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18 Social Norms and Pro-Environmental Behaviour

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18.1 INTRODUCTION

Many of the environmental problems we face today are the consequence of human behaviour, and as a result these problems can be solved by changing our behaviour. Consider the following environmental decisions:

- Buying a traditional washing machine, or spending more money to purchase the energy-efficient version;
- Riding a bicycle to work, rather than travelling by car;
- Dropping a piece of paper on the ground as litter, rather than carrying it to a recycling bin.

In each of these situations, there is a clear environmental choice. In many instances, the pro-environmental option requires more effort or inconvenience, or costs more money. Other chapters of this book have examined personal and contextual factors that explain when a person will make the environmental choice. This chapter focuses on **social norms** and people's tendency to conform to them. We will explain what social norms are, how they influence (environmental) behaviour, and when.

18.2 WHAT IS A SOCIAL NORM?

Social norms are 'rules and standards that are understood by members of a group, and that guide and/or constrain human behaviour without the force of laws' (Cialdini and Trost 1998, p. 152). In a general sense, social norms *are* what is commonly done or (dis)approved. They refer to what *other people* think or do. This sets them apart from **personal norms**, which are rules or standards for one's own behaviour (Kallgren et al. 2000; see also Chapter 22). It is useful to distinguish between two types of social norms: **injunctive norms** which refer to the behaviour commonly approved or disapproved, and **descriptive norms** which refer to the behaviour shown by most group members. Littering or pouring used paint down a storm drain are both socially disapproved behaviours, and there is an injunctive norm against doing so. A newspaper article stating that the majority of people in the Netherlands use a bicycle to cover short distances, or donate annually to environmental organizations, gives descriptive norm information. It tells which behaviour is common (using a bicycle), or the extent to which a certain behaviour is common (donating money).

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When psychologists talk about social norms, they are typically referring to an individual's *beliefs* about the behaviours and evaluations of group members. Consider Jan who takes the train to work every day. He might think, based on the crowds in the train station, that the majority of people take the train instead of travelling by car. While, for Jan, commuting by train might be perceived as the descriptive norm, it may be that in reality most people travel by car.

18.3 HOW INFLUENTIAL ARE NORMS ON BEHAVIOUR?

Social psychologists have studied social norms for many years. An early study by Sherif (1936) showed that individuals used the responses given by others as a reference point for their own answer. Participants in this study were asked to estimate the movement of a light dot in an otherwise dark room (this basic perceptual task is called the autokinetic effect, and in the absence of any contextual information, the light will normally appear to move). In Sherif's studies, the sessions were conducted in groups of three, and each person gave their answers out loud. The results showed that over multiple trials, the answers given by the participants became closer together. In essence, hearing the responses of others led to the development of a norm. In these studies the situation was highly ambiguous for the participants. However other studies have shown that the influence of norms is not limited to such situations.

In a study by Asch (1951), participants had to indicate which of three lines was similar in length to a fourth line. When seated alone, 100% of the participants gave the correct answer. This number however dropped to 68% when the participant was seated in a group where the other members all gave the same but wrong answer. So 32% of the participants went along with the descriptive norm and gave what was clearly a false answer on at least one occasion. Norms not only influence stated opinions but also (private) behaviour. In one study, residents who learned that most of their neighbours engaged in specific behaviours to reduce their energy at home used subsequently less energy themselves (Schultz et al. 2007).

Although norms can exert a powerful influence on (environmental) behaviour, people tend to underestimate their own susceptibility to social pressure. This tendency was illustrated in study by Nolan et al. (2008) on individuals' willingness to conserve energy in their homes. The study showed that providing normative information about the (better) conservation behaviours of other households in the same neighbourhood was more effective than receiving information about conserving energy for reasons of environmental protection, social responsibility, saving money, or just tips on ways to reduce their energy use. However, when asked how much the normative information motivated them to conserve energy, residents rated it as much less influential than messages about saving money or environmental protection.

