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Defaults, Framing and Privacy: Why Opting In-Opting Out[1]

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Abstract

Differences in opt-in and opt-out responses are an important element of the current public debate concerning on-line privacy and more generally for permission marketing. We explored the issue empirically. Using two on-line experiments we show that the default has a major role in determining revealed preferences for further contact with a Web site. We then explore the origins of these differences showing that both framing and defaults have separate and additive effects in affecting the construction of preferences.

Key words: privacy, consumer choice, framing, default effects, electronic commerce

Introduction

Concern about the privacy of Internet usage seems to be a major factor determining the penetration of usage of the Net, particularly for e-commerce (Hoffman et al. 1999). One issue at the center of the controversy surrounding privacy on the Internet and the role of possible government regulation is what action is required of consumers to express their preferences. For example, according to the European Union Data Directive (European Union 1995), a consumer must *opt-in* to any program that collects personal information such as demographics or purchase and clickstream histories. By opting-in, they must give their explicit consent to a set of rules that govern the way that information can be used, traded or sold. In contrast, policy in the United States takes no formal stand on consumers' needed consent and the most common practice among Internet sites appears to be an *opt-out* policy, requiring the consumer to make an explicit request *not* to be included in a program that collects personal information. The U.S. Congress has been considering legislation which will require an opt-out policy, although an opt-in alternative has also

been proposed. While this distinction is very salient when talking about Web privacy, it is also quite relevant in related domains, particularly what has become to be known as permission marketing (Godin and Peppers 1999).

In this paper we examine whether asking consumers to opt-in or to opt-out makes a difference. Does opting-in produce different levels of participation than opting out? In addition, we explore the mechanisms underlying possible differences.

This issue has important implications for public and business policy. Different forms of action assume different types of knowledge on the part of market participants. On one hand market based solutions suggest that consumers have well articulated ideas of the value of their personally identifying information. In these circumstances, customers can make informed decisions about the use of privately identifying information. For example they might avoid web sites that collect such information, demand compensation for its provision, adopt technological solutions, or willingly provide it in return for the benefit it provides in terms of customization. However, if customers have less well-articulated values about the importance of privacy and related issues, then other forms of consumer protection might be advocated.

We might expect the format of the question to make no difference. They might simply be retrieving well thought out prior preferences. However, there is evidence that consumers do not fully understand the implications of their choices. For example, a study by CyberDialogue found that 69 percent of U.S. Internet users did not know how they had signed up for e-mail distribution lists. There is a large literature showing that when consumers' values are not well articulated, the format of questions can make a large difference in what consumers say (Kahneman et al. 1993). This is because consumers are not simply recalling a previously calculated preference, but instead are generating the response on the spot in response to the question (Fischhoff 1991; Payne et al. 1992; Slovic 1995).

This can lead to sizable differences in consumers' choices, even for consequential decisions. Johnson, Hershey, Meszaros, and Kunreuther (1993) examined the choices of auto insurance options that were very similar, except that consumers were asked to opt-in or opt-out of additional coverage, similar to the choices posed in the domain of privacy. Despite the fact that the decision involved significant amounts of money (hundreds of dollars), both questionnaire data and results from a field study showed that opting-in resulted in much lower levels of participation (20%) than opting-out (75%).

1. Theory: Frames and Defaults

To better understand why opt-in choices differ from opt-out choices, we need to consider the mechanisms that might contribute to these differences. Table 1 shows how opt-in (Question 1) and opt-out options (Question 2) are typically presented on Web sites. Upon closer examination, it becomes clear that opting-in vs. opting-out combines two different effects, each of which affects the construction of preferences. The first concerns framing: are alternatives expressed as a positive option (as in Question 1) or a negative option (as in Question 2). The second effect is the nature of the default option that occurs if no action is taken. This is illustrated by comparing Question 1 with Question 3 and comparing

Table 1. Formats and Participation Rates, Experiment 1

Question	Percent Participating
(1) ☐ Notify me about more health surveys.	48.2
(1) ☐ Do NOT notify me about more health surveys.	96.3
(3) ☑ Notify me about more health surveys.	73.8
(4) ☑ Do NOT notify me about more health surveys.	69.2

Question 2 with Question 4. While each pair has an identical frame, each question has the opposite default option.

