Using Norm-Based Interventions to Influence Behaviour

PSYC481: Psychology of Advertising

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Norms Targeting Norms Intervention Strategies Environmental Public Goods Intervention Considerations

» Learning Objectives

- * Types of social norms
 - * descriptive norms, trending norms, injunctive norms
- * Targeting norms
 - * logic of norm-based interventions
- * Intervention strategies
 - social norms marketing vs. personalised normative feedback
- * Norm-based interventions and environmental public goods
 - * towel reuse, environmental theft, energy conservation, water conservation, recycling
- Intervention considerations
 - backfire effects, negative spillover, normative referent group, choice of norm

Social Norms

- * Descriptive Norms
- * Trending Norms
- * Injunctive Norms
- * Summary of Norms

» Social Norms

- Social norms refer to the beliefs individuals have about what most people do or approve of doing
- Normative beliefs are powerful motivators of behaviour (Cialdini & Trost, 1998)
- Evident from classical social psychological studies showing we use the behaviour of others to guide our own actions (Asch, 1955; Latané & Darley, 1968; Sherif, 1937)
- Norm-based interventions harness normative information to modify individual or collective behaviour

Based on two assumptions:

- 1. Social norms are often not salient to people
- Providing this information encourages people to reevaluate their behaviour in terms of group norms

Social Norms

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 Social Norms
 Targeting Norms
 Intervention Strategies
 Environmental Public Goods
 Intervention Considerations

» Descriptive Norms

- Descriptive norms refer to beliefs about which behaviours are typically performed by others
- Thought to influence behaviour by providing information about the appropriate way to act in a given situation fulfilling our goal for accuracy (Cialdini & Trost, 1998)
 - * 'if most other people are doing it, then it must be the right thing to do'
- Supported by the finding descriptive norms are most effective in novel, uncertain, or ambiguous situations (Griskevicius et al., 2006)
- Descriptive norms serve as a mental short-cut that guides behaviour under conditions of low cognitive effort (Cialdini, 1984)

» Descriptive Norms

- Descriptive norms are likely to change from one context to the next due to changes in the situational or social context
- The most informative guide to behaviour is the descriptive norm in the immediate context and moment in time
- * Thus, while the behaviour of most others is a valid point of reference in one context, it might not be in the next

Social Norms

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» Trending Norms

- Although descriptive norms influence behaviour, trends in norms do as well
- Trending norms refer to beliefs that a norm is increasing in popularity over time
- Communicating increases in popularity causes more conformity than communicating popularity only (Mortensen et al., 2019)
 - * even when only a minority of people perform the behaviour
- The increased conformity emerges as people predict the increase in prevalence will continue
- Thus, portraying a behaviour as increasing in popularity creates a perception of greater future popularity

Social Norms

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» Injunctive Norms

- * Injunctive norms refer to beliefs about which behaviours are typically approved or disapproved
- * They motivate action via the social rewards/punishments related with desirable/undesirable conduct (Cialdini et al., 1990)
- Injunctive norms are effective as they serve our goal of affiliation
 - "if we do what others approve of, they must approve of us too"
- Through strategic action, we aim to obtain social approval, and avoid social disapproval
- Injunctive norms are most influential under conditions of high cognitive effort

» Injunctive Norms

- Unlike descriptive norms, injunctive norms tend to remain effective across different contexts as they deal with people's perceptions about what is valued by others
- They refer to conduct that is approved or disapproved within a culture and are therefore unlikely to change from situation to situation (Reno et al., 1993)

Social Norms

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» Descriptive, Trending, and Injunctive Norms

Descriptive norms:

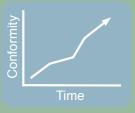
perceptions of which behaviours are typically performed by others.



80% of people shower for 4 minutes or less

Trending norms:

perceptions that a behaviour is increasing in popularity over time.



Injunctive norms:

perceptions of which behaviours are typically approved or disapproved.





