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Research article

Doing good by doing nothing? The role of social norms in explaining default effects in altruistic contexts

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Abstract

We explore whether the known preference for default options in choice contexts—default effects—occurs in altruistic contexts and the extent to which this can be explained through appeal to social norms. In four experiments, we found that (i) participants were more likely to donate money to charity when this was the default option in an altruistic choice context; (ii) participants perceived the default option to be the socially normative option; (iii) perceptions of social norms mediated the relationship between default status and charitable donations; and (iv) a transfer effect, whereby participants translated social norms they inferred from the default option in one domain into behavior in a second, related domain. Theoretically, our analysis situates default effects within a comprehensive body of social psychological research concerning social norms and the attitude-behavior relationship, providing novel empirical predictions. Practically, these findings highlight that the way donation policies are framed can have an important impact on donation behavior: in our third study, we found that 81% donated half of their earnings for taking part in the experiment to charity when this was the default option, compared with only 19% when keeping the money was the default. Our work suggests that making use of default effects could be an effective tool to increase altruistic behavior without compromising freedom. © 2014 The Authors. European Journal of Social Psychology *published by John Wiley & Sons, Ltd.*

In a world where nearly 50% of the global population lives in a state of abject poverty and 22 000 children die each and every day, the refrain that "something must be done" is often heard (Shah, 2013). Yet while potential solutions to deal with these global ethical issues have been suggested, the mass population at large has failed to adopt these measures, and the use of coercion—such as compulsory taxes—is largely considered unacceptable (Schuitema & Jakobsson Bergstad, 2013). Concurrently, a growing movement has suggested that an effective strategy to nudge individuals to make better choices without compromising their freedom is to modify the architecture in which choices are framed (Thaler & Sunstein, 2003). In this paper, we deploy four studies to explore whether utilizing a simple psychological phenomenon—the preference for defaults—could constitute such a nudge used to increase altruistic behavior. Moreover, to shed light on the psychological mechanism driving such default effects, we test the causal role of perceived social norms. We investigate three key issues related to a social norms account of default effects: first, whether social norms are inferred from a default option status; second, whether perceived injunctive and descriptive social norms mediate the effects of defaults on behavior; and third, whether default effects can transfer to influence other altruistic behavior. Taken together, our findings suggest that the default option in a given choice context can be interpreted as being the socially approved form of action, which in turn influences behavior. In doing so, this paper provides both theoretical and practical insights into how choice contexts can be structured in ways that elicit greater altruistic behavior by making the default option that people receive altruistic and enabling people to do good simply by "doing nothing."

Default Effects

A default is "the choice alternative a consumer receives if he/she does not explicitly specify otherwise" (Brown & Krishna, 2004, p.529; see also Johnson & Goldstein, 2003; Camerer, Issacharoff, Loewenstein, O'Donoghue, & Rabin, 2003). This preference for the default—the *default bias*, or *default effects* (Anderson, 2003; Johnson & Goldstein, 2003; Yu, Mobbs, Seymour, & Calder, 2010)—has been shown to influence decision-making in a range of decisions including insurance choices (Johnson, Hershey, Meszaros, & Kunreuther, 1993), retirement plans (Choi, Laibson, Madrian, & Metrick, 2002), public pension schemes (Hedesström, Svedsäter, & Gärling, 2007), employee saving for retirement schemes (Thaler & Benartzi, 2004), and Internet privacy policies (Johnson,

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Bellman, & Lohse, 2002). Researchers have also begun to investigate the extent to which the default effect occurs in different contexts (Pichert & Katsikopoulos, 2008), how this is moderated by the attractiveness of the options (Campbell-Arvai, Arvai, & Kalof, 2012), the neural structures underlying default effects (Yu et al., 2010), and how defaults can actually construct preferences (Dhingra, Gorn, Kener, & Dana, 2012).

This preference for the default seems to make a dramatic difference in real-life altruistic behavior—that is, any instance where one individual helps another, in the absence of any clear, immediate benefit to the self. The classic example of altruistic default effects concerns organ donation. Certain countries use an "opt-out" organ donation system (where one is automatically a donor unless one registers to not be) while others use a "consent-in" policy (where one is required to register if one wants to be an organ donor) (Johnson & Goldstein, 2003). In Austria (with an opt-out policy), a staggering 99% of the population are registered organ donors, while just across the border in Germany (which is highly similar in language and culture, but with a consent-in policy), a mere 12% are registered organ donors (Johnson & Goldstein, 2003). Simply framing something as a default appears to significantly influence the choices that people make.

The Scope of Default Effects

The first motivating question driving this paper was whether this preference for the default can lead participants to be nudged toward *immediate* selfless behavior that is in the common interest. The potential use of default effects in fostering behavior that promotes the greater good has been discussed by a number of behavioral economists and is often explained through a broadly defined behavioral economics framework (Smith, Goldstein, & Johnson, 2013; Thaler & Sunstein, 2003). Within behavioral economics, the dominant method of testing altruistic behavior comes from economic games, where participants make decisions about allocating resources between themselves and others (Camerer, 2003). Here, the altruistic behavior is immediate: participants act in a way to the benefit of others, at immediate cost to themselves.

Yet, the contexts in which default effects have been explored thus far lack this central feature of typical altruistic behavior. The contexts in which altruistic default effects have been previously explored—for example, organ donations (Johnson & Goldstein, 2003) and sustainable food choices (Campbell-Arvai et al., 2012)—do not involve this immediate cost to the actor and consequently are somewhat atypical. For example, in registering to be an organ donor, the cost of doing so (i.e., donating an organ) will only occur—*if* it occurs at all—once a person has died and no longer able to even experience this cost. Most everyday altruistic behaviors, however—from helping in an emergency to volunteering to donating to charity—involve an immediate and discernible cost to the individual. Therefore, we aimed to extend research on default effects by looking at typical altruistic behavior involving an immediate cost to the individual to benefit others, focusing on charitable giving, a paradigmatic example of such altruistic behavior.

Mechanisms Underlying the Default Effects

Why might such default effects occur? In the behavioral economics literature, it has been argued that default options can influence choices in three main ways (see Smith et al., 2013, for a review):

(i) *Defaults affect the perceived meaning of the choices and associated actions*: evidence suggests that defaults are interpreted as being the recommended option, or as being "implicitly endorsed" (Brown & Krishna, 2004; McKenzie, Liersch, & Finkelstein, 2006). Similarly, recent work on the "change-in-meaning" account of default effects has suggested that default effects may occur because people attach different meaning to behaviors they have to opt-in to perform, *versus* those they have to opt out to perform (Davidai, Gilovich, & Ross, 2012). Supporting this, Davidai and colleagues show that in relation to organ donation, within a consent-in country, donation was considered morally akin to giving away half of one's wealth to charity upon one's death, while in an opt-out country, it was considered similar to letting others get ahead of one in line and volunteering some time to help the poor.

