Personalized salutation, power of sender and response rates to Web-based surveys

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Abstract

Three studies were conducted to examine the effect of personalized salutation and sender power on signing up to an online survey panel, and subsequent survey response rates. In the first study, significantly more people joined a panel if addressed by a personalized salutation. In Study 2, this effect was replicated using an invitation to leave a second panel. In the final study, a significant salutation effect was found when power of the sender was high, and not when power of the sender was neutral. It is argued that for this sample, power of audience and participant identifiability linked to create a compliance-based motivation to join and maintain membership of an online panel. Implications for the maintenance of online panels, survey response rates, and the collection of sensitive personal information, are discussed.

Keywords: Personalization; Response rates; Salutation; Survey methodology; Power

1. Introduction

Although Internet research and survey methodology is still in its infancy, it is clear that it can offer a number of powerful advantages over traditional modes of survey and questionnaire administration. For instance, it can provide considerable cost savings; allows large samples to be collected as easily as smaller samples; elim-
inates data entry errors, and virtual researchers can collect data 24 h a day (Reips, 2000, 2002). Comparisons of data collected online and via more traditional modes tends to confirm that no major differences occur (Krantz & Dalal, 2000; Krantz, Ballard, & Scher, 1997), although computerized methods have proved to be successful at eliciting sensitive information (Tourangeau, 2004), while reducing socially desirable responding (Joinson, 1999).

A further advantage of online research is the control it offers researchers to personalize the research experience of participants. This personalization can take a number of forms – for example, by providing feedback or study results to volunteers, by adapting subsequent questions on the basis of previous answers, by pre-filling items based on an individual’s records, or by enabling invitations to participate to be personalized using mail merge techniques.

The impact of such personalization of invitations on response rates and participant motivation is not well understood, and research findings are highly equivocal. In part this is due to the various differing manipulations of personalization used in previous mail survey studies, including the use of handwritten envelopes, letters, signatures and by varying formal and personal salutations (e.g. Andreasen, 1970; Edwards et al., 2002; Simon, 1967). A number of studies have found an improvement in response rates if the salutation is ‘Dear <person’s name>’ compared to ‘Dear Sir/Madam’ (Brennan, 1992), and the personalization of correspondence forms part of the ‘Tailored Design Method’ (Dillman, 2000) which aims to maximize response rates. However, Simon (1967) found that response rates both increased and declined due to personalization in different survey situations, and Pearson and Levine (2003) found no effect of varied salutation on response rates in an e-mail invitation to complete an online survey, although they did find some interactions between age and preferred salutation. Most recently, Heerwegh, Vanhove, Matthijs, and Loosveldt (in press) and Joinson, Woodley, and Reips (in press) did find an effect of personalized salutation on response rates to an online survey.

Clearly then, the impact of personalized salutation on response rates is moderately robust, but there has been little progress in identifying possible reasons for the variation in results, or indeed why a personalized salutation (at least sometimes) increases response rates. Dillman (2000), drawing on social exchange theory, argues that personalization increases the reward of a survey to a participant by making them feel more important and valued. Since this economic model assumes that the balance of costs and rewards (and trust in the likely reward in the long term) is weighed by the potential participant before action, then any increase in reward will tip the scales toward participation.

Indeed, there is other evidence that manipulations which make the respondent feel more ‘special’ or responsible will increase response rates. For instance, Barron and Yechiam (2002) showed that addressing an e-mail request for assistance to a single addressee (as opposed to five people) led to more responses, and for those responses to be both more helpful and longer in length. However, explaining this effect does not depend on social exchange theory, and fits more closely to social psychological research on helping behavior (e.g. Latane & Darley, 1970).
Moreover, Andreasen (1970) argues that for participants wishing to protect their anonymity, increasing a personalized salutation may well reduce the likelihood of them responding to a survey (although the results of his study were inconclusive). Joinson et al. (in press) similarly report that using a personalized salutation, while increasing response rates, also serves to reduce disclosure to a sensitive personal question. This finding suggests that a personalized salutation may serve to reduce participants’ perception of anonymity. Heewegh et al. (in press) also found some evidence that personalized surveys also tended to be associated with increased socially desirable responding.

However, this reduction in anonymity might suggest a further reason for the varied impact of personalized salutation on survey response rates. Although in some cases reduced anonymity may reduce response rates, in others it is plausible that it will improve response rates. This is because, for an identifiable individual, responding to a survey may well involve impression management in itself. This is particularly likely when the status of the sponsor or researcher is high (for example, in employee surveys, see Reips & Franek, in press) – a technique found to improve response rates (Brennan, 1990; Edwards et al., 2002). In such cases, acting in a socially desirable manner – effectively to please the researcher – is more likely to occur. As such, we would expect that a personalized salutation will increase response rates only when the power or status of the requestor is high.