Framing has a long history in decision research and has been shown to have sizable effects (Kahneman and Tversky 1984; Tversky and Kahneman 1987). The major cause of framing differences is (1) the fact that one frame emphasizes the loss of an option, while the other emphasizes what is gained, and (2) that the cost of the loss looms larger than the pleasure of the equivalent gain. Although both options describe exactly the same transaction, these differences cause marked reversals in revealed preferences.

In Experiment 1, we wanted to emulate the language most often used in current privacy policies, our manipulation is much more subtle than that used in most framing studies. The phrasing is minimal in the sense it does not explicitly mention both alternatives—the opportunity for compensation is implicit in the choice—and the questions do not explicitly mention any tradeoff between taking action and the outcome. It simply presents a single outcome using positive and negative phrasing. For this reason, while we might expect the framing effect to be more modest than commonly observed, we still expect framing effects may contribute to any observed differences.

Default options have been less extensively explored. An important paper by Samuelson and Zeckhauser (1988) documents cases, many of real consequence, where the presence of one option as the status quo seems to inflate its attractiveness, even when that default option was randomly assigned. Subsequent research went on to draw a distinction between the status quo, the current state of affairs, and default options, that which would happen if no action were taken (Baron and Ritov 1994). To illustrate this distinction, consider Questions 1 and 3 in Table 1. While they offer subjects the option of receiving additional emails, a change in the status quo, they have different default options. Subsequent research has shown that both status quo and default effects occur (Schweitzer 1994; Schweitzer 1995), and both can influence choice.

The reasons for this inflated popularity of the default option are many, and our research is not intended to tease them apart. One source of effects may be that the decision-maker assumes that the questioner is implicitly recommending the default as best, and the defaults are legitimate sources of information. Another possibility includes cognitive and physical laziness on the part of decision-maker. Other possibilities, which do not rely on effort, are anchoring upon the default option (Chapman and Johnson 1999), or that the default option is considered the subject of the comparison, which increases choice

probability (Houston et al. 1989). For a more complete examination of the distinction between status quo and default biases, and an examination of their possible causes, see Baron and Ritov (1994) and Schweitzer (1995).

Both framing and default effects are part of an emerging literature that suggest that preferences are, on occasion, constructed in response to a decision (Payne et al. 1992). The basic idea, which represents a challenge to market-based solutions, is that tradeoffs between many goods are not well articulated and can be affected by various elements of the question and context. We return to this point in the discussion.

2. Experiment 1

2.1. Method and Procedure

Table 1 contains four variations of a question that asked respondents to an on-line survey whether they wanted to be contacted with further surveys. Again, Question 1 represents the opt-in format, while Question 2 represents an opt-out format.

To examine whether the question form makes a difference, we asked a total of 277 participants in an on-line panel if we could contact them with further opportunities to participate in on-line surveys about health. These respondents were randomly assigned to each receive one of the four question formats in Table 1.

2.2. Subjects

Our subjects were drawn from the Virtual Test Market (VTM), a panel of over 25,000 Web users. The demographics of the U.S. members of the VTM are matched during membership drives with the demographics of the U.S. Internet population, as reported by the U.S. Census (e.g., for 1999: Table #923, *www.census.gov*). The panel also includes a high percentage of international Internet users, recruited through geographically targeted banner advertisements. For details on the panel see Bellman, Lohse, and Johnson (1999) and Lohse, Bellman, and Johnson (2000).

Since subjects for this Experiment and Experiment 2 were solicited similarly, there were no differences between the populations used in the two experiments. This sub-sample was 44.9% male, had been on the Net for a mean of 48.6 months, had a median education of 1–4 years of college, a mean age of 35.4 years, and had a median income of $45,000. These respondents were part of a sample of 4,248 respondents to the health survey as a whole, some of who had joined the panel in previous years and had been invited by email to participate (response rate 77%), while the rest joined the panel and went on to complete the health survey in response to banner ads or prize-site listings.

2.3. Results

If question format makes no difference, we would expect the percentage of people agreeing to be contacted for future studies to be about the same for the two formats.

Yet looking at the participation rate for Question 1 and 2, we see that this is not the case. There is a sizable difference: Almost twice as many people (96.3%) agree to be contacted for future research when the question is posed with an opt-out format than an opt-in format (48.2%).

