A Field Experiment: Testing the Potential of Norms for Achieving Behavior Change

in English Parishes

Abstract

Tests of behavioral insights have become increasingly more common, and have been deployed by UK government and agencies. Typically these field experiments aim to change individual-level behaviors. The current paper tests the potential of behavioral insights for changing group-level behavior. This paper reports the results of a field experiment carried out with the Department of Communities and Local Government. The field experiment tested whether a normative message (vs. a neutral or no message) could encourage parish councils to register an asset of community value (social action). There was no statistically significant effect from this intervention, but the process of designing and implementing this field experiment shows the potential for theories of behavior change to be used by government departments.

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Behavioral Insights Revolution

In recent years there has been considerable official interest in the use of *behavioral insights* to inform public policy. Policy-makers are starting to take advantage of the wealth of behavioral research from across areas of psychology, economics, and other social sciences, which has been popularized in recent years (see Thaler & Sunstein, 2008). Behavioral insights (or nudge) is a term that is increasingly used and understood across disciplines as well as by lay-people. Behavioral insights typically consist of low-cost strategies that aim to change behavior. The years since 2010 have seen central government departments and agencies in the UK and elsewhere using behavioral insights to complement conventional policy tools (i.e., legislation, regulation, incentives) and to enhance policy outcomes (see Dolan et al., 2012). Examples of behavioral insights interventions that were first tested using experimental designs in the field and then rolled out to improve public policy include using tax reminders to collect taxes and using SMS texts to collect court fines (Halpern, 2015).

Governments have always sought to influence human behavior and such an interest goes back to recruiting for armies and getting citizens to pay their taxes, core functions of government. The study of human behavior influenced the emergence of central regulation in the nineteenth century, such as the rise of public health legislation and regulation, and continued in the twentieth as government became more professionalized and responsive to specialist knowledge, such as measures to prevent traffic accidents. However, the greater focus on behavior change as a key objective of government emerged more strongly in the twenty-first century following on from the

academic advances in the social sciences. Central government in the UK has taken a great interest in this agenda and it has influenced central government discussion documents (e.g. Halpern, Bates, Mulgan, & Aldridge, 2004). But the visibility of behavioral sciences increased markedly with the publication of *Nudge* (Thaler & Sunstein, 2008). Most prominent has been the emergence of the Behavioral Insights Team (BIT), established in 2010 under the United Kingdom Coalition government, which succeeded in gaining public attention and a measure of success, and was spun out of government as an independent organization (Halpern, 2015). Key has been the use of the randomized controlled trials (or field experiments) as a way to test the effectiveness of these behavioral interventions in the field (Haynes, Service, Goldacre, & Torgerson, 2012; John, 2013). These interventions have been done on standard operating procedures of government and on new policies, which are intended to show the potential for a greater roll out.

Influencing Organization-Level Behavior

The current research will examine the potential of behavioral insights for influencing organization-level behavior among parish councils. This is a particularly important research endeavor for several reasons. First, while ample research (both in the laboratory and in the field) has examined the effects of behavioral insights on individual-level behavior, much less is known about whether and how behavioral insights may affect group-level behavior. Indeed, in spite of the diffusion of behavioral insights practices and the greater use of scientific knowledge, English local and parish councils have experienced fewer of these behavioral insights interventions. It seems likely that organization-level behavior may be harder, or at least more complex, to influence than individual-level citizen behavior. Indeed, action from the organization is dependent on the decision-making structure within the organization.

Parish-level decision making processes vary but they will typically involve discussions among a group of elected members supported by the permanent office, the parish clerk. Moreover, some parishes seek input through meetings of all residents, and/or contact with local interest groups. In other words, such organization-level action may be subject to the decision of veto players in the organization or may suffer from implementation loss through chains of command or simple failure of collective action. Nevertheless, organizations are headed by individuals who can respond to behavioral cues. There are examples of the use of behavioral interventions directed to organizations in the less developed context, such as encouraging the standing of women in village councils in India (Chattopadhyay & Duflo, 2004) or linking aid to performance with local providers in India (Olken, Onishi, & Wong, 2014). In the UK, behavioral interventions targeted at businesses, such as Growth Vouchers, show how policy-makers can seek to influence organizations (Department for Business and Skills and Cabinet Office 2014).

Second, given that UK governments elected since 2010 have given a particular emphasis to the philosophy of localism, which implies a hand-off approach to local government (Lowndes & Pratchett, 2012), novel strategies need to be developed and tested to help advance knowledge and ensure better implementation of policies among local government organizations. Effective behavioral insights interventions might be seen as consistent with the localism agenda as such interventions do not use the authority of the state to command local authorities but instead indirectly encourage behaviors.

