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Do You Want to Be an Organ Donor? Why Question Order and Straightlining Matter

Danielle R. Blazek
Claremont Graduate University

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Approval of the Dissertation Committee

This dissertation has been duly, reviewed, and critique by the Committee listed below, which hereby approves the manuscript of Danielle R. Blazek as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Psychology.

Jason T. Siegel, Ph.D.
Dissertation Chair
Claremont Graduate University
Professor of Psychology

William D. Crano, Ph.D.
Claremont Graduate University
Oskamp Chair, Distinguished Professor in Psychology

Eusebio M. Alvaro, Ph.D.
Claremont Graduate University
Research Professor of Psychology

Mel Hyde, Ph.D.
University of Queensland, Australia
Faculty of Health and Behavioural Sciences

Abstract

Do You Want to Be an Organ Donor? Why Question Order and Straightlining Matter

By

Danielle R. Blazek

Claremont Graduate University: 2022

This trio of studies is designed to investigate a possible means of increasing donor registration rates, as doing so can save lives by increasing the number of registered organ donors. Many Motor Vehicle Departments (MVDs) ask a series of probing health and legal questions prior to asking visitors about registering as an organ donor. This practice may diminish registration because of straightlining, a type of satisficing, which is a common problem in survey research where respondents do not give the most accurate response, often in an attempt to diminish effort. When straightlining, some individuals may not register as an organ donor simply because they did not notice they were being asked to register, even if they support organ donation. The first study was an MTurk experiment that found that moving the registration question from last to first position within a series of probing questions significantly affected how often individuals expressed willingness to register as a donor. Study 1 found an order effect online for both donors (OR = 2.57) and non-donors (OR = 2.01).

Study 2 took advantage of a decision by New Mexico MVDs to move their donor question from after a series of health and legal questions to before it. Thus, Study 2 served as a conceptual replication of the first study, by using secondary data to examine this change's effect on registration behavior in the Department of Motor Vehicles in New Mexico. This change in question location occurred on April 2, 2020. Unfortunately, this was within two weeks of a statewide stay-at-home order due to the COVID-19 pandemic. As this, this represents a critical

history effect, it serves as a rival explanation for all the results from Study 2. Not all analyses indicated meaningful results, but when controlling for an overall decline in registrations, this downward trend was attenuated by the change in question position. Additionally, both prior donor and non-donor visitors to the MVD were more likely to re-affirm their previously selected donor statuses. However, these effects could have been the result of the pandemic.

Study 3 replicated the order effects observed in Study 1 for the donors, but did not find this effect among the non-donors. Study 3 also added an examination of instructional manipulations to see if it was possible to assuage the tendency to straightline using different instructional manipulations on MTurk. One instruction focused on real-world implications -- that when asked to register as a donor, this represents placement on the donor registry. This approach may be applicable for use in MVDs, and was expected to be effective for individuals who already possess extremely favorable attitudes about registration. The other approach was based on equity theory and was expected to be especially helpful in online research contexts. However, this experiment did not find support for the use of these instructional manipulations.

Taken together, these studies shed important insight into how question order influences organ donation registration willingness. Across Studies 1 and 3, there was evidence that the order in which the donor registration question is asked influences donor registration rates for donors, as well as for those who are paying the least attention. This dissertation did not conclusively observe the same effect for those who are not registered donors. Thus, when it is possible to do so, listing the donor question prior to any other health and legal questions may increase willingness to register.

Keywords: straightlining, satisficing, order effects, organ donation, survey instructions

Dedication

For my friend Matthew, who became a tissue donor while I was writing Chapter 7.

We love you, and we will miss you.

This dissertation is also dedicated to those who make the generous decision to register as organ and tissue donors, either by letting their loved ones know their wishes, signing the back of their driver's licenses, or even just reading the application all the way to the end. Thank You.

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CHAPTER 1: INTRODUCTION

Each day, 22 people die in the United States while they await an organ transplant (UNOS, 2021). Many of these deaths could be prevented if there were not a shortage of available organs for transplantation; thus, it is essential to maximize the number of organs that are available for transplantation. One way to do this is to increase the number of registered donors, which is especially important because fewer than 1% of people die in a way that allows for organ transplantation after their death (Siegel et al., 2022). Maximizing the number of people registered as potential organ donors increases the number of organs that will be available for transplant. However, even though more than 90% of Americans have a favorable view of organ donation, fewer than 50% of adults are currently registered as an organ donor (Health Resources & Services Administration [HRSA], 2020). This discrepancy in attitude-behavior consistency is one that has been commonly noted across many research contexts as a challenge facing those attempting to increase donor registrations (e.g., Feeley, 2007; Hyde & White, 2009; Reynolds-Tylus & Quick, 2017) and is often the focus of interventions aimed to increase organ donor registrations (e.g., Cossé & Weisenberger, 2000; O'Carroll et al., 2018; Siegel et al., 2010).

The interventions that aimed to increase donor registrations have taken numerous different approaches, including message framing (Chien & Change, 2015; Cohen, 2010; Reinhart et al., 2007), reciprocity priming (O'Carroll et al., 2017; 2018), inducing emotional states such as anticipated regret (O'Carroll et al., 2011), anticipated guilt (Wang, 2011), humor (Shepherd & Lefcourt, 1992), elevation (Blazek & Siegel, 2018), and motivational harmony (Blazek et al., 2019). These interventions have also taken place in numerous difference locations, including the Department of Motor Vehicles (DMV; e.g., Quick et al., 2019; Rodrigue et al., 2014; Siegel et

al., 2021), workplaces (Quinn et al., 2006), barbershops (Resnicow et al., 2010), churches (Arriola et al, 2015), as well as online surveys (e.g., Blazek & Siegel, 2018).

However, because Motor Vehicle Departments (MVDs) are responsible for the vast majority (92%) of donor registrations (HRSA, 2020), they are often thought of as the ideal location for an intervention designed to increased registrations (e.g., Harrison et al., 2008; Rodrigue et al., 2004). MVDs also typically represent one of the only places where a registration can immediately be completed after engaging an individual to consider registering, and this is an important aspect in increasing registrations (see Alvaro et al., 2011 and Siegel et al., 2010 for a description of the IIFF model and its role in increasing organ donation registrations). However, even when interventions do occur in the most common place of registering as a donor, the MVD, success is not guaranteed. Although interventions have taken numerous different approaches, including point-of-decision materials (Feeley et al., 2017; Siegel et al., 2021), staff training (Degenholtz, et al., 2015; Harrison et al., 2008), volunteers on site recruiting donors (Harrison et al., 2011), and videos (Rodrigue et al., 2014; Siegel et al., 2021), these approaches have had mixed success, and are often costly to enact. However, there are other factors within the MVD that may influence registration rates that have received less attention, and may even be less expensive to address (Stevens et al., 2019).

In an examination of 46 different applications to get a driver's license at MVDs nationwide, Stevens and colleagues (2019) found that no states used empirically supported messages aimed at increasing donor registrations, and that several states might benefit from reordering or rephrasing the questions that are asked of visitors which could remove significant barriers to registration. It is a common practice within many MVDs is to ask numerous questions about health, legal issues, and driving abilities when administering or renewing

driver's license or ID cards (Stevens et al., 2019). For example, one of these questions that is asked at MVDs in New Mexico is "do you now have any physical or mental problem or disability which may impair your ability to safely operate a motor vehicle?" Stevens and colleagues believe that these questions are problematic because they prime individuals to believe that they are ineligible to register as organ donors, thus reducing the likelihood that someone will choose to register. Although reordering or rephrasing these questions represents minimal changes to the environment in which someone is asked to register as an organ donor, these changes represent the potential to have a significant impact (Sanders & Hallsworth, 2015).

The goal of this dissertation will be to assess if the health and legal questions that are often asked in MVDs, and the placement of the question about organ donation registration relative to these questions, influence willingness to register as an organ donor. This dissertation will explore the possibility mentioned by Stevens and colleagues (2019) that the presence of the health and legal questions diminish registrations. Although Stevens and colleagues believe these questions may cause self-disqualification, this dissertation will also explore a complementary reason these questions reduce the tendency to register as a donor. This alternative explanation is satisficing, a common behavior in which individuals who are responding to a series of questions give any acceptable response, rather than the most appropriate one, to reduce the effort of responding to survey or questions. Additionally, this dissertation also will take advantage of the unique opportunity to examine the effect of question order within New Mexico MVDs, where a longstanding research partnership allowed the opportunity to study this effect with real registration data. Using both an online experiment and a quasi-experimental interrupted time series design, I will examine how placement of a question about organ donation among other health and legal questions influences willingness to register. In addition, this dissertation also

will explore whether some types of instructions can ameliorate the effect of question order on donor registrations using an online experiment.

CHAPTER 2: REVIEW OF THE LITERATURE

This dissertation will explore how the placement of the question asking someone to register as an organ donor relative to other questions can influence willingness to register. Specifically, I will explore how straightlining, the tendency to give the same or nearly the same answer to series of questions, may preclude people who would be willing to register as donors from stating that willingness or registering as donors. The tendency to engage in straightlining is linked to question order. Specifically, the order of questions may either enhance or diminish willingness to register. Straightlining is a specific type of behavior under the broader umbrella of inattentive responding called satisficing. The literature review will begin with a discussion of the broader satisficing domain and then specifically talk about straightlining.

Satisficing

Satisficing, a term introduced in by Simon (1957) in the field of economics, is a means of introducing error that can be either random or non-random. This non-optimal responding behavior occurs when making a decision, and involves accepting an option that meets the minimal requirements rather than the best option (Simon, 1957). Krosnick (1991) built upon the work of Simon and brought this terminology from economics to the field of survey research, and more broadly, to behavioral research. To respond to a question, participants must engage in a four-step process that includes (1) understanding the question being asked, (2) searching their memories to retrieve any relevant information, (3) forming a judgment utilizing relevant information, and (4) selecting or reporting an appropriate response (Tourangeau et al., 2000). Optimizing occurs when respondents carefully perform these four cognitive steps described (Tourangeau, 1984), and comprehensively answer all questions. However, whenever someone

chooses to ease the cognitive burden by skipping or shortening these steps, this behavior can be called satisficing (Krosnick, 1991).

According to Krosnick (1991), satisficing is a broad category of behaviors that can manifest in a several ways, including giving the first reasonable response alternative, agreeing with assertions, not differentiating while using scales, responding *don't know* or engaging in coin-flipping decision making. Rushing through questions, skipping items, giving the same response every time, and quitting early can also be deemed satisficing behavior (Barge & Gehlbach, 2012), as can rounding to diminish the cognitive load of calculating an actual estimate (Turner et al., 2015). Satisficing can be strong or weak. Weak satisficing occurs any time one of the four cognitive steps is not given full attention, whereas strong satisficing is evident any time one of the four steps is skipped in its entirety (Krosnick et al., 1996; Turner et al., 2015).

When individuals engage in satisficing behavior, they typically incur little to no cost, and might even shorten their response time (Krosnick & Alwin, 1987; Zhang & Conrad, 2013) making this behavior rewarding to the individual. However, this behavior can be exceedingly problematic for researchers. In many contexts, satisficing can give the false illusion that the relationships between variables are either stronger or weaker than reflect reality (Barge & Gelbach, 2012; DeSimone et al., 2018). One common assumption is that satisficing may lower the perceived relationship between constructs by introducing error (Crano et al., 2015). For instance, satisficing can lower inter-item correlations and reduce relationships between items or scales (DeSimone et al., 2018). Furthermore, satisficing can lower construct validity and derail factorial loading patterns by distorting theoretical factors and increasing the problem of cross-loading (Kam, 2019), and lead to the selection of worse items for scale development (Fleischer et al., 2015).

Perhaps a less intuitive assumption, but one that is just as worrisome, is the fact that satisficers also can artificially increase scale reliability and apparent validity (Barge & Gehlbach, 2012; Fang et al., 2014; Hamby & Taylor, 2016). Those who engage in satisficing may drive up the reliabilities of scales when the items are similar, and oriented in the same direction, where a similar response to several of these items would yield a higher reliability coefficient, but actually reflects bias and not true relationships (Barge & Gehlbach, 2012). Some researchers have found support for stronger correlations between items when satisficers are included rather than excluded (DeSimone, et al., 2018; McGonagle et al., 2016). Furthermore, Schmitt and Stults (1985) found that when as few as 10% of participants are engaged in satisficing behavior, a separate factor develops during factor analysis with the negatively worded items, or items with the minority wording orientation, clustering together more than reflects reality. The resulting factor is likely due to satisficing and the bias it produces, and not an accurate reflection of the true relationship between items.

In addition to both the artificial reduction and enhancement of correlations, reliability, and validity there are other problematic data quality issues affected by the prevalence of satisficers. For instance, single-item measures can be disproportionately affected by individuals who give improbable responses, and thus lessen overall data quality (Barge & Gehlbach, 2012). Additionally, when trying to identify rare groups, or participants who meet certain criteria, those who satisfice their way into meeting these criteria can respond in ways that may subsequently be thought of as representing certain subpopulations (Chandler et al., 2020). When participants satisfice, they can bias estimations of effects and distort moderation effects (Miura & Kobayahi, 2019). When survey respondents do not pay adequate attention, this obscures the real results, decreases statistical power, and ultimately threatens the validity of psychological research

(Beach, 1989; Maniaci & Rogge, 2014; McKibben & Silvia, 2015; Silber et al., 2019). Having a large percent of inattentive responders in a dataset can create enough noise or error to make the entire dataset essentially meaningless (Maniaci & Rogge, 2014). The reduction in data quality is problematic and weakens the ability to draw valid conclusions (Gao et al., 2016).

Even if there no other effects on the data quality occur, the presence of satisficers limits generalizability when these responses are removed from the analyses. If this could be solved by simply collecting additional survey participants to maintain adequate statistical power, this issue would be of limited concern. However, when satisficers are removed from the sample, their removal is not random, as satisficers are more likely to possess certain traits (i.e., satisficers tend to be lower in conscientiousness and agreeableness Berry et al., 2019; Bowling et al., 2016). Removing these individuals from the dataset affects the sampling distribution thus limiting external validity and narrowing the potential scope of the study's implications (Ward & Pond, 2015). Satisficing clearly can influence the psychometric properties of the data collected in surveys; however, the full impact of this issue is not yet fully understood (Ward & Meade, 2018).

The estimated range of survey respondents engaged in satisficing varies widely and depends both on the specific definition used and detection technique(s) utilized, with most estimates ranging from 3.5% to 60% of all survey respondents (Curran, 2016; Hong et al., 2020; Johnson, 2005; Maniaci & Rogge, 2014; Ward & Pond, 2015). Maniaci and Rogge (2014) found that 84% of participants skip reading the instructions at least occasionally, but also acknowledge that this alone might be too stringent an assessment of satisficing in some cases. Fleischer and colleagues (2015) estimate that nearly 42% of all MTurk respondents may be engaging in

satisficing behavior, indicating that this problem is common online. Together, this range of estimates does suggest that satisficing is a common, and troubling, occurrence.

Not all literatures use the terminology of satisficing and instead have given new and different names to many behaviors that would fall under Krosnick's definition of satisficing, such as random responding, straightlining, and acquiescence responding. Keeping the terminology consistent across fields could help compile information and practical solutions to this problem because when the definitions are parsed by clustering the categories of negative outcomes, information on how to cope with or prevent these problems is lost (Blazek & Siegel, 2022). However, it is also helpful to consider unique types of satisficing when working within a particular context, as the particular challenges of certain types of satisficing may be especially prevalent.

Straightlining and the MVD

One specific type of satisficing behavior that is particularly relevant to registering as an organ donor at the MVD is straightlining. Straightlining is when the respondent gives the same, or nearly the same, answer to several questions with identical response options, especially when they are arranged in grid format (Kim et al., 2019; Schonlau & Toepoel, 2015; Zhang & Conrad, 2013). A hallmark of straightlining is when there is a straight line when questions have been framed in both a positive and negative orientation, or when the answers given create implausible or unlikely combinations of attitude expression (Schonlau & Toepoel, 2015). Straightlining is the type of satisficing most relevant to this dissertation because of the unique conditions of registering as an organ donor within an MVD.

When MVDs ask their visitors to complete a series of questions about their health and other social concerns, such as whether they have ever fallen asleep while driving or have had

their license revoked, they run the risk that a large proportion of visitors may engage in straightlining to get through the questions. This may be particularly worrisome for the questions at the end of the list as respondents may lose steam answering questions and are less likely to respond carefully on later questions (Herzog & Bachman, 1981). They may read the first several questions, realize that this series of questions asks about health and legal issues that are related to driving, assume the correct response is to answer *no* for each of these questions, and straightline down the remaining questions without carefully reading or considering each unique question. As Stevens and colleagues (2019) noted, listing the question about registering as a donor last is a common occurrence in MVDs nationwide. Thus, straightlining may be especially prevalent when the questions are presented in a grid-format with identical response options (Schonlau & Toepoel, 2015), as they are in many MVDs, where many questions are listed in a row with *yes* and *no* response options in a grid (see Appendix B for the grid of questions used in New Mexico). Ultimately, when asking visitors to register as an organ donor, the concern about straightlining behavior is that when this question follows a series of required questions, participants may respond without fully considering their deeply personal wishes for how their bodies should be treated after they die, and instead use the surrounding questions to guide their response. This dissertation is designed to learn if moving the question that asks an individual if they want to register as an organ donor from last, following a series of questions about health and legal issues, to first, changes the proportion of respondents willing to register as an organ donor.

Order Effects

Straightlining is especially likely to occur in the MVD environment because the questions may all appear to be about a similar topic, suggesting that the same response to each question should be sufficient. This is likely to be especially problematic for the questions at the end of this

series, where if straightlining occurs, not all questions will get the careful attention and responses they deserve. As noted, respondents are more likely to use earlier questions to guide responses given to later ones (Herzog & Bachman, 1981). Placing a question after a long list of questions at the MVD where most clients are expected to respond "no" repeatedly may fall under the general category of order effects.

An order effect is when either the location of the question or the sequence of the items affects the measurement (Krosnick & Presser, 2010). Although not all researchers find evidence of order effects (Benton & Daly, 1991), order effects have been acknowledged by many to influence question responses (e.g., Becker 1954; Israel & Taylor, 1990; Krosnick & Presser, 2010). Participant responses can be susceptible to the context in which a question is asked, which includes the location relative to other questions and topics (Krosnick & Presser, 2010). For instance, Hutto and colleagues (2008) found that when asking about physical activity and walking activity, the order in which the items were presented mattered, as the amount of physical activity reported by respondents depended on which activity was asked first.

It is not just the individual question, but also the categories or chunks of questions that may matter in determining an order effect. For instance, Drury & Farhoomand (1997) found that when presented with a survey containing four categories of questions, three of which were randomly alternated, there were significant differences in the responses depending on the category order. Similarly, Jensen and colleagues (1999) found in a counterbalanced experiment of modules from the Diagnostic Interview Schedule for Children (DISC) that the order of the modules influenced subsequent endorsement of the individual items, and this was true regardless of whether the respondents were the parents of children, or the children being assessed.

Indeed, although question order can have a sizeable effect on responses. In one comparison of reported heavy drinking, there was a 14-point decline between two back-to-back years that also corresponded with the change in the question location (Harford, 1994). Although Harford did not claim the change was entirely due to the relocation of the question, this change is likely responsible for at least some of the significant reported decrease. Question order even seems to matter even when dealing with heavily politicized or sensitive issues. For example, participants were more willing to admit to their own academic dishonesty when asked earlier in a survey rather than later (Tourangeau et al., 2013). Likewise, when asked about whether abortion should be legal for any reason 48% of respondents agreed when this question occurred after a series of specific reasons; however, 60% agreed when this was the first question in the sequence (Bumpass, 1997). The level of reported support was compared between when the question was asked either last, where it received less support, or first, where it received more support. The approach of comparing support based on last position vs. first position is identical to the one taken in this dissertation for willingness to register as an organ donor.

Survey Instructions

If question order does indeed have a negative influence on donor registration rates, one solution is to change the question order. However, as it will not always be possible to list the donor registration question in the optimal location, it is also important to know how to minimize this effect when the donor question does follow a list of health and legal questions. One possible approach under this circumstance would be to use survey instructions, which have been shown empirically to reduce the prevalence of satisficing. Indeed, Gibson and Bowling (2019) found support for the idea that a manipulation instruction warning of consequences could deter careless responding. Likewise, Ward and Meade (2018) demonstrated that giving instructions based on

social influence theory decreased careless responding. Concerned that these instructions might deteriorate participant experience and result in poorer data quality, Breitsohl and Steidelmüller (2018) found evidence that giving clear instructions to participants about what to expect in the survey was not detrimental to the results, but leaving off warning instructions was, providing additional support for the use of instructions to deter satisficing behavior.

One specific type of instruction is the instructional manipulation check (IMC) developed by Oppenheimer and colleagues (2009). Initially, the purpose of the IMC was used to detect satisficing by presenting a complex instruction to participants that appears to ask for a response to a question, but which requires the respondent to read carefully to detect the appropriate response and then respond accordingly. The IMC is based on the premise that if respondents do not read survey instructions carefully, they also are likely to miss the nuance that is present in many manipulations, where the differences between conditions may be subtle and small. Although initially conceptualized only to identify satisficers, IMCs also have been used to deter satisficing behavior by pointing out to respondents when they make an error in an instructed response task. For instance, Ward and Meade (2018) showed that it was possible to enhance *responsive* responding, and motivate participants to respond carefully, by leveraging either the sense of hypocrisy or cognitive dissonance. By asking participants to revise their response to follow the instructions upon making an error, it may serve to refocus a participant's attention and avoid subsequent issues of satisficing. Although more empirical research is required to determine the best strategies for implementing survey instructions to prevent satisficing, the existing evidence suggests they are helpful, and at the very least, do not appear harmful.