18.4 WHY DO PEOPLE CONFORM TO NORMS?

Injunctive social norms tell us which behaviour is approved or disapproved. Conforming to such norms is often associated with social acceptance or rewards, whereas violating them often entails disapproval and social sanctions. People conform to injunctive norms to gain social approval or to avoid social sanctions. In essence, we want people to like us. Deutsch and Gerard (1955) termed this type of motivation **normative social influence**. Conforming to descriptive norms typically has a different motivation, namely the desire to be correct. In many instances, following the group will lead to a correct outcome. For example, following the crowd after arriving by train to an unfamiliar station will likely lead you to the exit. Deutsch and Gerard (1955) termed this type of motivation **informational social influence**.

18.5 WHEN DO NORMS INFLUENCE BEHAVIOUR?

As described in section 18.4, social norms can exert a powerful influence on our behaviour. But subsequent studies have shown a number of important moderator variables. **Moderators** are variables that increase or decrease the strength of an effect. In this section, we examine several moderators that have been found to affect the strength of normative social influence. We focus specifically on pro-environmental behaviour, and illustrate the effects with examples from recent studies.

18.5.1 *Salience*

In thinking about social norms, it is important to point out that norms are generally specific to a context. That is, norms refer to beliefs about the common or appropriate behaviour in a specific setting. Thus, while you might think that it is appropriate to reuse a bath towel at home for six or seven times before washing it, when staying in a hotel you might believe it is appropriate to use the towel only once. In addition, in most contexts there are multiple norms that are relevant, like for example, norms about social behaviour such as eye contact or interpersonal distance, norms about personal attire, or norms about environmental behaviour, to name just a few.

The extent to which a (specific) social norm is (made) salient determines the degree to which it is activated. The **focus theory of normative conduct** proposes that norms will motivate behaviour primarily when they are activated

Figure 18.1 *Percentage of participants littering a clean environment as a function of descriptive norm salience.*
Source: Adapted from Reno et al. (1993).

(Cialdini et al. 1990). A study designed to test the effects of norm salience examined whether people littered a handbill placed on the windshield of their parked car in a litter-free parking structure at a public library (Reno et al. 1993). The litter-free state of the environment revealed descriptive norm information, namely: ‘it is common not to litter in this setting’. Upon approaching their car, the participants saw an experimental confederate who carried a bag from a fast food restaurant. In the control condition this confederate just walked by. However, in the experimental ‘salience’ condition, the confederate dropped the bag onto the ground (in the otherwise litter-free setting). The authors argued that the act of littering served to make salient the descriptive norm (i.e. ‘it is common not to litter in this setting’). The results indeed showed that participants who observed the confederate dropping the bag into the litter-free environment were less likely to litter the handbill on their car (11%) than those who saw the confederate just walking by (37%; see Figure 18.1).

18.5.2 Group Size

A second variable found to moderate the influence of social norms is group size. Cialdini et al. (1990) showed that the more pieces of litter in a setting, which is an indication of the number of people littering, the more likely people are to litter. The classic studies described earlier by Asch (1951) showed a similar moderating influence of group size. In the initial studies – which found that individuals conformed to a group norm even when they knew their responses were incorrect – groups ranged in size from 8 to 10. In subsequent studies, Asch

(1956) found that groups of 4 (with 3 confederates plus the one true participant) resulted in more conformity than did groups of size 2 or 3. However, groups larger than 4 generally did not exert more influence. These findings suggest that larger groups tend to exert a stronger influence on individuals, but that the effect of group size quickly plateaus.

18.5.3 *Reference Groups*

Normative social influence is also moderated by the characteristics of the group itself. Research in this area often draws on a social identity framework and suggests that social influence results largely from categorizing oneself as a member of a specific group, and then adopting the attitudes and behaviours that are shared by the other members of the group (Hogg 2003). For example, Abrams et al. (1990) reported a series of studies using the classic conformity paradigms of Sherif and Asch (as described in the opening section of this chapter). In a study on the autokinetic effect, they found that estimates for the movement of the light became particularly more similar over repeated trials when the participants were led to believe that they were part of single group, rather than acting individually. Furthermore, using the Asch line paradigm, Abrams et al. (1990) showed that when confederates were other psychology students (i.e. an in-group) the normative influence of this group was higher than when confederates were described as ancient history majors (i.e. an out-group).