» Targeting Norms

- In the context of interventions, the term social norm has two meanings
 - 1. It can refer to a common behaviour or practice
 - * "Most members in this community donate money to charity"
 - It can also refer to an average outcome or numerical standard
 - "The median annual amount donated to charity by members of this community is £250"
- Thus, people can conform or deviate from a common practice (donate to charity)
- They can conform in a way that places them near or far from the central tendency of the group

» Targeting Norms

- Norm-based interventions assume people often do not know what the norm is or misperceive it
- Interventions provide feedback about where a person's actions put them in
 - relation to the most common actions of their peers (e.g., in the majority or in the minority) or
 - the distribution of their peers (e.g., above or below the 50th percentile)
- Making the norm salient/correcting norm misperceptions promotes conformity to the behaviour being encouraged
 - * e.g., to fit in, avoid social disapproval, or seek social esteem

Intervention Strategies

- * Social Norms Marketing
- * Personalised Normative Feedback
- * Summary of Intervention Strategies

» Interventions Strategies

- The challenge for norm-based interventions is to present normative information in a way that is:
 - * meaningful
 - * believable
 - * memorable
- * There are two strategies for achieving these goals
 - 1. social norms marketing
 - 2. personalised normative feedback

Intervention Strategies

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- st Summary of Intervention Strategies

» Social Norms Marketing

- Social norms marketing is used to correct norm misperceptions and involves publicising (marketing) the actual rate of the misperceived behaviour
- * This strategy involves communication of a single factual message documenting the (high) incidence of some desirable behaviour to all—or at least many members—of a group.
- * This message can be conveyed via publicity events, posters, letters, emails, and social media messages
- It is typically communicated in text-based format, often accompanied by an infographic visually reinforcing the normative information

» Social Norms Marketing

Examples of such message targeting water conservation are:

Descriptive Norm

Nearly 75% of your neighbours report taking shorter showers to conserve water.

Trending Norm

Research from 2019 has found that 48% of your neighbours report taking shorter showers to conserve water. This has increased from 37% in 2017 and 2018.

Injunctive Norm

Many of your neighbours have expressed their approval of conserving water.

» Social Norms Marketing

* Advantages

- normative information can be communicated to a large number of people cheaply and efficiently
- * Disadvantages
 - the normative feedback is general, which can be less effective than providing normative feedback that is personalised to the individual

Intervention Strategies

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» Personalised Normative Feedback

- Personalised normative feedback is another means of correcting norm misperceptions
- * It involves collecting peoples':
 - self-reported incidence of some behaviour (e.g., how long they spend in the shower on average)
 - their perception of the incidence of this behaviour among their peers (e.g., how long they think their neighbours spend in the shower on average)
- People are then given the actual incidence of the behaviour (e.g., how long their neighbours actually spend in the shower on average)
- Notice this approach targets its message at individuals—providing them with information about themselves as well as their peers

» Personalised Normative Feedback

An example of such a message targeting water conservation is:

Personalised Normative Feedback

You said you spend 8 minutes taking a shower and that you think the typical neighbour spends 10 minutes.

The actual average is 4 minutes.

You spend more time taking a shower than 80% of your neighbours.

» Personalised Normative Feedback

* Advantages

- it provides more targeted normative feedback than the social norms marketing approach
- people are more likely to process the message of the intervention because it is personally relevant
- it is more credible as it includes information about the source of the data it provides
- * Disadvantages
 - * labour-intensive approach

Intervention Strategies

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» Social Norms Marketing vs. Personalised Normative Feedback

Social norms marketing (SNM):

a means of correcting norm misperceptions that involves publicising (marketing) the actual rate of the misperceived behaviour via the media, posters, emails, etc. Personalised normative feedback (PNF): a means of correcting norm misperceptions that involves collecting participants' selfreported incidence of some behaviour and their perception of the incidence of this behaviour among their peers and then providing them with the actual incidence of the behaviour.