This dissertation is designed to identify if a modified approach to an IMC attenuates the tendency to straightline. Specifically, this dissertation explores if an instructional manipulation

can be used to combat order effects when asking about willingness to register as an organ donor. These instructions will take two approaches, one reminding participants of the real-world consequences of organ donation registration, and the other using equity theory to make participants think they owe the researcher attentive responses.

Using Real World Consequences to Diminish Straightlining

The first type of attempted survey instruction to diminish straightlining is intended to be adaptable for use with visitors at the MVD. The real-world consequences approach to a revised instructional manipulation will be to remind participants of the very real consequences that their responses can have to encourage participants to engage in more careful responding. Specifically, if someone is made aware that they will soon be asked if they want to register as an organ donor, coupled with a reminder that this question represents their placement on the national donor registry, and they already have extremely favorable attitudes about donation, they should be less likely to straightline.

The approach of using real-world consequences as an instructional manipulation draws heavily on the idea that people who have extremely favorable attitudes about organ donation are more likely to behave consistently with their attitudes, and accordingly, register as donors. This approach relies on the principle that strong attitudes are more stable, more resistant to change, more likely to influence decision making, and more likely to predict future behavior than weak attitudes (Krosnick & Petty, 1995; Petty et al., 2013). Strong attitudes are not as susceptible as weaker attitudes to context effects, where an external or contextual cues typically plays a larger role in shaping expression of an attitude (Lavine et al., 1998). Strong attitudes are also more accessible than weaker attitudes, and thus easier to report or act upon than weaker attitudes

which may necessitate consideration of the external context to be made salient (Fazio, 1986; Lavine et al., 1998).

However, although attitude strength is at the root of this approach, attitude strength is a multidimensional construct, and one that cannot be easily collapsed into a simple measure (Krosnick et al., 1993). This is because there are many antecedents of attitude strength, including vested interest, extremity, certainty, knowledge, importance, elaboration, ambivalence, and accessibility (Howe & Krosnick, 2017) and each of the antecedents of attitude strength tap into different dimensions of attitudes, they do not necessarily share the same origin as other antecedents, and they serve as moderators under different circumstances (Bassili & Krosnick, 2000). For this dissertation, where the context effect from question ordering may have a strong influence, it makes sense to limit the focus to just one element of attitude strength that can easily be measured, and that has empirically been shown to serve as a moderator of context effects. For this dissertation, that aspect of attitude strength will be attitude extremity.

Attitude extremity is one dimension of attitude strength and is "the degree to which the favorability of an individual's attitude diverges from neutral" (Wegener et al., 1995, p. 455). Attitudes that are extreme are less likely to change following a persuasive attempt (Osgood & Tannenbuam, 1955) compared to less extreme attitudes. Extreme attitudes are also associated with more attitude-behavior consistency than less extreme attitudes (Petterson & Dutton, 1975). Bassili and Krosnick (2000) found that attitude extremity was the dimension of attitude strength that most reliably showed moderation with question order effects, but acknowledged that attitude extremity was not always a reliable moderator of other context effects. Thus, we anticipate that the success of this approach will be moderated by attitude extremity (Krosnick & Petty, 1995;

Lavine et al., 1998; Wegener et al., 1995) where those who have extremely favorable attitudes will responsive to the reminder of the real-world implications.

The real-world consequences approach is not expected to work for everyone. This approach is not expected to work for those who do not have strongly favorable attitudes, as this reminder is unlikely to activate attention for those who are not interested in, or supportive of, organ donation. Although there is reason to believe that the vast majority of American adults are in favor of organ donation (HRSA, 2020), it is only those with extremely favorable attitudes that are expected to be responsive to this approach. This approach is intended to be easily adaptable for use in MVDs should it prove successful in increasing donor registrations for those who do possess favorable attitudes. This approach may also work in other contexts if adapted accordingly, but it is ideally suited for a setting where there are real world implications to the responses given, as is the case where responses can dictate placement on the national donor registry.

Using Equity Theory to Diminish Straightlining

The second attempted instructional manipulation is intended to serve as a general methodological tool to enhance the response quality for those conducting survey research. This is a theoretical approach that may work well in an impersonal environment where the researcher is not able to interact with the participant directly but is compensating the participant, as in an MTurk survey environment. However, this is not expected to be a useful approach in an MVD setting, or in research contexts where participants are not compensated monetarily.

The environment in which a participant engages with a survey can influence the responsiveness of that participant, including how controlled the environment is from distractions (Meade & Craig, 2012), whether a survey is completed online or in person (Fang et al., 2014;

Niessen et al., 2016), as well whether a proctor is present during survey completion (Francavilla et al., 2019; Gibson & Bowling, 2019; Green et al., 2001). Thus, to develop a general and methodologically sound instruction to deter straightlining when a survey is being completed in exchange for payment, one type of instruction will rest upon on a theory-based approach using equity theory to diminish the tendency to satisfice.

Equity theory is a special case of Festinger's (1957) dissonance theory (Adams, 1963). Dissonance is a sense of psychological discomfort that occurs when there is a cognitive and behavioral inconsistency, such as when an attitude towards the importance of recycling does not match the behavior of not engaging in recycling (Festinger, 1957). This sense of dissonance creates a drive to reduce that discrepancy, and return to a state of consonance, where cognitions and behaviors are in alignment. Similarly, in equity theory, "inequity exists for Person whenever his perceived job inputs and/or outcomes stand psychologically in an obverse relation to what he perceives are the inputs and/or outcomes of Other" (Adams, 1963, p. 3). Within the context of survey completion, Person could be conceptualized as the participant and Other as the creator of the survey, or the researcher. A participant completing a survey in exchange for payment may then recognize that their effort in completing the survey should be in consonance with the payment they receive. A participant reminded of this exchange may evaluate their own effort in responding, and then strive to have it feel in balance with their payment to regain a sense of consonance. For a participant who felt their effort was low relative to the payment received for that effort, one possible outcome of this inequity would be to increase effort and thus reduce the tendency to straightlining. Although it flows logically that a participant may feel payment requires a certain degree of attention, it is possible that a reminder of the exchange nature of the relationship between participant and respondent may backfire for some participants.

CHAPTER 3: RATIONAL OF STUDIES

The goal of this dissertation is to understand how to increase the number of registered organ donors, and thus reduce the shortage of available organs for transplantation (UNOS, 2022). Specifically, this dissertation was inspired by a concern that the way MVDs ask whether someone wants to register as a donor, and indeed the placement of the donor question itself, may reduce the likelihood that visitors will opt to register as organ donors. The decision of New Mexico MVDs to relocate the donor registration question became the impetus of this dissertation.

An examination of the donor registration designation question in New Mexico MVDs (see Appendix A for a screenshot of this page of questions for how they were asked after April 2, 2020) revealed that visitors to an MVD would need to answer seven questions about their current driving status, past driving infractions, and personal questions about their health before deciding whether or not to register as an organ donor. Further, each visitor to the MVD in New Mexico is asked to make a decision about their donor designation at each visit to the MVD, regardless of their prior decision. For example, someone who chose to register as an organ donor at a previous visit to the MVD is not reminded of that decision, but instead is asked to remake a decision each and every time they renew their driver's license or identification card. The practice of asking the donor designation question *after* all other transaction questions, combined with the lack of empirically supported messages or memory prompts, was noted by Stevens and colleagues (2019) as a potential barrier that may reduce the likelihood of registering because these other questions might make visitors to the MVD think they are ineligible to register. Therefore, Stevens and colleagues suggested that reordering the donor designation question was one way to diminish this barrier.

Study 1 was designed to test the idea that the question placement may influence willingness to register as Stevens and colleagues (2019) suggested. Indeed, this study served as a proof of concept that question order may have an effect on something as crucial as the decision to register as an organ donor. Although Stevens and colleagues were concerned that the question order could make visitors think they are ineligible to register, another reason that the question order may matter is that it may lead visitors to the MVD to engage in satisficing. This common behavior reduces the effort of responding to a series of questions, often by not fully reading or considering all questions and responses (Krosnick, 1991), and if visitors to the MVD are satisficing, they may not even notice the question about donor registration.

The second study in this dissertation examines the effect of moving the question about organ donation registration within the New Mexico MVDs. This change occurred on April 2, 2020 and the MVD graciously offered to share their registration data for the year before and after this change to help determine if moving the donor question itself would effect registration. This study serves as a conceptual replication of Study 1, but in a real-world environment where the dependent variable reflects actual registration behavior.

Study 3 explored whether there were other factors that could influence donor registration willingness when coupled with question order. Specifically, the third study in this dissertation combines what was learned in Study 1, that question order does seems to matter – regardless of why, with a novel approach to increasing donor registration, namely survey instructions. The addition of survey instructions is intended to be especially useful in situations where it may not be possible to change the question order. For instance, if multiple question topics are deemed to be equally important, placing the key question first may not be possible. Although survey instructions have been used in the past to ensure adequate attention, and to detect those

participants who have engaged in problematic survey behavior, using instructions to attempt increase donor registration willingness is a new application.

CHAPTER 4: STUDY 1

This study was inspired by a concern that the questions asked in MVDs, specifically in New Mexico, could minimize the likelihood that a visitor would choose to register as an organ donor. Of particular concern is the fact the New Mexico asked a series of health and legal questions, and then, on the same visual page, asked visitors if they wanted to register as a donor. Some of these health and legal questions include "have you ever been convicted, cited or have a pending traffic violation?," "do you now have a physical or mental problem or disability such as neurological, psychological, epilepsy, cardiovascular, dementia, loss of consciousness, diabetes, hypoglycemia, dizzy spells, or addiction to narcotic drugs or intoxicating liquor?," and "have you ever been convicted of driving under the influence of intoxicating liquor or drugs in New Mexico or any other jurisdiction?"

Stevens and colleagues (2019) noted that these questions, especially before the donor question, may be problematic because they make visitors think they are not eligible to donate, or that respondents have to respond in a certain way out of fear that doing otherwise would prevent them from receiving a license or ID. These questions could also be perceived as excessively invasive, or make it easy for respondents to zone out and not carefully read each question. Regardless, the presence of these questions presents a potential challenge to donor registration rates. This study tested whether the question placement relative to the type of health and legal questions that are often asked in MVDs mattered in an online experiment. By examining the role of question placement and determining if moving this question can increase registrations, we can better understand some aspects of how answering a series of questions may influence decisions, including the decision to register as an organ donor. This idea was tested by randomly assigning

participants to either receive the question about registering as an organ donor either before all the health and legal questions, or after they have responded to those questions.

Hypothesis

H1: Organ donation question placement, relative to the series of health and legal questions, will influence willingness to register as an organ donor. Specifically, participants who view the question about registering as an organ donor following the series of health and legal questions will express less willingness to register than those who see this question before responding to the series of questions.

Method

Participants

Participants were recruited using Amazon Mechanical Turk (MTurk). Both registered donors and non-donors were collected, and treated as separate groups. Due to the applied nature of this research, this was an intentional decision. For those in the realm of organ donation research, the primary interest will be in individuals who are not already registered as organ donors. However, there are several states, including New Mexico, where individuals are asked anew at each visit to the MVD whether they want to register as an organ donor, regardless of their previous donor status. As it was my intention to examine whether question order has an impact on those who are already registered in a subsequent study, I also wanted to ensure that the question order does not negatively impact on expressions of willingness to register in the future for those who are already registered as donors.

For each group, a power analysis using G*Power indicated that a total of 2,358 participants would be needed for a two-tailed binary logistic regression with an odds ratio of 1.25, Pr(Y=1|X =1) H0 = .1, alpha = .05, and 1-beta = .90.

Following the pre-registration (https://osf.io/jbxkv/) I initially collected 6,000 MTurk workers. After data cleaning, I determined that we had 3,234 eligible donors, but only 1,721 eligible non-donors. Thus, I decided to collect additional cases, aiming for 2,600 new cases to reach the target sample size for non-donors, as I estimated only approximately 25% would be eligible non-donors. I was able to collect an additional 1,793 cases before reaching the pre-approved spending limit, and thus needed to stop data collection[1].

A total of 4,770 individuals were organ donors. After data cleaning, 4,097 eligible donors remained in the sample (see Table 1 for exclusion criteria) They ranged in age from 18 to 92 (M = 39.29, SD = 12.67), were mostly female (59.9%) and predominately white (85.3%). A total of 2,693 individuals who were not registered as organ donors were also collected. After data cleaning, 2,188 eligible non-donors remained in the sample (see Table 1 for exclusion criteria). They ranged in age from 18 to 80 (M = 38.70, SD = 12.78), were mostly female (51.6%) and predominately white (70.2%).

Table 1

Study 1 Non-mutually exclusive reasons for participant exclusion from analyses

	Non-Donors 2,693 initially collected	Organ Donors 4,770 initially collected
Leaving most of the survey blank	118	117
Not providing their sex	6	14
Failing one or both hidden attention checks	69	76
Not following written attention check instructions	281	435

[1] This research was graciously supported by HRSA Grant # R39OT29877.

Having an identical worker ID or IP address as another case	31	31
Reported ineligibility to donate	641	--

Note. An additional 330 participants were also excluded for not indicating their donor status, and thus, could not be classified accordingly.

Procedure

Participants were asked to affirm that they meet the criteria for taking the survey and were discouraged from taking it if they did not meet them. Participants were told that the criterion for taking the survey was to provide valid MTurk ID, to follow directions which included typing a specific word into a fill in the blank question, passing attention checks, and taking the survey only once based on MTurk ID. Participants completed a culture check, prior to informed consent, identifying an object (i.e., a flashlight) using the word most common to U.S. residents. After participants gave their informed consent, they were randomly assigned into one of two conditions, and either started or ended the series of health questions with the question about registering as an organ donor.

After completion of these questions, all participants were asked if they were already registered as an organ donor. This was an intentional decision to avoid alerting participants to the goal of this study before exposure to the battery of health questions. Those who were not registered were asked if they believed that they are eligible to be registered. All participants then completed attention checks and demographic questions. For the full survey materials, please see Appendix D.

Materials

Cultural check

The very first page of the survey asked participants to identify a picture of a flashlight. They were asked to select the word they think is most appropriate to describe this image. Any selection other than flashlight (i.e., torch) was accompanied by a warning that they were at increased risk of rejection, and a question about whether they would like to continue the survey. Participants were not excluded on the basis on this question; instead, this question served as a warning system to alert MTurk workers that they may be at an increased risk for not receiving compensation, as only workers responding from within the U.S. were eligible to complete the survey.

Health and Legal Questions

These questions were adapted from the New Mexico Motor Vehicle Department. Originally, these offices asked nine questions about prior tickets or citations, driving impairment, and both physical and mental health. The last question of these original questions asked if the visitor wished to register as an organ donor. However, some of these questions are extremely long and difficult to understand, thus these questions were adapted into manageable, individual questions. The adapted version included eighteen separate questions, see Appendix B for the full list of the adapted questions as they were used in this survey, and Appendix A for a screenshot of the questions as they are asked in New Mexico MVDs.

Donor Status and Eligibility

All participants were asked to verify their current donor status as either registered as an organ donor, or not registered. Those who responded that they were not registered as an organ donor were asked five *yes/no* questions about their eligibility to register, including if they are *too old*, *too young, too sick, are eligible,* or if they have any *religious conflicts* preventing them from registering. These questions on eligibility were adapted from Siegel and colleagues (2015).

These questions intentionally were placed after all the adapted health questions to avoid giving participants the suggestion that this survey was about organ donation registration willingness. Those who said that they were registered as organ donors were not asked these questions based on the assumption that because they were registered, they already believed they were eligible to be registered.

Psychological Disequilibrium Questionnaire (PDQ)

This eight-item, seven-point measure used by Rosenberg and Siegel (2016) and Siegel and Lyrintzis (2015) was used to conceal two attention check questions that asked participants to make certain response selections to ensure that they were paying adequate attention while responding to the questions. This scale was placed toward the end of survey, and other than the two embedded attention check items, the PDQ was not analyzed.

Written Attention Check

All participants viewed a short paragraph informing them that on the next page, there will be a question asking them to type in their favorite food; however, instead of responding to that question, they were asked to type in a specific word.

Demographic Questions

All participants were asked to report on their age, sex, and ethnicity. Age and sex served as covariates in the subsequent analyses for this study, and all demographic variables were used to describe the data set.

Results

After all data was cleaned with listwise deletion, a priori exclusions, and only eligible cases remained (see Table 1 for exclusion criteria), the dataset was spilt into one set of analyzable cases of eligible non-registered individuals, and one set of eligible and registered

individuals. To determine whether the question location affected willingness to register as an organ donor, we ran a binary logistic regression with age and sex as covariates, as stated in our pre-registration (https://osf.io/jbxkv/) separately for those who were registered donors, and those who were eligible non-donors.

Eligible Non-Donors

For those who were not registered as donors (n = 2,188), neither age nor sex was a significant covariate; however, both were retained in the analysis as stated in the preregistration. Condition had a significant effect on registration willingness. Those who saw the question first had 2.01 times the odds of indicating a willingness to register compared to those who saw it last (see Table 2).

Table 2

Study 1 Impact of Condition on Donor Registration Willingness in Those Eligible to Register as Organ Donors Who Are Not Already Registered (*N* = 2,188).

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.01	.005	1.38	1	.241	1.00	.99	1.00
Sex	.16	.12	1.87	1	.172	1.17	.93	1.48
Condition	.70	.12	33.99	1	.000	2.01	1.59	2.54
Constant	-1.90	.21	83.87	1	.000	.150		

Note. Sex is coded 0 = Male, 1 = Female. Condition is coded 0 = Last, 1 = First.

Organ Donors

For those who were already registered as organ donors (n = 4,097) age was a significant covariate such that for each increasing year of age, participants were less likely to suggest a willingness to renew their donor registrations. Sex was also a significant covariate such that men were more likely to demonstrate a willingness to register than women. The condition had a

significant effect on donor registration willingness. Those who saw this question first had 2.57 times the odds of indicating willingness to register compared to those who saw this question at the end of the series (see Table 3).

Table 3

Study 1 Impact of Condition on Donor Registration Willingness in Those Already Registered (*N* = 4,097).

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.02	.003	35.93	1	.000	.98	.98	.99
Sex	-.17	.08	4.83	1	.028	.85	.73	.98
Condition	.95	.08	155.892	1	.000	2.57	2.22	2.99
Constant	1.44	.13	125.52	1	.000	4.24		

Note. Sex is coded 0 = Male, 1 = Female. Condition is coded 0 = Last, 1 = First.

In support of H1, there was a significant effect of condition on donor registration willingness for both donors and non-donors. Those who saw the registration question *following* the health questions had significantly lower willingness to register, and this effect was much larger than anticipated. However, this study was not specifically designed with the intention of studying the mechanism behind the observed order effect. Thus, to explore this mechanism, auxiliary analyses were performed. I recognize that there are rival hypotheses for these outcomes as this study was not designed to optimally evaluate this effect. Nevertheless, I believed the analyses could be a helpful first step for future investigations seeking to explain why the order effect occurred.

Auxiliary Analyses

Research Question: Is the effect of question order on willingness to register as an organ donor likely due to straightlining?

I expect that this effect was due to the specific a type of satisficing called straightlining where individuals respond with the same, or nearly the same, answer to several questions without thoroughly reading each of the questions (Schonlau & Toepoel, 2015). If this effect was the result of straightlining, then it should be the case that that people who respond "no" repeatedly to this series of legal and medical questions should be less likely to respond "yes" to the last question asking participants if they are willing to register as an organ donor. To test this, I used auxiliary analyses where only the participants who saw the question about registration after all other health questions were included. Those who saw the donor question last was the group who demonstrated statistically less willingness to register.

Where the assumed response to each question was "no," there were two possible approaches to analyze the data. The first option was to look for the presence of any "yes" response (i.e., "any yes") to any of the prior health and legal questions. The second option was to look at whether more "yes" responses (i.e., "more yeses") was predictive of donor willingness. I conducted these auxiliary analyses using both the "any yes" and the "more yeses" approaches to yield a clearer picture of the underlaying mechanism.

First, I examined whether there was an effect of the "any yes" approach with a hierarchical binary logistic regression with age and sex as covariates, and the binary independent variable of "any yes" on the dependent variable of donor registration question. In other words, this analysis examines if breaking the expected trend of responding "no" and saying "yes" to any of the prior questions mattered for donor willingness. For eligible non-donors (n = 1,093) who saw the donor question last, whether someone responded "yes" to any of the prior questions was not a significant predictor of willingness to register as an organ donor (see Table 4). For eligible donors (n = 2,033) who saw the donor question last, whether someone said "yes" to any of the

prior questions was again not a significant predictor of willingness to register as an organ donor (see Table 5). This suggests that a single affirmative response to prior questions asking about a health condition or driving violation was not associated with donor registration.

Table 4

Study 1 Impact of "Any Yes" Responses on Previous Questions for Non-Donors on Willingness to Register (*N* = 1,093).

