more directly to behavioral or intention shifts. Strategies to decrease plastic use in Portugal could focus on a different cohort, possibly an older one, since college students appear to already have low levels of single-plastic use and high levels of intention to reduce it.

4.3. Limitations and future directions

The present study has some limitations worth addressing. The study was conducted using only college students in the sample. Although this was necessary considering the goal of the investigation, it may have resulted in an unrepresentative student sample, where conclusions are ought to be taken carefully before extrapolating the results for other populations. Although intention is generally a good predictor of behaviour (Ajzen, 1985), it is different from addressing actual behaviour and therefore results might not translate directly to behavioral outcomes.

Future research could focus on studying different populations, apart from student samples, with diverse characteristics. For example, Sparkman & colleagues (2020) have found the effect of dynamic norms to be higher in samples with a lower income and a review by Gifford & Nilson (2014) demonstrated that individuals with more education are more environmentally concerned. Investigating factors that influence the adoption of and lack of engagement with eco-friendly behaviors is a crucial direction in the path to further understanding the dynamics of these behaviors and increase the efficacy of strategies designed to promote them. For example, social identification could be directly manipulated in order to properly address its effect and how it might relate to emotional processes. Environmental concern can be worth controlling for as it might relate to emotions elicited by climate change related phenomena. Moreover, the current study was conducted online, so future studies could extend the to the lab

and also apply the dynamic norm method in real contexts such as supermarkets and restaurants, following the work of Sparkman and his colleagues and extending it to different types of sustainable behaviors.

When designing a one-time measurement study, one wonders if the impact is long-lasting and leads to actual intention, attitude or behaviour change. The pro-environmental social norm research field could benefit from researchers investing in longitudinal studies that could help ascertain ways to ensure that interventions have an effect that sustains over time.

Illustrating the need to address environmental concerns, Project Drawdown, which states a wide number of solutions aimed at lowering greenhouse gas emissions, includes using bioplastics (i.e. plastic derived from plants) instead of normal plastic as one of the main solutions to help the environment ("Bioplastics @ProjectDrawdown #ClimateSolutions", 2021), amongst many others. There ought to be more investigation on the promotion and discouraging of behaviors with a significant environmental impact and different entities must join forces to create a multi-disciplinary wave of progress, including psychology and environmental researchers, government agencies and technical experts, all informed by each other's findings. Solving the issues resulting from harming the environment cannot be accomplished by one these groups on its own, even if they put forward their best work.

4.4. Conclusion

This study aimed to examine the effect of norm referent specificity and dynamic norms in promoting pro-environmental intention and the role of a positive group emotion – collective pride - and social identification on this link. The results indicate the importance of studying different factors that may come into play in the process of adopting an environmentally friendly behaviour. Pride might be an emotional avenue worth pursuing when creating strategies to promote sustainable behaviors but its role is not yet clear. All in all, human behavior is the cause of a great deal of Earth's health issues, and human behaviour is where we should invest our investigative efforts, to understand how to change it and further encourage the behaviors we want to see becoming the norm.

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Appendix A – Informed Consent & Questionnaire

Consentimento informado

O presente estudo surge no âmbito de um projeto de investigação a decorrer no ISCTE – Instituto Universitário de Lisboa. O estudo tem por objetivo conhecer melhor a forma como as pessoas formam impressões sobre outros em diferentes situações sociais. O estudo é realizado por Teresa Sousa (teresa.de.sousa@live.com.pt), que poderá contactar caso pretenda esclarecer uma dúvida ou partilhar algum comentário. A sua participação será muito valorizada pois irá contribuir para o avanço do conhecimento neste domínio da ciência.

Caso aceite participar, irá responder a um questionário, com duração de 10min. Não existem riscos significativos expectáveis associados à participação no estudo. A participação no estudo é estritamente voluntária: pode escolher livremente participar ou não participar. Se tiver escolhido participar, pode interromper a participação em qualquer momento sem ter de prestar qualquer justificação. Para além de voluntária, a participação é também anónima e confidencial. Os dados obtidos destinam-se apenas a tratamento estatístico e nenhuma resposta será analisada ou reportada individualmente. Em nenhum momento do estudo precisa de se identificar.

Solicitamos que apenas participe uma vez neste estudo.
O preenchimento do questionário presume que compreendeu e que aceita as condições do estudo, consentindo participar.

Se aceitar, clique em "aceito" e depois avance para a página seguinte. Desde já agradecemos a sua colaboração.

[Aceito / Não aceito]

Itens demográficos.

Em primeiro lugar, pedimos que nos indique alguns dados:

Indique a sua idade.