In sum, the current research aims to contribute to the literature by testing the effectiveness of a behavioral insights intervention for influencing group-level (rather

than individual-level) behavior in a relevant applied context (i.e., among parish councils).

Use of Descriptive Norms

In this experiment, we draw on the behavioral insights concept of *social norms* (see Fehr & Fischbacher, 2004), which has become the tool of choice of today's behavioral policy-makers. Social norms can be understood as socially shared definitions of the way people do behave or should behave (Fehr & Fischbacher, 2004). Research on normative theory has suggested that two types of social norms exist – descriptive and injunctive (Cialdini, Kallgren, & Reno, 1991; Fehr and Fischbacher, 2004). Descriptive norms are those that "characterize the perception of what most people do" (Cialdini et al., 1991, p. 203). In contrast, injunctive norms are those that "characterize the perception of what most people approve or disapprove [of]" (Cialdini et al., 1991; p. 203). For example, the statement "nine out of ten people pay their tax on time" would be a descriptive norm. In contrast, the statement "nine out of ten people think that people should pay their tax on time" would be an injunctive norm.

People are heavily influenced both by what other people do and by what other people think they should do. Social norms offer a standard from which people do not want to deviate as they do not want to risk social exclusion from their group (Schultz et al., 2007). Therefore, an effective strategy for mobilizing people to act is to publicize the desired social norm. This strategy is a very well validated in the psychology and economics literatures and has become a popular tool among policy-makers to encourage compliance (Dolan et al., 2012).

Empirical evidence suggests that social norms can mobilize people to act. Indeed, research has drawn on social norms to change socially important behaviors

such as alcohol consumption, drug use, disordered eating, gambling, littering, and recycling (e.g., Donaldson, Graham, & Hansen, 1994; Larimer & Neighbors, 2003; Neighbors, Larimer, & Lewis, 2004; Schultz, 1999; Schultz, Tabanico, & Rendon, 2008; see also Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007). For example, one experiment tested whether different types of messages could improve the reuse of towels in hotel rooms. A sign that asked guests to reuse towels in order to save the environment led to 37% of people doing so. A sign that highlighted that most other guests in the hotel reused their towel more than once led to 44% of people reusing their towels. A sign that highlighted that most occupants of the same room reused their towels more than once led to 49% of people reusing their towels (Goldstein, Cialdini, & Griskevicius, 2008). Therefore highlighting a social norm significantly increased pro-environmental behavior in a field experiment.

The Current Research

Drawing on and extending Goldstein et al.'s field experiment (2008), the current research focuses on the potential of descriptive norms for encouraging parish councils to act. Our reasoning for employing a descriptive norm rather than an injunctive norm intervention was as follows. Ample research shows a consistent relationship between group membership and social identification on the one hand and conformity to injunctive social norms on the other (e.g., Abrams, Palmer, Rutland, Cameron, & Van de Vyver, 2014; Terry & Hogg, 1996). In the current experiment, the norm intervention would be distributed by central government (Department for Communities and Local Government) to local governments (parish councils). Based on the literature, it seems unlikely that an injunctive norm message disseminated by a higher-status outgroup would successfully promote behavioral compliance. Indeed, parishes may read an injunctive norm message and think "what do they know about

our beliefs"? In contrast, it would be reasonable to expect central government departments to hold statistical data on parish-level asset listings. Therefore, in the current experiment we employ a descriptive rather than injunctive norm intervention.

Specifically, in the current research we explore whether a descriptive norm message (vs. a neutral message or no message) can increase parish councils' uptake of community rights policies, in particular the *Community Right to Bid* (introduced in 2011; Department for Communities and Local Government, 2011). The community right to bid gives parish councils and community groups the power to protect any local building or land by nominating it as "an asset of community value". A building or land in the parish area must be listed as an asset of community value if current primary use of the building/land or use of the building/land in the recent past furthers the social well-being or social interests (cultural, recreational, or sporting interests) of the local community. The advantages of nominating a community asset, if the nomination is accepted by the local authority, are that (1) the parish council (or community group) will be notified if the asset is ever put up for sale; (2) the parish council (or community group) will have the opportunity to buy it if they wish to do so; (3) a signal is sent to the owner making them aware that the asset is valued by the community; and (4) the nomination could be taken into consideration by planning authorities when considering planning applications (see Department for Communities and Local Government, 2015). During the development stage of this study, 1002 community assets (e.g., community halls, pubs) were listed across the UK.