In the present paper, three studies that examine the impact of personalization of survey invitation on response rates, and possible causes, are presented. All three studies involve the use of e-mail to invite responses to either join a panel of students giving their opinion (Study 1), leave the panel (Study 2), or invitations to panel members to complete a survey (Study 3). Across all studies, the dependent variable is response rate. The sample is derived from the student body of the Open University UK – a large (200,000 student) adult distance education institution.

2. Study 1

2.1. Overview

In Study 1, the impact of personalized salutation on volunteering to become a member of a survey panel was investigated.

2.2. Methods

2.2.1. Participants

Participants were a stratified sample of 10,000 Open University students with e-mail addresses, selected to match demographically the entire undergraduate study body by gender, age and location. This sample represents 6.3% of the entire student body.
2.2.2. Procedure

The sample of 10,000 students was randomly split into four groups of 2500. Each group was assigned a salutation: ‘Dear Student’, ‘Dear Open University Student’, ‘Dear Forename’ (e.g. Dear John), and ‘Dear Forename Surname’ (e.g. Dear John Doe). Each student was sent an e-mail signed by the (female) vice-chancellor of the Open University offering them the chance to volunteer to join a student survey panel (called ‘PRESTO’). Membership of PRESTO would entail receiving up to six invitations to Web-based surveys per annum. The subject line of the e-mail was ‘Give the OU your opinions’, the e-mail sender was ‘OU Electronic Survey Team’, with the reply address ‘Elsa-Presto@open.ac.uk’. Sign on period was 14 days, as most responses to e-mail invitations occur within nine days (Welker, 2001).

2.3. Results

Of the 10,000 e-mails, 706 were returned as ‘dead’ e-mail accounts (equally spread across conditions, $p > 0.7$). The total number of people signing up to the panel was 1405. This represents an overall response rate of 15.12%. A small sub-sample (nine people) who had not been invited directly onto the panel signed up – presumably because of either shared family e-mail accounts or automatic forwarding of e-mails. All these people were addressed as ‘Dear Student’ or ‘Dear Open University Student’.

The percentage of females signing onto the panel (15.1% of total invited) was significantly higher than the proportion of males (12.9%) ($\chi^2 = 10.23$, df = 1, $p < 0.01$).

2.4. Salutation and response rates

The response rates for each salutation condition are shown in Table 1. A Chi-square test confirmed a significant association between salutation and response rate ($\chi^2 = 24.39$, df = 3, $p < 0.000$).

Odds ratio (OR) analyses found that using the salutation ‘Dear John’ significantly increased the odds of a response compared to ‘Dear John Doe’ (OR = 1.16, $p = 0.056$), ‘Dear Open University Student’ (OR = 1.39, $p < 0.001$) and ‘Dear Student’ (OR = 1.40, $p < 0.001$). Using the salutation ‘Dear John Doe’ significantly increased the odds of a response compared to ‘Dear Open University Student’ (OR = 1.20, $p < 0.05$) and ‘Dear Student’ (OR = 1.21, $p < 0.05$).

<table>
<thead>
<tr>
<th>Salutation</th>
<th>Number of responses</th>
<th>Response rate (from 2500)</th>
<th>Response rate (adjusted for bounced e-mails)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dear Student</td>
<td>311</td>
<td>12.4</td>
<td>13.38</td>
</tr>
<tr>
<td>Dear Open University Student</td>
<td>313</td>
<td>12.5</td>
<td>13.47</td>
</tr>
<tr>
<td>Dear John Doe</td>
<td>366</td>
<td>14.6</td>
<td>15.75</td>
</tr>
<tr>
<td>Dear John</td>
<td>415</td>
<td>16.6</td>
<td>17.86</td>
</tr>
</tbody>
</table>

2.5. Discussion

As predicted, an effect of salutation on response rate – in this case a commitment to a panel – was found. Specifically, an informal, personal salutation (‘Dear John’) led to significantly higher response rates compared to impersonalized salutations and a marginally significant increase compared to the more formal personal salutation (‘Dear John Doe’). The more formal personalized salutation led to significantly more responses than either of the impersonal salutations. While the overall impact on response rates is relatively small, using the salutation ‘Dear Forename’ increased the odds of a response by almost 40% compared to using an impersonal salutation. This means that for each five individuals recruited using an impersonal salutation, seven people would be recruited using the personalized (Forename) salutation.