Similar results have been reported in other studies. For example, Smith and Louis (2008) found that participants were more influenced by normative information about the opinions and behaviours of other students at their university (i.e. an in-group) than when the same normative information was described as from students at another university. In essence, when normative information is provided about an out-group, it exerts little (if any) influence on behaviour.

18.5.4 *Personal Norms*

The preceding examples illustrate the general power of normative information, and describe several aspects of the social context that can moderate the effect. But what about a person's existing personal norms about a topic; can they override the normative pressure to conform? The results from a study by Schultz et al. (2016) suggest that (the strength of) personal norms can moderate normative social influence. Personal norms refer to an individual's belief about their moral obligation to engage in the behaviour. The results from this study showed that normative social influence is strongest among individuals who are generally ambivalent about the behavioural topic. Consider a person who feels passionately about the importance of conserving water. This person regularly does things to conserve, and in fact, they even admonish other people for not conserving. Such a person is less likely to be swayed either by messages indicating that other people are (also) doing things to conserve or by cues that other people are not conserving, than someone who does not have strong feelings about energy conservation.

18.5.5 Norm Conflict and the Importance of Aligned Messages

Our final consideration in understanding moderators of normative social influence pertains to conflicting norms. The research on littering by Cialdini et al. (1990) shows that people are more likely to litter in a littered setting than in a litter-free setting. It also makes clear that a descriptive norm can conflict with an injunctive norm. In a littered setting, the presence of signals that many people litter (the descriptive norm) conflicts with the general (injunctive) norm that one should not litter. The results of the study indicate that the injunctive anti-litter norm is not as influential in this ‘conflicting’ setting as it is in a setting where the descriptive norm supports the injunctive norm (i.e. a clean environment). Research reveals that a descriptive norm showing a lack of respect for an injunctive norm not only inhibits the influence of this norm but also the influence of other injunctive norms in that setting, suggesting a **cross-norm inhibition effect** (Keizer et al. 2008; see Box 18.1 and Figure 18.2). This spreading effect is explained by goal framing theory which states that observing cues that signal a specific norm-violating behaviour weakens people’s goal to act appropriately (Steg et al. 2016; also see Chapters 15 and 22).

In crafting messages to promote pro-environmental behaviour, developers often incorporate images or wording that depict the undesirable behaviour (Cialdini 2003). Such messages are designed to ‘raise awareness’ about the severity of an issue or to underscore the importance of adopting the new behaviour. But lurking in this awareness message is a descriptive norm – other people are not doing the desired behaviour.

In a series of studies at the Petrified Forest National Park, Cialdini et al. (2006) showed a possible resolution of such an awareness message. The park features ancient pieces of wood, turned to stone (i.e. petrified wood) over the

BOX 18.1 THE CROSS-NORM INHIBITION EFFECT

A series of field experiments by Keizer et al. (2008) showed that the influence of an injunctive norm is inhibited when violations of another injunctive norm are observed (i.e. a cross-norm inhibition effect). Individuals who came to retrieve their parked bicycle were more likely to drop a flyer as litter that was attached to the handlebar when the setting (an alley) had been sprayed with graffiti (69%) than in the same

setting without graffiti (32%). In turn, a littered environment sparked other norm violating behaviours. In another study, for example, people were more likely to steal an envelope (visibly) containing money that was hanging from a mailbox when the mailbox was surrounded with litter (in which case 25% stole the envelope) than when the setting was clean (where 13% stole the envelope).

Figure 18.2 Impressions of the experimental conditions for testing the cross-norm inhibition effect (See Box 18.1).

Source: Photos by Kees Keizer.

course of thousands of years. The often small pieces of wood are strewn about the floor of the park making them an easy target for visitors looking for a souvenir. In an effort to curb the loss of wood, the researchers conducted a study of signage encouraging visitors to leave the wood undisturbed. In one of the conditions, the sign provided a strong injunctive norm against taking the wood:

Please don't remove the petrified wood from the park.

The sign was accompanied by a picture of a lone visitor taking a piece of wood, with a red circle-and-bar admonishing this behaviour. In a second condition, the sign provided a descriptive norm message about the severity of the problem.