(ii) *Default options often require less effort for the decision-maker*: people may follow a default because they do not want the bother of changing to the non-default option, which may include (in organ donation, for example) acquiring and mailing a change-of-consent form (Johnson & Goldstein, 2003). Yet, effort cannot be the complete picture, for default effects are also shown to occur in cases where to switch to the non-default requires minimal effort: literally, a click of a button.

(iii) *Default options invoke cognitive biases*, *perhaps driven by loss aversion and anchoring of decision-makers to the existing status quo*: it may be that people feel that in some way they possess the default option, and so giving up this endowment is perceived as a loss—which, through loss aversion, looms heavier in the mind than the equivalent gain achieved by changing to the non-default option (Kahneman & Tversky, 1984; Ritov & Baron, 1990). Of course, these processes are not mutually exclusive and indeed are likely to work together—accepting the default may save time, effort, and money but that same default can also be perceived to be a recommendation from the policy maker, indicating the socially desirable behavior (Johnson & Goldstein, 2003).

In this paper, we focus on the first explanation: that meaning is inferred from defaults. Specifically, we consider the claim that defaults are interpreted as being the recommended option, or as being "implicitly endorsed" (McKenzie et al., 2006). On the "implicit endorsement" explanation, defaults affect choices because the public perceives them as implied endorsements by those who select them. In the case of policy defaults, such as for organ donation, McKenzie et al. (2006) argue that people interpret the default as the recommended course of action set out by policymakers, and Thaler and Sunstein (2003) further propose that the default selected by policymakers might be interpreted as an indication of what the majority chooses. Similarly, in a marketplace context, Brown and Krishna (2004) posit that defaults set by advertisers may be perceived as suggestions.

Social Norms as an Explanation for Default Effects

Both the change-in-meaning account (Davidai et al., 2012) and the implied recommendation account (McKenzie et al., 2006) highlight that defaults are perceived in a social context, having clear parallels with the concept of *social norms*. Social norms refer to an individual's beliefs about the common or accepted behaviors within a group (Cialdini & Trost, 1998). The implied endorsement account has been important in showing the power that defaults have over decision-making and highlighting the role of implicit recommendations through which default effects may occur (McKenzie et al., 2006). As yet, however, this research has been conducted largely in isolation to that large body of research on social norms. The second motivating question of this paper was therefore to provide a novel experimental investigation of the implied endorsement account for default effects through the lens of the social psychological literature concerning social norms. In doing so, we integrate previous work from behavioral economics with theoretical insights from social psychology.

Social norms play an important role in social behavior, with individuals often motivated to act in accordance with perceived social norms (Deutsch & Gerard, 1955). Social norms regulate social life, aiding in restricting selfish impulses in favor of collective outcomes (Biel, Eek, & Gärling, 1996). Social norms include both *descriptive norms*, concerning an individual's beliefs about how common the behavior is within a group, and *injunctive norms*, which refer to an individual's beliefs about the approval for a specific behavior among group members. Social norms can be perceived differently depending on which context or reference category is salient, and injunctive norms can be derived from institutions (e.g., what the government believes people should do), as well as from other community members (e.g., what most other people believe others should do). People are more likely to be influenced by social norms if there is a perception of ambiguity about what should be carried out (Crutchfield, 1955; Reno, Cialdini, & Kallgren, 1993), and if the social norms are relevant or appropriate (Cialdini & Trost, 1998). Both descriptive and injunctive normative messages have been used to promote prosocial behavior in general (e.g., Penner, Dovidio, Piliavin, & Schroeder, 2005), as well as in the specific contexts of charitable donations (Croson & Shang, 2010) and pro-environmental choices (Schultz & Kaiser, 2012).

We propose that default effects can be explained—at least in part—through an attempt to follow social norms. We suggest that participants perceive a default option as being the option that is both recommended (injunctive) and the one that most people choose (descriptive), and because individuals are motivated to act normatively, they are subsequently more likely to follow the default option. We therefore expand upon the work on the implied endorsement account to also consider the extent to which default effects may arise in a given choice context through both descriptive norms ("The default option is what most people choose") and general injunctive norms ("The default option is what most people would approve of").

Considering default effects through the lens of social norms is fruitful because it theoretically integrates the largely isolated research on default effects by behavioral economists to the large body of work on social norms in social psychology. In particular, there are three clear, still unaddressed questions that arise from a consideration of social norms and default effects.

1. First, when something is a default, do people believe that this is the option that most other people would choose and approve of? Following on from evidence that defaults are interpreted as being implied recommendations, it seems likely that the default option would be perceived as socially normative, relative to the non-default option.
2. Second, do these perceptions of social norms mediate default effects? If social norms are important in explaining default effects, we would expect that such perceptions of social norms would mediate the effects of default options on behavior.
3. Third, if the default option is perceived to be indicative of social norms, does awareness of this norm in the default option transfer to different situations involving similar norms? If a default is perceived to represent a desirable action, this perception is likely to transfer to other situations in which the relevant norm is salient and influence behavior accordingly (Reno et al., 1993). That is, the perception of an existing social norm to perform an action—inferred through the presence of a default—should increase the likelihood of performing that action in related contexts when similar norms are still salient. Such a normative transfer effect would suggest that individuals do not merely see the default option as being recommended in that given choice context, but rather that they interpret the default option as representing broader social norms.

The Present Research

In this paper, we examine the extent to which default effects occur in immediate altruistic contexts and the role of social norms in driving this phenomenon. We extend previous work by investigating whether default effects could lead to actual immediate altruistic behavior to help others both in the direct default context and in wider altruistic contexts.

We test two core hypotheses arising from prior research. First, previous work has suggested that default effects might occur in altruistic contexts that involve an immediate cost to the individual, but this has not yet been fully explored. Across our first three studies, we test our first hypothesis that

> H1: Default effects—a preference for the default option—occur in altruistic contexts that involve an immediate cost to the individual, such as charitable giving.

Our second hypothesis concerns the role social norms play in default effects, and had three corollaries, mapping onto the three questions raised by the literature. Across all four studies, we hypothesize that

> H2: Social norms play an explanatory role in default effects.
> H2a: Default options are perceived as socially normative relative to the non-default option.
> H2b: The perception of social norms to donate will mediate default effects.
> H2c: A transfer of default effects should occur, such that an inferred social norm from a default option increases the likelihood of choosing that option in related contexts when that norm is still salient.