This result is in keeping with similar studies that have examined the impact of personalization in mail-based surveys (Brennan, 1992; Edwards et al., 2002). As noted in Section 1, there are a number of possible explanations for a salutation effect on response rates. One possibility is that response rates are higher simply because more personalized messages are read. This would suggest that a personalized message would garner greater responses – regardless of the content. To test this possibility, the second study is a replication of Study 1 with one critical difference – rather than being asked to sign on to a panel, existing panel members are asked whether or not they wish to leave a panel.

3. Study 2

3.1. Overview

In the second study, salutation was once again manipulated, but this time when inviting existing panel members to exit the panel. This methodology allows an examination of the hypothesis that personalized messages are more likely to be responded to simply because they are more likely to be read or attended to. It is predicted that fewer people will respond to leave the panel when a personalized salutation is used.

3.2. Methods

3.2.1. Participants

Participants were 2247 students who had signed on to the PRESTO panel 12 months previously. The method to recruit the panel members was the same as used in Study 1 for the second panel.

3.2.2. Procedure

The sample of 2247 students was randomly split into four groups of 562 (with Dear John Doe being sent to 561). Each group was assigned a salutation: ‘Dear Student’, ‘Dear Open University Student’, ‘Dear Forename’ (e.g. Dear John), and ‘Dear
Forename Surname’ (e.g. Dear John Doe). Each student was sent an e-mail signed by
the vice-chancellor of the Open University offering them the chance to leave the
PRESTO student survey panel. The subject line of the e-mail was ‘Your PRESTO
panel membership’. The e-mail sender was ‘OU Electronic Survey Team’, with the
reply address ‘Elsa-Presto@open.ac.uk’.

3.3. Results

Of the 2247 e-mails sent, 146 were ‘dead’, leading to a sample of 2101. The number
of dead e-mails was evenly distributed across conditions ($p > 0.72$). A total of 103
people opted to leave the panel (response rate: 4.9%). Response rate by salutation
is shown in Table 2. A Chi-square found no significant association between saluta-
tion and response ($\chi^2 = 3.14$, (df = 3), $p > 0.3$), although this is most likely due to
the small number of people choosing to leave the panel.

The personalized (Dear John, John Doe) and impersonal (Dear Student, Open
University Student) groups were combined to create a two level factor. Using this
two level factor, the odds-ratio of salutation on leaving was 1.416 ($\chi^2 = 2.93$,
$p = 0.054$). This means that using a non-personalized salutation increases the chances
of a person leaving the panel by 1.4 times.

Analyses of the average age and gender distributions of those choosing to remain
versus leave the panel revealed no significant differences between the two groups.
Age ($t = -0.29$, $p > 0.75$, means 41.9 and 42.2 for leavers and non-leavers respec-
tively) and gender ($t = 1.59$, $p > 0.10$, percentage females were 59.8% in the leavers
group, 51.8% in the non-leavers group). A logistic regression found a non-significant
effect of the model (salutation, age, gender: $p = 0.11$), and a marginally significant
influence of salutation (Wald = 3.57, $p = 0.06$) and gender (Wald = 2.71, $p = 0.1$),
but not age (Wald = 0.41, $p > 0.5$).

3.4. Discussion

The partial replication of Study 1 strongly suggests that higher response rates in
the personalized salutation condition found in Study 1 were not due to a higher like-
lihood of a message being read or actively attended to. If this were the case, then we
would expect to find a higher number of people opting to leave the panel when a per-
sonal salutation is used – while in the present study, the opposite effect was found.
Although the differences in responses do not reach significance due to the small over-
all response rate, using a personalized salutation reduced opt-outs by around a third.

Table 2
Salutation and response rates (leaving the panel)

<table>
<thead>
<tr>
<th>Salutation</th>
<th>Dear Student</th>
<th>Dear Open University Student</th>
<th>Dear John Doe</th>
<th>Dear John</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of responses</td>
<td>32</td>
<td>28</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Response rate (%)</td>
<td>5.7</td>
<td>5.0</td>
<td>3.7</td>
<td>3.9</td>
</tr>
</tbody>
</table>
If more people from the whole sample were minded to opt out, this clearly would be a substantial effect.