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B) Odds Ratio	95% CI for Exp(B) Lower	Upper
Sex	.12	.19	.42	1	.515	1.13	.78	1.64
Age	-.01	.01	2.73	1	.098	.99	.97	1.00
Any Yes	.09	.20	.21	1	.645	1.10	.74	1.62
Constant	-1.63	.32	25.28	1	.000	.20		

Note. Sex is coded 0 = Male, 1 = Female. Any Yes is coded 0 = Said no to all prior 16 health questions, 1 = Said yes to at least one of the prior 16 health questions.

Table 5

Study 1 Impact of "Any Yes" Responses on Previous Questions for Donors on Willingness to Register (*N* = 2,033).

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B) Odds Ratio	95% CI for Exp(B) Lower	Upper
Sex	-.12	.10	1.53	1	.216	.89	.73	1.07
Age	-.02	.00	15.16	1	.000	.99	.98	.99
Any Yes	.01	.11	.00	1	.965	1.01	.82	1.24
Constant	1.31	.17	59.98	1	.000	3.71		

Note. Sex is coded 0 = Male, 1 = Female. Any Yes is coded 0 = Said no to all prior 16 health questions, 1 = Said yes to at least one of the prior 16 health questions.

Next, I examined whether there was an effect of "more yeses" by creating a composite of the number of "yes" responses given to the preceding questions. In other words, whether there

was an effect of breaking the trend to respond "no" cumulatively, or with more "yes" answers. Both age and sex were included covariates. For non-donors, the number of yes responses was a significant predictor of willingness to register such that each additional yes response corresponded with an increased odds of registering as a donor (see Table 6). The significance of the increased number of affirmative responses to health and legal concerns suggest that for those who are not registered as donors, there is reason to believe that straightlining is the cause of the reduced donation willingness. However, for donors, the number of yes responses was not a significant predictor of willingness to register (see Table 7). There is partial support for straightlining being the mechanism behind the order effect, as donors did not show the same trend as non-donors.

Table 6

Study 1 Impact of "More Yeses" Responses on Previous Questions for Non-Donors in the Last Condition on Willingness to Register (*N* = 1,093).

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B) Odds Ratio	95% CI for Exp(B) Lower	Upper
Sex	.14	.19	.52	1	.472	1.15	.79	1.66
Age	-.02	.01	3.85	1	.050	.98	.97	1.00
More Yeses	.17	.05	13.65	1	.000	1.18	1.08	1.29
Constant	-1.71	.33	27.59	1	.000	.18		

Note. Sex is coded 0 = Male, 1 = Female.

Table 7

Study 1 Impact of "More Yeses" Responses on Previous Questions for Donors in the Last Condition on Willingness to Register (*N* = 2,033).

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B) Odds Ratio	95% CI for Exp(B) Lower	Upper
Sex	.14	.10	1.96	1	.161	.87	.72	1.06

Age	-.01	.00	13.68	1	.000	.99	.98	.99
More Yeses	-.04	.03	1.90	1	.168	.96	.92	1.02
Constant	1.35	.16	68.43	1	.000	3.86		

Note. Sex is coded 0 = Male, 1 = Female.

Discussion

There have been myriad investigations seeking to increase donor registration rates at DMVs. Approaches have included clerk training, point-of decision materials, and video messaging (e.g., Harrison et al., 2008; Rodrigue et al., 2004; Quick et al., 2019). Stevens and colleagues (2019) recently noted that the driver's license application itself may be influencing donor registration rates. In response to this call for experimental studies to assess this possibility, this study served as an experimental assessment of the impact of question order on willingness to register as a donor. Results indicated that questions that precede the donor registration request can indeed influence willingness to register as an organ donor.

The current study randomly assigned participants to receive a question about donor registration willingness either before or after a series of health and legal inquiries. Whether focused on currently registered donors (OR = 2.57) or non-donors (OR = 2.01), there was a significant effect of question placement on willingness to register. Highlighting the strength of this effect, the effect size was consistent with a prior online experiment that exposed participants to videos (OR = 1.86; Thornton et al., 2019) and to an online experiment with autobiographical recall (OR = 1.94; Blazek & Siegel, 2018). Moreover, the potentially minimal cost associated with changing the question order driver's license application is in accord with Robitaille and colleagues' (2021) call for more saleable and cost-effective interventions. Altogether, these results support Stevens and colleagues (2019) theorizing about the potential importance of the

driver's license application as an intervention target, and the auxiliary analyses suggest that the reason behind the order effect may be due at least in part to straightlining.

Limitations

There are some limitations to this study that should be considered. First, this research was conducted on MTurk, and not in a DMV. Although MTurk is crowdsourcing tool that is a convenient and cost-effective data collection method that may be akin to other traditional methods of data collection (Buhrmester et al., 2011), it is possible that participants may have paid more attention if the questions were indeed asked in the DMV, and as such the effect size might not reflect the reality in a true DMV setting. Second, although registration willingness might predict registration behavior, it is not synonymous with actual behavior (Ajzen, 1991). Third, this study was not designed to understand the mechanism behind this observed order effect, although the auxiliary analyses were intended to explore this mechanism. The findings of these analyses need to be considered in relation to possible rival hypotheses.

Future Directions

The most critical future direction is to investigate if changing the question location in DMVs replicates the results demonstrated in this study. Simultaneously, researchers should begin to explore the totality of DMV applications. Question order, the focus on this study, is just one of many survey principles that can potentially influence responses. Applying the most basic rules of survey creation to the DMV application could pay substantial dividends. DMV applications should be reviewed from top to bottom to learn how registration rates can be maximized.

CHAPTER 5: STUDY 2

Understanding how question order and straightlining may affect the response to the donor registration question is essential. The first study focused on an online sample from MTurk. The donor question did not reflect real behavior, but instead served as a proxy for behavior. Although informative of registration intentions, Study 1 had only a proxy of registration behavior, and because it occurred online, the responses do not have the same real-world implications they would to the same questions asked in an MVD. Study 1 did serve as a proof of concept for Study 2, which took advantage of a research partnership with New Mexico MVD and Donor Services. New Mexico MVD made the statewide decision to relocate the question from last position, following all other health and legal questions, to first position. Study 2 evaluated the effect that moving this question had on registration behavior in the place most commonly associated with organ donation registration decisions -- the MVD. To understand how moving the question about organ donor registration affected actual rates of registration as organ donors, this study focused on a period of two years, the year before the question was moved to the beginning of the health and legal questions, and the year following this change. No other changes in process to register as an organ donor or receive a driver's license or ID card took place during this time. However, it is important to note that the ongoing COVID-19 pandemic began shortly before the relocation of the organ donor question, which occurred on April 2, 2020. Indeed, although lockdown dates varied across the country, a stay-at-home order went into effect in New Mexico on March 23, 2020 (Albuquerque Journal, 2021). It is difficult to quantify or fully understand the long-term effects the pandemic may have on research, but worth noting that studies conducted within this period may not generalize to those outside it, as this certainly represents an atypical time. Additionally, the COVID-19 pandemic represents a major threat to the internal validity of this

quasi-experimental study. The change in question location occurred simultaneously as the global pandemic, which makes it very difficult to tease apart the effect of the change from the effect of the pandemic. For instance, one possible concern is that early in the pandemic uncertainty levels were especially high. Those who did need to venture out for a visit to the MVD were likely very uncomfortable doing so, and they may have been preoccupied with concern over the possibility of their own or a loved one's imminent death that may have altered the way the approached the decision about whether to register as an organ donor. This history effect is an inherent limitation of this study, and does serve as a rival hypothesis to all findings.

Hypothesis

H1: The placement of the donor registration question will influence donor registration rates. Rates will be higher among those who receive the donor registration question before the health/legal questions compared to those who receive the donor registration question after the health/legal questions.

Research Question: Are there differences between donors and non-donors on the magnitude of the effect of condition?

Method

Data Set for Analyses

To assess the impact of the change in donor registrations rates after the move of the question about registration that went into effect statewide on April 2, 2020, I used secondary data in interrupted time series design, and analyzed the records of MVD visitors in New Mexico who entered an office between April 2, 2019 and April 1, 2021. The New Mexico MVD provided a dataset of all license and ID transactions during the two-year intervention period. This secondary dataset includes date of visit, MVD location, age, sex, and donor status. To account for the fact

that an intervention aimed to increase donor registrations was occurring in nine motor vehicle offices during a portion of this time (see Siegel et al., 2021 for a description of that intervention and a list of the specific locations), I covaried for office location. Specifically, I controlled for whether the data came from one of these nine offices or from any other office in the state.

All MVD visitors in New Mexico are asked if they wish to register at each license or ID transaction, regardless of prior registration status, making this an optimal place to assess whether the change in question location had an influence on subsequent registration decisions. Although the MVD report included only one donor status, this was recoded to include two donor statuses: one for the donor status prior to the MVD visit, and one donor status following the current visit to the MVD. The prior donor status includes those who are unregistered (those who never registered, removed previously, or had a new registration) and those who registered (those who removed today, renewed today, or renewed continuous). The exit donor status indicates the post-transaction status as either unregistered (those who never registered, removed previous, or removed today) or registered (those who were a new registration, renewed today, or renewed continuous).

Participants

This investigation was limited to visitors 18 or older who engaged in driver's license and/or ID card transactions at DMV locations during the intervention period. The decision to limit to age to those 18 or older was made in concert with Claremont Graduate University's IRB. This dataset includes 1,029,361 transactions. Of these, individuals who visited during the intervention period ranged in age from 18 to 113 (M = 48.65, SD = 20.78), almost exactly half were male (50.1%), 52.8% of the sample were registered as organ donors when they entered the MVD, and 55.1% were registered as organ donors when they left the MVD.

Results

To analyze the data from this interrupted time series design, I used two segmented binary regression analyses and planned simple slope analyses to compare the data for the state before and after the movement of the question (see https://osf.io/xsuam/ for the Open Science Framework preregistration). A segmented regression is designed to compare "the slopes over time between preintervention and postintervention periods" (Mascha & Sessler, 2019, p. 619).

The primary regression included age, sex, office location, prior donor status, and time. Age, sex, office location, and prior donor status were entered on block one. The time variable, captured as continuous date, was added on block two. The time variable was between April 1, 2019 and March 30, 2021, and also reflected the question placement intervention. All dates before April 2, 2020 had the donor question in the last position and all dates April 2, 2020 and after had the donor question in the first position. The regression forced a segmentation to correspond with April 2, 2020 to allow for an examination of fluctuation in the time period before the change and in the time period following it. See Table 8 for all pertinent statistical details. This regression replicated with segmented regression an approach taken in a prior publication with a similar dataset (Siegel et al., 2021) by first controlling for all covariates and then looking for an effect of condition, see Figure 1.

Table 8

Study 2 Segmented Regression

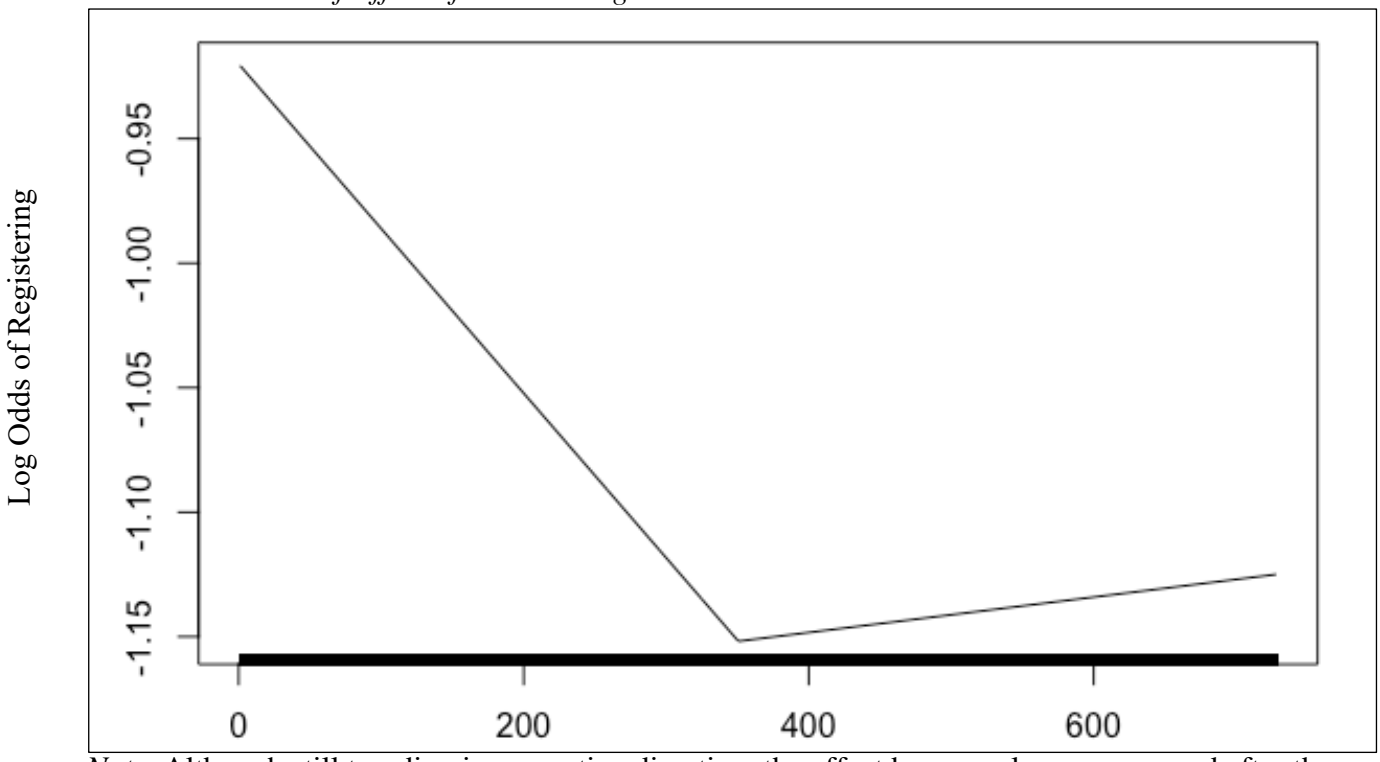
	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.01	.000	-96.54	1	<.001	.99	.99	.99
Sex	.16	.006	26.16	1	<.001	1.17	1.15	1.18
Office Location	.23	.008	30.78	1	<.001	1.26	1.25	1.28
Prior Donor Status	3.86	.006	635.91	1	<.001	47.28	46.73	47.85
Date in Before	-.001	.000	-15.91	364	<.001	1.00	1.00	1.00

Date in After	.001	.000	13.34	364	<.001	1.00	1.00	1.00
Intercept	-0.92	.012	-77.23	1	<.001	.40		

Note. Sex is coded 0 = Male, 1 = Female. Office Location is coded 0 = not an office we previously intervened in, 1 = an office we previously intervened in. Prior Donor status 0 = came in unregistered, 1 = came in registered.

Figure 1

Downward Trend of Effect of Date on Registration



Note. Although still trending in a negative direction, the effect becomes less pronounced after the change in question location, where the segmentation occurred.

When controlling for everything else in the model, age was significant such that each increasing year in age corresponds with a significant but small decrease in odds of registering as a donor. Sex was significant such that women had greater odds of registering than men. Office location was significant such that those who visited an MVD office in which Siegel and colleagues (2021; see for the campaign intervention details) ran donor campaigns had greater

odds of leaving registered compared to those who visited an MVD in which Siegel and colleagues had not previously intervened.

In this analysis, the effect of the date in the before period of time was also statistically significant, but did not appear to have a notable direction of effect on the odds of registering. In other words, although it was statistically significant, the odds of registering did not deviate from 1.00 at the hundredth decimal point. However, using the Wald statistic does suggest that the direction to this effect, and implies that it is a very small effect. This could be a result of the large sample size, and suggests that time was an important element in odds of registering, but that this effect was so small a day to day change was not a meaningful unit of time in which to examine change. Likewise, the segmented regression demonstrated that in the period following the relocation of question placement, date was again statistically significant but without a noticeable effect, or deviation away from odds of 1.00. This provides partial support for the hypothesis that placement of the donor registration question would influence donor registration rates; however, there is not a meaningful directionality of this effect. This does not mean that the effect cannot be practically meaningful. Given the very small size of the effect, but the importance of the topic, and the number of people, this may well suggest a small but practically important effect.

To better understand what effect the intervention had, I also conducted the preregistered examination of the effect of the interaction between entrance status and the continuous date variable (see Table 9 for all pertinent statistics). As in the previous segmented regression analysis, age, sex, office location, and prior donor status were all significant and in the same direction. Of note, the effect of donor status was somewhat diminished when the interaction term was in the equation, but this is as expected. When controlling for everything else in the model,

the effect of the interaction between data and donor status was also statistically significant, but without an observable difference in effect.

Table 9

Study 2 Segmented Regression with Interaction Term

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.01	.000	-96.09	1	<.001	.99	.99	.99
Sex	.16	.005	26.33	1	<.001	1.17	1.16	1.18
Office Location	.24	.008	31.1	1	<.001	1.26	1.25	1.28
Prior Donor Status	3.08	.019	165.66	1	<.001	21.78	21.00	22.58
Date in Before	-.001	.000	-27.26	364	<.001	1.00	1.00	1.00
Date in After	.001	.000	11.78	364	<.001	1.00	1.00	1.00
Donor Status*Date	.001	.000	43.37		<.001	1.00	1.00	1.00
Intercept	-0.742	.012	-60.49	1	<.001	.48		

Note. Sex is coded 0 = Male, 1 = Female. Office Location is coded 0 = not an office we previously intervened in, 1 = an office we previously intervened in. Prior Donor status 0 = came in unregistered, 1 = came in registered.

A simple slopes analysis allowed for a closer examination of the variables in the interaction between date and prior donor status. First, when looking only at those who entered as non-donors (see Table 10), date is again statistically significant, but without an observable difference in odds of leaving registered. This is also true for those who came in already registered (see Table 11).

Table 10

Study 2 Simple Slopes – Non-Donors

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.000	.000	-3.75	1	<.001	1.00	1.00	1.00
Sex	.17	.009	18.56	1	<.001	1.18	1.16	1.20
Office Location	.12	.012	10.12	1	<.001	1.12	1.10	1.15

Date	.000	.000	17.23	364	<.001	1.00	1.00	1.00
Intercept	1.98	.015	132.21	1	<.001	7.26		

Table 11

Study 2 Simple Slopes – Donors

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.01	.000	-138.51	1	<.001	.99	.99	.99
Sex	.23	.004	56.37	1	<.001	1.25	1.24	1.26
Office Location	.17	.005	33.71	1	<.001	1.19	1.18	1.20
Date	-.000	.000	-9.61	364	<.001	1.00	1.00	1.00
Intercept	-0.75	.007	.007	1	<.001	2.13		

In a simple slopes analysis of the time period before the intervention (i.e., when the donor question was last in the series of health and legal questions), the effect of prior donor status is both statistically significant and has a meaningful effect (see Table 12), where for those who came in registered, the odds of leaving registered are 34.66 times the odds of leaving unregistered. However, in the time period following the intervention (i.e., after the donor question has been relocated to precede all other health and legal questions) the odds for those who came in registered also leaving registered was nearly double what it was in the time period before the intervention, now at 64.46 (see Table 13). Other interesting things to note include that the effect of age was similar in both time periods. The effect of sex was larger in the time period before than in the after. Office location had a larger effect in the time period after the intervention than in the time period before, again suggesting that the COVID-19 pandemic may have influenced the effectives of any donor campaign.

Table 12

Study 2 Simple Slopes – Before the Intervention

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.01	.000	-68.02	1	<.001	.99	.99	.99
Sex	.19	.008	23.58	1	<.001	1.21	1.19	1.23
Office Location	.11	.009	12.86	1	<.001	1.12	1.10	1.14
Prior Donor Status	3.55	.008	428.38	1	<.001	34.66	34.10	35.22
Intercept	-0.91	.012	-79.30	1	<.001	.40		

Note. Sex is coded 0 = Male, 1 = Female. Office Location is coded 0 = not an office we previously intervened in, 1 = an office we previously intervened in. Prior Donor status 0 = came in unregistered, 1 = came in registered.