One obvious way that these two formats differ is in their *default* option, the response that would be recorded if the respondent subject takes no action. One might try to explain this difference by suggesting that respondents simply did not take the time to read and respond to the question, and took no action. This cannot be the entire story since a substantial number of respondents (48.2%) did actively opt-in when presented with the opt-in format. Similarly, the large percentage agreeing to participate to Question 2 belies the idea that responses are being selected at random. Here only 3.7% of respondents chose to take an action, in this case to opt-out.

However, to partially assess the effects of defaults, we asked the other half of our sample the same questions, but checked the response prior to presentation. We were also motivated by our observation that some Web sites put a check in the box when presenting options to respondents, perhaps to take advantage of default effects. By pre-checking the result, we reversed the defaults. If the same percentage of subjects did not read or respond to the question we should see the opposite results for participation to those produced by Questions 1 and 2. Note however, that this is not the case. What we see, instead, is an intermediate result—in both cases about 70% of the respondents agree to be notified in the future. This intermediate result suggests that the presence of the checkmark signals to some respondents that a decision is being made, and that they should pay attention to the options.

To assess the significance of these results, we ran a logistic regression using as predictors whether the Frame was positive or negative and whether the Default was to participate or not participate. This model also included the interaction between these two categorical variables. The overall model was significant, $\chi^2(3) = 47.7$, $p < .001$, as were both main effects, $p < .001$, t's $= 4.16$ and 4.76 for Frame and Default, respectively. The interaction was marginally significant, $t = 1.80$, $p < .08$. This analysis clearly confirms that the rate of participation was significantly affected by how the questions were posed.

The major point that can be drawn from this first study is that opting-in is not the same as opting-out: There are major differences between the two formats: About twice as many people agree to be notified when they must opt-out than when they need to opt-in. Moreover, these differences cannot be explained entirely by inattention. Many subjects do opt-in, and changing the default does not simply reverse the observed rates of participation.

3. Experiment 2

3.1. Method

Experiment 1 showed that the methods commonly used to ask consumers permission produce different levels of participation. In Experiment 2 we attempt to assess the relative

impact of framing and defaults on preferences. To pursue this we presented the 6 question formats presented in Table 2 to 235 Internet users drawn from the same panel used in the first study. Each of these formats was randomly presented to a different group of respondents at the end of the same questionnaire inquiring about their use of the Internet to acquire health information.

These 6 formats replicate and extend the question formats used in the first study using a factorial design that crosses frame (positive vs. negative) with the 3 different defaults: Not participate, No default, and Participate. By using this input format, termed a radio button in Hypertext Markup Language (HTML), we make two changes from the checkbox format used in the first study. The radio button format presents both the outcomes (yes and no), instead of only one, controlling, perhaps, for attentional effects caused by the absence of the alternative option. The second change is that a radio button format allows us to present the options without a default, as in Questions 2 and 5. Here we have an intermediate, no-default control, which may allow us to assess what preferences for contact would be independent of default effects. To ensure that this item was completed, the online questionnaire contained code which examined if one of the two options were checked and if not reminded each respondent that they needed to complete the question to complete the questionnaire, then presented the options again.

3.2. Results

As can be seen in Table 2, there are again sizable differences in the proportion of respondents who agree to be notified across the different formats. About twice as many people agree to participate when receiving the positive frame with a positive default than when both frame and default were negative.

Figure 1 graphs the data from Table 1, and indicates a fairly clear story. First there is an effect of question frame—the participation rate for negative frames is about 15 to 20

Table 2. Formats and Participation Rates, Experiment 2

Question	Percent Participating
(1) Do NOT notify me about more health surveys. ◯ Yes ◉ No	76.9
(2) Do NOT notify me about more health surveys. ◯ Yes ◯ No	70.8
(3) Do NOT notify me about more health surveys. ◉ Yes ◯ No	44.2
(4) Notify me about more health surveys. ◯ Yes ◉ No	59.9
(5) Notify me about more health surveys. ◯ Yes ◯ No	88.5
(6) Notify me about more health surveys. ◉ Yes ◯ No	89.2