Environmental Public Goods

- * Towel Reuse
- * Environmental Theft
- * Energy Conservation
- * Water Conservation
- * Recycling

» Norm-Based Interventions and Environmental Public Goods

- Norm-based interventions were developed initially to reduce the incidence of risky behaviours whose prevalence is often misperceived (see Miller & Prentice, 2016)
 - * student drinking behavior
 - * tobacco use
 - illicit drug use
 - * wearing of seatbelts
 - practice of safe sex
 - bullying
 - * sexual aggression
 - * ... and many others

» Norm-Based Interventions and Environmental Public Goods

- * I focus here on the application of norm-based interventions to supply environmental public goods
- This focus on reducing environmental harms is for three reasons:
 - 1. it is the area in which I have applied norm-based interventions personally
 - 2. all the major lessons associated with crafting norm-based interventions can be illustrated through this literature
 - 3. it is the only area in which norm-based interventions have been applied at scale

Environmental Public Goods

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» Towel Reuse

- Goldstein et al. (2008) examined towel reuse in 190 rooms of a midsize hotel in the southwestern United States
- * Guests were exposed to one of two different messages

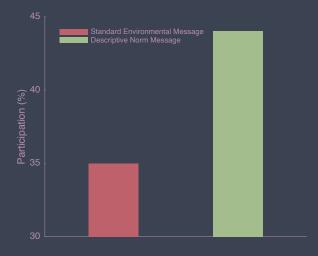
Standard environmental message

Help save the environment. You can show your respect for nature and help save the environment by reusing your towels during your stay.

Descriptive norm message

Join your fellow guests in helping to save the environment. Almost 75% of our guests who are asked to participate in our new resource saving program do help by using their towels more than once. You can join your fellow guests in this program to help save the environment by reusing your towels during your stay.

» Towel Reuse



- * These results were replicated by Schultz et al. (2008) who targeted towel reuse amongst guests in 62 hotel rooms at an upscale beach resort in the United States
- * Guests were given one of four randomly assigned printed message urging them to reuse their bath towels

This hotel has initiated a conservation program.

Nearly 75% of hotel guests choose to reuse their towels each day. To support our guests who want to conserve, this hotel has initiated a conservation program.

» Towel Reuse

3. Injunctive Norm Message

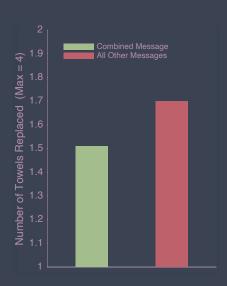
Many of our guests have expressed to us their approval of conserving energy. Because so many guests value conservation and are in the habit of conserving, this hotel has initiated a conservation program.

4. Combined Message

Incorporated both the descriptive and injunctive norm messages

» Towel Reuse

- * Schultz et al. (2008) found that towel reuse rates were higher for the descriptive norm and injunctive norm messages than the control message (but not significantly so)
- However, towel reuse rates were highest in the combined condition in which the descriptive and injunctive norms were aligned
- * Suggests that aligning descriptive and injunctive norms is more powerful than either norm in isolation



Environmental Public Goods

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- Cialdini et al. (2006) examined the role of descriptive and injunctive norms in promoting/inhibiting environmental theft
- There is a misguided tendency to try to mobilise action against socially disapproved conduct by depicting it as regrettably frequent
 - e.g., alcohol and drug use is intolerably high, suicide rates are alarming, and rampant polluters are spoiling the environment
- This communicates a counterproductive descriptive norm that may increase conformity to the undesired conduct
- In such situations, it is wrong to focus people's attention on what is done (descriptive norm)
 - attention should instead be directed to what is approved/disapproved (injunctive norm)