The pattern of responses across the first two studies suggests that a personalized salutation may be encouraging socially desirable behaviour amongst participants. Specifically, in choosing to join a panel, or remain a panel member, participants are acting in a manner likely to please the source of the message. In both cases, the source was high power – the vice-chancellor (UK equivalent of Principal) of their university. The combination of personalized salutation and a powerful requestor may exert compliance pressure on potential responders, in much the same manner in which a powerful outgroup and identifiability tends to inhibit undesirable behavior (e.g. Reicher & Levine, 1994). In the third study, both salutation and power of the sender were manipulated to examine whether the effect of personalized salutation is independent of the power of the sender.

4. Study 3

4.1. Overview

In the third study, the interaction between salutation and power of the sender is examined using a request to complete a survey sent to members of the PRESTO panel retained following the opt-out survey in Study 2. It is predicted that the salutation and power/status interact such that the highest response rates will be when a personalized invitation originates from a high power/status source, the lowest when an impersonal invitation originates from a neutral power/status source.

4.2. Method

4.2.1. Participants

Participants were the remaining 2137 members of the first PRESTO panel following the opt-out conducted during Study 2. The panel was randomly divided into equal sub-groups (356 per group, one more in the final group) and each group assigned a condition.

4.2.2. Materials and procedure

In keeping with the previous studies, salutation was manipulated in the e-mail inviting panel members to complete the survey. Panel members were assigned to one of three conditions (‘Dear Student’, ‘Dear John Doe’ and ‘Dear John’). Power was manipulated by the presence or absence of the professorial title and rank of the sponsor of the survey in the first and final lines of the e-mail. In the neutral power condition, the source of the e-mail was: “From (name) (Strategy, Planning and Partnerships), The Open University”. In the high power, the source was shown as “From Professor (name), Pro-vice chancellor (Strategy, Planning and Partnerships), The Open University”. The e-mail briefly described the topic of the survey (community activity and involvement), and provided a unique URL linking to the survey.
Three questions about students’ identification with the Open University were also collected at the end of the survey (for use in predicting later response rates, and not analysed here).

4.3. Results

There were 146 dead e-mails (6.8%), evenly distributed across conditions \((p > 0.6)\). The survey comprised of a start page and 14 separate HTML pages. The first question was a skip question, meaning that the response rate measure used previously (first page submitted) is not appropriate since many participants did not submit this page, but instead ‘skipped’ to three quarters of the way through the survey. In light of this, two measures of response rate are possible – the number of people visiting the start page and clicking the continue button, or those who completed the first page, i.e. the page skipped to. 1054 participants visited the start page and clicked ‘continue’, and 961 (48.26%) responded to the first page of questions. Given that response in the earlier studies was taken as submission of some answers, the more conservative second measure was used to study response rates.

Drop out was low: 63 of the panel members who began the questionnaire did not complete it as far as the final non-optional question, and all but 124 completed the survey (including optional items). There were no differences in drop out across conditions (see Table 3, \(\chi^2\) all \(ps > 0.10\)).

4.4. Power, salutation and response rates

The cross-tabulations of power and salutation on response rates are presented in Table 4.

Chi-square tests confirmed a significant association between salutation \((\chi^2 = 8.92, df = 2, p < 0.02)\) and response rate, but not power and response rate \((\chi^2 = 1.25, df = 1, p = 0.23, ns)\). A logistic regression (Method: Stepwise Forward Conditional) found a significant effect of salutation on response rate \((B = -0.181, SE = 0.053, Wald = 11.388 \ (df = 1), p < 0.01, OR = 0.83)\), but not power \((B = -0.104, SE = 0.087, Wald = 1.427 \ (df = 1), p = 0.23, OR = 0.90)\).

To examine the prediction that the effect of salutation occurs only in the presence of a powerful source, two further Chi-square tests were computed to estimate the size of the effect (contingency co-efficient) of salutation for high and neutral power sources separately. The size of the effect of salutation was larger when the source was high power \((\chi^2 = 10.97, df = 2, Contingency co-efficient = 0.10, p < 0.01)\) than when it was neutral power \((\chi^2 = 3.24, df = 2, Contingency co-efficient = 0.055,\n
<table>
<thead>
<tr>
<th>Table 3</th>
<th>Drop out by condition (raw n)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dear John</td>
</tr>
<tr>
<td>High power</td>
<td>14</td>
</tr>
<tr>
<td>Neutral power</td>
<td>11</td>
</tr>
</tbody>
</table>
According to Cohen (1988), an effect size of between 0.07 and 0.2 should be judged to be a small effect (for 2 df). This supports the hypothesis that the effect of salutation on response is in part dependent upon the power of the source.

