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How to Get the Attention of Government Officials: A Test of the Effectiveness of Social Proof Treatments

Aubriana Wolferts

Introduction to General Problem Area

Social proof treatments—informing people about the behavior of their peers—have generally been shown effective in influencing subjects to engage in desired behavior due to a psychological desire to conform (Cialdini et al. 1990; Schultz et al. 2008; Shearman 2007). Social proofs are more effective when they describe what peers typically do rather than what peers generally approve of and when the social proof is more salient and closely related to the desired behavior (Cialdini 2004; Cialdini 1990). Subjects consistently underestimate the power of social proof, crediting changes in their behavior to other, irrelevant factors (Nolan et al. 2008).

However, while studies have shown social proof treatments to be effective in influencing the behavior of the general population, research to date has not yet assessed the impact of social proofs on government officials. In practice, social proof might motivate officials to take up new policy practices that benefit the citizens they serve. This is the hypothesis that motivated the present research. However, it is possible that staff members in government agencies—that are social elites and, therefore, likely outliers compared to normal citizens—may behave differently than the studies on normal subjects indicate. Other research shows that elites are not as easily influenced as their non-elite counterparts. Elites have been found significantly less likely to accept counsel from even intelligent and highly qualified research assistants (See 2011; Tost 2012). This lack of affinity for heeding the advice of others may also indicate that government officials would be less likely to be influenced by the actions of others; therefore, government officials may prove resistant to social proof treatments.

This randomized controlled experiment done in Peru explores the effects of social proof on government officials’ interest in learning more about using evidence
to predict what policies and development programs might be effective. The context involved invitations to nearly 3,000 government officials to host a briefing in which researchers provided credentials for and coaching on a new online library reporting rigorous evaluation information on development programs. The library compiles and graphically summarizes results from more than 400 randomized control trials in international development. Such evidence-based reports (EBRs) have so far remained difficult to access for policy-makers without doctorates, despite their usefulness in indicating, using concrete evidence, what policies might be most effective. Any take-up of the invitations, therefore, would also have the practical advantage of promoting government learning of best practices in development programming.

Our study found that social proof affects government officials differently than it has generally been shown to affect average members of society in previous studies. Contrary to our hypotheses and the majority of findings on social proofs, the social proof was not effective in encouraging the desired behavior and even had a negative effect in some instances. Social proof significantly decreased the overall likelihood of receiving a positive response from a government official to the invitation to hold a meeting. Similarly, the likelihood of holding a meeting also significantly decreased with the presence of the social proof treatment.

In what follows, we situate this study in the context of prior research on social proof, elite behavior, and propensity for policy learning. We then describe the research design and estimation procedures, discuss results, and draw conclusions about what the findings indicate about the value of social proof for government uptake of policy-relevant knowledge.

Theoretical Framework and Literature

Social proof treatments have been found successful in influencing behavior in many contexts (Schultz et al. 2007). For example, informing hotel guests that other guests overwhelmingly reused their towels significantly increased towel reuse (Schultz et al. 2008). Additionally, reporting average energy use to homeowners caused high-volume users to decrease usage. However, this same treatment caused energy savers to increase use to match their peers’ energy use, unless they received social praise for their conservation. This indicates that social proofs can also influence behaviors in undesired directions if subjects are made aware that others are engaging in an undesirable behavior (Schultz et al. 2007). Therefore, care must be taken when designing a social proof treatment to encourage the normative behavior the researcher desires. In another study seeking to decrease the amount of petrified wood being stolen from national parks, researchers observed that the social proof treatment increased the amount of wood stolen. The social proof treatment stated that a high amount of wood is stolen from national parks, and then encouraged subjects not to steal wood. Because the social proof treatment indicated that others were stealing wood, subjects were more likely to engage in this undesirable behavior (Cialdini 2006).

In summary, previous research indicates a successful social proof must include two elements: 1) the social proof treatment should not normalize undesirable behavior, and 2) the social proof should be a descriptive norm that states what other people do, rather than an injunctive norm, which states what is commonly thought one should do (Cialdini 2006; White 2013). Normalizing bad behavior encourages increased participation in the undesirable behavior, producing results opposite of what was desired, such as in the case of the petrified wood study. The literature suggests people are not affected by normative claims of what one should do—only by what other people are actually doing. No literature has been found indicating that social proof treatments adhering to the standards described above are ineffective.

