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Research Article

Recommendations Implicit in Policy Defaults

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ABSTRACT—*Should people be considered organ donors after their death unless they request not to be, or should they not be considered donors unless they request to be? Because people tend to stay with the default in a variety of domains, policymakers' choice of default has large and often important effects. In the United States, where the organ-donation policy default is "not a donor," about 5,000 people die every year because there are too few donors. Four experiments examined two domains—being an organ donor and saving for retirement—where default effects occur and have important implications. The results indicate that default effects occur in part because policymakers' attitudes can be revealed through their choice of default, and people perceive the default as indicating the recommended course of action. Policymakers need to be aware of the implicit messages conveyed by their choice of default.*

Policymakers often have to decide which of the available options to impose on individuals who fail to make a decision (Camerer, Issacharoff, Loewenstein, O'Donoghue, & Rabin, 2003; Sunstein & Thaler, 2003). For example, if someone has not stated a preference about being an organ donor, should it be assumed that this person is willing to be a donor after his or her death, or should it be assumed that this person is unwilling to be a donor? Some countries have adopted an "organ donor" default: People are considered donors unless they request not to be. Other countries have adopted a "not an organ donor" default: People are not considered donors unless they request to be. Because relatively few people request to switch from the default—regardless of what the default is—the default has a large effect on the number of classified donors, which in turn affects the number of lives saved or improved through organ transplants (Johnson & Goldstein, 2003). In the United States, where the default is "not a donor," about 5,000 people die every year because there are too

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few donors. Default effects have also been found in decisions about pension savings (Madrian & Shea, 2001), insurance (Johnson, Hershey, Meszaros, & Kunreuther, 1993), and Internet privacy policies (Bellman, Johnson, & Lohse, 2001; Johnson, Bellman, & Lohse, 2002).

Clearly, the default selected by policymakers has important implications. The question we address in this article is why the default matters so much. Three possible answers (which are not mutually exclusive) were suggested by Johnson and Goldstein (2003). One is that people are loss averse (Tversky & Kahneman, 1991). They might view the default as the status quo, and giving this up might be especially aversive (Johnson et al., 1993). A second possibility is that accepting the default requires no effort, whereas changing the default does (e.g., filling out paperwork). Although effort almost certainly plays a role in real-world decisions, Johnson and Goldstein (2003) found large default effects in a laboratory task when no additional effort was required to switch from the default, so effort does not completely explain default effects. The final possibility suggested by Johnson and Goldstein is that the policymakers' choice of default signals a recommended action. It is this possibility that we examine here.

Default effects are theoretically interesting because the options are the same regardless of which is the default (e.g., Should I be an organ donor or not?). However, recent research has shown that how speakers (e.g., policymakers) choose among "equivalent" descriptions can convey information that is relevant to listeners (e.g., decision makers). For example, McKenzie and Nelson (2003) found that participants were more likely to describe a new medical treatment in terms of its survival rate (e.g., "75% survive") rather than its mortality rate ("25% die") when, compared with the old treatment, it resulted in relatively many survivors instead of relatively few. In other words, speakers' choice of description implicitly conveyed (or "leaked") information about the relative efficacy of the new treatment. Equally important is that listeners made appropriate inferences based on the speaker's choice of description: They were more likely to infer that the new treatment led to relatively many survivors when it was described in terms of its survival rate rather than its mortality rate.

Sher and McKenzie (in press) argued more generally that a speaker's choice of description signals his or her attitude toward an object or option. For example, participants were more likely to describe a research-and-development team in terms of how many successes (rather than failures) it had if the team was obviously good than if it was obviously bad. How speakers choose between seemingly equivalent descriptions can leak relevant information, which listeners absorb (see also McKenzie, 2004).

With this in mind, it seems plausible that default effects occur at least in part because of information leakage. Indeed, information leakage seems especially likely in the case of default effects because it is clear to both policymakers and the public that it is effortless to accept the default and effortful to switch from it. For example, policymakers might be likely to select the "organ donor" default if they think that people ought to be donors, believe that people want to be donors, or are willing to be donors themselves. The public might in turn infer this "implicit recommendation" (Sher & McKenzie, in press) and be influenced by it.

The first experiment we report here examined whether there was a relationship between participants' attitudes toward organ donation and what those same participants, playing the role of policymakers, chose as the organ-donation policy default. Experiment 2 investigated the kinds of inferences participants drew from policymakers' choice of organ-donor default. Experiment 3 examined policy defaults in retirement saving, another important domain where a default effect occurs. The fourth and final experiment examined the causal role that implicit recommendations play in default effects.