STUDY 1

In this study, we explored our first hypothesis by testing for the existence of default effects in the immediate altruistic context of charitable giving, where individuals choose to help others at an immediate cost to themselves. We tested whether participants would be more likely to donate a bonus participation payment of $0.50 to an anti-poverty charity in the developing world when this was presented as the default option, compared with when the default option was to keep the money (H1). We explored our second hypothesis concerning social norms by testing whether perceptions of social norms to donate to charity were stronger when the default option was to donate the bonus money to charity (H2a), and whether such perceptions of social norms directly influenced donation rates (H2b).

Method

Participants

One hundred and seventy-seven American participants (73 female) with a mean age of 32 ($SD = 10.73$) participated in this experiment, recruited online using Amazon Mechanical Turk (MTurk). Amazon MTurk is a website that facilitates payment for completing tasks posted by researchers, and such samples have been shown to provide reliable data and be more representative of the general population than are student samples (Buhrmester, Kwang, & Gosling, 2011). Participants completed the experiment online and were paid $0.50 for their time, with an option of keeping an additional bonus of $0.50.

Design

The experiment had a randomized between-subject design with two conditions: "charity default" *versus* "charity non-default." Participants first completed an unrelated filler task involving estimating the number of countries in Europe and indicating where one country was on a map. After ostensibly completing the study, participants were presented with information about payment, being told that, on top of the $0.50 payment they received for taking part in the study, they could either keep for themselves or donate to charity an additional $0.50 bonus. The experimental manipulation constituted whether this money would be paid to them by default (charity non-default), or whether it would be donated to a charity as a default (charity non-default). All participants received identical information about the payment, where only the last sentence was manipulated to make this donation the default or not:

> [Charity default condition] As a default, this bonus money will be donated to charity. If you would rather keep this money as a bonus to be paid to you, however, all you have to do is fill in an additional question to indicate this on the next page.
>
> [Charity non-default condition] As a default, this bonus money will be paid to you. If you would rather us donate this money to charity, however, all you have to do is fill in an additional question to indicate this on the next page.

Charity Donation

The key dependent measure was whether, as described earlier, participants chose to donate the $0.50 to charity or keep themselves as a bonus payment. The wording of the question was as follows:

> Would you like to follow the default and have this money [donated to charity/paid to you as a bonus]? If you select "No", you will be taken to the next page to confirm you would like to [donate this money to charity/be paid this money yourself].

Perceived Social Norms

After making their decision, participants were asked two questions concerning perceived social norms: "I think that most people believe that others should donate the bonus money to charity" (Agree–disagree: *1 = not at all*, *7 = very much*); and "Of all the people that take part in this survey, what proportion do you think will donate this bonus money to charity?" (Sliding scale from 0% to 100%). Upon completion of the study, all participants were fully debriefed, and we gave the total money that participants chose to donate from their bonus to charity.

Results and Discussion

Charity Donation

Our first hypothesis (H1) was supported, with results from a chi-square test of independence demonstrating default effects in an altruistic context: when the default option was to donate the bonus money to charity, 35% of participants chose to donate this money, compared with only 20% when the default option was to keep the bonus money: $\chi^2(1, N = 177) = 5.24$, $p = .02$.

Social Norms

Results revealed that hypothesis H2a was also supported, with independent samples *t*-tests showing that participants perceived stronger social norms to donate to charity when this was the default. Participants in the charity default condition perceived stronger injunctive social norms to donate the bonus money to charity ($M = 5.01$, $SD = 1.68$) relative to when the default was to keep the money ($M = 4.16$, $SD = 1.70$), $t(175) = -3.34$, $p < .001$. Similarly, participants perceived a greater descriptive social norm to donate when this was the default, expecting that 50% of participants would donate the money to charity when this was presented as the default ($SD = 23.07$), compared with only 38% when it was not the default ($SD = 20.40$), with these being significantly different, $t(169.18) = -3.53$, $p < .001$.

Next, we conducted mediation analyses using the Preacher and Hayes (2008) bootstrapping technique to explore whether perceived social norms mediated the effects of default condition on donation amounts (H2b). A 95% bias-corrected bootstrap confidence interval for the indirect effect of injunctive norms ($B = 0.27$) based on 10 000 bootstrap samples did not include zero (0.06–0.64), indicating that perceived injunctive

norms significantly mediated the effects of condition on donation. Similarly, the same 95% bias-corrected bootstrap confidence interval for the indirect effect of descriptive norms ($B = 0.51$) also did not include zero (0.19–1.01), again indicating that perceived descriptive norms significantly mediated the effects of condition on donation (Table 1). When controlling for the influence of social norms, the influence of the default option on donations was not significant ($B = 0.09$, $p = .82$).

Overall, then, in addition to showing default effects in a charitable context (H1), we provided evidence for an explanatory role of social norms in explaining default effects (H2). Participants perceived stronger social norms to donate when this was the default (H2a), and perceptions of both descriptive and injunctive norms to donate fully mediated the effects of default condition on donations (H2b).

STUDY 2

In this study, we aimed to replicate the results of Study 1, again in an immediate altruistic context where individuals choose to help others at an immediate cost to themselves. In this study, rather than a non-specified charity that focused primarily on helping people in the developing world, we had participants choose to donate their bonus money to a specific environmental charity—*Greenpeace*. Previous work has suggested that default effects could be moderated by the attractiveness of the options (Campbell-Arvai et al., 2012), and it is known that people donate substantially more to poverty-related charities than environmental ones (Forbes, 2013), suggesting that such charities are seen as being more appropriate receivers of donations. Given that individuals are generally more inclined to donate to anti-poverty charities and other charities that primarily benefit other people, we aimed to explore whether default effects would also be observed for a "higher threshold" environmental charity. As in Study 1, we first hypothesized that participants would be significantly more likely to donate a bonus participation payment of \$0.50 to Greenpeace when this was presented as the default option (H1). Additionally, we again hypothesized that when the default option was to donate to charity, participants would perceive stronger social norms to donate to charity (H2a), and that social norms would mediate the effect of default condition on donations (H2b).

Method

Participants

One hundred and fifty American participants (55 female) with a mean age of 34 years ($SD = 12.14$) participated in this experiment, recruited online using Amazon MTurk. Participants completed the survey online and were paid \$0.50 for their time, with an option of keeping an additional bonus of \$0.50.