However, despite the large body of research done to test the general effectiveness of social proof treatments and how to make them more effective, little research has been done on if and how social proof treatments affect various demographics differently. In particular, no research has been done to determine the effectiveness of social proof treatments on government officials. Previous studies indicate that persons classified as elite react differently when receiving advice and making decisions (Galinsky et al. 2008). Elites have been shown to be less likely to listen to the advice of others and more likely to make decisions alone and on impulse (Fast et al. 2012; See et al. 2011). This could indicate that social proof treatments will be less effective on policy-makers than on the general population, as they are included in the class of elites in society. Determining the specific impact of social proof on elites, however, is important because of the disproportionately large influence these individuals have on society.

Hypotheses

Due to the vast body of literature that proclaims the effectiveness of social proof treatments, we anticipated the social proof treatment would incentivize government officials to have increased interest in learning about our web site for accessing and understanding EBRs, despite their elite status.

We hypothesize the social proof will greatly increase the likelihood of a positive response to cold e-mails and phone calls. People are frequently wary of e-mails or calls received from unknown persons; therefore, including the statement that other government officials have also invited a meeting with us will likely encourage government officials to be more trusting and likely to respond to our invitation. We also hypothesize the social proof treatment will make government officials more likely to hold a meeting with a research assistant for similar reasons.

Hypothesis 1: The social proof treatment will have a positive impact on the likelihood of responding positively to the invitation to hold a meeting to learn more about the web site.

Hypothesis 2: The social proof treatment will have a negative impact on the likelihood of responding negatively to the invitation to hold a meeting to learn more about the web site.
Hypothesis 3: The social proof treatment will have a positive impact on the likelihood of holding a meeting with a research assistant.

Hypothesis 4: The social proof treatment will have a positive impact on the average number of people who are trained in a meeting.

Research Design

Government officials are constantly faced with the need to make decisions of high consequence. Having proficient government officials is critical to effective policymaking. However, even the most intelligent government officials can be betrayed by their intuition; the impacts of development policies are often different than expected. Over the past fifteen years, researchers and academics have increasingly conducted randomized controlled trial experiments to address this problem. These experiments and the evidence-based reports (EBRs) that convey the results of these experiments provide causal evidence about which policies are effective and which are not.

Despite the increasing number of EBRs that have been done, government officials are not using these resources. Research shows that “public servants make use of academic resources only in exceptional circumstances” (Head 2015). Government officials’ resistance to using EBRs is likely two-fold: 1) EBRs are difficult to access by non-academics and are often hidden behind paywalls, and 2) government officials are not accustomed to using EBRs when making policy decisions and are hesitant to begin using them because of their academic jargon and lengthy nature.

To address the barriers that government officials face in using EBRs, we created a web site filled with easy-to-read graphics and summaries of over 400 EBRs, taken from premiere research centers on development policy, such as JPAL, CEGA, and DIME (see Appendix). We then used online resources to create a database of nearly 3,000 government officials in Peru with whom we could meet and present the web site.

However, incentivizing government officials to use the web site we created to inform their policy decisions can be a difficult task. Using our extensive database of government officials as subjects, we designed an experiment to discover what impact a social proof treatment (telling someone what others are doing) has on government officials’ willingness to learn about and use our web site resource to make more informed policy decisions. This study addresses the impact of social proof on the likelihood of a government official responding positively to the request to set a meeting and actually holding a meeting to learn more about the web site.

We randomly assigned each government official from our database to either the social proof treatment or to the control treatment. College students from both Brigham Young University in the U.S. and from local universities in Lima, Peru, were hired as research assistants and trained to visit the government officials from our database. Government officials were randomly assigned to be contacted by one of the students. The research assistants from the U.S. traveled to the countries of interest during the summer of 2017 (roughly between June and August) and spent five weeks in Peru attempting to meet with their assigned government officials. E-mails inviting government officials to schedule a meeting were sent out to the government officials from our database who were assigned to the control group one week before students went to Peru. Just before students departed, e-mails were sent to those who were assigned to the control group. The reason for the time difference between the e-mails sent to the control and treatment groups was that the social proof involved telling government officials that others from their ministry had set up a meeting with us. To maintain our integrity, it was necessary to target the control group first and receive responses so we could truthfully tell those assigned to the treatment group that other government officials in their ministry had set up a meeting with us (or that other government officials in their country’s government had expressed interest, if no one in their specific ministry had expressly set up a meeting).

The social proof was given either through e-mail or over the phone by including this paragraph in the invitation to set a meeting:

A number of your colleagues in [YOUR MINISTRY] have already expressed interest and have invited a meeting with us. In a recent survey of 6,750 policy-makers in 126 countries, information about successful public policy programs in other countries was ranked second in importance on a list of fourteen policy inputs.