4.5. Discussion

As predicted, the highest response rate was when a personalized invitation came from a high power source and the lowest when an impersonal invitation came from a neutral power source. Moreover, the effect of salutation was confined to the high power sources of the invitation. Power itself exerted only a minor (non-significant) effect on response rates. This pattern of results supports the hypothesis that a combination of personalized salutation and high power source leads to a strategic imperative to respond to a survey.

5. General discussion

Research on the effect of personalization on survey response rates has been somewhat equivocal – although a general improvement in responses to mail surveys has been recorded, the causes, possible contra-indications and limits of such an effect are not well understood. The research in the present paper is the first successful investigation of salutation, power and response rates in all electronic surveys.

Across the three studies, the effect of personalized salutation in improving response rates and panel retention has been shown to be moderately robust for both recruitment and maintenance of panel membership and completion of surveys once a member of a panel. This research is important since general reductions in response rates have been a concern to survey methodologists (Tourangeau, 2004), and increasingly panels are seen as one mechanism for the improvement of responses generally (Göritz, Reinhold, & Batinic, 2002). However, online panels can similarly suffer from low recruitment, retention and response rates (Göritz, 2004), so research that addresses methods to improve responses is timely and valuable.

There are a number of unresolved issues that arise from the research presented here that require further consideration. First, the precise nature of the interaction between a powerful source and personalized salutation on response rates is unclear. According to models derived from social psychological research on groups (e.g. Reicher & Levine, 1994), it is the potential for censure or reprisal that leads identifiable individuals to repress undesirable ingroup behaviour. It is unclear if this pattern applies here, and a number of further studies will need to be conducted to establish if it

<table>
<thead>
<tr>
<th></th>
<th>Dear John</th>
<th>Dear John Doe</th>
<th>Dear Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>High power</td>
<td>190 (53.4)</td>
<td>154 (43.3)</td>
<td>150 (42.1)</td>
</tr>
<tr>
<td>Neutral power</td>
<td>166 (46.6)</td>
<td>158 (44.4)</td>
<td>143 (40.1)</td>
</tr>
</tbody>
</table>

$p = 0.2, \text{ ns})$. According to Cohen (1988), an effect size of between 0.07 and 0.2 should be judged to be a small effect (for 2 df). This supports the hypothesis that the effect of salutation on response is in part dependent upon the power of the source.

Table 4
Power, salutation and response rates (raw and %)
is indeed the case (for instance, by manipulating the risk of censure and personalization). An alternative explanation might be somewhat more prosaic – to receive a personalized salutation from a high power source might simply increase the importance or seriousness with which any request is treated. However, the data from Study 2 suggests that even if this were possible, this combination would still lead to audience-led behaviour.

Second, the differences between the two personalized salutations are difficult to interpret. Although ‘Dear John’ would seem to be more ‘personal’, ‘Dear John Doe’ would on first sight seem to be a more identifiable salutation. However, the pattern of results (excepting Study 2) would suggest that ‘Dear John’ is the more influential salutation (particularly when combined with power as in Study 3). One possibility is that the interaction effect between personalized salutation and power is not related to identifiability. Alternatively, ‘Dear John Doe’ might be received as the norm for direct mail or ‘impersonal personal’ salutations. Future studies will need to measure identifiability independently (or via social desirability) in response to salutation to confirm the interpretation proposed in the present paper.

Third, the present studies have not examined individual characteristics in survey response patterns. A number of individual differences, specifically the age of the participant, their gender and their years as a student, also predicted willingness to sign up to the panel. Further research should investigate these individual differences in more detail, with particular attention paid to possible interactions between survey mode, personalization and other manipulations, and individual characteristics.

Finally, the present series of studies have tended to equate social desirability with response rates – but people may well respond to surveys for a number of other reasons (e.g. level of interest in the topic). However, whenever a role of the audience in social behaviour is found, it does tend to be accompanied by an increase in impression management concerns, and associated socially desirable responding and face-saving motivations (Joinson, 2005; Paulhus, 1984).

6. Conclusion

The results of the present research replicate previous research on salutation and response rates conducted in print surveys in an electronic environment, and extend our understanding of the mechanisms by which personalized salutations improve response rates. The interaction between salutation and power of the source was confirmed – such that a personalized salutation only exerts an effect on response rates when the source of the invitation is high power/status. One possible reason for this is that personalized salutations increase people’s sense of identifiability – which when combined with a high power audience increase socially desirable, strategic behaviour. As such, studies which require sensitive information, or evaluation of an entity associated with the high power source, would be advised to exercise caution when combining a personalized invitation to participate in research with a high power source.
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References