Design

The experiment utilized the same randomized 1×2 between-subject design with two conditions as in Study 1: "charity default" *versus* "charity non-default." The dependent measures were the same as those in Study 1, and the only feature that differed was that the charity to which money would be donated was Greenpeace, rather than a water poverty charity. Upon completion of the study, all participants were fully debriefed, and the total money that participants chose to donate from their bonus was donated to *Greenpeace*. This was chosen as representing a respected and well-known environmental charity.

Results

Charity Donation

Results from a chi-square test of independence supported H1, demonstrating default effects such that significantly more people donated their bonus payment to Greenpeace when this was presented as the default. When the default option was to donate the bonus money to Greenpeace, 23% of participants chose to donate this money, compared with only 11% of participants when the default option was to keep the bonus money: $\chi^2(1, N = 150) = 3.89$, $p < .05$.

Social Norms

Results from two independent samples *t*-tests revealed that H2a was partially supported, with participants perceiving stronger descriptive—but not injunctive—social norms to donate to charity when this was the default. Participants expected that 41% of participants would donate the money to charity when this was presented as the default ($SD = 22.22$), compared with only 33% when to keep the money was the default

Table 1. Mediation model for the indirect effects of default condition on donations in Study 1

	Outcome									
	Descriptive (M_1)			Injunctive (M_2)				Donation (DV)		
Predictor	*B*	*SE*	*p*	*B*	*SE*	*p*		*B*	*SE*	*p*
Condition (IV)	12.37	3.53	< .001	0.85	0.25	< .001	*c*'	0.09	0.41	.82
M_1 (Descriptive)							b_1	0.04	0.01	.001
Indirect								0.51	0.22	.01
M_2 (General Inj)							b_2	0.32	0.14	.02
Indirect								0.27	0.14	.03
	$r^2 = .07$, $F(1,175) = 12.27$ $p < .001$			$r^2 = .06$, $F(1,175) = 11.16$ $p < .001$				*Nagelkerke's* $r^2 = .33$		

Note. The dependent variable in this analysis was coded such that 0 = keeping the money, and 1 = donating the money.

($SD = 22.24$), with these being significantly different, $t(148) = -2.18$, $p = .03$. However, participants in the charity default condition were not significantly more likely to agree with the statement concerning the injunctive norm "I think that most people believe that others should donate the bonus money to charity" ($M = 4.43$, $SD = 1.63$) than when the default was to keep the money ($M = 4.08$, $SD = 1.62$), $t(148) = -1.31$, $p = .19$, although the means were in the predicted direction.

Finally, as in Study 1, we conducted mediation analyses to explore whether perceived social norms mediated the effects of default condition on donation amounts (H2b). A 95% bias-corrected bootstrap confidence interval for the indirect effect of injunctive norms ($B = 0.68$) based on 10 000 bootstrap samples contained zero (−0.11 to 0.68), indicating that perceived injunctive norms did not significantly mediate the effects of condition on donation. Similarly, the same 95% bias-corrected bootstrap confidence interval for the indirect effect of descriptive norms ($B = 0.01$) also contained zero (−0.06 to 0.39), again indicating that perceived descriptive norms did not significantly mediate the effects of condition on donation (Table 2). There was no evidence that the default option influenced donations independent of its effect on perceived social norms ($B = 0.69$, $p = .16$).

Discussion

Why might this difference between the effects of default condition on social norms in Studies 1 and 2 have occurred? One potential explanation for participants perceiving weaker social norms when the charity was Greenpeace (Study 2) than when it was an anti-poverty charity (Study 1) is that while stronger social norms are perceived as a function of a default option, social norms are clearly not exclusively perceived *via* a default option. Rather, individuals often receive information about existing social norms from a variety of sources and over a sustained period of time (Cialdini & Trost, 1998). Therefore, given that poverty-related charities are perceived more favorably than environmental charities (Forbes, 2013), a tentative explanation is that participants' awareness of this imbalance may have weakened a perceived relation between the default option and social norms. This explanation fits with work suggesting that the attractiveness of the options moderates default effects (Campbell-Arvai et al., 2012), such that default effects is more pronounced for attractive options. Of course, future research is needed to test this hypothesis more fully with regard to social norms.

Overall, Study 2 provided further evidence for our hypothesis that default effects would be observed in immediate altruistic contexts. However, in contrast to Study 1, social norms did not seem to mediate this effect.

STUDY 3

In this study, we aimed to improve upon the methodologies of Studies 1 and 2. In many real-life default options, the default option is not merely stated (as in our studies so far), but also preselected, such that if participants do nothing, they receive that default option. A common default scenario often takes the form of a checkbox that is already selected, where one unclicks the box (and/or clicks another) if they do not wish to follow the default, and otherwise they are not required to do anything. A potential limitation of our first two studies is that while a default option was clearly stated, this option was not preselected, such that whether or not participants chose the default they had to click an option indicating their preferred choice. While this design has its advantages—particularly, in regard to controlling for the effort required by the participants—it might not fully approximate common default choices in the real world. Although default effects were observed in both of our studies (supporting our hypotheses), one might expect that when using clearly preselected options, observed default effects would be even higher. Therefore, in our third study, we used the same basic experimental design but changed the response measure so that the default option was preselected with a checked box, and participants could choose to de-select this box and select the alternative, or simply do nothing to stick with the default.

A second change to the design of this study was the inclusion of both general injunctive norms (i.e., perceived norms about how one thinks other people in general think one should behave), as well as institution-derived injunctive norms (i.e., perceived norms about how the policy-maker/choice architect thinks one should act). Previous work on default effects through the lens of the implied endorsement account has focused on the importance of such institution-derived social norms, and so we included both general and institutional-derived social norms to more clearly link our work to—and distinguish it from—the previous work by McKenzie et al. (2006).

Our overall aim was to again show default effects in an immediate charitable context, as well as providing further

Table 2. Mediation model for the indirect effects of default condition on donations in Study 2

	Outcome									
	Descriptive (M_1)			Injunctive (M_2)				Donation (DV)		
Predictor	*B*	*SE*	*p*	*B*	*SE*	*p*		*B*	*SE*	*p*
Condition (IV)	7.91	3.63	.03	0.35	0.27	.19	*c'*	0.69	0.49	.16
M_1 (Descriptive)							b_1	0.01	0.01	.48
Indirect								0.07	0.11	.52
M_2 (General Inj)							b_2	0.68	0.01	.001
Indirect								0.24	0.20	.23
	$r^2 = .03$, $F(1,148) = 4.74$ $p = .03$			$r^2 = .01$, $F(1,148) = 1.71$ $p = .19$				*Nagelkerke's* $r^2 = .22$		

Note. The dependent variable in this analysis was coded such that 0 = keeping the money, and 1 = donating the money.

evidence for the explanatory power of social norms. As in our previous studies, we first hypothesized that participants would be significantly more likely to donate a bonus participation payment of $0.50 to charity when this was presented as the default option (H1). Second, we hypothesized that when the default option was to donate to charity participants would perceive stronger social norms to donate to charity (H2a) and that social norms would mediate the effect of default condition on donations (H2b).