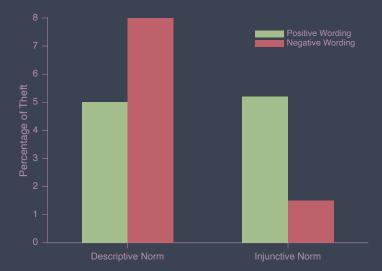
- Visitors to Arizona's Petrified Forest National Park learn from signage that visitors frequently steal pieces of petrified wood
- Your heritage is being vandalised every day by theft losses
 of petrified wood of 14 tons a year, mostly a small piece at
 a time.
- Cialdini et al. (2006) placed marked pieces of petrified wood along visitor paths
- Examined the impact on environmental theft of signage making descriptive vs. injunctive norms salient
- Also examined the influence of positively vs. negatively worded messages

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

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

Please leave petrified wood in the park.

The vast majority of past visitors have left the petrified wood in the park, preserving the natural state of the Petrified Forest.



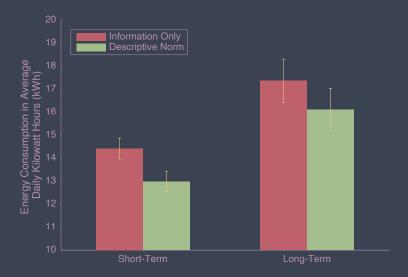
Environmental Public Goods

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» Energy Conservation

 Nolan et al. (2008) examined the impact of communicating descriptive norms on energy use amongst 371 households in a California neighbourhood

- Over a month, residents received doorhangers informing them that they could save energy by engaging in four energy conserving behaviours
 - taking shorter showers, turning off unnecessary lights, turning off the air conditioning at night, and using fans instead of air conditioning
- In an information-only condition, residents received this information alone
- In a descriptive norm condition, residents received factual information about their neighbours' high rate of engagement (ranging from 77% to 99%) in the four energy-conserving behaviours



- Schultz et al. (2007) provided 287 California households with different types of normative messages over a two-week period
- Households were randomly allocated to one of two conditions
 - 1. descriptive-norm-only condition
 - 2. descriptive-plus-injunctive-information condition
- * After baseline energy measurements were taken, both sets of households received a message

- In the descriptive-norm-only condition the message contained:
 - handwritten information about how much energy (in kilowatt-hours per day) they had used in the previous week
 - b descriptive normative information about the actual energy consumption of the average household in their neighborhood during that same period (in kilowatt-hours per day)
 - c preprinted suggestions for how to conserve energy (e.g., use fans instead of air conditioning)

- The descriptive-plus-injunctive-information condition received the same information as the descriptive-norm only condition
- * However, there was one key addition:
 - If the household had consumed less than the average for the neighbourhood, a happy face was drawn @
 - * If the household had consumed more than the average for the neighbourhood, a sad face was drawn ©
- The valence of the emoticon communicated an injunctive message of approval or disapproval about the amount of energy being consumed

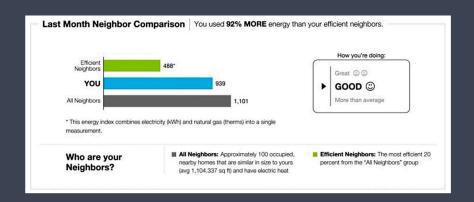


- The study by Schultz et al. (2007) served as a spring board for other large-scale field experiments using normative messages to reduce energy usage
- The largest of these, involving 35,000 households in a California community, was conducted by Opower a company that partners with utility companies to promote energy conservation (Allcott, 2011)
- * Social comparison condition
 - 25,000 households received monthly energy reports comparing energy usage to that of similar households in their community
 - 10,000 households received the same reports on a quarterly basis
- Control condition consisted of 50,000 households that did not receive descriptive norm information

» Energy Conservation

The social comparison condition received the following information:

- A descriptive normative message comparing the household's energy use with the average energy usage among approximately 100 neighbours with similarly sized homes that used the same energy sources (electricity only or electricity and natural gas)
- A further level of comparison was provided by comparing individual households to "Efficient Neighbours," defined as the lowest 20% of consumers
- 3. Households above average in consumption received an injunctive normative message conveying disapproval, whereas those below average in consumption received a happy face and a "good" or "great" depending on whether they fell below the 50th percentile or the 20th percentile