In the current experiment parish council clerks were sent either an e-mail depicting the descriptive norm, an identical e-mail but without the descriptive norm, or no e-mail at all. While parish council clerks are responsible for implementing the council's decisions, they do not have inherent powers to make any decisions

(Communities Parish and Local Councils, 2017). Therefore, we expect that parish council clerks would share the intervention email with the council members, who would then discuss how to proceed. Parish council's uptake of community rights (i.e., asset nomination) was monitored. Based on past research (e.g., Schultz et al., 2007), it is hypothesized that asset nomination will be higher among those who viewed the descriptive norms message than among those who viewed the neutral message or among those who received no message at all. Furthermore, it is hypothesized that asset nomination will be higher among those who viewed the neutral message than among those who received no message at all. This is because, while unlike the experimental norm-Condition there is no motivational incentive, the neutral message provides parishes with easy, accessible, and necessary information about the community right. Indeed, research suggests that while motivational incentive is important for behavioral change, so is capability and opportunity (i.e., knowledge and resources) (see Michie, van Stralen, & West, 2011).

Method

Sample

The sample consisted of 3,026 parish councils from all regions in England except for London (see Online Supplemental Materials for a full breakdown of the sample by regions, counties, and local authorities). The sampling strategy involved scanning the web for open-access contact details (e-mail addresses) of parish councils - typically accessed via Local Authority webpages. The sample was therefore restricted by public availability of parish council contact information. The mean precept size (i.e., parish income from taxes paid by residents within the parish area) for this sample was £27, 599.61 ($SE = 924.22$). Precept size ranged from £48 to £801, 462. Twenty-nine per cent of parishes in this sample had a precept of less than £5,000

(vs. 34 % of parishes across England). Ninety-three per cent of parishes in this sample

had a precept of less than £100,000 (like 90 % of parishes across England;

Department for Communities and Local Government, 2014).

Design and Stimuli

Parishes were randomly assigned to Condition in a one factor between

participants design with three levels (Message: norms, neutral, none).[1] The norm and

neutral messages were distributed via e-mail (using Mailchimp, a web-based e-mail

marketing application). The e-mails were sent by the Department for Communities

and Local Government. Messages (including message headers) were kept identical

across Conditions. Titles within the e-mail varied by Condition (see Table 1 for a

depiction, see also Online Supplemental Materials).

Randomization. In order to randomly allocate parish councils to one of the

three Conditions, block randomization was employed. Block randomization

(randomizing within subgroups) ensured (1) a relatively equal number of small versus

large parishes (in terms of precept size) and (2) a relatively equal number of parishes

with (vs. without) assets already listed across the three Conditions.

A phenomenon that became apparent while retrieving parish councils' contact

details was that parish councils sometimes shared the same clerk (i.e., administrator)

with other parish councils (25.4% of the parish councils in the dataset shared a clerk

with at least one other parish council). Therefore, in the current experiment, one

parish council was randomly selected per clerk. However, while only one parish per

clerk was randomly assigned to Condition, the behavior of all parishes will be

analyzed. It is highly likely that the clerk would share the information with all of the

parish councilors who they work with. This inclusion of the duplicate clerks in the

analyses increases the sample size and therefore the statistical power of the

experiment.[2]

Table 1

Message Headers and Titles

Condition	E-mail header	E-mail title
1.No e-mail	N/A	N/A
2.Neutral e-mail	Protect a community asset – it's quick and easy	Protect a community asset – it's quick and easy
3. Norm e-mail	Protect a community asset – it's quick and easy	Parishes and local groups all over the country are nominating community assets. Over 1000 assets have already been listed.

Measures

Outcomes were measured in two ways: (1) monitoring e-mail activity; and (2) monitoring community asset listings.

Interest in listing an asset. Mailchimp software was used to send out the neutral and norm messages. Mailchimp is able to monitor whether parish councils clicked on the link for further information given at the end of the e-mail (see Online Supplemental Materials). This offers some insight into whether the norm message generated greater, lesser, or equal interest in listing a community asset (vs. the neutral message). No reminder e-mail was sent.

Asset listings (behavioral outcome). We monitored whether parish councils listed community assets (offering behavioral data). Listings were monitored via inspecting local authority webpages. Listings made prior to the intervention (i.e., prior to April 2014) will be referred to as Time 1 listings. Listings made between April and August 2014 will be referred to as Time 2 listings. Due to the nature of the

collaboration with DCLG, only data up to August 2014 were available for analyses.

