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Special issue of Psyecology: Social norms and environmental behaviour
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Abstract: In the last years there are growing expectations from policy makers towards social sciences in order to reach sustainability goals. Research on social norms is often used to promote changes in pro-environmental behaviour. However, the underlying social psychological mechanisms that explain those changes are not well described yet. This special number puts together four papers that, from different perspectives, contribute to innovate in this field, proposing theoretically relevant mediators and contextual moderators.

Humanity deals with challenges of, probably, unequalled extent and complexity, such as climate change or the current loss of biodiversity. Consequently, environmental issues have been very present in public debates during the last three decades; from the Rio Earth Summit in 1992, and the recognition of sustainable development; the creation of Agenda 21, the Kyoto protocol, up to the Conference of Parties in Paris, in 2015. These events pointed towards a New Ecological Paradigm (Dunlap, Van Liere, Mertig & Jones, 2000) and gave rise to a strong social movement in pro-environmentalism (e.g., Félonneau & Becker, 2008). At the European Union level, the necessity for a transition towards a low-carbon economy is now an official objective, with a cut to greenhouse gas emissions of 80% below 1990 levels by 2050. In this regard, we may observe growing expectations from policy makers towards Social Sciences and Humanities in order to help reach these goals (e.g. 7th Framework Programme, Horizon 2020). In psychology, social influence is one of the preferred fields, specially the influencing of social norms, as they are well identified as an efficient lever for behavioural changes in individuals.

Indeed, the seminal work by Cialdini and colleagues (1990), proposing the differential impact of descriptive and injunctive norms on individual behaviour, initiated a strong diffusion within the general public and policy makers. This research paradigm has been applied to many environmental behaviours such as, for example, energy saving (Nolan, Schultz, Cialdini, Griskevicius & Goldstein, 2008; Schultz, Estrada, Schmitt, Sokoloski & Silva-Send, 2015), sustainable transportation (Kormos, Gifford & Brown, 2015) and consumption (Demarque, Charalambides, Hilton & Waroquier, 2015) or recycling behaviour (Bohner & Schluter, 2014; Reese, Loew & Steffgen, 2014). A noteworthy illustration of this diffusion is the adaptation of the results of Schultz, Nolan, Cialdini, Goldstein and Griskevicius (2007) by the Opower Company. The recent emergence of the fashionable concept of "nudges" (Thaler & Sunstein, 2008) also expanded the study of social norms to related disciplines such as behavioural economics, consecrating the use of focus theory of normative conducts as one of the most promising way for changing individuals' environmental behaviours.

...At the cost of complexity?

These considerations rouse some questions. On the one hand, that a psychological paradigm of social norms goes beyond disciplinary boundaries is an indication of its

relevance. On the other hand, the idea of the effects of social norms, mainly in terms of limited rationality and cognitive miser (Tversky & Kahneman, 1974; Fiske & Taylor, 1984) – which are dominant among upholders of nudges approaches and, consequently, among policy makers –, presents a risk of reductive vision of social complexity in environmental behaviours. This could fuel the idea of norm-based generic solutions that would not be context-dependent. Yet, without reconsidering the potential efficiency of social norms, some field studies showed that normative messages should not be considered as "magic bullets". For instance, Allcott's study (2011) on a 300 thousand household sample, using descriptive and injunctive norms feedback, showed a 2% average reduction of energy consumption. The different categories of injunctive norms used to reduce unwelcome boomerang effects played an insignificant role. Moreover, the aims of behavioural change are generally insufficiently discussed, and could make more or less sense, depending on the priorities and stakes of the populations in question (e.g., energy conservation amongst people in situations of fuel poverty). In a nutshell, "What the cognitive miser perspective overlooks is the fact that humans are social beings who derive meaning and direction from groups whose norms they embrace and enact, and who derive significant value – not only socially, but also intellectually – from identity-affirming behaviour" (Mols, Haslam, Jetten & Steffens, 2015, p.89).