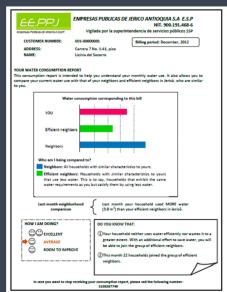
- The intervention led to a reduction in energy consumption of 2.5%, compared to control households
- Households receiving monthly reports conserved more energy than households receiving quarterly reports
- Differences in energy usage amongst intervention and control groups persisted twelve months after intervention withdrawal (Ayres et al., 2013)
- An analysis of Opower interventions involving more than half a million households and multiple utility companies shows the social comparison intervention reduces energy usage between 2%-5% on average (Alcott, 2011; Alcott & Mullainathan, 2010)
- st These interventions have generated a reduction of nearly 13 billion pounds of CO $_2$ emissions

Environmental Public Goods

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- * The results of the personalised normative feedback studies of energy conservation have been replicated with water utility companies (e.g., Ferraro & Miranda, 2013; Ferraro & Price, 2013; Ferraro et al., 2011)
- Torres & Carlson (2018) conducted a study in the Colombian municipality of Jerico
- Examined water usage of a normative intervention group comprising 656 households presented with social comparison information regarding monthly water usage
- Compared with a control group of 655 households that received no normative information

- Descriptive normative message comparing household water usage with the mean of households with similar water needs
- Further level of comparison provided by comparing individual households to "Efficient Neighbours," defined as the lowest 25% of consumers
- Injunctive normative message categorising households as "Excellent," "Average" or "Room to improve"



- Water use dropped by 7% in the normative intervention group compared to the control group
- * Evidence of positive behavioural spillover
- Households that did not receive the normative intervention reduced their water use by 5.8% in the first six months following the intervention

- * Mortensen et al. (2018) examined whether trending norms could promote water conservation
- In the first stage of the study, participants read statements about students' water conservation behaviours
- * Two different conditions:
 - 1. minority norm condition
 - 2. trending minority norm condition
 - 3. control condition

» Water Conservation

Minority Norm Condition

Research from (previous year) has found that 48% of (University name) students engage in one or more of the following water conservation behaviours.

Behaviours included turning off the water while soaping their hands during handwashing; using low-flow shower heads; watering lawns and plants in the early morning or evening.

Trending Minority Norm Condition

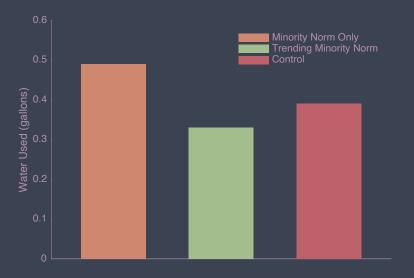
The trending minority norm condition added, *This has increased from 37% in (2 years previous).*

Control Condition

Participants read about architectural trends with no specific numbers.

» Water Conservation

* In the second part of the study, under the cover story of a market research exercise, participants were asked to choose one of several toothpastes and brush their teeth at a sink surreptitiously equipped with a water meter



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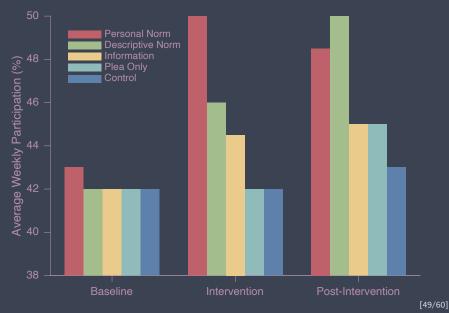
» Recycling