Up to three rounds of e-mails were sent (e-mails were no longer sent once a response, positive or negative, had been received) soliciting a meeting. Government officials were contacted by phone in the case that an e-mail was found to be invalid or no response was received. Research assistants carefully tracked the number of times the government officials that they were assigned to were e-mailed and called and if and when the government official responded.

Specific training procedures for the research assistants were put into place. Research assistants were instructed to follow a specific script to follow for both e-mails and phone calls to minimize the impact of various factors about research assistants apart from their gender and nationality. These effects were also being tested as another part of this experiment (the factorial design of the experiment prevents these other experiments from interfering with the social proof experiment). Furthermore, a detailed in-person meeting protocol was developed that described in detail what research assistants were to say in meetings. Research assistants received approximately ten hours of training on how to conduct e-mails, phone calls, and in-person meetings. There were abnormalities in a few meetings, such as a meeting where the intended person of contact was not present or where the government official had significantly less time for the meeting than expected, but generally meetings adhered to the protocol. Any abnormalities in meetings were recorded by the research assistants. Furthermore, research assistants were trained on how to accurately report the data and carefully tracked all outcomes of interest. The responses have since been double-blind coded by other research assistants to ensure that they were coded correctly. The criteria for the coding given to the research assistants was as follows:
Positive e-mails clearly affirm some kind of interest in continuing the conversation. The continuance of the conversation could be by referral to someone else or by the sender showing interest. The interest could be minimal, simply consisting of “tell me more,” “I don’t quite understand,” or “is this service really free?” As long as the government official clearly indicated a desire to continue the conversation, the response was coded as positive.

Negative e-mails clearly communicate a disinterest in continuing the conversation. A Neutral coding means the response was vague, noncommittal, off-topic, or baffling. Examples might be, “Let’s talk, Sandra” when the name of the RA was not Sandra. Another common neutral response is, “I am in receipt of your email.”

Responses must clearly be created by a human and not be a machine generated response.

Inter-coder reliability for the coding of e-mail responses was 95 percent. Obviously, this same verification of the response could not be completed for phone correspondence; however, research assistants were trained on how to code responses prior to the experiment, and the vast majority of correspondence was done via e-mail, so we are not concerned that the phone call data will skew the results.

Appointment held was coded simply as whether or not the research assistant met with the government official and shared the necessary information for the government official to access the web site. Most meetings lasted around thirty minutes, though in some instances meetings were shorter.

**Methods**

We measure the effect of the social proof treatment on four outcomes: 1) receiving a positive response to our invitation to hold a meeting, 2) receiving a negative response to our invitation, 3) holding an appointment with a government official, and 4) the number of people trained in the meetings that are held. The outcome measures are estimated and compared based on whether or not the government official received the social proof treatment. Every effort was made in our experiment to ensure that the social proof treatment used in our experiment was valid and adhered to the two characteristics of good social proof treatments specified above: 1) does not normalize undesirable behavior, and 2) states what other people do rather than what people should do.

In order to create the most effective social proof possible to accurately test the effectiveness of social proof treatments on government officials, we carefully selected the language of the social proof to highlight the desirable behavior of other government officials. Government officials were told that information about successful public policy programs was important to other government officials and that other government officials in their ministry were interested in setting a meeting with us, giving a descriptive norm of what other government officials actually do rather than simply describing what one should do.

We attempted to make the social proof as impactful as possible by stating, whenever true, that other policy-makers from one’s own ministry had agreed to set up a meeting with us. Studies have shown that the closeness of the social proof comparison to the subject impacts the effect of the social proof treatment. Persons closer to the subject are more likely to impact the subject’s behavior than mere acquaintances or strangers (Bond 2012). In cases where we had no scheduled meetings with employees of a certain ministry, we simply stated that other government officials from their country had agreed to set up a meeting with us. This social proof treatment successfully adheres to the two characteristics of good social proofs explained above. Bad behavior, such as the problem of policy-makers not using EBRs to inform their decisions, is not mentioned. Furthermore, the social proof treatment is not an idealistic statement of what policy-makers should do but rather a statement of what other policy-makers actually do—they express interest in learning more about our web site that provides quality summaries of EBRs.

We used difference of means t-tests and probit regression to determine whether there were significant differences in the outcome measures based on the social proof treatment. Difference of means tests are used to estimate average treatment effect to evaluate how the likelihood of positive responses, negative responses, appointments held, and the number of people trained are affected by the social proof treatment. We also used probit regression to evaluate the impact of the social proof treatment as well as other covariates on our outcomes in order to ensure that the differences are truly due to the treatment and robust to alternative specifications. We found the data was heteroskedastic; therefore, we used robust models in all instances.