Method

Participants

One hundred and fifty-two American participants (81 female) with a mean age of 35 years ($SD = 11.43$) participated in this experiment, recruited online using Amazon MTurk. Participants completed the survey online and were paid $0.50 for their time, with an option of keeping an additional bonus of $0.50. Participants were excluded if they failed a simple attention check, whereby after being presented with a map of Europe, they were asked to indicate which of the following countries was not in Europe (Germany; France Italy; Poland; India). Nine participants failed this simple attention check by indicating that India was a European country and so were excluded from subsequently data analysis, leaving a final sample of $N = 143$.

Design

The experiment utilized the same basic randomized between-subject design with two conditions as in Studies 1 and 2. The charity and the pre-decision information about the charity were the same as that used in Study 1.

Charity Donation

The key dependent measure was whether participants chose to donate the $0.50 to charity or keep themselves as a bonus payment. All participants were given the same two options: "I would like this bonus money paid to charity" and "I would like this bonus money paid to me." To parallel the way that default options are often presented in online forms, the default option from each condition was preselected with a checkbox, where participants had the option of clicking to change their selection, or leave it as it was.

Perceived Social Norms

After making their decision, participants were asked—as before—two questions concerning perceived descriptive and general injunctive social norms. The descriptive norm question was identical to the previous studies, but we expanded the general injunctive norm question to make it clear that we are referring to other people taking the task: "I think that most people taking this task believe that others should donate the bonus money to charity." Further, we also asked participants to rate their perception of institution-derived injunctive norms: "I think that the researchers who designed this task believe that others should donate the bonus money to charity" (Agree–disagree: *1 = not at all*, *7 = very much*).

Results

Charity Donation

Results from a chi-square test of independence showed that H1 was supported, with results demonstrating default effects such that significantly more people donated their bonus payment to charity when this was presented as the default. With this improved methodology, when the default option was to donate the bonus money to charity, 81% of participants chose to donate this money, compared with only 19% of participants when the default option was to keep the bonus money: $\chi^2(N = 141) = 19.44$, $p < .001$.

Social Norms

Results from three independent samples *t*-tests revealed that H2a was supported, with participants perceiving stronger descriptive and injunctive social norms to donate to charity when this was the default. Participants expected that 47% of participants would donate the money to charity when this was presented as the default ($SD = 23.51$), compared with only 33% when to keep the money was the default ($SD = 20.23$), with these being significantly different, $t(139) = 3.90$, $p < .001$. Participants in the charity default condition were significantly more likely to agree with the statement concerning the general injunctive norm "I think that most people believe that others should donate the bonus money to charity" ($M = 4.73$, $SD = 1.67$) than when the default was to keep the money ($M = 3.94$, $SD = 1.71$), $t(139) = 2.78$, $p < .01$. Finally, participants in the charity default condition were also significantly more likely to agree with the statement concerning the institution-derived injunctive norm "I think that the researchers who designed this task believe that others should donate the bonus money to charity" ($M = 5.18$, $SD = 1.53$) than when the default was to keep the money ($M = 4.54$, $SD = 1.61$), $t(139) = 2.42$, $p = .02$.

As in Studies 1 and 2, we conducted mediation analyses to explore whether perceived social norms mediated the effects of default condition on donation amounts (H2b). As in Studies 1 and 2, we conducted mediation analyses to explore whether perceived social norms mediated the effects of default condition on donation amounts (H2b). A 95% bias-corrected bootstrap confidence intervals for the indirect effect of descriptive norms ($B = 0.39$) based on 10 000 bootstrap samples were above zero (0.03–0.91), indicating that perceived descriptive norms did significantly mediate the effects of condition on donation. However, the same 95% bias-corrected bootstrap confidence interval for the indirect effect of general injunctive norms ($B = 0.25$) did contain zero (−0.01 to 0.77), indicating that perceived general injunctive norms did not mediate the effects of condition on donation (Table 3). Finally, the confidence intervals for the indirect effect of institution-derived injunctive norms ($B = 0.05$) also contained zero (-0.17, 0.35), indicating that perceived institution-derived injunctive norms did not mediate the effects of condition on donation. There was, however, evidence that the default option did influence donations independent of its effect on perceived social norms ($B = 1.47$, $p < .005$).

Table 3. Mediation model for the indirect effects of default condition on donations in Study 3

	Outcome												
	Descriptive (M_1)			General Inj (M_2)			Institution Inj (M_3)			Donation (DV)			
Predictor	*B*	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*		*B*	*SE*	*P*
Condition (IV)	14.48	3.71	.001	0.79	0.28	.01	0.64	0.26	.02	*c*'	1.47	0.49	.003
M_1 (Descriptive)										b_1	0.03	0.01	.02
Indirect											0.39	0.22	.08
M_2 (General Inj)										b_2	0.32	0.16	.04
Indirect											0.25	0.19	.19
M_3 (Institution Inj)										b_3	0.07	0.15	.64
Indirect											0.05	0.12	.67
	$r^2 = .10$, $F(1,139) = 15.21$ $p < .001$			$r^2 = .05$, $F(1,139) = 7.72$ $p = .006$			$r^2 = .04$, $F(1,139) = 5.83$ $p = .02$				*Nagelkerke's* $r^2 = .22$		

Note. The dependent variable in this analysis was coded such that 0 = keeping the money, and 1 = donating the money.

Discussion

Overall, then, in addition to showing default effects in a charitable context (H1), we provided evidence for an explanatory role of descriptive social norms in explaining default effects (H2). Again, participants perceived stronger norms to donate when this was the default (H2a). Most importantly, perceptions of descriptive—but not injunctive—norms to donate significantly mediated the effects of default condition on donations (H2b).