Table 13

Study 2 Simple Slopes – After the Intervention

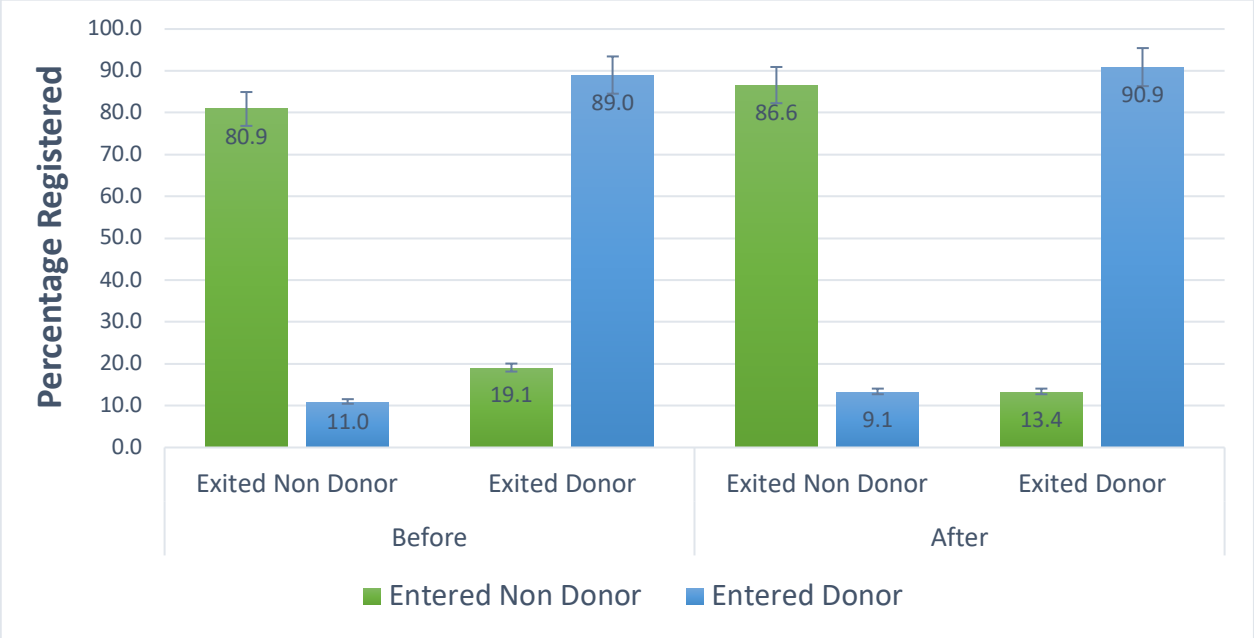
	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.014	.000	-68.99	1	<.001	.99	.99	.99
Sex	.12	.009	13.57	1	<.001	1.13	1.11	1.15
Office Location	.56	.014	39.86	1	<.001	1.76	1.71	1.81
Prior Donor Status	4.18	.009	467.76	1	<.001	65.60	64.46	66.76
Intercept	-1.28	.012	-105.34	1	<.001	.28		

To better understand the interaction between prior donor status and time, χ^2 test of independence demonstrated that when controlling for prior donor status, there was a statistically significant effect of the intervention on exit donor status during the time period before the intervention, $\chi^2(1) = 245042.50$ p <.001, and in the time period following it, $\chi^2(1) = 322363.35$, p <.001. Specifically, following the relocation of the question placement, the intervention helped retain registered organ donors. In other words, 89.0% of people who came in as registered organ donors prior to the intervention also left as registered donors compared to 90.9% of those who

came in and left as registered donors following the intervention, representing a 2.13 percent change increase (see Figure 2). However, the intervention also seemed to retain non-organ donor status as 80.9% of those who came in prior to the intervention as unregistered also left unregistered compared to 86.6% of those who came in and left unregistered following the intervention, representing a 7.05 percentage change increase. In short, the change of question location from last position to first seemed to reinforce prior registration decisions, and the importance of prior decision only intensified following this change intervention.

Figure 2

Percentage of Donor Registrations by Entrance Status and Time Period



Note. Before refers to the time period before the donor question was relocated from last position. After refers to the time period following this relocation when the donor question was in first position.

Exploratory Analyses

To further tease apart the effect of the intervention, I also examined the effect of months on exit status with a binary logistic regression. By examining the effect of month, I hoped to

reduce some of the noise observed in the prior analyses with a continuous time variable. This analysis revealed that age, sex, office location, and prior donor status all continued to influence the likelihood that someone would leave registered as a donor (see Table 14 and Figures 3 and 4). It also revealed that there was a statistically significant, but small decrease in the odds of leaving registered for each progressing month, Wald (1) = 266.59, $p < .001$, Exp(B) = .99. In other words, throughout the two-year intervention period, each month that passed resulted in a reduction in the odds of leaving registered compared to the prior month.

Table 14

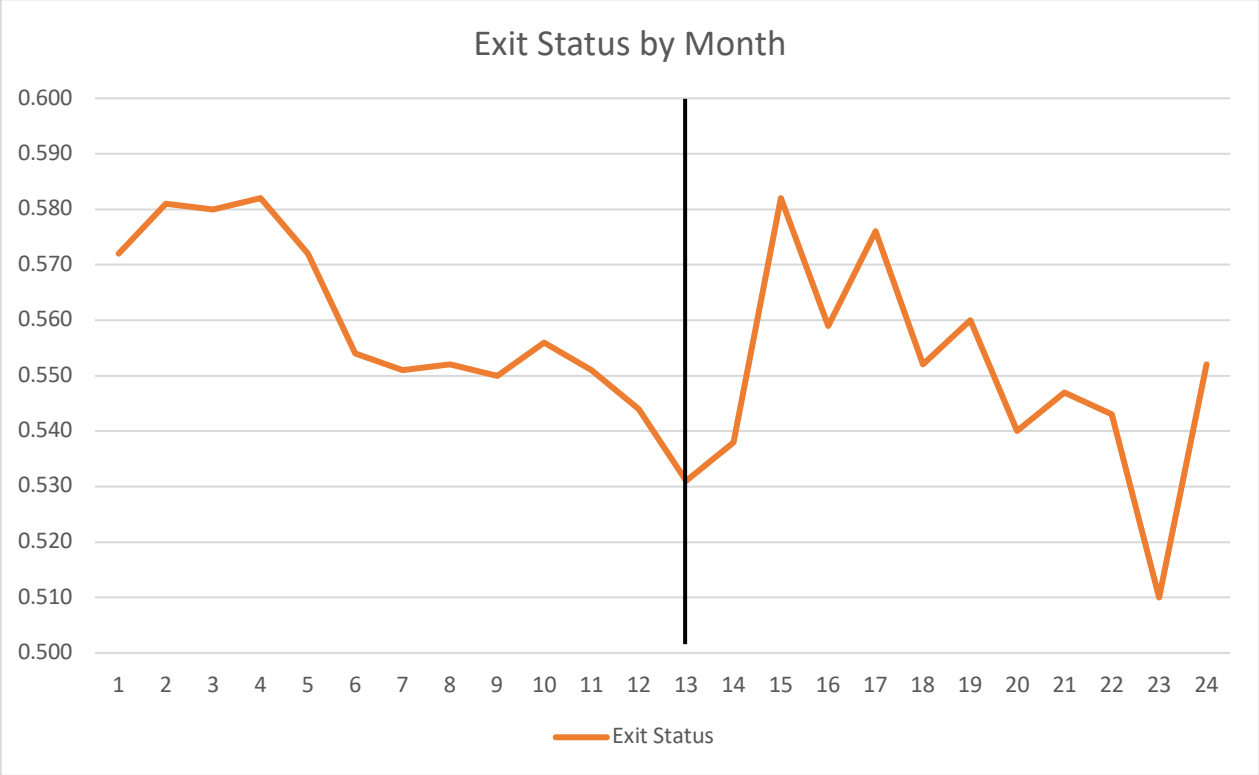
Study 2 – Exploratory Analysis of Months

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.01	.000	9416.03	1	<.001	.99	.99	.99
Sex	.16	.006	687.05	1	<.001	1.17	1.16	1.18
Office Location	.24	.008	971.90	1	<.001	1.27	1.25	1.28
Prior Donor Status	3.85	.006	404620.92	1	<.001	47.19	46.63	47.76
Months	-.01	.000	266.59	1	<.001	.99	.99	.99
Intercept	-1.00	.010	9806.31	1	<.001	.369		

Note. Sex is coded 0 = Male, 1 = Female. Office Location is coded 0 = not an office we previously intervened in, 1 = an office we previously intervened in. Prior Donor status 0 = came in unregistered, 1 = came in registered.

Figure 3

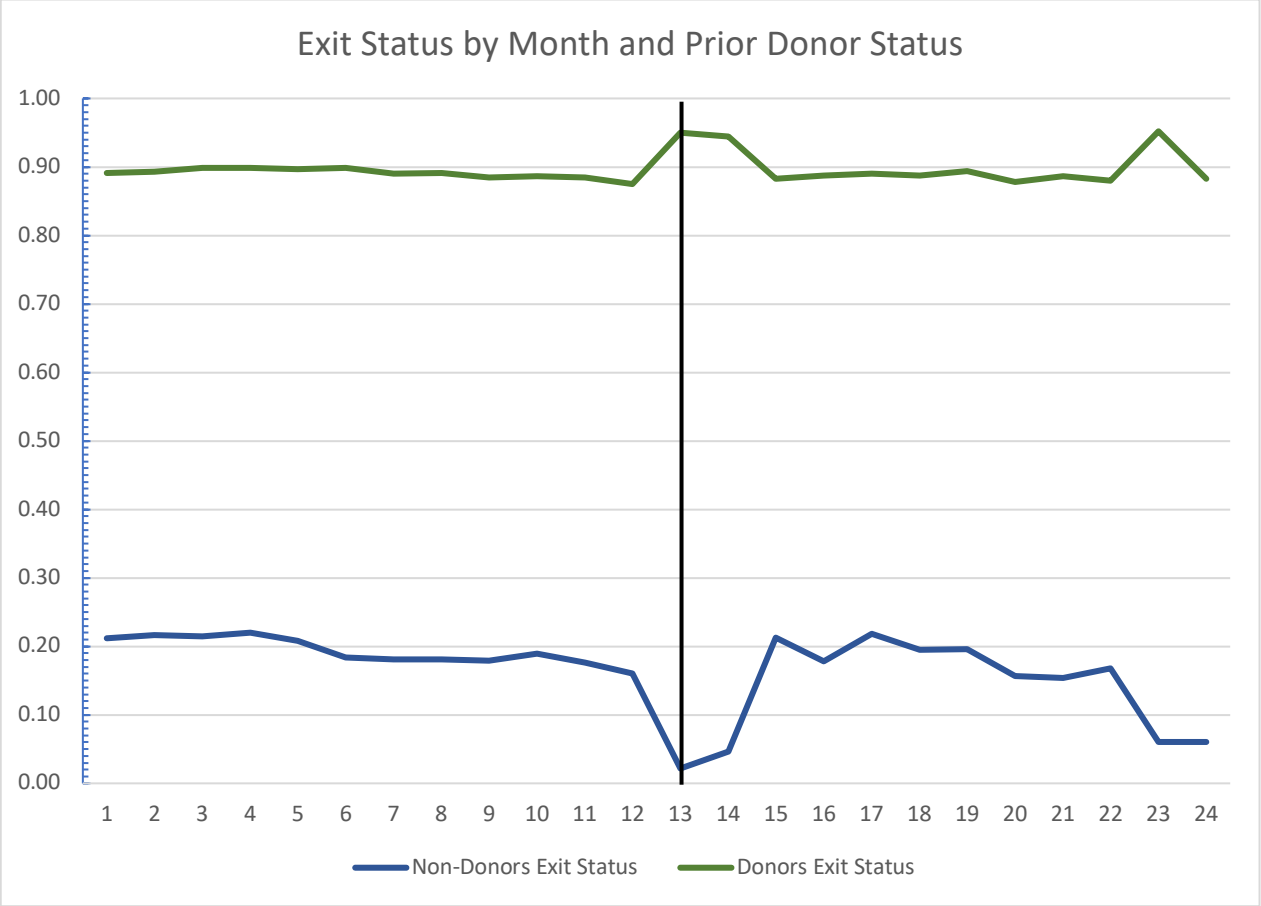
Effect of Month on Exit Donor Status for All Visitors



Note. The vertical line indicates when the question was relocated from last to first position.

Figure 4

Effect of Month on Exit Donor Status by Prior Donor Status



Note. The vertical line indicates when the question was relocated from last to first position.

To control for the effect of time period when examining the influence of month, an additional binary logistic regression controlling for age, sex, office location, and prior donor status suggested that the odds of registering actually improved when the question was relocated, Wald (1) = 22.90, $p < .001$, Exp(B) = 1.06, but the effect of months continued to trend down, Wald (1) = 159.65, $p < .001$, Exp(B) = .99 (see Table 15). In other words, when controlling for the overall downward trend of month on registration, relocating the question had a small, but significant effect such that the odds of leaving registered were greater after the question had been relocated to the first position.

Table 15

Study 2 – Exploratory Analysis of Time Period and Months

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.01	.000	9432.16	1	<.001	.99	.99	.99
Sex	.16	.006	648.61	1	<.001	1.17	1.16	1.18
Office Location	.24	.008	994.86	1	<.001	1.27	1.25	1.29
Prior Donor Status	3.85	.006	404543.63	1	<.001	47.18	46.62	47.74
Time Period	.06	.012	22.90	1	<.001	1.06	1.04	1.08
Months	-.01	.001	159.65	1	<.001	.99	.99	.99
Intercept	-1.04	.013	6346.11	1	<.001	.354		

Note. Sex is coded 0 = Male, 1 = Female. Office Location is coded 0 = not an office we previously intervened in, 1 = an office we previously intervened in. Prior Donor status 0 = came in unregistered, 1 = came in registered. Time Period is coded 0 = before change/question in last, 1 = after change/question listed first.

Discussion

Knowing how question order influences donation decisions, especially in the place where most people make the decision about whether to register as a donor, is important. This study took advantage of a procedural change that occurred in New Mexico by using secondary data and an interrupted time series design to examine the impact on registration decisions with real registration behavioral data collected throughout the state of New Mexico between April 1, 2019 and March 30, 2021. However, under the unusual circumstances of a global pandemic beginning almost simultaneously, and indeed the start of a stay-at-home order for the New Mexico beginning on March 23, 2020 (Albuquerque Journal, 2021) it is important to note that all reported effects could also be the result of the pandemic, and not the change in question location.

Although it is clear that relocating the donation question had a significant effect on registration, determining a strong, precise, and clear directionally of that effect proved much harder to detect. In the planned analyses, date was significant, but it did not yield any directional effect for those who began their visit to the MVD as either registered donors or non-donors. However, the planned examination of the simple slopes revealed some very interesting, and unexpected, findings. Namely, although prior donor status has been found to consistently be the biggest predictor of donor status when MVD visitors must decide their registration status at each visit (Siegel et al., 2021), this sizeable effect in the time period prior to the to the donor question being relocated to first position nearly doubled in the time period following this change. Specifically, the odds of those who came in registered also leaving registered increased from 34.66 to 64.46. Although this could possibly suggest an increase consistency with past registration status decisions, especially for donors, this is likely an effect of the COVID-19 pandemic. Indeed, Wotring and colleagues (2022) noted that "with the global COVID-19 pandemic, rising medical mistrust, declining altruism, lower social cohesion, and increasing self-interests, organ donation and procurement may become even more challenging" (p. 9). Regardless of the reason it occurred, in the time period following the change, during the first year of the pandemic, people were more likely to leave the MVD with a donor designation status that matched their previous decision status, and this increase was larger for the non-donors (7% increase) than the donors (2% increase).

However, as the primary goal of this study was to better understand the extent to which the question placement either increased or decreased the odds of people registering as an organ donor, and the use of date as a continuous variable did not provide meaningful directionality to this effect, I also conducted a set of exploratory analyses using months instead of individual

days. These analyses revealed that throughout the entire duration of this secondary analysis, including the year prior to the change in question location and onset of the COVID-19 pandemic, there was a small but significant decrease in the odds of registering as an organ donor for each passing month. In other words, over time, the odds that someone would choose to register as an organ donor was dropping, even before the New Mexico MVDs decided to relocate the donor question, or before the onset of the COVID-19 pandemic. However, when I controlled for this overall decline in odds of registering by months (OR = .99), there was a small but significant increase in the odds of registering (OR = 1.06). In other words, when taking the overall declining trend into consideration, the change in question location from last position to first position actually seemed to attenuate this trend of decreasing odds in registration. Therefore, even though the overall odds of registering were still trending down, moving the question to first place did slow down this trend. Although COVID-19 remains a rival hypothesis, these data also support the moving the question could have had a positive influence.

In addition to the main outcome of interest, this study also found support for the idea that older individuals are less likely to register than younger, as has been observed previously in New Mexico MVDs (Schulz et al., 2018; Siegel et al., 2021), nationally (Alvaro et al., 2005), and internationally (Reubsaet et al., 2001; Wakefield et al., 2010) where older individuals are persistently less likely to register as donors relative to younger individuals. Again, as often observed, this study also found support for women being more likely to register as donors than men (i.e., Siegel et al., 2021; Wakefield et al., 2010). It also appeared that the office location mattered. People who visited an MVD office in which Siegel and colleagues (2021; see for the campaign intervention details) had previously run donor campaigns were more likely to leave as registered donors than in non-campaign offices, even though these campaigns had ended prior to

the change of question location. Again, like all the results found in this study, a reason that this could have occurred is because of the COVID-19 pandemic. Specifically for this findings, even though all active campaigns were terminated prior to the statewide lockdown, all intervention materials were left in place, and thus may have continued to have an on effect on donor registrations.

Limitations

There are several limitations of this study to consider. First, this dataset assumes that each entry is an individual that is visiting the MVD only once during the data collection period. However, it is conceivable that some individuals may have visited the MVD more than once, and some may have visited both when the donor registration question was listed in first and last position. The dataset did not include any means of checking or controlling for this, and thus this is a limitation as repeat visits by some, but not all, MVD customers may influence the findings.

Second, and more troubling, is that the intervention coincided almost identically with the COVID-19 pandemic and initial lockdown beginning in the United States in March 2020, and March 23 within New Mexico (Albuquerque Journal, 2021). Although I attempted to tease apart the influence of time during both the pre and post intervention periods, the near identical dates of lockdown (March 23, 2020) and question relocation (April 2, 2020) make it difficult to discern to what extent changes in the post intervention period are fully the result of the intervention itself, or the result of the pandemic. Indeed, although the segmented regression forced a comparison between the rates of registration in the before intervention period to the after, the model estimated the best breakpoint to be day 350 of the intervention, which corresponds to March 16, 2020. This was five days after the first four positive tests of coronavirus were confirmed in New Mexico, three days after the declaration of a national pandemic emergency, and the same day

that schools in New Mexico began a temporary three-week closure (Albuquerque Journal, 2021). Likewise, the date the change in question location occurred statewide, April 2, 2020, was also the day that New Mexico began urging all residents to weak masks in public (Albuquerque Journal, 2021). Thus, it is an unfortunate reality that at the very same time a procedural change occurred, a global event likely overshadowed observation of the full extent to which this procedural change affected organ donation registrations.

Future Directions

A longer scope examination of New Mexico should be undertaken to include a time period following the cessation of the COVID-19 pandemic. Adding in several years of data on either side of the procedural change, as well as zooming out to considering larger chunks of time, may help capture a clearer picture of how this change influenced donor registrations statewide. If other state MVDs were considering such a change, this too could provide ripe ground to examine whether this is a worthwhile approach forward to increase donor registrations nationally. Further, an examination of other factors that might be present in the MVD itself, including the instruction on the application itself, would be a useful contribution.

CHAPTER 6: STUDY 3

Study 3 was designed to be a conceptual replication of Study 1 while also adding an additional experimental component. As in Study 1, participants were randomly assigned to see the question about registering as an organ donor either as the first question in the series of health and legal questions, or as the last. However, although changing the question order proved a very effective way of increasing willingness to register online in Study 1, it is important to replicate work multiple times (Coles et al., 2018). Thus, this study also aimed to identify other means of reducing a potential order effect, namely, the use of manipulated survey instructions. Following a screener survey in which only participants who carefully responded to both bot and attention checks were invited to participate in the main survey, participants were randomly assigned to see one of three types of instructions developed to reduce careless responding. Either, participants saw a no instruction control, an equity instruction that reminded participants that they are responding to this survey in exchange for money, or a real-word instruction that reminded participants that the answers they give can have real implications outside the survey environment. Taken together, this study has the potential to be an important contribution to those who engage in online surveys and those who aim to increase donor registration.

Hypothesis

H1: There will be a main effect of question order on willingness to register as an organ donor. Specifically, receiving a question about donor registration at the start, rather than at the end of a battery of health questions, will result in higher willingness to register as an organ donor.

H2: There will be a main effect of instruction type on willingness to register as an organ donor.

H2a: Participants who receive an equity instruction will be more likely to indicate a willingness to register compared to participants in the control condition.

H2b: Participants who receive the real-world implications instruction will be more likely to indicate a willingness to register compared to participants in the control condition.

Research Question: Does willingness to register as an organ donor differ based on which instruction type (i.e., equity vs. real-world consequences) a participant receives?

H3: There will be a two-way interaction effect between question order and type of instruction. Specifically, the instructions are expected to have less impact on participants in the first condition. However, for participants who are presented the donor question last, the effect of the instructions will result in more willingness to register than for those in the first condition

H4: There will be a two-way interaction between attitude extremity and instruction type. Specifically, for participants who have extremely favorable attitudes, the real-world implications instruction will result in more willingness to register than for participants who do not have extremely favorable attitudes, as compared to those who receive either the control or the equity instruction.

H5: There will be a two-way interaction between attitude extremity and order of donor question. Specifically, for participants who have extremely favorable attitudes, the order of question will have less impact on willingness to register as an organ donor than for participants who do not have extremely favorable attitudes.

H6: There will be a three-way interaction between attitude extremity, question order, and instruction condition. Specifically, for those with extreme attitudes, there will be no differences in registration based on instruction type and question location. However, for those who do not have extreme attitudes, there is an expected two-way interaction between question order and type of instruction. These instructions are expected to have less impact on participants in the first

condition, but for participants who are presented the donor question last, the effect of the instructions will result in more willingness to register than for those in the first condition.

Method

Participants

As in Study 1, all participants were recruited on Amazon Mechanical Turk (MTurk). Again, both registered and non-registered individuals were collected together but treated as separate groups for analyses. A power analysis conducted using G*Power suggested that for both donors and non-donors a total of 361 participants would be needed for a two-tailed binary logistic regression with an odds ratio of 1.65, Pr(Y=1|X =1) H0 = .1, alpha = .05, and 1-beta = .95. The estimated effect size was based off a conservative estimate from Study 1, but accounting for a reduction in anticipated effect for the survey instructions.