EXPERIMENT 1: INFORMATION LEAKAGE FROM ORGAN-DONATION POLICY DEFAULTS

Method
The participants in Experiment 1 were 102 University of California, San Diego (UCSD), students who filled out a questionnaire in a laboratory setting. The first page provided general instructions and noted that responses were anonymous and would be used for research purposes only. On another page, participants were asked whether they were willing to be organ donors upon their death ("yes," "no," or "unsure") and whether they thought that people, in general, ought to be organ donors ("yes," "no," "unsure"). On a third page, they were to imagine that they were in a position to choose the organ-donation policy for California; they chose between two policies that differed in whether the default was being an organ donor or not being an organ donor. Order of the questions and options was varied.

Results and Discussion
The top half of Table 1 shows that there was a relation between willingness to be a donor and the chosen default. Forty-one percent (25/61) of the participants who were willing to be donors selected the policy with "organ donor" as the default, but only 14% of the participants who were unwilling to be donors and

TABLE 1

Results From Experiment 1

Preference or belief	Participants' chosen default		
	Donor	Not a donor	Total
Willing to be a donor			
Yes	25	36	61
No	1	6	7
Unsure	5	29	34
Total	31	71	102
Think people ought to be donors			
Yes	25	34	59
No	2	15	17
Unsure	4	22	26
Total	31	71	102

15% of the participants who were unsure selected that default, $\chi^2(2, N = 102) = 8.0$, $p = .018$. The bottom half of Table 1 shows that 42% of the participants who thought that people generally ought to be donors selected "organ donor" as the default, but only 12% of the participants who did not think that people generally ought to be donors and only 15% who were unsure chose this default, $\chi^2(2, N = 102) = 9.6$, $p = .008$. Participants' personal preferences and beliefs about what other people ought to do were predictive of their chosen default.

EXPERIMENT 2: INFORMATION ABSORPTION FROM ORGAN-DONATION POLICY DEFAULTS

Experiment 1 demonstrated that the "policymakers" leaked information regarding their preferences and beliefs about organ donation through their choice of default. Do other people absorb this leaked information?

Method
The participants in this experiment were 103 UCSD students who read the following:

> Imagine a small group of policymakers who make decisions about organ donations. One decision this group has to make regards how to handle situations in which people have not specified what to do with their organs after their death. In general, should people be considered organ donors unless they request *not* to be? Or should people *not* be considered organ donors unless they request to be? In other words, should the default be "organ donor" or "not an organ donor"?

Half of the participants then read that the policymakers had decided to make "organ donor" the default, and half read that the policymakers had decided to make "not an organ donor" the default. All participants were then asked two questions, one of

which was, "What, if anything, do you think this policy decision says about the policymakers' personal decisions about organ donation?" They selected one of three options, indicating that the policymakers are probably willing to be donors, that they are probably unwilling to be donors, or that "their policy decision tells me nothing about their personal decisions." The other question was, "What, if anything, do you think this policy decision says about the policymakers' views about what others ought to do?" The response options were that the policymakers probably think that other people ought to be donors, that they probably do not think that other people ought to be donors, or that "their policy decision tells me nothing about their views about what other people ought to do." The order of the questions was varied.

Results and Discussion

The top half of Table 2 shows the relation between the policymakers' chosen default and the resulting inferences about their personal preferences. Compared with participants told that the policymakers had chosen the "not an organ donor" default, participants told that the policymakers had chosen the "organ donor" default were more likely to infer that the policymakers were probably willing to be donors themselves (65% vs. 2%), were less likely to infer that the policymakers were probably unwilling to be donors (2% vs. 38%), and were less likely to conclude that nothing could be inferred from the policymakers' choice of default (33% vs. 60%), $\chi^2(2, N = 103) = 51.4, p < .001$.

The bottom half of Table 2 shows the relation between the policymakers' chosen default and participants' inferences regarding the policymakers' beliefs about whether people ought to be donors. Compared with participants told that the policymakers had selected the "not an organ donor" default, participants told that the policymakers had selected the "organ donor" default were more likely to infer that the policymakers probably thought that people ought to be donors (86% vs. 10%), were less likely to infer that the policymakers probably did not think that people ought to be donors (0% vs. 31%), and were less likely to conclude that nothing could be inferred (14% vs. 60%), $\chi^2(2, N = 103) = 62.2, p < .001$. Participants made different inferences regarding the policymakers' preferences and beliefs about organ donation depending on the policymakers' chosen default.