It is perhaps surprising that both general and institution-derived injunctive norms were not significant mediators, given the theoretical relevance this has to the implied-endorsement model of default effects (McKenzie et al., 2006). We do not have a clear answer as to why this is the case and are reluctant to speculate on the basis of limited data. It is possible that the implied recommendations are stronger when coming from accepted policymakers (e.g., the government), rather than just the designers of an online task (e.g., "the researchers who created this task"). It is also possible that—at least in part—some of the results found in support of the implied endorsement model were actually driven by perceptions of descriptive norms, which would cohere with our findings across our studies that descriptive norms more consistently mediated default effects. Whatever the potential explanation, we do not suggest that our findings disprove or provide convincing evidence against the implied endorsement account. Rather, future work must be conducted to explore more fully the way that such institution-derived social norms interact with other kinds of social norms to explain default effects. In at least some cases, both types of norms are likely to be of importance.

STUDY 4

After finding converging evidence in Studies 1–3 for both the existence of default effects in actual altruistic donation behavior and the explanatory role of social norms, we next turned to the third corollary of our second hypothesis, investigating whether a transfer effect would be observed in a hypothetical taxation policy. We predicted that a transfer effect of perceived social norms from the initial default policy context to an actual altruistic context would occur: if a default is perceived to represent a normative action, this effect is likely to transfer to other situations in which that norm is salient. Therefore, the perception of an existing social norm to donate—inferred through the presence of a default—should increase the likelihood of donating money in related contexts when that norm is still salient. Specifically, we hypothesized that participants presented with information that an altruistic tax donation was the default option would subsequently choose to actually donate more money to a charity providing aid to individuals in need (H2c). Note that in this study we were not exploring default effects directly as in the previous study, but rather using a novel approach whereby we manipulated defaults and tested the effects in a different context.

Method

Participants

One hundred and thirty-six US American participants (59 female), with a mean age of 34 years old ($SD = 13.50$) participated in this experiment, recruited online using Amazon MTurk. Participants completed the survey online and were paid $0.50 for their time, with an option of keeping up to $1.00 of an additional bonus.

Design

The experiment had a randomized between-subject design with two conditions: "charity default" *versus* "charity non-default." All participants were presented with a description of an optional (and fictional) 5% charity tax in Sweden, followed by the experimental manipulation where this tax was presented as either a default or not. All participants received identical information about this tax, and only the last sentence was manipulated to make this donation the default *versus* not:

> In Sweden, for the last 10 years there has been a voluntary donation included in all citizens' tax forms. This is an entirely optional and anonymous additional 5% tax that is given wholly and directly to 10 of the most effective charities, as judged by the reputable "*Giving What We Can*" research centre. This 5% tax of gross income is dependent upon individuals' own income, such that individuals with

> lower incomes contribute less in real terms than those with high incomes…
>
> [Charity default condition] This tax is entirely voluntary and is a default on tax records. However, if an individual does not want to give this additional 5%, all they have to do is fill out an additional "opt-out" form included in all tax returns.
>
> [Charity non-default condition] This tax is entirely voluntary and participants can consent to if they wish to. If an individual does want to give this additional 5%, all they have to do is fill out an additional "consent-in" form included in all tax returns.

Attitudes Toward Altruistic Policies

After being exposed to the experimental manipulation, participants were asked two questions designed to assess their attitudes toward the described charitable policy. Participants were asked to rate how likely they would be to follow the default action ("If I were living in Sweden, I would go with the default") and how much they would support the donation policy ("In my own country, I would support this donation policy") (*1 = strongly disagree*, *7 = strongly agree*).

Transfer Effect

Participants were given the option to actually donate real money to a charity that they could otherwise keep for themselves. Participants were told that

> For your participation in this study, you will be paid \$0.50. We would also like to offer you a bonus fee of up to \$1.00, to which you can choose how much to keep and how much to donate to one of the most effective charities (as rated by the Giving What You Can Research Centre). Please write below in numerical form how much of this \$1 you would like to keep. We will subtract this amount you choose to keep from the \$1.00 total and donate the rest directly to charity.

Upon completion of the study, all participants were fully debriefed and the total money that participants chose to donate from their bonus was donated to charity.

Results

Attitudes Toward Altruistic Policies

Independent samples *t*-tests revealed that there were no significant differences between conditions in attitudes toward the altruistic policy. With regards to the self-reported likelihood of following the default policy (whether that be the opt-out or the consent-in tax), there were no significant differences between conditions, $t(134) = -.84$, $p = .40$, with comparable means centered around the mid-point when the charity was the default ($M = 3.99$, $SD = 2.01$) as to when the charity was not the default ($M = 4.27$, $SD = 1.93$). In other words, participants reported themselves just as likely to follow either policy when it was the default. Similarly, there were no significant differences between conditions with regard to participants' support of the policy, $t(134) = -.40$, $p = .69$, with comparable means—again around the midpoint—when the charity was the default ($M = 4.26$, $SD = 2.07$) as to when it was not ($M = 4.40$, $SD = 2.07$). Therefore, participants expressed moderate support for the default position on charitable giving—whether or not this default was to give to charity.

Transfer Effect

Supporting H2c, an independent samples *t*-test revealed a significant effect of condition on donation amounts, $t(134) = 2.42$, $p = .02$, with participants in the charity default condition choosing to donate significantly more actual money to charity at the end of the experiment ($M = \$0.43$, $SD = 35.34$) than in the charity non-default condition ($M = \$0.29$, $SD = 29.40$). Looking further at descriptive statistics, the median level of donation for the charity default condition was \$0.50, while the median level of donation for the charity non-default condition was \$0.20. Hence, with reference to the overall available amount of \$1.00, median donations were 30% higher when charitable donations were presented as the default policy.

Discussion

The results found in Study 4 accord with our hypothesis that the effects of default effects could transfer to a different context: participants exposed to a policy where charitable donations was a default would subsequently choose to donate significantly more of a bonus reward for taking part in the study to charity, presumably through a process of social norm activation (H2c). These findings provide further indirect support of a social norms-based account of default effects. Were default effects to be explained solely through lack of effort or cognitive biases such as loss aversion, it seems unlikely that a transfer account would be observed from the default status in one context to similar behavior (with no default option) in a second context. Rather, such findings—particularly when taken together with the direct evidence of social norms driving default effects in Studies 1 to 3—are suggestive of participants inferring a norm from the default status.

GENERAL DISCUSSION

How can the known preference for the default in a choice situation—default effects—be used to nudge individuals toward altruistic behavior for the greater good? In this paper, we tested whether default effects would occur in altruistic contexts, and the extent to which this could be explained through social norms. Across four studies, we found converging evidence for two core hypotheses: that default effects exist in altruistic contexts and that this can be at least partially explained through perceptions of social norms. In Studies 1–3, we found that participants were more likely to—and perceived stronger social norms to—donate money to charity when such a donation was presented as the default option. Further, such norms—and particularly descriptive norms—mediated the effect of condition on donation amounts. Finally, in Study 4, we tested whether this norm-based default effect could transfer to other situations and found that inferred social norms to donate as a function of default status can transfer to other donations in a similar context. Such results from our fourth study support

the claim that a social norm is inferred from a default option, rather than a singular recommendation for that particular choice context. Taken together as a package, these findings provide converging evidence for an important explanatory role of social norms in understanding default effects.