Nevertheless, the four-month period seemed a reasonable length of time to allow

parish councils to nominate assets of community value.

Parish precept size. In the analyses below we include parish precept size as

an additional independent variable. Parish precept size is publicly available

information which we matched with our experimental data. We include precept size in

the analyses because a parish council's financial capacity may reasonably moderate

their capability of responding to the intervention. Due to a particularly strong positive

skew of precept size (skew = 5.49, *SE* = .06), this variable was log transformed (ln)

prior to entering it as a linear predictor in the regression analyses reported below. For

the mixed model analyses of variance reported in the results section below, we

categorized precept size into equally distributed categories of low (*M* = 3152.03, *SD* =

1396.70), medium (*M* = 9788.88, *SD* = 3111.24), and high (*M* = 60,170.98, *SD* =

68,834.61) precept income.

Covariates. We also collated information about: (1) geographical area of the

parish council and (2) whether a community asset was already listed in the boundaries

of the parish council. These two variables will be used as covariates in the analyses on

the grounds that areas vary considerably across England and that prior listing might

affect responsiveness.

Results

For the norm and neutral Conditions, data analyses were restricted to those

who opened the e-mail, and therefore to only those who were exposed to Condition.

In the norms condition 437 (43.8%) parish councils opened the e-mail. In the neutral

condition 433 (43.4%) parish councils opened the e-mail.

Interest in Listing an Asset

Statistical analyses of the Mailchimp data were conducted three weeks after the e-mails were sent. Binary logistic regression was conducted to examine whether Condition (norms message vs. neutral message) predicted whether or not parish councils clicked on the link for further information. Region of parish, asset listed, and precept size were also entered into the model as predictors.

Results showed that Condition did not significantly predict whether parishes clicked on the link for further information ($B = -.22$, $SE = 0.26$, $p = .397$, ExpB = .80). Precept size was the only significant predictor ($B = .32$, $SE = 0.11$, $p = .002$, ExpB = 1.38). Specifically, the greater the precept size, the more likely parishes were to click on the link for further information.

Asset Listings (Behavioral Outcome)

Whether a new asset was listed. An analysis of variance was conducted to test the effect of Condition (norm message vs. neutral message vs. no message) and Precept Size (low, medium, high) on whether a new asset was listed ($0 = no$, $1 = yes$). The analysis controlled for region of parish. Results revealed no significant main effects of Condition, $F (2, 2408) = 0.64$, $p = .529$, $\eta^2 = .001$ or of Precept Size, $F (1, 2408) = 1.41$, $p = .244$, $\eta^2 = .001$. There was also no significant Condition x Precept Size interaction, $F (4, 2408) = 0.64$, $p = .634$, $\eta^2 = .001$ (see Table 2)

Number of assets listed. A mixed model analysis of variance was conducted to test the effect of Condition and of Precept Size on the number of assets listed at Time 1 versus at Time 2. We employed a 2 (Time: number of assets listed at Time 1 vs. number of assets listed at Time 2) x 3 (Condition: norm message vs. neutral message vs. no message) x 3 (Precept Size: low vs. medium vs. high) design with the first factor being a within participants factor and the second and third factors being a between participants factors. The analysis controlled for region of parish.

Results revealed no significant main effect of Time, $F(1, 2408) = 0.16$, $p =$ .693, $\eta^2 < .001$ or of Condition, $F(2, 2408) = 0.96$, $p = .385$, $\eta^2 = .001$. There was a significant main effect of Precept Size, $F(2, 2408) = 8.78$, $p < .001$, $\eta^2 = .01$. Furthermore, there were no significant Time x Condition interaction, $F(2, 2408) = 0.50$, $p = .606$, $\eta^2 < .001$, Condition x Precept Size interaction, $F(2, 2408) = 0.62$, $p = .651$, $\eta^2 = .001$, or Condition x Precept x Time interaction, $F(4, 2408) = 1.18$, $p = .318$, $\eta^2 = .002$[3] (see Table 2).

Table 2

Means and Standard Errors for the Effect of Condition on Assets Listed

Condition	Whether New Asset Listed	Assets Listed at Time 1	Assets Listed at Time 2
	M (SE)	*M (SE)*	*M (SE)*
Norms message	.04 (.01)	.07 (.02)	.13 (.03)
Neutral message	.04 (.01)	.05 (.02)	.09 (.03)
No message	.03 (.01)	.07 (.01)	.13 (.02)

Note. "Whether new asset listed" ranged from 0 = *no new asset listed* to 1 = *new asset listed*, therefore the means can be interpreted as proportions. "Assets listed at Time 1" reflected the number of assets listed at Time 1 and ranged from 0 to 9. "Assets listed at Time 2" reflected the number of assets listed at Time 2 and ranged from 0 to 15.