EXPERIMENT 3: INFORMATION ABSORPTION FROM RETIREMENT-PLAN DEFAULTS

Default choices presumably leak information in other policy domains as well. Another established—and important—default effect occurs in retirement savings. Madrian and Shea (2001) studied a large U.S. company that changed its retirement-plan default. Previously, new employees were not enrolled in a 401(k) plan unless they requested to be. Literally overnight, the policy changed: New employees would deposit 3% of their income into

TABLE 2

Results From Experiment 2

Participants' inference	Policymakers' chosen default		Total
	Donor	Not a donor	
Policymakers willing to be donors			
Yes	33	1	34
No	1	20	21
Can infer nothing	17	31	48
Total	51	52	103
Policymakers think people ought to be donors			
Yes	44	5	49
No	0	16	16
Can infer nothing	7	31	38
Total	51	52	103

a 401(k) account unless they requested otherwise. The number of new employees enrolling in the retirement plan more than doubled. Furthermore, most new employees contributed the default 3% (they could invest up to 15%) and put their money into the default money-market fund (there were a variety of investment options). Also of interest is that old employees who decided to participate after the new default was introduced tended to contribute 3% into the money-market fund. Madrian and Shea considered several explanations for the findings, but the only one that could account for all of them was that employees considered the default plan to be implicit investment advice. Experiment 3 tested this hypothesis.

Method

Seventy UCSD students read that the human resources (HR) department at a company was debating whether the default should be that new employees are enrolled in a retirement plan or are not enrolled. In either case, new employees would be informed about their options (i.e., they could stay with or switch from the default). In the *enrolled* condition, participants were told that the HR department decided to make enrollment the default, and in the *not-enrolled* condition, participants were told that the HR department decided to make not being enrolled the default. Participants then answered five questions (see Table 3), choosing among three responses to each (see Table 4). We asked an additional question (Question 2) in this experiment in order to probe further into what information might be leaked by the choice of default. We also examined participants' beliefs about how the choice of default would affect themselves (Question 5) and other people (Question 4). The order of the questions was varied.

Results and Discussion

Responses are summarized in Table 4. Compared with participants in the not-enrolled condition, those in the enrolled con-

TABLE 3

Questions Asked in Experiment 3

What do you think choosing this default (rather than the other default) says about the human resources staff's . . .
. . . views about what employees ought to do? (Question 1)
. . . beliefs about what employees want to do with respect to a retirement plan? (Question 2)
. . . personal decisions about enrollment in a retirement plan? (Question 3)

Do you think the fact that the human resources department chose this default (rather than the other default) . . .
. . . will affect how many new employees will be enrolled in the retirement plan (after, say, 6 months of being employed)?
   (Question 4)
. . . would affect the chances that you would be enrolled in the retirement plan (after, say, 6 months of being employed)?
   (Question 5)

dition were more likely to infer that the HR staff (a) probably think that employees ought to enroll in a retirement plan (89% vs. 6%), (b) probably think that employees want to be enrolled (80% vs. 11%), and (c) are probably enrolled themselves (57% vs. 29%); in all three cases, the chosen default influenced the

TABLE 4

Results From Experiment 3

Participants' inference or belief	HR staff's chosen default		
	Enrolled	Not enrolled	Total
HR staff thinks employees should enroll			
Yes	31	2	33
No	2	17	19
Can infer nothing	2	16	18
Total	35	35	70
HR staff thinks employees want to enroll			
Yes	28	4	32
No	2	27	29
Can infer nothing	5	4	9
Total	35	35	70
HR staff are probably enrolled			
Yes	20	10	30
No	2	5	7
Can infer nothing	13	20	33
Total	35	35	70
Default will lead to greater enrollment			
Yes	30	1	31
No	2	31	33
Makes no difference	3	3	6
Total	35	35	70
Default would make the participant more likely to enroll			
Yes	25	5	30
No	0	15	15
Makes no difference	10	15	25
Total	35	35	70

Note. HR = human resources.

distribution of responses, $\chi^2(2, N = 70) > 6$, $ps < .05$. On the basis of the HR staff's choice of default, participants drew different inferences about the staff's opinions, beliefs, and behaviors with respect to retirement plans.

The participants were also asked about the effect of the chosen default. Compared with participants in the not-enrolled condition, those in the enrolled condition were more likely to think that the HR staff's chosen default would lead to more people being enrolled (86% vs. 3%) and would increase the chances that they (the participants) would be enrolled (71% vs. 14%), $\chi^2(2, N = 70) > 29$, $ps < .001$. People are aware of how the choice of default affects themselves and others.