Theoretical Implications

Our results are consistent with a broader theoretical framework concerning social norms that has not previously been applied to default effects. Our results suggest that in addition to institutional-derived injunctive norms (as in the implied endorsement account: McKenzie et al., 2006), both general injunctive and descriptive social norms are important. In particular, this work extends the work of McKenzie and others in directly highlighting the importance of descriptive norms. It is of note that in the three studies in which we were able to test the effects of defaults on perceived social norms and conduct a mediation analysis, it was descriptive social norms that showed the consistent pattern of mediation. Such results suggest that descriptive social norms may be a more potent factor in explaining default effects than the implied-endorsement account might predict. Future work should, of course, explore this more fully.

This theoretical integration with social norms helps to elucidate when the default effects may be stronger—and when they may be weaker, or non-existent. Research has demonstrated that people are more likely to be influenced by social norms when the two conditions hold: when the norms are perceived to be relevant and when there is a perception of ambiguity about what should be carried out (Cialdini & Trost, 1998; Crutchfield, 1955; Reno et al., 1993). Our results suggest that the strength of default effects will depend on the degree of ambiguity evident in the situation and the extent to which the implicitly inferred norms are perceived to be relevant. Therefore, in exploring default effects, it is important to recognize that all default choice contexts are not alike.

Practical Implications

In addition, the results presented in this paper may also have significant practical implications for how altruistic behavior can be encouraged to help relieve the effects of poverty and climate change. Specifically, our work suggests that a simple, practical, and efficient tool for increasing donations for charities could be to simply present that donation as a default in a choice situation. We note that in Study 3, we found a very large difference in donations to charity, with 81% of participants donating when such a donation was the default, compared with only 19% when it was not. Such findings have important practical implications. For example, such a default policy might be implemented at a government level in tax returns by presenting small charitable donation as a default (to which individuals could easily opt out from if they wished).

In discussing the practical implications of such work, it is crucial to consider expected *public acceptability*, which can have a strong influence on attitudes toward the policy and affect the likelihood that a policy could be put into action effectively (Schuitema & Jakobsson Bergstad, 2013). Of particular relevance to the work suggested here is that policy measures are more likely to be perceived as unacceptable when people perceive an infringement to their freedom or if the costs for not complying are too high (Jakobsson, Fujii, & Gärling, 2000). In implementing a default policy, however, both of these key predictors of low acceptability are absent: placing an altruistic donation as an opt-out default does not significantly impinge on freedom and has low costs, for the donation is wholly voluntary and optional, and people can opt out from it with minimal effort (Loewenstein, Brennan, & Volpp, 2007; Thaler & Sunstein, 2003). While we focused on altruistic and self-sacrificial decisions, this work has broader implications for encouraging prudential and moral behavior in a wide range of social and financial interactions. By structuring the architecture of choice, one hope is to encourage better behavior of citizens, politicians, those involved in financial institutions, and indeed all social actors. What constitutes "better behavior" is a deep ethical question but one which we cannot avoid asking.

Strengths, Limitations, and Future Directions

The first key feature of the studies presented that requires further discussion is that they utilized a strictly experimental design. While some previous studies on default effects have had high ecological validity, utilizing naturally occurring differences in policies or systems (e.g., Choi et al., 2002), the nature of these methods mean that it is often not possible to strictly control for any extraneous variables that could have had played a confounding role. In utilizing a controlled experimental design, we were able to isolate changes in whether an option was the default or not to gain confidence that the observed effect is due to the change in the default option in particular. It remains true, however, that people's behavior and opinions in controlled experiments such as these may still differ in part from their behavior in real-life default decisions, and so in future work, we hope to conduct further experimental designs in a natural setting.

A second key feature of our design was that it allowed us to assess not just predicted but actual donation behavior. It is known that there can often be a discrepancy between planned and actual behavior (e.g. Ajzen, 1991, Ajzen & Fishbein, 1980), such that while a default donation policy might lead individuals to predict that they would donate more to a charity, this intention might not translate into actual behavior. Our design therefore allowed a measure of participants' actual altruistic donation behavior: participants were able to donate some of their own reward money they had obtained for taking part in the study. A remaining question, however, is the extent to which this effect may continue outside the experimental situation. As such, a fruitful area of future research would be to investigate how knowledge of default policies in altruistic domains may have a longer-lasting effect on positive behavior outside of the experimental setting.

In this paper, we have presented converging evidence suggesting that social norms play an important explanatory role in default effects. Having established this relationship, future research should be conducted to more fully explore how, when, and why social norms impact upon default effects. As discussed earlier, one of the most compelling future directions is to consider how the relevance of implicitly perceived norms (e.g. through relevant social group membership) impacts upon

default effects. Further, it is important to explore how the social norms account interplays with other accounts posited in explaining default effects (Johnson & Goldstein, 2003). Our analysis concerning social norms is not intended to replace but rather to complement other explanations of default effects, and it would be fruitful to explore the interplay between these different potential processes. Having established that social norms play an important role in explaining default effects, future research is needed to explore how perceptions of social norms may interact with lack of effort and anchoring to the status quo to produce default effects. Do implicitly perceived social norms help to moderate the posited anchoring effect of default choices? Are individuals less willing to expend effort to choose the non-default action when the default action is perceived as socially normative? In answering such questions, a more complete and integrative understanding of default effects can be sought.

Conclusions

In this paper, we have provided evidence for the existence of default effects in immediate altruistic contexts, as well as demonstrating an explanatory role for social norms. In four experiments, we found that: (i) participants preferred the default option in an altruistic choice contexts, that is, charitable donations; (ii) participants perceived the default option to be the socially normative option; (iii) that perceptions of (primarily descriptive) social norms mediated the effect of default condition on donation amounts; and (iv) participants translated social norms they inferred from the default option in one domain into behavior in a second, related domain, suggesting a transfer effect in social norms.

Theoretically, our analysis situates default effects within a comprehensive body of social psychological research concerning social norms and the attitude-behavior relationship, providing novel empirical predictions. Practically, the evidence presented in this paper highlights that the way that optional donation policies are framed can have an important impact on donation behavior. Such work suggests that making use of default effects could be an effective tool to increase behavior in the overall interest without compromising freedom. Samuel Johnson (1751) famously said—"to do nothing is in every man's power." While no doubt, in some cases, it is better to do nothing than to act, we have shown that the passivity of human choice and the tendency to be led by social norms and default options can be harnessed to encourage more altruistic behavior.