After pre-registering this study on Open Science Framework (https://osf.io/rq49g/) I initially collected 1,100 MTurk workers. I reasoned that approximately 35% of Mturk workers would not pass the attention check survey and agree to participate in the main survey, and because MTurk typically has more donors than non-donors, I intentionally started my collection assuming I would need to over collect from non-donors to arrive at the correct number of donors. However, after collecting 1,100 workers, I realized that I would be short on eligible non-donors in my final sample, and thus collected additional workers prior to resuming data cleaning and analysis. Thus, I collected a total of 1,501 MTurk workers.

I removed participants from the sample for a number of a priori reasons. It is possible that participants would have multiple reasons to be excluded, but each was coded only with one exclusion criteria. I removed participants who stated that they were not at least 18 years old (n = 1), had a duplicate IP address as another case (n = 22), did not qualify to participate in the main

survey (n = 180), had mismatched demographics between the screener survey and the main survey (n = 7), did not report a binary sex (n = 8), took more than three standard deviations longer in time than others from the same donor status to complete the survey (n = 21)[2], said they were not eligible to register as an organ donor (n = 142), not providing donor status (n = 7), or for failing the fill-in-the-blank attention check in the main survey (n = 104)[3]. After data cleaning, 1,009 participants remained in the sample.

Of these, 646 indicated that they were already registered as organ donors. The donors ranged in age from 19 to 81 (*M* = 41.45, *SD* = 12.45). 401 (62.1%) of the donors were female and 245 (39.7%) were male. A vast majority of the donors (n = 553; 85.6%) self-described as White, and an additional 32 (5.0%) as Black, 48 (7.4%) as Hispanic, and 39 (6.0%) as Asian, 15 as Native American (2.3%), five as Pacific Islander (0.8%) and one person (0.2%) preferred to self-describe as "other."

There were an additional 363 eligible non-donors in the sample. They ranged in age from 19 to 78 (*M* = 39.39, *SD* = 12.04). Of these, 197 (54.3%) were female and 166 (45.7%) were male. A majority of the non-donors (n = 249; 68.6%) self-described as White, and an additional 63 (17.4%) as Black, 28 (7.7%) as Hispanic, and 41 (11.3%) as Asian, five as Native American (1.4%), one as Pacific Islander (0.3%) and one person (0.3%) preferred to self-describe as "other."

[2] Due to the additional questions asked of non-donors about their registration status, the average time was calculated separately for the donors and non-donors and exclusions made based on taking more than three standard deviations above the average time for their donor designation group.

[3] The 104 individuals who failed the fill-in-the-blank attention check in the main survey, but qualified for every other exclusion reason, were retained to be used in the auxiliary analyses, but were not included in the main analyses.

Procedure

Participants were recruited from MTurk and asked to participate in a short survey in exchange for $0.10. The first part of the survey was a screener survey which was used to identify participants who were paying adequate attention to the survey items before moving onto the main survey. This screener required participants to complete a captcha check, a drag-and-drop question requiring participants to drag four separate items into the correct location with three choices, and an instructed response item embedded into a three-item scale. Participants also completed three demographic questions. Participants who successfully completed the bot check and attention check items were asked if they wanted to participate in a bonus survey for an additional $0.50. Participants who said yes were required to complete a separate informed consent before progressing into the main survey.

After providing informed consent the second time, participants were randomly assigned into one of six conditions. These conditions were comprised of the cross between question order (first, last) and instruction type (control/no instruction, equity, real-world; see Appendix C). After reading the instruction, and affirming that they understood the instruction and would comply, participants received the same 18 health and legal questions from Study 1 (see Appendix B) that either started or ended with the question about willingness to register as an organ donor. Participants were then asked three questions about their attitudes towards registering as a donor, whether or not they were registered as a donor, and those who were not donors were asked if they believed they were eligible to register as a donor. Finally, all participants completed an additional fill-in-the-blank attention check and demographic questions. For the full survey materials, please see Appendix E.

Materials

Screener Survey Items

Prior to completing the main survey, all participants were recruited on MTurk for a one-minute survey paying $0.10. The sole purpose of this screener survey was to ensure that no computer bots were completing the survey and that participants were paying attention to the questions asked. After completing informed consent, the specific questions required all participants to give their MTurk ID, complete a Captcha check, complete a four-item instructed response drag-and-drop where participants were asked to place four items into the correct bin from three possible options, and a three-item multiple choice scale which included one instructed response (adapted from Marshburn & Siegel, 2022). After these questions, all participants were asked to complete three demographic questions assessing participant age, sex, and ethnicity. Only participants who correctly followed the instructions, including providing their MTurk ID, passing the Captcha check, the four-item drag and drop, and the embedded multiple choice attention check were permitted to progress to the main survey. Those who indicated that they would be willing to complete an additional five-minute survey for $0.50 were asked to complete a second informed consent document and progressed to the main survey. Those who did not opt to complete the bonus survey, or those who failed to follow any survey instructions, were thanked for their time, and paid.

Survey Instructions

Upon completing the second informed consent, participants were randomly assigned into one of three survey instruction groups. Participants either received a no-message control, an equity instruction that asked participants to respond carefully because they were being paid in exchange for their responses, or a real-world instruction that asked participants to pay special

attention to the items because they included items like organ donation registration that can have real consequences in the real-world. The equity instruction read:

> You will be compensated $0.50 in exchange for your careful responding and attention to these items. It is important to the researcher, who is paying you for your responses, that you read each question and consider your answers carefully answer before responding.
>
> Please type the following phrase in the text box below:
>
> **I acknowledge that I am being paid in exchange for my responses and I will pay attention and respond accordingly.**

The real-world implications instruction read:

> These questions can have real-world implications, including the decision to register as an organ donor. This question asks you to consider how you would want your loved ones to respond, should this need arise. Please be on the lookout for this question, and carefully consider your answer to each question before responding.
>
> Please type the following phrase in the text box below:
>
> **I acknowledge that my responses can have real-world implications and I will respond accordingly.**

Health and Legal Questions

As in Study 1, participants were randomly assigned to see the same series of health and legal questions where either the first or the last question in the set and on the page asked "Would you like to register as an organ donor? If you are already registered as a donor, would you like to re-register?" See Appendix B for the full list of questions.

Positive Attitudes and Attitude Extremity

A three-item, 100-point slider scale (from Blazek et al., 2020 and initially modified from Siegel et al., 2014) was used to assess positive attitudes toward donations. Items included asking whether registering as an organ donor would be a "rewarding act," "useful act," and a "good act." Participants were asked to rate the extent to which they disagree or agreed from 1 *Strongly Disagree* to 100 *Strongly Agree.* Donors demonstrated adequate internal consistency ($\alpha = .72$, *M =86.84, SD = 16.00).* Non-donors had good internal consistency ($\alpha = .85$, *M =62.60, SD = 26.57).*

The positive attitude extremity was calculated using the method from Brit and colleagues (2009) and Bassili and Krosnick (2000). First, a composite attitude score was calculated for participate. Then, the general mean score for all respondents was calculated. This mean was subtracted from each respondent's attitude composite score. Any individual who had a composite score above the mean was deemed as having extremely positive attitudes and coded accordingly. Thus, those with extreme attitudes in this study refers only to individuals who had positive attitudes above the general mean, not extreme attitudes on either side of the spectrum.

Donor Status and Eligibility

To assess participants' donor status and eligibility to register as an organ donor, the identical questions from Study 1 were used.

Written Attention Check

Participants were asked to complete a fill-in-the-blank attention check. They were instructed that they would be asked on the following page to write in their favorite food, but instead of doing that, were asked to write the phrase "hold the elevator" instead.

Demographic Questions

Participants were asked to complete the same three demographic questions from the screener survey a second time.

Results

After all data cleaning and a priori exclusions were made, the data set was spilt into one set of analyzable donors and one set of eligible non-donors.

Organ Donors

To evaluate if there was a main effect of question order on willingness to register (H1), I ran a binary logistic regression with age and sex as covariates. This analysis served as a direct replication of Study 1, and it demonstrated a main effect of question order. Although neither age nor sex were significant covariates, they were retained in the analyses as noted in the pre-registration. Donors who saw the donor question first had 1.53 times the odds of registering compared to those who saw it last (see Table 16, providing support for H1.

Table 16

Study 3 H1: Donors - Main Effect of Question Order

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B) Odds Ratio	95% CI for Exp(B) Lower	Upper
Age	.002	.007	.096	1	.757	1.00	.99	1.02
Sex	.166	.182	.834	1	.361	1.18	.83	1.69
Question Order	.424	.179	5.62	1	.018	1.53	1.08	2.17
Intercept	.581	.325	3.18	1	.074	1.79		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First.

To examine where there was a main effect of instruction type (H2) I ran a binary logistic regression with age and sex as covariates which indicated that the instruction condition did not have a significant effect on registration willingness. Neither the equity nor the real-world instructions differed from the control significantly (see Table 17).

Table 17

Study 3 H2: Donors - Main Effect of Instruction Type

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.003	.007	.227	1	.634	1.00	.99	1.02
Sex	.185	.181	1.04	1	.307	1.20	.84	1.72
Instruction Type			.837	2	.658			
Equity to Control	-.195	.220	.785	1	.375	.82	.54	1.27
Real-world to Control	-.150	.222	.455	1	.500	.86	.56	1.33
Intercept	.842	.350	5.77	1	.016	1.79		
Equity to Real-world	.045	.210	.046	1	.829	1.05	.69	1.58

Note. Sex is coded 0 = Male, 1 = Female. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world. Hypothesis two was not supported for donors. Additionally, in response to the research question whether there would be a difference between the two types of instructions, there was not a statistically significant difference between registration willingness between the equity and the real-world consequences to suggest that either condition was more successful *(p* = .829).

To examine whether there was an interaction effect between question order and instruction condition (H3), I ran a hierarchical binary logistic regression with age and sex as covariates entered on model 1, the two main effects on model 2, and the interaction term on model 3. The final model revealed that there was not a significant interaction between question order and type of instruction, which does not provide support for H3 (see Table 18). Additionally, when the interaction term was in the model, the previously significant main effect of question order was no longer significant.

Table 18

Study 3 H3: Donors – Two-Way Interaction Between Question Order and Instruction Type

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.003	.007	.160	1	.689	1.00	.99	1.02
Sex	.157	.182	.745	1	.388	1.17	.82	1.67
Question Order	.534	.332	2.58	1	.108	1.71	.89	3.27
Instruction Type			1.21	2	.546			
Equity to Control	.042	.300	.020	1	.889	1.04	.58	1.88
Real-world to Control	-.250	.296	.714	1	.398	.78	.44	1.39
Order*Instruction			3.07	2	.215			
Equity*Order	-.510	.445	1.32	1	.252	.60	.25	1.44
Real-world*Order	.218	.452	.231	1	.631	1.24	.51	3.02
Intercept	.631	.381	2.74	1	.098	1.88		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

To test if there was a two-way interaction between attitude extremity and instruction type (H4), I ran a hierarchical binary logistic regression with age and sex as covariates on the first model, attitude extremity on the second model, instruction type on the third model, and the interaction between instruction type and attitude extremity on the fourth model. On the second model, there was a main effect of attitude extremity, such that the odds of being willing to register as a donor were significantly greater for those with extremely positive attitudes compared to those without extremely positive attitudes, Wald (1) = 45.86, $p < .001$, Exp(B) = 2.19, and this was still true when the attitude instructions were entered on the third model, Wald (1) = 15.39, $p < .001$, Exp(B) = 2.23. However, on the final model, when the interaction term was entered, neither the main effect of attitude extremity, nor the interaction term were statistically significant. The main effect of instruction type also remained insignificant in the full model (see Table 19).

Table 19

Study 3 H4: Donors – Two-Way Interaction Between Instruction Type and Attitude Extremity

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.000	.007	.000	1	.999	1.00	.99	1.02
Sex	.005	.190	.001	1	.979	1.01	.69	1.46
Attitude Extremity	.382	.357	1.14	1	.285	1.47	.73	2.95
Instruction Type			3.49	2	.174			
Equity to Control	-.532	.400	1.76	1	.184	.59	.27	1.29
Real-world to Control	-.746	.412	3.281	1	.070	.47	.21	1.06
Extremity*Instruction			2.44	2	.295			
Equity*Instruction	.441	.481	.839	1	.360	1.55	.61	3.99
Real-world*Instruction	.767	.492	2.43	1	.119	2.15	.82	5.66
Intercept	.828	.406	4.16	1	.041	2.29		

Note. Sex is coded 0 = Male, 1 = Female. Attitude Extremity is coded 0 = not extreme, 1 = extreme. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

To evaluate whether there was a two-way interaction between attitude extremity and order of donor question (H5), I ran another hierarchical binary logistic regression. Again, the covariates of age and sex were entered onto the first model, attitude extremity on the second model, question order on the third model, and the interaction between question order and attitude extremity on the fourth model. Both attitude extremity [Wald (1) = 14.73, $p < .001$, Exp(B) = 2.19] and question order [Wald (1) = 5.85, $p = .016$, Exp(B) = 1.55] were significant main effects prior to the interaction term being entered. Once the interaction term was entered, only the interaction between attitude extremity and question order was statistically significant, Wald (1) = 5.21, $p = .022$, Exp(B) = 2.46; which is opposite what was expected in H5 (see Table 20). I used a χ^2 test of independence to better understand the interaction effect. In short, attitude extremity mattered for those who saw the donor question first, $\chi^2(1) = 21.04$, $p < .001$, but not for those who saw the donor question last, $\chi^2(1) = 1.89$, $p = .169$. In other words, 82.9% of individuals who had

extreme attitudes and who saw the donor question first were willing to register compared to 70.4% of those with extreme attitudes who saw the donor question last. However, for those without extreme attitudes the difference in willingness to register for those who saw the donor question first (57.3%) was not significantly different from those who saw the donor question last (62.2%).

Table 20

Study 3 H5: Donors – Two-Way Interaction Between Question Order and Attitude Extremity

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	-.003	.007	.147	1	.701	1.00	.98	1.01
Sex	-.005	.190	.001	1	.979	1.00	.69	1.44
Question Order	-.180	.325	.307	1	.579	.84	.44	1.58
Attitude Extremity	.377	.271	1.93	1	.165	1.46	.86	2.48
Order*Extremity	.899	.394	5.21	1	.022	2.46	1.14	5.32
Intercept	.609	.371	2.70	1	.101	1.84		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

To evaluate H6, that there would be a three-way interaction between attitude extremity, question order, and instruction condition, another hierarchical binary regression was run. Once again, the covariates of age and sex were entered on model one, the three main effects (question order, instruction type, and attitude extremity) were entered on model two, the three two-way interactions on model 3, and the three-way interaction on model 4. This hypothesis was not supported as there was no three-way interaction (see Table 21).

Table 21

Study 3 H6: Donors – Three-Way Interaction Between Instruction Type and Attitude Extremity

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)

						Odds Ratio	Lower	Upper
Age	-.001	.008	.039	1	.844	1.00	.98	1.01
Sex	-.046	.193	.057	1	.811	.96	.66	1.39
Question Order	-.175	.583	.090	1	.764	.84	.27	2.63
Instructions Type			3.05	2	.217			
Equity to Control	-.320	.563	.324	1	.569	.73	.24	2.19
Real-world to Control	-1.01	.595	2.90	1	.088	.36	.11	1.66
Attitude Extremity	-.081	.494	.027	1	.869	.92	.35	2.43
Order*Instruction			1.59	2	.451			
Equity*Order	-.511	.810	.399	1	.528	.60	.12	2.93
Real*Order	.507	.823	.379	1	.538	1.66	.33	8.34
Extreme*Order	1.07	.717	2.24	1	.135	2.92	.72	11.90
Extreme*Instruction			1.99	2	.370			
Extreme*Equity	.486	.667	.531	1	.466	1.63	.44	6.01
Extreme*Real-world	.970	.688	1.99	1	.159	2.64	.68	10.17
Three-Way			.127	2	.938			
Equity Three-Way	-.107	.980	.012	1	.913	.90	.13	6.13
Real-world Three-Way	-.346	1.00	.120	1	.729	.71	1.00	5.03
Intercept	.997	.509	3.83	1	2.71			

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

Eligible Non-Donors

I conducted identical analyses for the non-donors to evaluate support for each hypothesis. For the main effect of order (H1), age was a significant covariate such that each increase in year corresponded with an increase in the odds of registering. Sex was not a significant covariate, but was retained in the analyses as stated in the preregistration. Unlike for those who were already registered, there was no effect of question order on willingness to register, and thus H1 was not supported (see Table 22) for non-donors.

Table 22

Study 3 H1:Non- Donors - Main Effect of Question Order

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.028	.013	4.43	1	.035	1.03	1.00	1.06
Sex	.237	.336	.499	1	.480	1.27	.66	2.45
Question Order	.250	.334	.562	1	.453	1.28	.67	2.47
Intercept	-3.44	.660	27.11	1	<.001	.032		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First.

For the main effect of instruction type (H2), age remained a significant covariate and sex was not, but both were retained. As for the donors, there was no significant effect of the instruction type when compared to the control group for the non-donors (see Table 23). Neither the equity nor the real-world instruction was better at increasing registration willingness. Additionally, in response to the research question about whether there would be differences between the two types of instruction in registration willingness, no significant difference was identified, $p = .180$.

Table 23

Study 3 H2: Non-Donors - Main Effect of Instruction Type

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.003	.013	4.45	1	.035	1.03	1.00	1.06
Sex	.243	.337	.521	1	.471	1.28	.66	2.50
Instructions Type			2.13	2	.345			
Equity to Control	-.57	.437	1.67	1	.196	.57	.24	1.34
Real-world to Control	.027	.377	.005	1	.944	1.03	.49	2.15
Intercept	-3.16	.632	24.95	1	<.001	.043		
Equity to Real-world	.593	.442	1.80	1	.180	1.81	.76	4.31

Note. Sex is coded 0 = Male, 1 = Female. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

When examining if there was a two-way interaction between question order and instruction type (H3) for the non-donors, again, just as for the donors, there was no significant effect of the interaction, or either main effect within the full model (see Table 24).

Table 24

Study 3 H3: Non-Donors – Two-Way Interaction Between Question Order and Instruction Type

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.028	.013	4.57	1	.032	1.03	1.00	1.06
Sex	.242	.338	.514	1	.474	1.27	.66	2.47
Question Order	.055	.531	.011	1	.918	1.06	.37	2.99
Instruction Type			1.13	2	.568			
Equity to Control	-.675	.635	1.13	1	.288	.51	.15	1.77
Real-world to Control	-.219	.567	.150	1	.699	.80	.26	2.44
Order*Instruction			.300	2	.861			
Equity*Order	.200	.882	.051	1	.821	1.22	.22	6.88
Real-world*Order	.420	.767	.300	1	.584	1.52	.34	6.85
Intercept	-3.22	.723	19.80	1	<.001	.04		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.4

The two-way interaction between attitude extremity and instruction type (H4) for the non-donors again mirrored what was seen for the donors. There was not a significant interaction effect, but there was a significant main effect of attitude extremity such that those with extremely favorable attitudes had 5.77 times the odds of being willing to register compared to those without extreme attitudes (see Table 25).

Table 25

Study 3 H4: Non-Donors – Two-Way Interaction Between Instruction Type and Attitude Extremity

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)

						Odds Ratio	Lower	Upper
Age	.016	.014	1.39	1	.238	1.02	.99	1.04
Sex	.033	.356	.009	1	.926	1.03	.51	2.08
Attitude Extremity	1.75	.557	9.91	1	.002	5.77	1.94	17.20
Instruction Type			.679	2	.712			
Equity to Control	-.528	.726	.528	1	.467	.59	.14	2.45
Real-world to Control	-.444	.726	.374	1	.541	.64	.16	2.66
Extremity*Instruction			.317	2	.854			
Equity*Instruction	-.163	.929	.032	1	.860	.85	.14	5.25
Real-world*Instruction	.375	.875	.183	1	.668	1.46	.26	8.09
Intercept	-3.335	.71	22.37	1	<.001	.04		

Note. Sex is coded 0 = Male, 1 = Female. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

There was not support for a two-way interaction between question order and attitude extremity (H5) among the non-donors. Although again the effect of attitude extremity remained, now with those who had extreme attitudes having 7.34 times the odds of being willing to register compared to those without extreme attitudes. The interaction term was not statistically significant (see Table 26).

Table 26

Study 3 H5: Non-Donors – Two-Way Interaction Between Question Order and Attitude Extremity

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.016	.014	1.29	1	.256	1.02	.99	1.04
Sex	.064	.35	.033	1	.856	1.07	.53	2.13
Question Order	.398	.602	.437	1	.508	1.49	.46	4.84
Attitude Extremity	1.99	.556	12.85	1	<.001	7.34	2.47	21.81
Order*Extremity	-.325	.736	.195	1	.659	.72	.17	3.06

Intercept	-3.82	.747	26.15	1	<.001	.02		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

The last hypothesis was the three-way interaction between question order, instruction type, and attitude extremity (H6). As for the donors, there was no support for this hypothesis among the non-donors when the covariates of age and sex were entered one model one, the main effects on model 2, the two-way interactions on model 3, and the three-way interaction on model four (see Table 27). However, it is interesting to note that in the final model, the main effect of attitude extremity, when controlling for everything else in the model, was significant and demonstrated that attitude extremity has a large impact on willingness to register as an organ donor, Wald (1) = 7.97, p =.005, Exp(B) = 11.57. This effect was much larger than any other observed in either Study 1 or Study 3 and certainly deserves future attention.