EXPERIMENT 4: THE CAUSAL ROLE OF RECOMMENDATIONS IMPLICIT IN DEFAULTS

We have shown that policymakers' choice of default can convey an implicit recommendation that decision makers are sensitive to, but we have not demonstrated that this information leakage plays a causal role in default effects. In Experiment 4, participants chose between two options in a laboratory task. In the default condition, one option was the default, whereas in the no-default condition, the two options had equal status. After they made their choice, the participants were asked (among other things) to what extent they selected the option they did because the experimenters seemed to want them to. We expected participants in the default condition to be more likely than those in the no-default condition to report that their decision was caused by such an implicit recommendation.

We also asked participants whether they made the choice they did because it was too much effort to choose the alternate option. Implicit recommendations may be signaled in part by making the alternate option difficult to obtain. We therefore hypothesized that there would be a correlation between reporting that it was too hard to choose the alternate and reporting being causally influenced by an implicit recommendation.

Method

The participants were 88 UCSD students who were seated at desks in a laboratory setting. All instructions were written.

Participants were asked to choose which of two 1-page summaries of some psychological research to read; they were told that they would be asked some simple questions later. In the no-default condition, the two summaries were lying on the desk. All that was visible were two cover sheets, one that said only "Summary A" (placed on the left side of the desk) and one that said only "Summary B" (on the right side). They were to choose one of the summaries without looking at the content. (There were paperweights on the summaries to discourage peeking.) Once participants chose a summary, they removed the paperweight, turned the cover page, and started reading. They were instructed not to read the other summary.

In the default condition, participants were informed that there were two 1-page summaries, and they were to read one of them. However, only one summary (B) was on the desk. (The summary that was on the desk was always Summary B to reinforce the idea that there was another summary.) Participants were asked to read that summary unless, for whatever reason, they would rather read the other summary (A). They could not look at the content before deciding. They were told to let the experimenter know if they preferred to read the other summary, in which case the experimenter would bring it to them. In both conditions, Summaries A and B were identical: a 300-word description of research by Schkade and Kahneman (1998).

After reading their chosen summary, participants turned the page and reported the degree to which they agreed with each of six statements. The scale ranged from −3 (*strongly disagree*) to 3 (*strongly agree*). Two statements were of primary interest. One regarded an implicit recommendation: "I read this particular summary because the experimenter(s) appeared to want me to read this one (rather than the other one)." The other regarded effort: "I read this particular summary because it would have been too much effort to choose the other one." The other four statements were fillers about the summary's content (e.g., "The conclusions in the summary I read seemed correct"). The order of the statements was varied.

Results and Discussion

As expected, the choices showed a default effect: Ninety-eight percent (43/44) of the default participants chose to read Summary B (the default), whereas only 39% (17/44) of the no-default participants chose Summary B ($p < .001$, two-tailed Fisher's exact test). The 1 default participant who did not choose the default summary was dropped from subsequent analyses.

The mean agreement rating for the implicit-recommendation statement was −0.5 for the default condition and −2.9 for the no-default condition, $t(85) = 8.0, p < .001, d = 1.7$. The top half of Table 5 summarizes the number of participants who agreed with the statement (a rating of 1 to 3 on the scale), disagreed with the statement (a rating of −1 to −3), or neither agreed nor disagreed (a rating of 0). As shown, 30% (13/43) of the default participants agreed with the implicit-recommendation state-

TABLE 5
Results From Experiment 4

Statement	Condition		Total
	Default	No default	
Decision was due to implicit recommendation			
Agree	13	0	13
Disagree	20	43	63
Neither	10	1	11
Total	43	44	87
Decision was due to effort			
Agree	28	2	30
Disagree	10	39	49
Neither	5	3	8
Total	43	44	87

ment, whereas none of the no-default participants did; the distribution of responses differed significantly between the two groups, $\chi^2(2, N = 87) = 28.8, p < .001$. Default participants were more likely to claim that they chose as they did because it seemed as though that is what the experimenters wanted. Note that the point is *not* that default participants inferred that we wanted them to choose the default—which, of course, we did—but that this inference played a causal role in their choice.

For the effort statement, the mean agreement rating was 0.8 for the default condition and −2.4 for the no-default condition, $t(85) = 9.4, p < .001, d = 2.0$. The numbers of participants who agreed, disagreed, or neither agreed nor disagreed with the effort statement are shown in the bottom half of Table 5. In the default condition, 65% agreed with the effort statement, whereas in the no-default condition, only 5% agreed, $\chi^2(2, N = 87) = 40.2, p < .001$.