Many past visitors have removed the petrified wood from the park, changing the state of the Petrified Forest.

The sign was accompanied by pictures of visitors taking wood from the park. To test the effectiveness of the signs, the researchers placed marked pieces of wood along several of the trails in the park. The dependent variable was the percentage of marked pieces that were stolen. The results showed that the message focusing attention on the injunctive norm produced the lowest rate of theft (1.67%) compared to the sign that made focal the (negative) descriptive norm (7.92%). However when comparing these results to the theft rate when no sign was present (2.92%; Cialdini 2003), it becomes clear that awareness campaigns that highlight the large number of people who behave in undesirable ways can produce boomerang effects.

The petrified wood study shows that the impact of an injunctive norm can be seriously threatened by a conflicting descriptive norm. However, when the descriptive norm is aligned with the injunctive norm, a combination of both norms can make an effective intervention (Schultz et al. 2008; see Box 18.2).

BOX 18.2 ALIGNED NORMS MAKE AN EFFECTIVE INTERVENTION

In a study on the usage of social norms Schultz et al. (2008) developed messages placed in hotel rooms encouraging guests to reuse their bath towels. In one of the studies, the descriptive and injunctive messages were *aligned*. The message read:

Many of our resort guests have expressed to us the importance of conserving energy. When given the opportunity, nearly 75% of our guests choose to reuse their towels each day. Because so many guests value conservation and want to conserve, this resort has initiated a conservation program. ....
PLEASE REUSE YOUR TOWELS.

Results over a six-month period showed that 62% of guests who stayed in a room with the aligned norm message reused at least one towel on the first opportunity to do so, and the average room replaced 1.74 towels on the first cleaning day. By comparison, 57% guests who stayed in rooms with a control message about the environmental benefits of reusing towels chose to reuse at least one towel, and the average room replaced 2.32 towels. See Smith et al. 2012 for a study showing the importance of aligned norm messages when stimulating energy conservation.

The positive influence of observing other people's respect rather than disrespect for an injunctive norm also increases conformity to other injunctive norms in that setting (Keizer et al. 2013). More specifically, people were more likely to help a stranger in a setting that was relatively clean rather than littered. The study also showed that helping increased even more in the clean setting when a confederate was observed showing clear respect for the 'anti-litter' injunctive norm by removing their own or other people's litter. The latter suggests that when it comes to stimulating pro-environmental behaviour in others, even one person can make a difference.

18.6 SUMMARY

In this chapter, we discussed the role of social norms in understanding and changing pro-environmental behaviour. We distinguished two types of social norms: injunctive and descriptive norms. Next, we described research showing that social norms can exert a powerful influence on (pro-environmental) behaviour through normative and informational influence. This influence is moderated by the salience of the norm, the size of the reference group, the extent to which this group is considered an in-group, one's personal norms, and the extent to which injunctive and descriptive norms are aligned. When designing messages to promote pro-environmental behaviour, it is essential that information regarding corresponding descriptive norms is in line with the targeted behaviour.

GLOSSARY

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cross-norm inhibition effect The negative effect of observing other people's violation of one norm on one's own likelihood of following another norm.

descriptive norm The behaviour shown by most group members.

focus theory of normative conduct Theory that proposes that norms will motivate behaviour primarily when they are activated.

informational social influence The influence of norms on behaviour that is the result of a person's desire to be correct.

injunctive norm The behaviour commonly approved or disapproved.

moderators Variables that increase or decrease the strength of an effect.

normative social influence The influence of norms on behaviour that is the result of a person's desire to gain social approval or to avoid social sanctions.

personal norms An individual's belief about their moral obligation to engage in certain behaviour.

social norm What is commonly done or (dis)approved.

SUGGESTIONS FOR FURTHER READING

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REVIEW QUESTIONS

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1. Define social norms, and describe the distinction between descriptive and injunctive social norms. Give two unique (i.e. not from the readings) examples of each.
2. Name and describe the two types of motivations behind normative social influence.
3. Name and describe three moderators of normative social influence.
4. Imagine that you are asked by your university to develop a campaign to reduce the number of cigarette butts littering the ground. Identify two strategies that you think would be effective, and two strategies that would be ineffective.