- * Schultz (1999) examined participation in curbside recycling amongst 600 households in La Verne California
- * Households then allocated to one of five different intervention conditions (N = 120)
- Baseline measurements of participation were recorded initially over an 8-week period (baseline)
- Interventions administered over 4 weeks and participation measured (intervention)
- Interventions discontinued but participation measured for a further 4 weeks (post-intervention)

» Recycling

- 1. Personal norm
 - * feedback about the households own degree of participation
- 2. Descriptive norm
 - feedback about the households degree of participation compared to the average of households in the area
- 3. Information
 - * information about the recycling process and its benefits
- 4. Plea only
 - * a plea to participate in the recycling program
- 5. Contro
 - * no intervention

» Recycling



Intervention Considerations

- * Backfire Effects
- * Negative Spillover
- * Referent Group
- * Norm Choice

Intervention Considerations

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» Backfire Effects

- When only a minority of people are engaged in the desired behaviour, communicating the descriptive norm can backfire (Cialdini, 2003)
- The evidence that most people are not doing these things undermines the credibility of the claim that such behaviours are desirable
- Campaigns that seek to change behaviour by highlighting the regrettable frequency of an undesired behaviour may inadvertently increase the incidence of such undesired conduct
- * Within the statement "Many people are doing this undesirable thing" lurks the powerful and undercutting normative message "Many people are doing this"
- Messages encouraging people to be a "hero" or "star" can backfire for the same reason

Intervention Considerations

- * Backfire Effects
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» Negative Spillover

- * Norm-based interventions can sometimes produce negative behavioural spillover
- * Tiefenbeck et al. (2013) found that a social comparison treatment reduced water consumption by 6%
- At the same time, the electricity consumption of the treatment group increased by 5.6% compared to the control group
- This result is consistent with the concept of moral licensing (Nisan & Horenczyk, 1990)
- * Intervention creators should be mindful of these potential side-effects of norm-based interventions

Intervention Considerations

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» Referent Group

- All normative interventions communicate information about the behaviour or beliefs of "others" (the so-called "referent" group)
- The choice of referent group is an important factor to consider when creating normative interventions (Graffeo et al., 2015; Terry & Hogg, 1996)
- If people receive normative information about a referent group they identify with, they will be susceptible to the influence of that information
- However, if people receive normative information about a referent group they do not identify with, it has the potential to backfire

» Referent Group

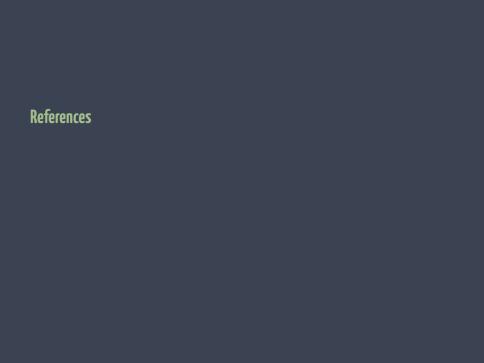
- The more physically or geographically close those represented in the normative intervention are to participants, the more influence they have on behaviour (Goldstein et al., 2008; Schultz, 1999)
- e.g., the household social comparison studies of energy and water usage examined the influence of "similar households in your neighbourhood"
- * The best approach is to use "social identities" (e.g., shared affiliations, interests, and beliefs) and to emphasise the similarities between the referent group and individual receiving the normative message

Intervention Considerations

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» Norm Choice

- If a majority of people are performing the desired behaviour, then use the descriptive norm
- * If a minority of people are engaged in the desired behaviour, then refrain from using the descriptive norm as it can backfire (Cialdini, 2003)
- * When only a minority of people are engaged in the desired behaviour—but its popularity is increasing—consider using the trending norm
- * Communicating the injunctive norm is always beneficial, as it can motivate behaviour across a range of contexts (Cialdini et al., 2006) and is immune to backfire effects
- * When descriptive and injunctive norms are aligned, communicate both, since the two norms presented together are more powerful than either norm in isolation (Schultz et al., 2007; Schultz et al., 2008)



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