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REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179–211.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Anderson, J. A. (2003). The psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychological Bulletin*, *129*(1), 139–167.

Biel, A., Eek, D., & Gärling, T. (1996). Provision of community social services: The role of distributive fairness for willingness to pay. In W. B. G. Liebrand, & D. M. Messick (Eds.), *Frontiers in social dilemma research* (pp. 57–76). Berlin: Springer Verlag.

Brown, C. L., & Krishna, A. (2004). The skeptical shopper: A metacognitive account for the effects of default options on choice. *Journal of Consumer Research*, *31*(3), 529–539.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*(1), 3–5. doi: 10.1177/1745691610393980

Camerer, C. (2003). *Behavioral game theory: Experiments in strategic interaction*. NJ, US: Princeton University Press.

Camerer, C., Issacharoff, S., Loewenstein, G., O'donoghue, T., & Rabin, M. (2003). Regulation for conservatives: Behavioral economics and the case for 'asymmetric paternalism'. *University of Pennsylvania Law Review*, *151*, 1211–1254

Campbell-Arvai, V., Arvai, J., & Kalof, L. (2012). Motivating sustainable food choices: The role of nudges, value orientation, and information provision. *Environment and Behavior*. doi: 10.1177/0013916512469099

Choi, J., Laibson, D., Madrian, B. C., & Metrick, A. (2002). Defined contribution pensions: Plan rules, participant decisions, and the path of least resistance. In J. M. Poterba (Ed.), *Tax policy and the economy* (Vol. *16*. pp. 67–114). Cambridge, MA: MIT Press.

Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity, and compliance. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 151–192. New York: McGraw-Hill.

Croson, R., & Shang, J. (2010). Social Influence in giving: Field experiments in public radio. *The science of giving: Experimental approaches to the study of charity* (pp. 65–80). New York, NY: Psychology Press.

Crutchfield, R. (1955). Conformity and character. *American Psychologist*, *10*, 191–198.

Davidai, S., Gilovich, T., & Ross, L. D. (2012). The meaning of default options for potential organ donors. *Proceedings of the National Academy of Sciences*, *109*(38), 15201–15205. doi: 10.1073/pnas.1211695109

Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *The Journal of Abnormal and Social Psychology*, *51*(3), 629–636.

Dhingra, N., Gorn, Z., Kener, A., & Dana, J. (2012). The default pull: An experimental demonstration of subtle default effects on preferences. *Judgment and Decision Making 7*(1), 69–76.

Forbes (2013). *The 50 largest U.S. charities*. http://www.forbes.com/top-charities/list/, November 2013. Retrieved 9 May 2014.

Hedesström, T. M., Svedsäter, H., & Gärling, T. (2007). Determinants of the use of heuristic choice rules in the Swedish Premium Pension Scheme: An Internet-based survey. *Journal of Economic Psychology*, *28*(1), 113–126.

Jakobsson, C., Fujii, S., & Gärling, T. (2000). Determinants of private car users' acceptance of road pricing. *Transport Policy*, *7*, 153–158.

Johnson, S. (1751). *The rambler*, No. 155. 10 September 1751. Retrieved from http://www.samueljohnson.com on 6 June 2014.

Johnson, E. J., Bellman, S., & Lohse, G. L. (2002). Defaults, framing and privacy: Why opting in-opting out. *Marketing Letters*, *13*(1), 5–15.

Johnson, E. J., & Goldstein, D. (2003). Do defaults save lives? *Science*, *302*, 1338–1339.

Johnson, E. J., Hershey, J. C., Meszaros, J., & Kunreuther, H. (1993) Framing, probability distortions, and insurance decisions. *Journal of Risk and Uncertainty*, *7*(1), 35–51.

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, *39*(4), 341–350.

Loewenstein, G., Brennan, T., & Volpp, K. G. (2007). Asymmetric paternalism to improve health behaviors. *JAMA, the Journal of the American Medical Association*, *298*(20), 2415–2417.

McKenzie, C., Liersch, M. J., & Finkelstein, S.R (2006). Recommendations implicit in policy defaults. *Psychological Science*, *17*, 414. doi: 10.1111/j.1467-9280.2006.01721.x

Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: Multi-level perspectives. *Annual Review of Psychology*, *56*, 365–392.

Pichert, D., & Katsikopoulos, K. V. (2008). Green defaults: Information presentation and pro-environmental behaviour. *Journal of Environmental Psychology*, *28*(1), 63–73.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediators. *Behavior Research Methods*, *40*, 879–891. doi: 10.3758/BRM.403.879

Reno, R. R., Cialdini, R. B., & Kallgren, Carl, A. (1993). The trans-situational influence of social norms. *Journal of Personality and Social Psychology*, *64*, 104–112.

Schuitema, G., & Jakobsson Bergstad, C. (2013). Acceptability of environmental policies. In L. Steg, A. Van den Berg, & De Groot, J. (Eds.), *Environmental psychology: An introduction* (pp. 255–266). Oxford: Blackwells

Schultz, W., & Kaiser, F. (2012). Promoting pro-environmental behaviour. In S. Clayton (Ed.), *The Oxford handbook of environmental and conservation psychology*. Oxford, UK: OUP.

Shah, A. (2013). *Global issues: Poverty facts and stats*. 7 January 2013. Retrieved from http://www.globalissues.org/article/26/poverty-facts-and-stats, on 5 June 2014.

Smith, C. N., Goldstein, D. G., & Johnson, E. J. (2013). Choice without awareness: Ethical and policy implications of defaults. *Journal of Public Policy and Marketing*, *32*(2), 159–172.

Ritov, I., & Baron, J. (1990). Reluctance to vaccinate: Omission bias and ambiguity. *Journal of Behavioral Decision Making*, *3*(4), 263–277.

Thaler, R. H., & Benartzi, S. (2004). Save more tomorrow™: Using behavioral economics to increase employee saving. *Journal of Political Economy*. doi: 10.1086/380085

Thaler, R. H., & Sunstein, C. R. (2003). Libertarian paternalism. *American Economic Review (Paper and Proceedings)*, *93*(2), 175–179.

Yu, R., Mobbs, D., Seymour, B., & Calder, A. J. (2010). Insula and striatum mediate the default bias. *The Journal of Neuroscience*, *30*(44), 14702–14707.