In other words, it is important to develop more societal approaches (Himmelweit & Gaskell, 1990) alongside the study of social norms in social and environmental psychology in order to come to a better understanding of environmental behaviours in their full complexity. This is the purpose of a second line of research, linking social norms to social representations of environmental issues, and thusly to the groups' dynamic constructions of meaning (Castro, 2015). This perspective takes into consideration both the position of individuals in a complex inter-group context and the conflicting and simultaneously social norms that are available within society at any a given moment (cf. Batel & Devine-Wright, 2015; Bonaiuto, Carrus, Martorella & Bonnes, 2002). These two main lines of research are represented in this special issue on *Social norms and environmental behaviour* relationships. Both have been developed independently, but could be complementary for a better understanding of sustainable practices and more effective promotion.

Social norms and environmental behaviour: Four contributions

As such, this special issue aims to draw together work on each of these lines, to further theoretical and methodological knowledge on this topic. Despite the focus theory of normative conducts already evoked showing its potential efficiency for behavioural change; the underlying mechanisms are not always well understood. Some contributions presented here are interesting from this point of view. In the first paper, **Moussaoui and Desrichard** evidence the mediating role of outcome expectancy in the link between descriptive norms and behaviours. This mediation only appeared in the case of collective goals, suggesting that, beyond the classical informational or normative explanations (Deutsch & Gerard, 1955), the effect of descriptive norms occurs when people may consider that their actions will have an impact. These results notably have implications for the framing of normative messages.

As for those, **Corrégé**, **Clavel**, **Christophe** and **Ammi** focus on the use of injunctive norms for incentivizing energy-efficient building renovation. This is an important topic, as increasing existing buildings' energy efficiency could allow the significant decrease of both energy consumption and greenhouse gas emissions. Even if the external validity could be improved in future research, the paper suggests that a prominent injunctive norm could have an effect on a costly and complex behaviour. Moreover, it opens promising interdisciplinary perspectives of collaboration with software designers.

In line with the importance of external validity, **Rubens et al.** present a study with occupants of energy-efficient houses. The aim was to test the efficiency of normative descriptive feedbacks in this kind of building. This study highlights the importance of mixing quantitative and qualitative approaches in field studies for a better understanding of the way people receive and deal with feedback, according to past experience and level of knowledge. One of the conclusions is that normative feedback must be clear, practical, personalised and contextualised, showing the limitations of generic signals. Finally, the paper underlines the need to clearly identify the correct significant others within the situation, when intending to activate a relevant comparison (on this question, cf. also Hamann, Reese, Seewald & Loeschinger, 2015). Is there a clear representation of who the "neighbourhood" is? Is there a sufficient feeling of belonging to this group?

In the fourth paper, **Mouro and Castro** examined how law-community norms conflicts amongst residents of Portuguese Natura 2000 sites related to different stages of engagement in conservation action. Referring to the Trans-Theoretical Model (Proshaska & Di Clemente, 1983), the aim was to clarify how two types of conflicts – between law and community descriptive/injunctive norms, and the latter two – were associated to transitions from awareness to engagement in defence of the lynx, an at-risk local species. The authors

highlight the interest in distinguishing between pre-action and post-action stages, for examining the evolution of conflicts before and after the action takes place. Results showed stronger normative conflicts at pre-action (versus post-action) stages. Furthermore, conflict between descriptive and injunctive community norms is lower and more invariant across stages than conflict between community norms and the law. For the authors, it suggests a higher relevance of this later conflict for engagement/disengagement in action. This stage perspective could notably be useful for policy makers when implementing new conservation laws.

Overall, we hope the papers presented in this special issue make a significant contribution, both for researchers, social practitioners, and policy makers, at a very particular moment. Indeed, the economic crisis rekindled the supposed opposition between economical and environmental issues. Additionally, the recent election of Donald Trump in the United States, despite controversial declarations, could be the starting point of a new cycle, less favourable to pro-environmentalism. This should lead not to consider pro-environmentalism automatically as a dominant norm in all social fields, and has consequences for our research practices. Many studies using the focus theory start from a pre-supposed pro-environmental injunctive norm, whereas a more systematic analysis of their genesis would be useful to understand some contradictory results. From this perspective, qualitative approaches appear relevant, for instance, for a better understanding of feedback reception. In the future, crossing focus theory and societal approaches would be particularly useful both to understand and stimulate social change and innovation.