Table 27

Study 3 H6: Non-Donors – Three-Way Interaction Between Instruction Type and Attitude Extremity

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.017	.014	1.43	1	.232	1.02	.99	1.05
Sex	.003	.361	.000	1	.993	1.00	.50	2.03
Question Order	.798	.896	.793	1	.373	2.22	.38	12.86
Instructions Type			.127	2	.939			
Equity to Control	.124	1.03	.015	1	.904	1.13	.15	8.45
Real-world to Control	-.319	1.25	.065	1	.798	.73	.06	8.39
Attitude Extremity	2.45	.867	7.97	1	.005	11.57	2.12	63.29
Order*Instruction			.72	2	.697			
Equity*Order	-1.29	1.54	.703	1	.402	.28	.01	5.60
Real*Order	-.244	1.54	.025	1	.874	.78	.04	15.91
Extreme*Order	-1.34	1.16	1.33	1	.249	.26	.03	2.55

Extreme*Instruction			.91	2	.635			
Extreme*Equity	-1.29	1.34	.88	1	.348	.28	.02	4.05
Extreme*Real-world	-.296	1.43	.043	1	.836	.74	.05	12.24
Three-Way			1.38	2	.501			
Equity Three-Way	2.20	1.95	1.27	1	.261	9.00	.20	413.57
Real-world Three-Way	1.35	1.83	.54	1	.461	3.86	.11	139.77
Intercept	-3.80	.95	15.94	1	<.001	.02		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

Auxiliary Analyses

Although Study 3 was designed to be a conceptual replication of Study 1, it did differ in some methodological ways that justified additional auxiliary analyses. Specifically, this study used a prescreening technique to ensure that participants were adequately paying attention and engaged in careful responding. This screener prevented approximately 18% of the sample from completing the main survey. Although those who failed the screener attention checks were not invited to participate in the main survey, there was a fill-in-the-blank attention check in the main survey after the series of health and legal questions. Anyone who did not correctly follow this instruction was excluded from the primary analyses (n = 104, approximately 10% of the final sample). However, as stated in the preregistration for this study, I had planned to conduct auxiliary analyses to determine whether or how the results differed when these individuals were included in the analyses, and the results of these individuals on their own. First, to compare how the results differed when those who failed the fill-in-the-blank questions were included alongside those who passed, I repeated all analyses identically as previously reported to look for differences.

Organ Donors

For H1(see Table 28), the same pattern of significance was observed as in the main analysis. The effect of question order was stronger than previously. For H2 (see Table 29, the same pattern was observed, and there were no significant effects of instruction type. For H3 (see Table 30), the main effect of question order was now significant with everything else in the model, Wald(1) = 4.58, p = .032, Exp(B) = 1.94. The rest of the model showed the same pattern as observed previously. For H4 (see Table 31), the same pattern as before was again observed, there were no significant main effects or interactions when all other terms were in the model, although the main effect of attitude extremity was approaching significance. For H5 (see Table 32), there was a main effect of attitude extremity when the sample included those who failed the fill-in-the-blank question, Wald(1) = 5.47, p = .019, Exp(B) = 1.79. However, the previously significant interaction between question order and attitude extremity was no longer significant. For H6 (see Table 33), there was no change in the pattern of significance in the three-way interaction, as all main effects, all two-way interactions, and the three-way interaction remained not significant.

Table 28

Study 3 H1: Donors - Main Effect of Question Order Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.008	.007	1.34	1	.248	1.01	.99	1.02
Sex	.191	.169	1.27	1	.260	1.21	.87	1.69
Question Order	.453	.167	7.35	1	.007	1.57	1.13	2.18
Intercept	.221	.306	.519	1	.471	1.25		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First.

Table 29

Study 3 H2: Donors - Main Effect of Instruction Type Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.009	.007	1.75	1	.186	1.01	1.00	1.02
Sex	.198	.169	1.38	1	.241	1.22	.88	1.70
Instruction Type			.707	2	.701			
Equity to Control	-.162	.206	.617	1	.432	.85	.57	1.27
Real-world to Control	-.140	.207	.458	1	.498	.87	.58	1.30
Intercept	.495	.327	2.297	1	.130	1.64		
Equity to Real-world	.022	.198	.012	1	.913	1.02	.694	1.51

Note. Sex is coded 0 = Male, 1 = Female. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 30

Study 3 H3: Donors – Two-Way Interaction Between Question Order and Instruction Type Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.009	.007	1.59	1	.207	1.01	1.00	1.02
Sex	.179	.170	1.11	1	.292	1.20	.86	1.67
Question Order	.663	.310	4.58	1	.032	1.94	1.06	3.56
Instruction Type			1.36	2	.507			
Equity to Control	.134	.280	.229	1	.632	1.14	.66	1.98
Real-world to Control	-.183	.279	.429	1	.512	.83	.48	1.44
Order*Instruction			3.68	2	.158			
Equity*Order	-.639	.417	2.35	1	.125	.528	.233	1.20
Real-world*Order	.056	.422	.018	1	.90	1.06	.46	2.42
Intercept	.212	.356	.354	1	.552	1.24		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 31

Study 3 H4: Donors – Two-Way Interaction Between Instruction Type and Attitude Extremity Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B) Odds Ratio	95% CI for Exp(B) Lower	Upper
Age	.005	.007	.492	1	.483	1.01	.99	1.02
Sex	.023	.177	.017	1	.897	1.02	.72	1.45
Attitude Extremity	.573	.320	3.21	1	.073	1.77	.95	3.32
Instruction Type			3.60	2	.166			
Equity to Control	-.371	.356	1.09	1	.298	.69	.34	1.39
Real-world to Control	-.712	.377	3.56	1	.059	.49	.23	1.03
Extremity*Instruction			2.16	2	.339			
Equity*Instruction	.237	.440	.291	1	.590	1.27	.54	3.00
Real-world*Instruction	.664	.457	2.11	1	.146	1.94	.79	4.76
Intercept	.395	.366	1.16	1	.280	1.49		

Note. Sex is coded 0 = Male, 1 = Female. Attitude Extremity is coded 0 = not extreme, 1 = extreme. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 32

Study 3 H5: Donors – Two-Way Interaction Between Question Order and Attitude Extremity Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B) Odds Ratio	95% CI for Exp(B) Lower	Upper
Age	.003	.007	.190	1	.663	1.00	.99	1.02
Sex	.033	.176	.035	1	.852	1.03	.73	1.46
Question Order	.074	.298	.062	1	.803	1.08	.60	1.93
Attitude Extremity	.582	.249	5.47	1	.019	1.79	1.10	2.92
Order*Extremity	.549	.363	2.28	1	.131	1.73	.85	3.53
Intercept	.097	.342	.080	1	.778	1.10		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

Table 33

Study 3 H6: Donors – Three-Way Interaction Between Instruction Type and Attitude Extremity Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.004	.007	.360	1	.549	1.00	.99	1.02
Sex	-.009	.179	.003	1	.960	.99	.69	1.41
Question Order	.279	.502	.310	1	.578	1.32	.49	3.54
Instructions Type			2.55	2	.280			
Equity to Control	-.059	.487	.015	1	.903	.94	.36	2.45
Real-world to Control	-.775	.527	2.16	1	.142	.46	.16	1.30
Attitude Extremity	.313	.428	.535	1	.465	1.37	.59	3.16
Order*Instruction			1.33	2	.513			
Equity*Order	-.680	.717	.900	1	.343	.51	.12	2.07
Real*Order	.11	.76	.020	1	.886	1.11	.25	4.91
Extreme*Order	.616	.644	.914	1	.339	1.85	.52	6.54
Extreme*Instruction			1.33	2	.513			
Extreme*Equity	.238	.598	.159	1	.690	1.27	.39	4.10
Extreme*Real-world	.715	.627	1.30	1	.254	2.04	.60	6.98
Three-Way			.022	2	.989			
Equity Three-Way	-.036	.891	.002	1	.968	.965	.168	5.53
Real-world Three-Way	-.134	.925	.021	1	.885	.875	.143	5.36
Intercept	.303	.437	.479	1	.489	1.35		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

Non-Donors

For H1 (see Table 34), the only change in statistical significance to the previous model was that the age covariate was no longer significant after including those who failed the fill-in-the-blank question. Similarly, for H2 (see Table 35) the age covariate was no longer significant,

but there were no other changes in significance. For H3 (see Table 36), again the only change in significance was the age covariate, this time, it was statistically significant. For H4 (see Table 37), there were no changes in the pattern of significance; however, the main effect on attitude extremity became even more pronounced, Wald(1) = 12.18, $p < .001$, Exp(B) = 6.73. For H5 (see Table 38), there were again no changes in pattern of significant, but the main effect of attitude extremity, became even more pronounced, Wald(1) = 16.35, $p < .001$, Exp(B) = 9.04. For H6 (see Table 39), there were no changes in the pattern of statistical significance in the model with the three-way interaction, including with any of the two-way interactions. Attitude extremity remained the only significant main effect, but once again, the effect was even more pronounced when those who failed the fill-in-the-blank were included, Wald(1) = 8.48, $p = .004$, Exp(B) = 12.45.

Table 34

Study 3 H1:Non- Donors - Main Effect of Question Order Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.022	.013	3.04	1	.081	1.02	1.00	1.05
Sex	.122	.308	.157	1	.692	1.13	.62	2.06
Question Order	.313	.310	1.02	1	.313	1.37	.74	2.51
Intercept	-3.10	.607	26.01	1	<.001	.045		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First.

Table 35

Study 3 H2: Non-Donors - Main Effect of Instruction Type Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)

						Odds Ratio	Lower	Upper
Age	.021	.012	2.94	1	.087	1.02	1.00	1.05
Sex	.10	.308	.152	1	.697	1.13	.62	2.06
Instructions Type			1.58	2	.454			
Equity to Control	-.371	.396	.877	1	.349	.69	.32	1.50
Real-world to Control	.112	.355	.100	1	.751	1.12	.56	2.24
Intercept	-2.83	.587	23.34	1	<.001	.059		
Equity to Real-world	.484	.393	1.51	1	.219	1.62	.75	3.50

Note. Sex is coded 0 = Male, 1 = Female. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 36

Study 3 H3: Non-Donors – Two-Way Interaction Between Question Order and Instruction Type Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.023	.013	3.28	1	.07	1.02	1.00	1.05
Sex	.110	.309	.127	1	.722	1.12	.61	2.05
Question Order	.067	.513	.017	1	.896	1.07	.39	2.92
Instruction Type			.495	2	.781			
Equity to Control	-.349	.561	.386	1	.534	.71	.23	2.12
Real-world to Control	-.313	.562	.310	1	.578	.72	.24	2.20
Order*Instruction			1.20	2	.549			
Equity*Order	-.049	.798	.004	1	.951	.95	.199	4.55
Real-world*Order	.700	.735	.907	1	.341	2.01	.48	8.50
Intercept	-2.93	.68	18.41	1	<.001	.05		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 37

Study 3 H4: Non-Donors – Two-Way Interaction Between Instruction Type and Attitude Extremity Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.010	.013	.638	1	.424	1.01	.99	1.04
Sex	-.054	.327	.028	1	.868	.95	.50	1.80
Attitude Extremity	1.91	.546	12.18	1	<.001	6.73	2.31	19.65
Instruction Type			.705	2	.703			
Equity to Control	-.554	.724	.586	1	.444	.58	.14	2.37
Real-world to Control	.011	.625	.000	1	.986	1.01	.30	3.44
Extremity*Instruction			.054	2	.973			
Equity*Instruction	.078	.887	.008	1	.930	1.08	.19	6.15
Real-world*Instruction	-.123	.782	.025	1	.875	.884	.19	4.10
Intercept	-3.14	21.84	22.37	1	<.001	.04		

Note. Sex is coded 0 = Male, 1 = Female. Attitude Extremity is coded 0 = not extreme, 1 = extreme. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 38

Study 3 H5: Non-Donors – Two-Way Interaction Between Question Order and Attitude Extremity Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.010	.013	.637	1	.425	1.01	.99	1.04
Sex	-.043	.324	.018	1	.894	.96	.51	1.81
Question Order	.635	.573	1.23	1	.267	1.89	.62	5.80
Attitude Extremity	2.20	.544	16.35	1	<.001	9.04	3.11	26.26
Order*Extremity	-.593	.696	.725	1	.395	.55	.14	2.16
Intercept	-3.66	.710	26.55	1	<.001	.03		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

Table 39

Study 3 H6: Non-Donors – Three-Way Interaction Between Instruction Type and Attitude Extremity – Including Those Who Failed Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.012	.013	.785	1	.376	1.01	.99	1.04
Sex	-.085	.332	.066	1	.797	.92	.48	1.76
Question Order	.705	.893	.624	1	.430	2.02	.35	11.65
Instructions Type			.156	2	.924			
Equity to Control	.030	1.02	.001	1	.976	1.03	.14	7.65
Real-world to Control	-.437	1.25	.123	1	.726	.646	.06	7.42
Attitude Extremity	2.52	.866	8.48	1	.004	12.45	2.28	67.97
Order*Instruction			1.068	2	.586			
Equity*Order	-1.15	1.53	.562	1	.453	.32	.02	6.39
Real*Order	.572	1.45	.156	1	.693	1.77	.10	30.25
Extreme*Order	-1.13	1.14	.993	1	.319	.32	.04	2.99
Extreme*Instruction			.208	2	.901			
Extreme*Equity	-.578	1.27	.208	1	.649	.56	.05	6.74
Extreme*Real-world	-.281	1.43	.039	1	.843	.755	.05	12.28
Three-Way			.527	2	.768			
Equity Three-Way	1.34	1.85	.525	1	.469	3.83	.10	144.15
Real-world Three-Way	.578	1.74	.111	1	.739	1.78	.06	53.41
Intercept	-3.60	.924	15.17	1	<.001	.03		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

All Fill-in-the-Blank Failures

Next, to examine just the effect of *only* those who failed the fill-in-the-blank attention check, regardless of their donor status, I repeated the above analyses once again. I did not split these pre-registered exploratory analyses because the sample of those who failed was not large enough (n = 104, with 62 donors and 42 non-donors), and thus would be underpowered, to treat these groups separately. For H1 (see Table 40), the order effect was much stronger than observed in the main analyses or other auxiliary analyses, and much more akin to what was observed in

Study 1. Those who saw the question first had 2.89 times the odds of registering compared to those who saw the question last. As in all other analyses, H2 was not supported (see Table 41). H3 (see Table 42) was also not supported. For H4 (see Table 43), similar to the other auxiliary analyses, the main effect of attitude extremity was not statistical significance, but was noteworthy, Wald(1) =3.61, p =.057, Exp(B) = 5.21. For H5 (see Table 44), the interaction between question order and attitude extremity was not significant, and neither was the main effect of question order, Wald(1) =3.74, p =.053, Exp(B) = 4.19, although it is worth noting. There was a main effect of attitude extremity, Wald(1) =6.07, p =.014, Exp(B) = 7.31. For H6 (see Table 45), as in all other analyses, the three-way interaction was not significant; however, because of the very limited sample size, many of the interaction terms in this model were heavily unstable.

Table 40

Study 3 H1: Only Those Who Failed Fill-in-the-Blank Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.029	.024	1.43	1	.231	1.03	.99	1.02
Sex	.197	.429	.212	1	.645	1.22	.87	1.69
Question Order	1.06	.449	5.58	1	.018	2.89	1.13	2.18
Intercept	-2.33	.998	5.46	1	.019	.097		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First.

Table 41

Study 3 H2: Only Those Who Failed Fill-in-the-Blank Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.027	.023	1.29	1	.255	1.03	.98	1.08
Sex	.108	.418	.067	1	.795	1.11	.49	2.53

Instruction Type			.181	2	.913			
Equity to Control	-.217	.514	.178	1	.673	.81	.29	2.20
Real-world to Control	-.138	.514	.072	1	.788	.87	.32	2.39
Intercept	-1.43	.963	2.20	1	.138	.240		
Equity to Real-world	.078	.500	.025	1	.875	1.08	.41	2.88

Note. Sex is coded 0 = Male, 1 = Female. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 42

Study 3 H3: Only Those Who Failed Fill-in-the-Blank Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.031	.025	1.53	1	.216	1.03	.98	1.08
Sex	.094	.445	.044	1	.833	1.10	.46	2.63
Question Order	1.15	.830	1.93	1	.165	3.16	.622	16.10
Instruction Type			2.25	2	.324			
Equity to Control	.434	.842	.265	1	.606	1.54	.30	8.03
Real-world to Control	-1.30	1.24	1.09	1	.296	.27	.02	3.12
Order*Instruction			3.37	2	.186			
Equity*Order	-1.03	1.08	.903	1	.342	.358	.043	2.98
Real-world*Order	1.37	1.40	.956	1	.328	3.93	.25	61.22
Intercept	-2.30	1.19	3.71	1	.054	.100		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 43

Study 3 H4: Only Those Who Failed Fill-in-the-Blank Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.028	.025	1.31	1	.253	1.03	.98	1.08
Sex	.080	.452	.031	1	.860	1.08	.45	2.63
Attitude Extremity	1.65	.868	3.61	1	.057	5.21	.95	28.52

Instruction Type			1.02	2	.600			
Equity to Control	-.366	.757	.234	1	.628	.69	.16	3.06
Real-world to Control	-.910	.909	1.00	1	.317	.40	.07	2.39
Extremity*Instruction			.472	2	.790			
Equity*Instruction	-.437	1.14	.148	1	.701	.65	.07	6.00
Real-world*Instruction	.340	1.24	.075	1	.784	1.41	.12	16.05
Intercept	-2.00	1.09	3.37	1	.067	.35		

Note. Sex is coded 0 = Male, 1 = Female. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world.

Table 44

Study 3 H5: Only Those Who Failed Fill-in-the-Blank Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.032	.025	1.62	1	.203	1.03	.98	1.08
Sex	.149	.450	.110	1	.740	1.16	.48	2.8
Question Order	1.43	.741	3.74	1	.053	4.19	.98	17.87
Attitude Extremity	1.99	.807	6.07	1	.014	7.31	1.5	35.55
Order*Extremity	-1.02	.971	1.10	1	.295	.361	.054	2.43
Intercept	-3.34	1.15	8.46	1	.004	.035		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

Table 45

Study 3 H6: Only Those Who Failed Fill-in-the-Blank Attention Check

	B	*S.E.*	Wald.	*Df*	Sig.	Exp(B)	95% CI for Exp(B)	
						Odds Ratio	Lower	Upper
Age	.036	.027	1.78	1	.182	1.04	.98	1.09
Sex	.224	.500	.201	1	.654	1.25	.47	3.33
Question Order	.765	1.03	.557	1	.455	2.15	.28	16.04
Instructions Type			.448	2	.799			
Equity to Control	-.887	1.33	.448	1	.504	.412	.03	5.54

Real-world to Control	-19.70	14050.42	.000	1	.999	0.00	0.00	0.00
Attitude Extremity	1.07	1.65	.416	1	.519	2.90	.11	73.91
			.340	2	.844			
Equity*Order	.970	1.67	.340	1	.560	2.64	.10	68.96
Real*Order	19.37	14040.42	.000	1	.999	0.00	0.00	0.00
Extreme*Order	.613	2.01	.093	1	.760	1.85	.04	94.89
Extreme*Instruction			.728	2	.695			
Extreme*Equity	1.82	2.13	.728	1	.393	6.14	.10	397.07
Extreme*Real-world	18.65	14050.42	.000	1	.999	0.00	0.00	0.00
Three-Way			1.78	2	.410			
Equity Three-Way	-3.52	2.64	1.78	1	.182	.03	.000	5.18
Real-world Three-Way	-18.89	14050.42	.000	1	.999	0.00	0.00	0.00
Intercept	-2.79	1.31	4.53	1	.033	.06		

Note. Sex is coded 0 = Male, 1 = Female. Question Order is coded 0 = Last, 1 = First. Instruction type is dummy coded with 0 = control, 1 = Equity, 2 = Real-world. Attitude Extremity is coded 0 = not extremely positive, 1 = extremely positive.

Finally, although I did not break the individuals who failed the fill-in-the-blank attention check by donor status, I was still interested in whether there were differences in their willingness to register by donor status, order, and attitude extremity. The binary logistic regression with age and sex and covariates revealed that indeed, donor status was a significant predictor of willingness to register such that those who were already donors had 5.06 times the odds of being willing to register compared to those who were not registered. The effect of donor status, Wald(1) =10.91, p <.001, Exp(B) = 5.30, held when question order was added into the model, Wald(1) =8.36, p =.004, Exp(B) = 4.56, and the effect of donor status also held when both attitude extremity, Wald(1) =7.08, p =.008, Exp(B) = 1.03, and question order, Wald(1) =3.80, p =.051, Exp(B) = 2.66, were in the model.

Discussion

This study replicated Study 1, and demonstrated that once again, the effect of order matters on willingness to register as an organ donor for those who are already registered as organ donors (OR =1.53). This provides additional support for the idea that the question order does matter for registration willingness, at least among those who are already registered as donors. Both Studies 1 and 3 found putting the donor question front and center helped make it easier for donors to show their willingness to re-register. However, it should be noted that the effect size that was observed was much smaller than what was seen in Study 1 for donors (OR = 2.57), and this effect was not significant among those who began the study as non-registered individuals.