Implicit recommendations are presumably inferred from defaults in part because it is clear to both policymakers and decision makers that one option is being made easier to adopt. The results of Experiment 4 are consistent with this idea: There was a moderately strong correlation between (raw) agreement ratings for the effort and implicit-recommendation statements, collapsed across conditions ($r = .58, p < .001$). The more that participants agreed they chose their summary because it was too much effort to choose the other one, the more they agreed they chose their summary because the experimenters seemed to want them to.

GENERAL DISCUSSION

Default effects may occur because policymakers' choice of default leaks information regarding their beliefs or attitudes about the available options, and the public is sensitive to this information. Experiment 1 showed that participants, playing the role of policymakers, leaked information regarding their personal preferences and beliefs about organ donation through their choice of policy default. For example, compared with people

who did not think people ought to be donors, those who thought people ought to be donors were more likely to choose the "organ donor" default over the "not an organ donor" default. Experiment 2 showed that participants made predictable inferences about policymakers' preferences and beliefs on the basis of the policymakers' choice of default. They were more likely to infer that, for example, the policymakers probably thought that people ought to be donors when the policymakers had chosen the "organ donor" default rather than the "not an organ donor" default. In other words, Experiment 2 showed that people tend to infer that the default is an implicit recommendation, and Experiment 1 showed that this is a reasonable inference. Experiment 3 extended these findings beyond organ donation by demonstrating that people perceive retirement-plan defaults as implicit investment advice. Finally, Experiment 4 showed that implicit recommendations play a causal role in default effects.

Presumably, people who are uncertain about their preferences are more likely than others to be influenced by implicit (and explicit) recommendations, and it is of interest to note that one third of the participants in Experiment 1 claimed they were uncertain about their willingness to be organ donors. In a sample of 1 million Virginians, 24% were undecided about being a donor (Klassen & Klassen, 1996). In a postexperimental survey, 24% of participants in Experiment 3 reported that they were unsure whether they would enroll in a retirement plan when they got a job after graduation. Implicit recommendations could therefore have large effects on decisions about being an organ donor and saving for retirement.

Our results also suggest that one way to decrease default effects is through education about the issues in question (see also Johnson & Goldstein, 2003; Madrian & Shea, 2001). To the extent that education reduces uncertainty about preferences, implicit recommendations should have smaller effects. Furthermore, decision makers are probably influenced more by an implicit recommendation the more they feel that the source is trustworthy. Employees might be less willing to accept the default retirement plan of investing in a money-market fund if this default were chosen by managers of money-market funds rather than more disinterested parties.

Some additional aspects of the data are worth mentioning. For instance, although participants' personal preferences and beliefs in Experiment 1 influenced their choice of default, most participants (70%) chose the "not an organ donor" default. This implies that one can draw stronger inferences about policymakers who choose the "organ donor" default (because it is unusual) than about those who choose the "not an organ donor" default. The results from Experiment 2 showed that participants were sensitive to the differential informativeness of the different defaults (see also McKenzie & Nelson, 2003). The majority of participants told that policymakers had selected the "organ donor" default inferred that the policymakers both were willing to be donors and thought that people ought to be donors. The majority of those told that policymakers had selected the "not an

organ donor" default thought they could infer nothing about the policymakers' preferences and beliefs. These results indicate that the "organ donor" default sends a strong positive recommendation about donation, whereas the "not an organ donor" default sends a weak negative recommendation. Interestingly, both real-world and laboratory data show an asymmetry: People are less likely to switch from the "organ donor" default than from the "not an organ donor" default (Johnson & Goldstein, 2003). Similarly, participants in Experiment 3 drew stronger inferences about the HR staff when the default was being enrolled in the retirement plan rather than not being enrolled, and Madrian and Shea's (2001) real-world data showed that employees were less likely to switch from the "enrolled" default than from the "not enrolled" default. Although these asymmetries could occur for several reasons, one reason might be that the defaults differ in strength of recommendation.

Although the "not a donor" or "not enrolled" default might send a relatively neutral signal, it should be kept in mind that the signal is nonetheless negative. In Experiment 2, when participants were told that the policymakers had chosen the "not an organ donor" default—the norm in the United States, among many other countries—31% inferred that the policymakers probably did not think that people should be donors. In Experiment 3, when told that the HR staff had chosen the "not enrolled" retirement-plan default—the norm in U.S. companies—49% of the participants inferred that the HR staff probably did not think that employees should enroll in the plan. Because many people are uncertain about their preferences, and much is at stake, these inferences could have profound implications. Policymakers need to be aware of the sorts of inferences, perhaps unintended, that people make on the basis of the selected default.

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