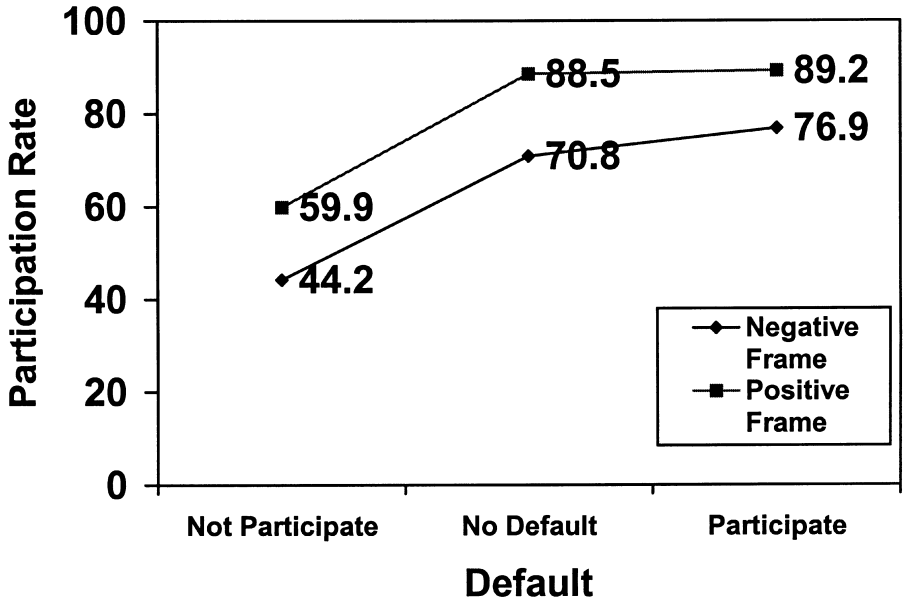

Figure 1. Participation Rate by Frame and Default.

percent lower than for positive frames. Despite our relatively mild framing manipulation, there is an effect. Second, there is a sizable effect of defaults. The negative default has about a 30 percent lower level of participation than the positive default. In our study, the effect of default is larger than the effect of frame. Finally, these two effects appear to be additive and do not interact, as shown by the approximately parallel lines in Figure 1.

The no-default condition, Questions 2 and 5 in Table 2, allow us to assess what preference exists in the absence of a default. While one might expect the no-default condition to be intermediate between the negative and positive default condition, this is not the case in our data. In both framing conditions the no-default control is much closer to the positive default percentage than that of the negative default. It is worth noting that there is still an effect of framing, even in the absence of a default.

Because the positive framing in this study corresponds to the opt-in option, it is tempting to suggest that opting-in might be closer to some sense of 'true' preference. However, such a conclusion is perilous, based on this study alone, since our participants, by and large, are positively disposed to being notified about future studies. Whether this result would apply to domains such as privacy, and to populations that have not just voluntarily participated in a questionnaire is a subject for future research.

One final question that can be raised by the data in Table 2 and Figure 1 is that some of the question forms are more confusing than others. While this is no doubt true, for example Question l's default implies a double negative, it does not account for all of the

differences we observe. Question 1, the 'double negative' question, yields participation rates (76.9%) that are not that much different than the simpler positive frame without defaults (88.5%). While designing our stimuli may have resulted in formats that were taxing for participants, the relatively clear effects of defaults and frames seem to outweigh these comprehension effects.

To confirm the impressions portrayed in Table 2 and Figure 1, we again conducted a logistic regression on the rate of participation. As in Experiment 1, the predictor variables were Frame (positive or negative), Default (this time with an added level representing the no-default option), and their interaction. Again, the model as a whole was significant $\chi^2(5) = 28.2$, $p < .001$, as were both main effects: Frame ($t = 2.56$, $p < .02$) and Default. However, the effect of Default was due to the difference between the Participate and Not Participate groups ($t = 4.59$, $p < .001$), and the No Default group was not significantly different than the Participate group ($p > .10$). Confirming our description of the results in Figure 1, the interaction is not significant ($p > .5$).

3.3. Who Participates, What Moderates?

At some point in the three years preceding this experiment, all respondents had completed a lengthy questionnaire that included information about their Web usage and demographics. This allows us to examine if any of these variables predict who will choose to potentially participate in future studies. To do this we performed a logistic regression using as predictor variables the number of months the person was on the Net, their gender, education, age, and whether they were from the U.S. or an international respondent. Of particular interest are potential effects of experience, since it could be argued that more experienced users might be less likely to participate. Similarly, it has been shown that users from the U.S. appear to have different attitudes about privacy than those in the rest of the world (Bellman et al. 2000) (Lohse et al. 2000). This model, however, failed to predict participation with both the overall fit and all individual coefficients failing to approach significance ($p > .20$).