In trying to understand the differences observed between Studies 1 and 3, one methodological difference may be partly responsible. Namely, in this study, participants were asked to complete a screener survey that contained a captcha check, a drag-and-drop question requiring participants to drag four items into the correct spot out of three options, and an instructed response item embedded into a three-item scale. The purpose of this screener was to ensure that no bots got into the main survey, and that participants were paying adequate attention. Indeed, this screener prevented 180 out of 1,009 otherwise eligible participants from completing the main survey, which is nearly 18% of the sample. This is relevant because one reason that the order effect may matter is because of the tendency to engage in satisficing behavior, whereby participants are not giving adequate attention to the questions before them. The screener was used to make sure that only the high quality MTurk respondents would participate, but this approach may have removed those who were most likely to satisfice.

Fortunately, in considering this possibility a priori, I preregistered the intention to perform analyses to look for an order effect among those who failed a fill-in-the-blank in the

main survey. This question appeared to ask respondents one things, while instructing participants to answer with a specific phrase. An additional 10% of the sample failed to follow this instruction after passing the screener survey, and not being excluded for any other reason. Indeed, the planned auxiliary analyses for this study were intended to assess whether and how those who passed the screener but failed the fill-in-the-blank differed from the rest of the sample in their willingness to register as donors. When these individuals were added to the remainder of the clean sample of donors, there was a small increase in the magnitude of the observed order effect (OR = from 1.53 to 1.57), although the effect for the non-donors remained non-significant. When looking *only* at the people who had failed the fill-in-the-blank, regardless of their donor status, participants who saw the donor question first had 2.89 times the odds of indicating a willingness to register compared to those who saw the donor question last, which is akin to what was observed in Study 1 (OR = 2.57). Indeed, even when controlling for donor status among those who failed the fill-in-the-blank, which mattered in willingness to register (OR = 5.06), question order had a significant effect, with those who saw it first being much more likely to indicate a willingness to register (OR = 4.56). These auxiliary analyses suggest that that the order effect may be driven by attention – those who are carefully reading the questions are less susceptible to an order effect than those who are not carefully reading. This provides some evidence that the mechanism by which this study found an order effect, at least for the donors, is straightlining.

This study also differed methodologically from Study 1 by adding a means of reducing the order effect that was observed in Study 1. However, this study did not find support for the use of instructional manipulations, as Ward and Meade (2018) found, for either donors or non-donors. Indeed, there was also no support for any interaction effects that were paired with the

instructional manipulations. Interestingly, this study did shed light on the large effect that attitude extremity can have on willingness to register as a donor, both on its own, and in combination with question order. This is a participant trait that was not manipulated in this study, but past research has demonstrated that the vast majority of American adults have strongly favorable attitudes towards donation (HRSA, 2020; Siegel et al., 2019; 2022). Donors with extremely positive attitudes had more than two times the odds of registering than those without extremely positive attitudes, but for non-donors, attitude extremity was even more impactful in the decision over whether to register, with those with extreme attitudes having more than five times the odds of willingness to register than those with non-extreme attitudes.

The hypothesized interaction with question order occurred, but in an unusual and unanticipated way. I had anticipated that the order effect would be less pronounced for those with extreme attitudes, under that assumption that people who cared deeply about the topic would be on the lookout for this question, or hypersensitive to the words "organ donation", and thus less likely to miss this question even if it was at the end. However, what occurred was an interaction effect between question order and attitude extremity, specifically, for the donors who saw the donor registration question first. Of those in the first condition with extreme attitudes, 82.9% were willing to register compared to 57.3% of donors without extreme attitudes. For those who saw the question last and had extreme attitudes 70.4% were willing to register compared to 62.2% of those without extreme attitudes. In other words, what occurred was the exact opposite of what I had anticipated. Donors who had extreme attitudes and saw that question in the first position were much more likely to be willing to register than if they saw this question in the last position. Whereas placement of the question was much less influential for the donors without extreme attitudes. This same interaction effect was not observed for the non-donors, in either the

unexpected or expected direction. Likewise, for both the donors and the non-donors, there was not support for the predicted three-way interaction between question order, instruction type, or attitude extremity.

Limitations

As with all studies, the limitations of that study should be taken into consideration along with the strengths. One limitation of this particular study is that the power analysis used to calculate effect sizes used a conservative assessment from the Study 1 data collection. However, this calculation did not take into consideration other possible reductions in effect size, namely that the inclusion of a screener survey may have led to a reduced order effect by eliminating the satisficers in the main survey. Indeed, I anticipated such a small effect for Study 1 that the sample size was 6,285 total, compared to 1,009 in Study 3. Thus, to capture the smaller effect of question order present in this survey, particularly among the non-donors, this study may have inadvertently been underpowered, resulting in a Type II error. Additionally, the design of the screener precludes the ability to determine whether straightlining was the cause behind the order effect, although the auxiliary analyses do allow some investigation, future research should examine the casual link. Finally, as in Study 1, a limitation of this study is that the data was collected on MTurk, and does not represent actual registration behavior.

Future Directions

Although there was not support for the instructions used in this study, future research should examine whether other implementations of instructions are effective as this represents the potential to address some of the negative effects of satisficing. Additionally, further exploration should evaluate why the anticipated order effects were not observed among those who were not registered as donors. This could include an examination of the casual mechanism behind the

order effect. Further, exploration of how to enhance attitude extremity should be considered, as this proved to be the biggest predictor of donor willingness in this study, especially for those who are not currently registered as donors.

CHAPTER 7: GENERAL DISCUSSION

This trio of studies was designed to learn how to increase donor registration rates, ultimately with the goal of alleviating the number of people who die each day while waiting for an organ transplant (UNOS, 2021). There have been numerous attempts to increase donor registrations with campaigns (e.g., Harrison et al., 2008; Quick et al., 2019; Rodrigue et al., 2004; Siegel, et al., 2021), but often with mixed results and great expense. This dissertation set out to explore alternative means to increasing donor registrations, including approaches that could be cost-effective (Robitaille et al., 2021) and simple to implement. A recent review by Stevens and colleagues (2019) noted that the procedural practices within an MVD could yield an effect on donor registrations. Although Stevens and colleagues did not assess whether asking health and legal question actually affected registration rates, they did find that nearly half of the states asked a series of questions immediately prior to organ donation registration. Indeed, this dissertation discovered clear support suggesting that people are more likely to indicate a willingness to register as an organ donor if they are asked about registering at the beginning of this battery of questions, rather than at the end, and this effect was especially pronounced among those who were already registered as organ donors and those who pay the least amount of attention.

In an empirical assessment of Stevens and colleagues theorizing, this experiment found that for both currently registered donors (OR = 2.57) and non-donors (OR = 2.01), there was a significant effect of question placement on willingness to register with those who saw the

question first being more likely to indicate a willingness to register. This replicated the order effects that have been found previously in numerous different contexts (Bumpass, 1997; Harford, 1994; Hutto et al., 2008; Krosnick & Presser, 2010; Tourangeau et al., 2013). Although Stevens and colleagues believed the order effect might be present because prior health question could make respondents feel ineligible to donate, the auxiliary analyses in Study 1 demonstrated that this effect may actually have been because of a type of satisficing behavior called straightlining. Study 3 served as a conceptual replication for Study 1, and again looked for the presence of an order effect. Indeed, this effect was replicated for donors (OR =1.53). However, unlike Study 1, Study 3 did not find an effect among the non-donors. Pre-planned auxiliary analyses in Study 3 also lend support for the observed order effect being especially pronounced among those who were paying the least attention to the survey questions.

The goal of Study 2 was to see if the results seen on MTurk with registration willingness could be replicated in the real world with registration behavior. On April 2, 2020 New Mexico changed the driver's license and ID application. Before this date, the question about registering as an organ donor followed their standard series of health and legal questions. On April 2 and afterwards, the organ donation question was the first question of this series. However, this day was extremely close to when a statewide stay-at-home order was issued on March 23, 2020 (Albuquerque Journal, 2021). As such, all results from this study are subject to the rival explanation that it was not the question order, but the pandemic itself, that is responsible for any observed effects. Initially, the segmented regression analyses did not reveal a direction to this statistically significant effect. However, when controlling for the overall trend that people were less likely to register as donors each passing month, there was a small but significant increase in the odds of registering (OR = 1.06). Additionally, Study 2 found that in the time period

following the relocation of the question, both donors and non-donors were more likely to retain their previously selected statuses. Again, these effects need to be considered with the possibility that they were truly the result of the pandemic, and not the change in question order.

Although Studies 1 and 3 did not occur in a field setting and do not reflect actual registration behavior, there is still much to learn about the effect on question order on donor registration willingness online from these studies. For those who want to register as organ donors, and have registered as organ donors in the past, receiving the donor registration question after a battery of seventeen legal and health questions reduced self-reported willingness to register as a donor. Both Studies 1 and 3 found an order effect for those who self-reported that they were registered donors. However, the order effect for those who reported that they were not registered as donors was only significant in Study 1, and this will be discussed shortly. In considering this pattern of results, it is reasonable to believe that the order effect would be more pronounced among those who wanted to be registered donors—which was true for the vast majority of those who had already been registered.

When someone who wants to be a registered donor is asked to respond to several questions in a row, where *no* is the most likely response, and they begin straightlining, they will continue responding with *no*. Thus, a *no* response to the donor question may actually be the opposite answer than intended, and represents a response error. When instead the donor question is asked first, it is much more likely to be seen and to receive a response in accordance with their wishes based on their past registration behavior. In both Studies 1 and 3, donors were simply more likely to indicate a willingness to register when they saw this question first. This order effect suggests that donors are willing to remain donors, so long as they notice the question.

Even though the results offer steadfast support for an order effect among already registered individuals, this same effect was not consistently observed among those who were not registered. Study 1 did find an order effect among non-donors; however, Study 3 did not replicate this effect. There are two reasons that may help explain this. First, recall that those who wanted to show a willingness to register demonstrated a large order effect. This is presumably because when they straightline, they inadvertently responded *no* to a question they likely intended to respond to with a *yes.* However, for those who were not registered as donors, and wish to remain unresisted, a *no* response to the donor question does not clearly imply that they were straightlining. Indeed, this should be the expected response for most non-donors, as only a small fraction of non-donors demonstrate a willingness to change their donor status (between 13% and 19% in Study 2). Simply put, whether a *no* response was intentionally or accidentally given, the response itself is the same and no order effect would be observed. This effect should only be present among the non-donors who wanted to become donors *and* were straightlining. There may have been too few non-donors who were willing to consider becoming an organ donor to see an order effect as (using the most generous estimate from Study 2) if 19% of the 363 non-donors in Study 3 were willing to change their donor status, this would have included only 69 individuals. Even if a non-donor was straightlining throughout the prior health and legal questions, when the donor question is asked last, a *no* response would not be a clear indication that the question was simply missed. After all, this dissertation did not include a persuasive message to attempt to change the minds of non-registered individuals.

A reasonable counterargument would be that the same situation was present in Study 1, but there was a significant order effect among non-donors. However, there is a second reason—one unique to Study 3—a to why the results in Study 3 did not replicate Study 1. Study 3

included a screening technique to ensure that the responses from MTurk workers were both reasonably attentive, and not coming from robots. As noted, satisficing behavior and bots are both prevalent, and problematic, on MTurk where payment is offered for responses (Fleischer et al., 2015). This approach found that nearly 20% of the total sample was not demonstrating adequate attention to be included. These individuals were not present in the main survey, and thus it is impossible to say exactly how their presence would have altered the observed effects. However, an additional 10% of the sample had sufficient attention to pass into the main survey, and not be excluded for any other reason, but failed an instructed fill-in-the-blank question. The pre-planned auxiliary analyses on this portion of the sample offer additional insight. When these individuals were analyzed together with those who had not failed the attention check, there was no change to the non-significant effect of order on donor willingness. However, when analyzed on their own, these individuals, regardless of their donor status, demonstrated an effect of question order on their willingness to register (OR = 2.89) which was similar to what was seen in Study 1 (OR = 2.57). There was even a small increase in the magnitude of effect for the donors, when those who failed the fill-in-the-blank attention check were added in with all the donors who did not fail (OR =1.57). These auxiliary analyses provided support for the idea that that it was those who were paying the least amount of attention that were behind the order effect. Study 3 removed these individuals, thus minimizing the order effect for both donors and non-donors. As the presence of order effects has been moderated by numerous factors, including education level (Benton & Daly, 199; Krosnick & Alwin, 1987) and gender (Lee & Grant, 2009), it should not be surprising that it may also be moderated by some types of satisficing (Krosnick, 1991), namely straightlining. As described, there is reason to expect a larger effect of order on those who are looking to say *yes* to registering, such as those who are already registered, and a smaller

effect of order on those who want to say *no*, such as those who are not currently registered. Therefore, the order effect on previously registered donors was large enough to overcome the removal of those who were paying the least attention. The same was not true for those who are not registered.

In part because order effects showed such a strong effect in Study 1, and out of concern that these effects cannot always be easily overcome, Study 3 attempted to use instructional manipulations to see if they could ameliorate order effects and straightlining, as they have been successful in reducing types of satisficing in other applications (i.e., Breitsohl & Steidelmüller, 2018; Gibson & Bowling, 2019; Oppenheimer et al., 2009; Ward & Meade, 2018). I hoped that one instruction could be used in an MVD context, and be effective for those who already have extremely favorable attitudes towards donation. This instruction relied on the premise that extremely favorable attitudes, as a proxy for strong attitudes, are more stable, more resistant to change, more likely to influence decision making, influential of behavior than weak attitudes (Krosnick & Petty, 1995; Petty et al., 2013), and less susceptible to context effects, such as question order (Lavine et al., 1998). Thus, this approach reminded participants of the very real consequences that a question about donor registration can have, so that those with extremely positive attitudes would be on the lookout for this question. The other approach I took to instructional manipulations was to develop an instruction that could serve as a general methodological tool to enhance the quality of responses for those conducting online survey research in exchange for payment. This approach used equity theory (Adams, 1963) to remind respondents of the exchange nature of their relationship with the researcher to increase attentive responding. Unfortunately, this dissertation did not find any support for the use of these instructional manipulations for either donors or non-donors. However, before casting aside forever the idea that instructions cannot be a means of increasing donor registration, researchers should consider the possibility that the implementation of these instructions, rather than the theory behind them, is faulty. Indeed, in any persuasive attempt, but particularly one with an

intended goal of increasing donor registration, the message implementation itself matters as much as the message (Siegel et al., 2021).

Perhaps usurpingly, attitude extremity was a large predictor of donor willingness in Study 3, especially for the non-donors (with odds ratios ranging from 5.77 to 11.57 for non-donors who passed all screening protocols). Although I had anticipated an interaction between question order and attitude extremity such that for participants with extremely favorable attitudes, the order of the questions would be less important on their willingness to register. I had not anticipated that it would present in the opposite way for those who were already registered as organ donors. Of donors who saw the question first and had extremely favorable attitudes, 82.9% were willing to register compared to 57.3% of donors without extreme attitudes. For donors who saw the question last and had extremely favorable attitudes 70.4% were willing to register compared to 62.2% of those without extreme attitudes. This interaction was not present among the non-donors. Attitude extremity also did not appear to directly interaction with any of the manipulated instructions; however, it is possible that a different approach to these instructions could more directly tap into the potential of attitude extremity as a persuasive tool.

Limitations

This dissertation has some overarching limitations that need to be considered. First, the data collections for both Studies 1 and 3 were conducted on Amazon Mechanical Turk. Besides concern over the data containing a high percentage of inattentive responders (Fleischer et al., 2015), there is also the concern that the donor registration question is not actual behavior, but willingness to register. This is an important distinction as it may not be safe to assume that an order effect observed in an online survey, where the questions are not reflective of placement on a national donor registry, would elicit the same attention that respondents in an MVD may give

in consideration to those real consequences of their answers. As such, the observed effect sizes in Studies 1 and 3 cannot be assumed to replicate in an MVD setting.

A second limitation is that all studies included data that was collected after the onset of the COVID-19 pandemic. The effects of this are difficult to quantify, as the long-term consequences on research, particularly within the organ donation domain, are not yet understood. However, this is especially problematic for interpreting the results from Study 2, where the procedural change of moving the donor question from last position to first position coincided almost to the day with the onset of the pandemic in the United States. Study 2 was quasi-experimental in nature, and thus more susceptible to threats to internal and external validity than the experiments of Studies 1 and 3. This makes it very difficult in Study 2 to fully tease apart the extent to which any changes in donor registration were the result the of the question placement or the pandemic itself. Especially during the earliest months of the pandemic, uncertainty was high, and the extent that this may have influenced a typical MVD visit, or the decision to register as an organ donor, is unknown.

Future Directions

The most critical future direction is to further investigate how changing the question location in MVDs effects donor registrations on a larger state, or national, basis. All three studies found some evidence to suggest that the question order mattered, at least under certain contexts. A larger scope examination of New Mexico should be undertaken to include a time period following the cessation of the COVID-19 pandemic, or adding in additional years of data to both sides of the procedural change may help further tease apart the order effect observed in Study 2. Additionally, if other state's motor vehicle departments are considering changing their applications, this offers ripe opportunity to investigate whether a small procedural change

matters in the MVD, the place that most people choose whether to register as an organ donor (HRSA, 2020). Likewise, researchers should explore the totality of MVD applications, as question order is just one of many survey principles that can potentially influence responses, and therefore influence donor registrations. Other states may have practices or applications that could be adjusted with small tweaks that may pay substantial dividends. These should focus especially on means of increasing the rates of registration among non-organ donors.

Additionally, future research should explore whether the mechanism behind the observed order effect is being driven by straightlining, a type of satisficing behavior, as some of the auxiliary analyses in this dissertation suggest. There could be additional, or alternative, plausible explanations for the order effect. For example, it is possible that the placement of the donor question relative to health and legal question elicits resistance or defensive responding, or that answering these questions make a respondent feel ineligible to register as an organ donor.

Future research should consider other implementations of the manipulated instructions. Although this dissertation did not find support for the use these instructions, other versions or implementations could increase willingness to register as an organ donor. The use of effective manipulated instructions should also be explored in other research contexts. Finally, future research could explore means of increasing attitude extremity for organ donation, as this proved to be a strong predictor of willingness to register for donors and even for non-donors.

Conclusion

This dissertation was inspired by a concern that a battery of health and legal questions asked in MVDs, especially in New Mexico, might reduce the likelihood that a visitor would make the decision to register as an organ donor. Therefore, the goal of this dissertation was to understand how to increase organ donor registrations by optimizing the placement of the donor

request relative to these other questions. There was clear support suggesting that people are more likely to indicate a willingness to register as an organ donor if they are asked about registering at the beginning of this battery of questions, rather than at the end, and this effect was especially pronounced among those who were already registered as organ donors and those who paid the least attention to the survey questions. Although Study 2 did find support for a small order effect on actual donor registrations when controlling for the overall decline in registration rates, COVID-19 needs to be considered as a possible alternative explanation for this effect. This dissertation did not find support for the use of instructional manipulations. Taken in concert, these studies suggest that asking the donor registration question will increase either willingness to register or registration behavior among donors, those paying the least attention, and it may even work for some non-donors.

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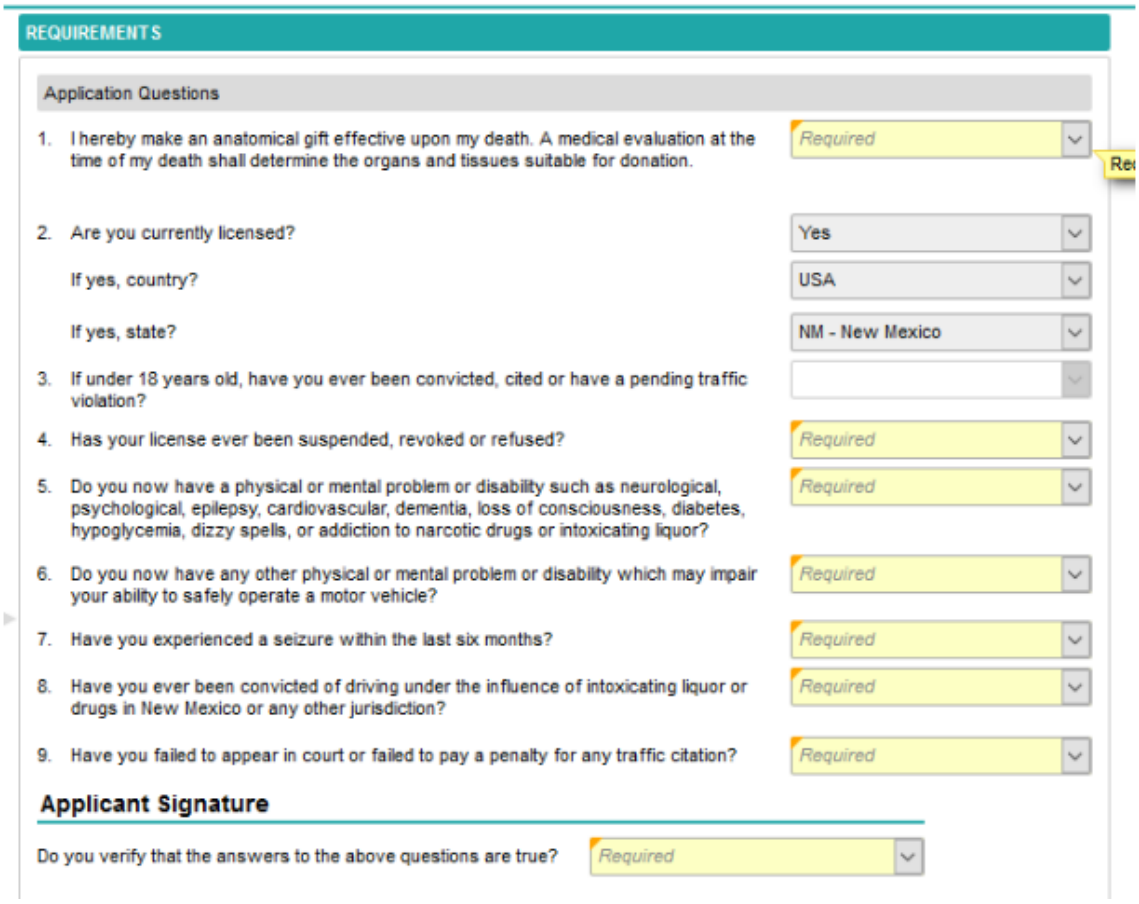
APPENDIXES

Appendix A: New Mexico Donor Application

Screenshot shared with me by New Mexico MVD of the questions asked in the New Mexico following the movement of the question about organ donation registration that took place on April 2, 2020.