Indique o seu sexo
[feminino, masculino, outro, prefiro não responder]

Indique a sua nacionalidade

[Portuguesa, outra [   ]

Indique o seu nível de escolaridade

[Licenciatura, Pós-Graduação, Mestrado, Doutoramento, Outro:]

Indique a área principal do curso superior que frequenta (e.g., psicologia, gestão, biologia, engenharia, etc) [   ]

Identificação social.

"Atendendo aos grupos apresentados, por favor indique o seu grau de acordo ou desacordo com as seguintes afirmações"

- Estudantes universitários

"Sinto-me parte deste grupo"

"Sinto-me comprometido(a) com este grupo"

1 – Discordo fortemente a 7- Concordo fortemente

- Portugueses

"Sinto-me parte deste grupo"

"Sinto-me comprometido(a) com este grupo"

1 – Discordo fortemente a 7- Concordo fortemente

- Jovens

"Sinto-me parte deste grupo"

"Sinto-me comprometido(a) com este grupo"

1 – Discordo fortemente a 7- Concordo fortemente

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- Europeus

"Sinto-me parte deste grupo"

"Sinto-me comprometido(a) com este grupo"

1 – Discordo fortemente a 7- Concordo fortemente

"Agora vamos pedir-lhe que leia a seguinte notícia e, posteriormente, iremos colocar-lhe algumas questões sobre a mesma."

MANIPULATION_INGROUP

MANIPULATION_GENERAL

SOCIEDADE

Portugueses reduzem o seu uso de plástico

Estudos recentes demonstram que, nos últimos 5 anos, 30% dos portugueses começaram a fazer um esforço para diminuir o uso de plásticos descartáveis. O que significa que, nos últimos anos, 3 em cada 10 portugueses mudaram o seu comportamento e começaram a usar menos plástico do que normalmente fariam.

MANIPULATION_CONTROL

Verificação_manipulação1. *"Segundo a notícia que acabou de ler, qual a percentagem de estudantes universitários que começou nos últimos anos a diminuir o uso de plástico?"*

Verificação_manipulação2. *"Segundo a notícia que acabou de ler, qual a percentagem de portugueses que começou nos últimos anos a diminuir o uso de plástico?"*

20%

30%

50%

Engagement_check.

 "Porque acha que o fenómeno descrito na notícia está a acontecer?"

[caixa para resposta aberta]

"Para percebermos melhor a sua opinião relativamente a esta notícia pedimos que responda a mais algumas questões."

Orgulho_coletivo.

"Para cada uma das seguintes frases indique o seu grau de acordo ou desacordo com as seguintes afirmações, relativamente ao modo como se sente neste momento."

"Estou orgulhoso(a) do comportamento pró-ambiental dos estudantes universitários/portugueses"

1 – Discordo fortemente a 7 – Concordo fortemente

"Sinto-me bem em relação ao comportamento pró-ambiental dos estudantes universitários/portugueses"

1 – Discordo fortemente a 7 – Concordo fortemente

Orgulho_individual.

"Sinto-me orgulhoso(a) em relação ao meu comportamento pró-ambiental"

1 – Discordo fortemente a 7 – Concordo fortemente

Intenção_pró-ambiental.

"Por favor indique o grau de probabilidade de tentar reduzir os comportamentos apresentados no futuro próximo"

Utilização de sacos de plástico (ex.: no supermercado)

1 – Muito baixo a 7 – Muito alto

Utilização de palhinhas de plástico para consumir bebidas

1 – Muito baixo a 7 – Muito alto

Utilização de garrafas de água de plástico

1 – Muito baixo a 7 – Muito alto

Comportamento_passado.

"Pensando agora nos últimos dois meses, indique a frequência com que adotou cada um dos comportamentos a seguir apresentados"

Utilização de sacos de plástico (ex.: no supermercado)

1 – Nunca a 5 – Sempre

Utilização de palhinhas de plástico para consumir bebidas

1 – Nunca a 5 – Sempre

Utilização de garrafas de água de plástico

1 – Nunca a 5 – Sempre

Debriefing

Muito obrigada por ter participado neste estudo. Conforme adiantado no início da sua participação, o estudo incide sobre a formação de impressões em diferentes contextos sociais e pretende compreender o efeito de diferentes normas sociais nas emoções e no comportamento pró-ambiental. No âmbito da sua participação, foi-lhe apresentada informação falsa sobre o comportamento pró-ambiental de outras pessoas. **A notícia apresentada continha informação criada por nós com o objetivo de compreendermos melhor o impacto que a norma de um grupo específico tem sobre emoções e comportamentos.** Reforçamos os dados de contacto que pode utilizar caso deseje colocar uma dúvida, partilhar algum comentário, ou assinalar a sua intenção de receber informação sobre os principais resultados e conclusões do estudo: **Teresa Sousa (teresa.de.sousa@live.com.pt)**. Mais uma vez, obrigada pela sua participação.