Discussion

This field experiment was designed to test the effectiveness of a behavioral insights technique (i.e., norms) to encourage parish councils to use the Community Right to Bid (i.e., to nominate assets of community value). The results showed that there was no significant effect of Condition (norms message vs. neutral message vs. no message) on assets listed at a four-month follow-up.

Overall the experiment showed how the behavioral sciences can be adapted to seek behavior change in the decentralized context with a valid methodology. The nudge approach was light-touch and consistent with a hands-off approach to implementing policies in the locality. The results highlight the importance of experimentally testing the effectiveness of behavioral insights techniques before further roll out. Indeed, the effectiveness of behavioral insights techniques will depend on context, audience, methodology, and many other factors. Therefore, it is essential for policy makers to work with researchers to conduct controlled field experiments prior to investing substantial time and money in such initiatives.

The non-significance of the findings could have occurred for many reasons. First, it is possible that the descriptive norm intervention simply was not effective at motivating behavioral change. However, given the substantial amount of prior evidence to the contrary (e.g., Donaldson et al., 1994; Larimer & Neighbors, 2003; Neighbors et al., 2004; Schultz, 1999; Schultz et al., 2008; see also Schultz et al., 2007) this explanation seems unlikely, or at least insufficient. Second, it is possible that organization-level behavior is more difficult to influence than individual-level behavior due to decision-making structures within the organization or implementation loss through chains of command. Third, it is possible that local parishes are resistant to encouragements from the centre. Fourth, the non-significant effect of our

intervention may have occurred due to the over-dispersion of our asset data.

Nevertheless, re-analyzing the data using negative binomial regression (O'Hara &

Kotze, 2010) continued to produce a non-significant effect of the intervention on asset

listings[3]. Finally, it is possible that perceived procedural barriers reduced uptake

(rather than a lack of motivation). Indeed, a separate follow-up survey among parishes

showed that the most frequently listed barriers to listing an asset of community value

were: expected cost, time required, and lack of specialized advice. In sum, conducting

a behavioral insight's experiment in an applied setting with a hugely diverse

population is challenging. However, we hope that this paper highlights the importance

of evaluating the effectiveness of applied social psychological interventions. Indeed,

the discrepancy between our findings and previously published research shows that

the impact of descriptive norms interventions on behavioral change varies by the

specific context.

   This field experiment had some limitations, which is inherent to any

intervention of this nature. One such issue was the availability of the asset nomination

data. Specifically, parish councils' asset nominations needed approval by the local

council in order to be successfully listed. Given that we were interested in parish

councils' behavioral change, we were interested in their *nominations*. Nevertheless,

the dependent variable in the analyses reflected successful listings rather than

nominations. This was due to data availability restrictions. Analyzing the successful

listings (rather than nominations) means that (1) we cannot be certain that a

nomination was not made before the intervention occurred, and (2) we cannot be

certain that unsuccessful (or delayed) nominations were not made following the

intervention. Nevertheless, the random assignment to groups helps attenuate these

issues. The key suggestion for future research in this particular field is to conduct a

similar field experiment but over a longer period of time. This would ensure more accuracy in the asset listing data. It would also be interesting to explore the effects of different behavioral insights techniques. Due to the sample size we were only able to test one behavioral insights technique, but it is very plausible that other behavioral insight techniques could be more effective as compared to the descriptive norm technique employed in the current experiment. Finally, it would be interesting to explore whether longer-term or repeated exposure to the behavioral insights message(s) would be more effective than a one-off exposure. As local parish and town councils become more important and better known by central government, it may be possible to craft other light-touch interventions that communicate government policy in a way that is suitable to the local context and appropriate for local democratic choice.

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Footnotes

[1] E-mails were sent out on Wednesday 9th and Thursday 10th April 2014. Due to a procedural error using Mailchimp the neutral messages were sent out 24 hours before the norm messages. This was not intended and we appreciate that this means allocation of Condition is no longer entirely random but influenced by time. However, we think it unlikely that one day's difference would make a difference to the impact of the treatment.

[2] The results do not differ significantly by whether the duplicate clerks were included or excluded.

[3] Given the non-normal distribution of the variable, we analyzed the data using two alternative analyses. Specifically, consistent with the asset listings results reported above, analyzing the data using log-transformed asset counts or using negative binomial regression similarly showed non-significant effects of Condition on asset listings. Results available on request