The covariates used for our regression analysis originally included the social proof treatment, nationality of research assistant, and gender of research assistant. These terms were included in the model in order to control for alternative drivers for the differences in the outcomes we observed. There is a large body of literature suggesting that nationality and gender have a significant impact on how people are accepted and the credibility they are perceived to have; therefore, controlling for these variables is important. For example, different countries have been observed to have different brands (Fetscherin 2010). In general, more developed countries tend to have a brand that is perceived more positively. For this reason, government officials in these developing countries may view the research assistants from the U.S. as more credible. We controlled for this. Additionally, previous research suggests gender can impact up-take rates. The literature, however, is mixed on this subject. Women have been found to be perceived as more trustworthy than men (Buchan et al. 2008). Thus, if social proof is effective in part because it elicits more trust from the recipient of the treatment, it is likely that having a female research assistant will compound this effect and that the social proof will be more positive on those government officials who were contacted by a female research assistant. On the other hand, men have been found to be generally more influential than women, and, therefore, it is possible that...
men will have a higher rate of positive responses and meetings held due to this (Carli 2001). We controlled for gender to distinguish the effects of the social proof treatment from the effect of gender. We also used a fixed effect for country in the overall analyses.

Our final probit regression models are written as follows. The first three outcomes use probit analysis, and the final outcome uses OLS regression:

\[ \text{Probability of Positive Response}_i = \text{Social Proof Treatment} + \text{Research assistant Gender} + \text{Research assistant Nationality} + \epsilon_i \]

\[ \text{Probability of Negative Response}_i = \text{Social Proof Treatment} + \text{Research assistant Gender} + \text{Research assistant Nationality} + \epsilon_i \]

\[ \text{Probability of Appointment Held}_i = \text{Social Proof Treatment} + \text{Research assistant Gender} + \text{Research assistant Nationality} + \epsilon_i \]

\[ \text{Number of Government Officials Trained}_i = \text{Social Proof Treatment} + \text{Research assistant Gender} + \text{Research assistant Nationality} + \epsilon_i \]

We used marginal effects transformations to make the results of the first three outcomes more comprehensible. Additionally, our final two-stage regression model uses probit analysis and is written as:

\[ \text{Probability of Appointment Held}_i = \text{Social Proof Treatment} + \text{Positive Response}_i | (\text{Research assistant Gender} + \text{Research assistant Nationality} + \text{Social Proof Treatment} + \epsilon_i) \]

**Results**

Research has consistently shown social proofs to be an effective way to influence the decisions of people (Schultz et al. 2008; Shearman 2007). In our experiment, however, we found that social proof at best had no significant effect on response and website usage rates and may even have increased the likelihood that government officials responded negatively to the request to hold a meeting to learn more about our web site. Difference of means t-tests showed that the social proof treatment had no significant effect on any of the outcomes. Regression analysis including controls for the nationality and gender of the research assistant who contacted the government official largely support the null results found from the t-tests, with the exception of showing that government officials who received the social proof treatment may have actually been more inclined to respond negatively to our invitation to hold a meeting to learn about the web site. Table 1 shows the results of our regression analysis. The following section details the results of our analysis, as well as providing marginal adjustments that are more easily interpreted than the coefficients found in the regression analysis.

**Positive Response**

The social proof treatment had no statistically significant impact on the likelihood of receiving a positive response. Analysis of marginal effects shows that government officials assigned to the control group responded, on average, to 11.78 percent (95 percent confidence interval of 9.94 to 13.63) of invitations to hold an appointment to learn more about using evidence-based reports in their policy work. Those assigned to the social proof treatment responded positively at the rate of 11.84 percent (95 percent confidence interval of 9.91 to 13.76). We illustrated the findings in Figure 1. These results are surprising, as social proofs have generally been found to significantly increase uptake rates for behaviors of peers (Cialdini et al. 1990).