Another important question is whether some of these usage and demographic measures moderate the experimental variables. Specifically, we wonder if those who had more experience on the Net, or those who were more educated, might be less likely to be influenced by frames and defaults. If so, then perhaps education about Net privacy might help eliminate the effects we see in our two studies. To test for moderation, we reran the logistic regression models for both experiments, separately including the length of time using the Net and education as covariates, and to test moderation (Baron and Kenny 1986) included the interaction between each of these variables and the two experimental factors of Frame and Default (Baron and Kenny 1986). If the demographic variables were to significantly interact with the experimental variables, then we would have to qualify our previous conclusions based on these demographics. However, while the overall model remains significant, there are no significant interactions between usage, education, and the manipulations in any of the models.

The simple conclusion that we draw from these analyses is that neither participation nor our experimental manipulations seem to be influenced by our demographic and usage measures. This is particularly striking since similar measures do predict other behaviors such as the number and size of purchases made on the Internet (Lohse et al. 2000).

4. Summary, Conclusion and Caveats

These data support one clear conclusion: The format of questions matters. Put another way, this research suggests that opting-in does not equal opting-out. In addition, we show that this is the result of at least two different theoretical mechanisms that have been widely discussed in the decision-making literature, the framing of the question and the type of default option. Since our results are consistent with prior findings, we feel fairly confident that the differences we see in participation will replicate across domains. It is interesting to note that we attempted, and failed, in using a large number of individual difference variables to either predict choice, or to show moderation of these effects. This suggests that the effects of question format override many individual differences.

Given our empirical results, what advice can we offer Web sites, consumers, and policy makers about how best to handle the process of acquiring consumers' consent for participation in other marketing activities? If we assume that marketers, consumers, and policy-makers all share the goal of separating interested from uninterested consumers, our findings suggest some constructive advice regarding the role of defaults. In our research, defaults have a sizable effect, and the best way of controlling these effects may well be to neutralize them as much as possible. In our second study, this corresponds to the no-default conditions, Questions 2 and 5 in Table 2. By forcing consumers to make an active choice, we believe that we minimize some of the effects of cognitive laziness. The question about which frame is most appropriate is much more difficult, and raises the question about which format produces answers that do a better job of predicting the experience utility of future outcomes (Kahneman 1999). Clearly this is an interesting question for future research, but our research suggests that even minimal framing manipulations can have a significant impact on choices. We should note that online questioning has important advantages in this case over off line elicitation of preferences: Because such queries can be interactive, one can use a neutral form, yet ensure that an answer is given. Off-line queries of the paper and pencil variety do not have this luxury.

A larger question surrounds the use of opt-in and opt-out strategies for public choices. Increasing evidence indicates that defaults are powerful influences of choice, even when the stakes are high. Madrian and Shea (2001) show that defaults can increase participation in retirement plans among new employees jumped from 49% to 86% when participation became the default. Along with results like those of Johnson et al., this suggests that choosing a default can, in a probabilistic sense, determine what outcome is chosen. Thus defaults need to be chosen carefully.

Distressingly, there is little consistency in how defaults and frames are applied, and different methods are used across different domains. In the United States, the choice to contribute to the presidential campaign fund on a tax form is an opt-in choice. At the same

time, members of a potential class action suit must opt-out not to be included in a settlement. A particularly interesting example concerns choices about organ donation. In Germany, one must opt-in to be a donor, but in Austria, one must opt-out. Interestingly, Germans traveling in Austria are governed by opt-out choices. Our research suggests that expressed preferences in all these domains may be affected by the choice of either opt-in or opt-out methods for eliciting choices. Clearly those who pose these questions and those who answer them should be are aware of what we demonstrate could be sizable effects.

Note

1. The member of the Wharton Forum on Electronic Commerce have supported this research.
File: D:\Data\Mss\Privacy\optin experiment 6.doc, printed Wednesday, October 03, 2001, 12:51:58

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