**Table 1. Effect of Social Proof Treatment**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Positive Response</th>
<th>Negative Response</th>
<th>Appointment Held</th>
<th>Number of People Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Proof</td>
<td>0.0970</td>
<td>0.172*</td>
<td>0.0314</td>
<td>0.397</td>
</tr>
<tr>
<td>(0.0969)</td>
<td>(0.0391)</td>
<td>(0.0891)</td>
<td>(0.0831)</td>
<td>(0.598)</td>
</tr>
<tr>
<td>RA from U.S.</td>
<td>0.331***</td>
<td>0.713***</td>
<td>0.243***</td>
<td>1.091**</td>
</tr>
<tr>
<td>(0.0733)</td>
<td>(0.0699)</td>
<td>(0.0591)</td>
<td>(0.0694)</td>
<td>(0.520)</td>
</tr>
<tr>
<td>RA Female</td>
<td>0.0453</td>
<td>-0.907***</td>
<td>0.0735</td>
<td>-0.365</td>
</tr>
<tr>
<td>(0.0722)</td>
<td>(0.120)</td>
<td>(0.0890)</td>
<td>(0.541)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-1.387***</td>
<td>-1.064***</td>
<td>-1.746***</td>
<td>2.167***</td>
</tr>
<tr>
<td>(0.0873)</td>
<td>(0.0694)</td>
<td>(0.0818)</td>
<td>(0.543)</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>2,227</td>
<td>2,227</td>
<td>2,227</td>
<td>131</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.024</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses:
*** p<0.01, ** p<0.05, * p<0.1

**Negative Response**

Interestingly, the social proof treatment slightly increased the probability that a government official would respond negatively to our invitation to hold a meeting. Government officials that did not receive the social proof treatment had a predicted 6.15 percent probability (95 percent confidence interval of 4.81 to 7.50) of responding negatively. Those who were randomly assigned to the social proof
treatment, however, had an 8.18 percent probability (95 percent confidence interval of 6.63 to 9.73) of giving a negative response. This difference is significant at the 0.1 level. Results are illustrated in Figure 2.

**Figure 2. Social Proof and Probability of Negative Response**

Appointment Held

The social proof treatment had no significant impact on the likelihood that a government official would hold a meeting with a research assistant to learn more about the web site. Government officials in the control group on average held meetings in 5.79 percent (95 percent confidence interval of 4.45 to 7.14) of researcher contacts, while government officials assigned to the social proof treatment had contacts result in briefings 6.16 percent of the time (95 percent confidence interval of 4.73 to 7.60). Figure 3 graphically presents these results.

**Figure 3. Social Proof and Probability of Holding Appointment**

Number of Government Officials Trained

The social proof treatment is estimated to have increased the number of government officials trained in a meeting, though this result was not significant statistically.

**Discussion and Conclusion**

While abundant literature is available on social proofs, little research indicates that social proofs are ineffective. What might explain our findings? The results are especially puzzling when considering that our treatments were quite similar to other social-proof treatments in the literature. In particular, the statement was descriptive (stating what other people do) rather than injunctive (stating what society generally approves or disapproves of). Descriptive norms have been shown to be more effective at influencing behavior (Jacobson, Mortensen, and Cialdini 2011). We were careful not to normalize any undesirable behavior, such as implying that many government officials do not use academic studies, because social proofs that normalize undesirable behavior are often less effective in inspiring the desired action from individuals (Cialdini et al. 2006).

Lastly, studies have shown that knowing similar people are involved in an activity increases one’s likeliness of participating (Bond 2012). We attempted to make the social proof as impactful as possible by stating, whenever true, that a policy-makers’ colleagues from their own ministry had asked for a meeting with researchers.

One possible explanation of the null result is that elites react differently to social proofs than others might. Few social proof studies focus on elites and even fewer on elites in government positions (Rao 2001). Previous studies indicate that persons classified as elite react differently when receiving advice and making decisions, and this could potentially explain their apparent resistance to the effect of a social proof (Galinsky et al. 2008). Elites have been shown to be less likely to listen to the advice of others and more likely to make decisions alone and on impulse (Fast et al. 2012; See et al. 2011). This could explain why the subjects of our study did not react positively to the social proof treatment. Rather than being motivated by the decisions of others, elites choose to form their own opinions and make their own decisions.

Another possibility is simply that social proof in the workplace induces free-riding. If employees hear that others in their ministry have received the same training, they may think it less important to spend their time doing it. They could rationally believe their coworkers or supervisors will bring the issue to their attention later if it is actually important.

Our research indicates that social proofs, though shown to strongly impact behavior in other settings, do not have a significant impact on the behavior of Peruvian government officials and may actually increase their likelihood of responding negatively to the request to engage in the desired behavior. More research, however, is necessary to understand if this is a result of the social proof or if there are other factors, such as free-riding, that contribute to this result.

**Appendix**

Example images of the Impact Evidence web site that was presented to government officials by the research assistants.
REFERENCES