REQUIREMENTS

Application Questions

1. I hereby make an anatomical gift effective upon my death. A medical evaluation at the time of my death shall determine the organs and tissues suitable for donation. — Required
2. Are you currently licensed? — Yes
   If yes, country? — USA
   If yes, state? — NM - New Mexico
3. If under 18 years old, have you ever been convicted, cited or have a pending traffic violation?
4. Has your license ever been suspended, revoked or refused? — Required
5. Do you now have a physical or mental problem or disability such as neurological, psychological, epilepsy, cardiovascular, dementia, loss of consciousness, diabetes, hypoglycemia, dizzy spells, or addiction to narcotic drugs or intoxicating liquor? — Required
6. Do you now have any other physical or mental problem or disability which may impair your ability to safely operate a motor vehicle? — Required
7. Have you experienced a seizure within the last six months? — Required
8. Have you ever been convicted of driving under the influence of intoxicating liquor or drugs in New Mexico or any other jurisdiction? — Required
9. Have you failed to appear in court or failed to pay a penalty for any traffic citation? — Required

Applicant Signature

Do you verify that the answers to the above questions are true? — Required

Appendix B: Health and Legal Questions Used in Studies 1 and 3

The following 18 yes/no questions are the revised questions that are actually asked in some motor vehicle departments. This order either asked the organ donation question first or last. The questions remained the same except for the change in location for the registration question.

1.) Would you like to be an organ donor? If you are already registered as a donor, would you re-register if given the opportunity?
2.) Do you have a drivers' license?
3.) Have you ever been convicted for a traffic violation?
4.) Do you have a pending traffic violation?
5.) Has your license ever been suspended?
6.) Has your license ever been revoked?
7.) Has your license ever been refused?
8.) Do you have a physical problem, including neurological disability, epilepsy, cardiovascular dementia, loss of consciousness, diabetes, hypoglycemia, or dizzy spells?
9.) Do you have a mental problem, including a psychological disability?
10.) Do you have an addiction to drugs?
11.) Do you have an addiction to liquor?
12.) Do you now have any other physical problem or disability which may impair your ability to safely operate a motor vehicle?
13.) Do you now have any other mental problem or disability which may impair your ability to safely operate a motor vehicle?
14.) Have you experienced a seizure within the last six months?
15.) Have you ever been convicted of driving under the influence of intoxicating liquor?
16.) Have you ever been convicted of driving under the influence of drugs?
17.) Have you failed to appear in court for any traffic citation?
18.) Have you failed to pay a penalty for any traffic citation?

Appendix C: Survey Instructions Used in Study 3

Equity Instruction

You will be compensated $0.50 in exchange for your careful responding and attention to these items. It is important to the researcher, who is paying you for your responses, that you read each question and consider your answers carefully answer before responding.

Please type the following phrase in the text box below:

I acknowledge that I am being paid in exchange for my responses and I will pay attention and respond accordingly.

Real-World Implications Instruction

These questions can have real-world implications, including the decision to register as an organ donor. This question asks you to consider how you would want your loved ones to respond, should this need arise. Please be on the lookout for this question, and carefully consider your answer to each question before responding.

Please type the following phrase in the text box below:

I acknowledge that my responses can have real-world implications and I will respond accordingly.

Appendix D: Full Survey Materials for Study 1

Start of Block: Intro

Before you begin ...

We respect your time and do not want you to waste it! We are grateful for good work and glad to approve payment for it. However, we **carefully inspect** each response to our survey, and we only approve work that meets our criteria for approval. Your work will be approved only when: · You provide your valid MTurk ID · You complete the survey only once · You correctly follow detailed directions **We do not want to have to reject your work**; if you do not believe you can meet the above criteria, please do not take this survey.

Please provide your correct MTurk ID … your work won't be approved without it!

_____

Page Break

To make sure you are a human being and not a robot, please look at this picture and tell us what you think.

Which of the following words **best describes the object in the picture above**? Please read all of the options before making your selection.

- ○ Flare (1)
- ○ Flashlight (2)
- ○ Lantern (3)
- ○ Travel light (4)
- ○ Torch (5)

End of Block: Intro

Start of Block: Increased Rejection

Page Break

Increased Chance of Rejection

Based on your answer, we have determined that there is an increased likelihood that your work could be rejected and you may not be paid, even if you spend the time and answer all the questions in this survey.

If you are somewhere in the world outside the United States, we will probably detect it.

If you do not read and write English well, we will also notice that.

Both of these are reasons that we would reject your work and not pay you. If you are in the United States and can write basic English well, we welcome your participation. Otherwise, for your sake, please don't take this survey.

- ○ I understand the chance of rejection and **I choose to stop this survey (1)**
- ○ I understand the chance of rejection and **I will take the survey anyway. (2)**

End of Block: Increased Rejection

Start of Block: Informed Consent

Informed Consent

You are invited to be a subject in a research project. Volunteering will not benefit you directly, but you will be helping the investigators to understand how placement of questions might influence thoughts and behaviors. If you decide to volunteer, you will answer questions about yourself and organ donor registration. This will take about **five minutes** of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

Study Leadership: This research project is led by Dr. Jason Siegel, a professor of psychology at Claremont Graduate University.

Purpose: The purpose of this study is to investigate how different elements of a survey can influence people's opinions, thoughts, and attitudes. This research also deals with organ donor registration.

Eligibility: To participate in this study you must be at least 18 years of age, live in the United States, be able to read and write in English, complete the HIT on a non-mobile device, and be registered on Amazon's Mechanical Turk.

Participation: During the survey, you will be asked to answer some questions about your health, driver's license, and opinions, thoughts, and attitudes towards organ donation. Your participation is expected to take approximately **five minutes** of your time.

Risks of Participation: The risks that you run by taking part in this study are minimal. It involves no more risk than what a typical person experiences on a regular day. There are some questions that are sensitive and personal, but these questions are the same that are asked at some Departments of Motor Vehicle in the United States. If at any time you are not comfortable answering a question, you may skip it.

Benefits of Participation: We do not expect the study to benefit you personally. This study will benefit the researchers by providing them insight into how placement of questions alters the answers given. This study is also intended to benefit society through better understanding of question ordering that may be encountered at different department of motor vehicles across the nation.

Compensation: You will be directly compensated the amount of **$0.50** for participating in this study, provided that you follow the instructions for filling out the survey. Failure to correctly follow survey instructions will disqualify you from receiving compensation.

Voluntary Participation: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time without it being held against you. You may refuse to answer any particular question for any reason without penalty. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

Confidentiality: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, we will delete all MTurk ID and IP addresses after participants have been compensated. We will also only report averages and other group level statistics.

Sponsorship: This study is being paid for by the U.S. Department of Health and Human Services.

Further Information: If you have any questions or would like additional information about this study, please contact Dr. Jason Siegel at 520-975-6264 (Jason.Siegel@cgu.edu). The CGU Institutional Review Board (IRB) has certified this project as exempt. If you have any ethical

concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. You may print and keep a copy of this form for your records if you wish. **Consent:** By selecting the "Yes" option below, you indicate that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.

- ○ Yes (1)
- ○ No (2)

End of Block: Informed Consent

Start of Block: Welcome

Welcome

Welcome!

Thank you so much for agreeing to participate in this study! Your time and attention are appreciated. We are interested in how you really feel, so as you take this survey please be completely honest.

We want you to understand that you will be instructed to answer certain questions in certain ways as a form of checking that you are paying attention. If those questions are not answered correctly, you will not be compensated.

Thank you.

Page Break

End of Block: Welcome

Start of Block: Health Questions – Donor Question First

Please answer the following questions.	No (1)	Yes (2)
Would you like to register as an organ donor? If you are already registered as a donor, would you like to re-register? (1)	○	○
Do you have a driver's license? (2)	○	○
Have you ever been convicted for a traffic violation? (11)	○	○
Have you ever been cited for a traffic violation? (12)	○	○
Do you have a pending traffic violation? (13)	○	○
Has your license ever been suspended? (14)	○	○
Has your license ever been revoked? (15)	○	○
Has your license ever been refused? (16)	○	○
Do you have a physical problem, including neurological disability, epilepsy, cardiovascular dementia, loss of consciousness, diabetes, hypoglycemia, or dizzy spells? (17)	○	○
Do you have a mental problem, including a psychological disability? (18)	○	○
Do you have an addiction to drugs? (19)	○	○

Do you have an addiction to liquor? (20)	○	○
Do you now have any other physical problem or disability which may impair your ability to safely operate a motor vehicle? (21)	○	○
Do you now have any other mental problem or disability which may impair your ability to safely operate a motor vehicle? (22)	○	○
Have you experienced a seizure within the last six months? (23)	○	○
Have you ever been convicted of driving under the influence of intoxicating liquor? (24)	○	○
Have you ever been convicted of driving under the influence of drugs? (25)	○	○
Have you failed to appear in court for any traffic citation? (26)	○	○
Have you failed to pay a penalty for any traffic citation? (27)	○	○

End of Block: Health Questions – Donor Question First

Start of Block: Health Questions – Donor Question Last (2)

Please answer the following questions.	No (1)	Yes (2)
Do you have a driver's license? (2)	○	○
Have you ever been convicted for a traffic violation? (11)	○	○
Have you ever been cited for a traffic violation? (12)	○	○
Do you have a pending traffic violation? (13)	○	○
Has your license ever been suspended? (14)	○	○
Has your license ever been revoked? (15)	○	○
Has your license ever been refused? (16)	○	○
Do you have a physical problem, including neurological disability, epilepsy, cardiovascular dementia, loss of consciousness, diabetes, hypoglycemia, or dizzy spells? (17)	○	○
Do you have a mental problem, including a psychological disability? (18)	○	○
Do you have an addiction to drugs? (19)	○	○
Do you have an addiction to liquor? (20)	○	○

Do you now have any other physical problem or disability which may impair your ability to safely operate a motor vehicle? (21)	○	○
Do you now have any other mental problem or disability which may impair your ability to safely operate a motor vehicle? (22)	○	○
Have you experienced a seizure within the last six months? (23)	○	○
Have you ever been convicted of driving under the influence of intoxicating liquor? (24)	○	○
Have you ever been convicted of driving under the influence of drugs? (25)	○	○
Have you failed to appear in court for any traffic citation? (26)	○	○
Have you failed to pay a penalty for any traffic citation? (27)	○	○
Would you like to register as an organ donor? If you are already registered as a donor, would you like to re-register? (28)	○	○

End of Block: Health Questions – Donor Question Last (2)

Start of Block: Donor Status

DonorStatus
Are you currently a registered organ donor?

- ○ No (1)
- ○ Yes (2)

End of Block: Donor Status

Start of Block: Eligibility

Please indicate if the following statements about **your eligibility** to register as an organ donor reflect your beliefs.

TooSick
I am **too sick** to register as an organ donor.

- ○ Yes (1)
- ○ No (0)

TooOld
I am **too old** to register as an organ donor.

- ○ Yes (1)
- ○ No (0)

TooYoung
I am **too young** to register as an organ donor.

- ○ Yes (1)
- ○ No (0)

AmEligible
I am **eligible** to register as an organ donor.

- ○ Yes (1)
- ○ No (0)

ReligionConflicts
Organ donation **conflicts** with my religious beliefs.

- ○ Yes (1)
- ○ No (0)

End of Block: Eligibility

Start of Block: Adapted PDQ

PDQ

We would now like to ask you some questions about how you are currently feeling. Tell us how much you disagree or agree with the following questions about how you are feeling right now.

	Strongly Disagree 1 (1)	Strongly Disagree 2 (2)	Strongly Disagree 3 (3)	Strongly Disagree 4 (4)	Strongly Disagree 5 (5)	Strongly Disagree 6 (6)	Strongly Agree 7 (7)
I am mentally calm. (1)	○	○	○	○	○	○	○
I have lost my psychological center. (2)	○	○	○	○	○	○	○
I feel psychologically confident. (3)	○	○	○	○	○	○	○
Please select three for this item. (4)	○	○	○	○	○	○	○
I feel psychologically off-balance. (5)	○	○	○	○	○	○	○
I feel mentally disrupted. (6)	○	○	○	○	○	○	○
Please click seven for this item. (7)	○	○	○	○	○	○	○
I feel safe at this moment. (8)	○	○	○	○	○	○	○

Page Break

On the next page, there will be a fill-in-the-blank question. It will look like this question is asking you about your favorite food, but instead of answering that question, please type the word sunflower into the blank. Again, please type the word sunflower, rather than answer the question on that page.

Page Break

Q44 What is your favorite food?

_____

End of Block: Adapted PDQ

Start of Block: Demographics

Thank you again for your participation and taking this survey! This is the last page of questions.

Sex
What is your biological sex?

- ○ Male (0)
- ○ Female (1)
- ○ Other (3) _____

Age
How old are you? Please enter a number.

_____

Race
How would you identify yourself? Check all that apply:

- ☐ Caucasian/ White (1)
- ☐ African American/ Black (2)
- ☐ Hispanic/ Latino (3)
- ☐ Asian (4)
- ☐ Pacific Islander (5)
- ☐ Native American (6)
- ☐ Other (7) _____

End of Block: Demographics

Start of Block: Debrief

Thank you for participating in this survey. The purpose of this study is to learn how responding to questions about your health and your driver's license, that are actually asked in some Departments of Motor Vehicles in the United States, alter your willingness to register as an organ donor. The questions we asked you were actually toned-down versions, and a bit less sensitive, than questions that are actually asked in some Departments of Motor Vehicles. Your responses to this survey will help us understand whether asking these questions prior to be asked about organ donor registration is reducing peoples' willingness to register as organ donors. While we do not anticipate that the tasks involved in this study would cause any more discomfort than is experienced in every-day life, we apologize if this process has been at all unpleasant. Please feel free to contact us to clarify any remaining concerns you may have or to express comments and questions. You may reach the primary investigator with the contact information provided below. Once again, thank you for your assistance in this research.
Jason Siegel
If you have any questions please email: jason.siegel@cgu.edu

Do you have any additional comments about this survey that you would like to share?

_____

_____

_____

_____

_____

Thank you again for your participation!

Make sure to **click next to receive the random payment code**.

End of Block: Debrief

Start of Block: Random Code

Thank you for participating in this survey. Your random code is:

${rand://int/10000:99999}

End of Block: Random Code

Appendix E: Full Survey Materials for Study 3

Start of Block: Consent 1

Informed Consent 1
Informed Consent

You are invited to be a subject in a research project. Volunteering will not benefit you directly, but you will be helping the investigators to understand how placement of questions might influence thoughts and behaviors. If you decide to volunteer, you will answer questions about yourself and organ donor registration. This will take about **two minutes** of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

Study Leadership: This research project is led by Danielle Blazek and supervised by Dr. Jason Siegel, a professor of psychology at Claremont Graduate University.

Purpose: The purpose of this study is to investigate how different elements of a survey can influences people's opinions, thoughts, and attitudes. This research also deals with organ donor registration.

Eligibility: To participate in this study you must be at least 18 years of age, live in the United States, be able to read and write in English, complete the HIT on a non-mobile device, and be registered on Amazon's Mechanical Turk.

Participation: During the survey, you will be asked to answer some questions that assess the level of attention you are paying. Your participation is expected to take approximately **two minutes** of your time.

Risks of Participation: The risks that you run by taking part in this study are minimal. It involves no more risk than what a typical person experiences on a regular day. There are some questions that are sensitive and personal, but these questions are the same that are asked at some Departments of Motor Vehicle in the United States. If at any time you are not comfortable answering a question, you may skip it.

Benefits of Participation: We do not expect the study to benefit you personally. This study will benefit the researchers by providing them insight into how placement of questions alters the answers given.

Compensation: You will be directly compensated the amount of **$0.10** for participating in this study, provided that you follow the instructions for filling out the survey. Failure to correctly follow survey instructions will disqualify you from receiving compensation.

Voluntary Participation: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time without it being held against you. You may refuse to answer any particular question for any reason without penalty. Your decision whether or not to

participate will have no effect on your current or future connection with anyone at CGU.

Confidentiality: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, we will delete all MTurk ID and IP addresses after participants have been compensated. We will also only report averages and other group level statistics.

Further Information: If you have any questions or would like additional information about this study, please contact Danielle Blazek at danielle.blazek@cgu.edu or Dr. Jason Siegel at 520-975-6264 (Jason.Siegel@cgu.edu). The CGU Institutional Review Board (IRB) has certified this project as exempt. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. You may print and keep a copy of this form for your records if you wish.

Consent: By selecting the "Yes" option below, you indicate that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.

- ○ Yes (1)
- ○ No (2)

End of Block: Consent 1

Start of Block: MTurk ID

MTurk ID **Please provide your correct MTurk ID** … your work won't be approved without it!

_____

End of Block: MTurk ID

Start of Block: Captcha

Captcha Please complete the captcha below.

End of Block: Captcha

Start of Block: Drag and Drop

Drag and Drop Please complete the following task before proceeding to the survey.

1.) Please drag and drop Minerva McGonagall into Gryffindor.
2.) Please drag and drop Gilderoy Lockhart into Ravenclaw.
3.) Please drag and drop Ignotus Flynn into Hufflepuff.
4.) Please drag and drop Pomona Sprout into Hufflepuff.

Hufflepuff	Gryffindor	Ravenclaw

End of Block: Drag and Drop

Start of Block: Attention Check

Attention Check Please read each group of statements **carefully**, and then pick out the one statement in each group that best describes **the way you have been feeling** during **the past two weeks**, including today.

Concentration Difficulty

- 0 - I can concentrate as well as ever. (1)
- 1 - I can't concentrate as well as usual. (2)
- 2 - It is hard to keep my mind on anything for very long. (3)
- 3 - I find I can't concentrate on anything. (4)

Tiredness or Fatigue

- 0 - I am no more tired or fatigued than usual. (1)
- 1 - I get more tired or fatigues more easily than usual. (2)
- 2 - I am too tired or fatigued to do a lot of the things I used to do. (3)
- 3 - I am too tired or fatigued to do most of the things I used to do. (4)

For the Following

- 0 - I have not paid attention to the questions in this survey. (1)
- 1 - I have paid very little attention to these questions. (2)
- 2 - I have paid attention to these questions. (3)
- 3 - I can't say I have paid attention to any of these questions. (4)

End of Block: Attention Check

Start of Block: Demographics

Sex
What is your biological sex?

- Male (0)
- Female (1)
- Other (3) _____

Age
How old are you? Please enter a number.

_____

Race
How would you identify yourself? Check all that apply:

- ☐ Caucasian/ White (1)
- ☐ African American/ Black (2)
- ☐ Hispanic/ Latino (3)
- ☐ Asian (4)
- ☐ Pacific Islander (5)
- ☐ Native American (6)
- ☐ Other (7) _____

End of Block: Demographics

Start of Block: Bonus Survey

Display This Question:

If Please complete the following task before proceeding to the survey. 1.) Please drag and drop Mine... = Minerva McGonagall [Gryffindor]

And Please complete the following task before proceeding to the survey. 1.) Please drag and drop Mine... = Gilderoy Lockhart [Ravenclaw]

And Please complete the following task before proceeding to the survey. 1.) Please drag and drop Mine... = Ignotus Flynn [Hufflepuff]

And Please complete the following task before proceeding to the survey. 1.) Please drag and drop Mine... = Pomona Sprout [Hufflepuff]

Based on your answers to the previous question, you are eligible to complete a five minute short survey for an additional $0.50. Would you like to complete this bonus survey?

- ○ No (1)
- ○ Yes (2)

End of Block: Bonus Survey

Start of Block: Informed Consent 2

Bonus Consent
Informed Consent

You are invited to be a subject in a research project. Volunteering will not benefit you directly, but you will be helping the investigators to understand how placement of questions might influence thoughts and behaviors. If you decide to volunteer, you will answer questions about yourself and organ donor registration. This will take about **five minutes** of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

Study Leadership: This research project is led by Danielle Blazek and supervised by Dr. Jason Siegel, a professor of psychology at Claremont Graduate University.

Purpose: The purpose of this study is to investigate how different elements of a survey can influences people's opinions, thoughts, and attitudes. This research also deals with organ donor registration.

Eligibility: To participate in this study you must be at least 18 years of age, live in the United States, be able to read and write in English, complete the HIT on a non-mobile device, and be registered on Amazon's Mechanical Turk.

Participation: During the survey, you will be asked to answer some questions about your health, driver's license, and opinions, thoughts, and attitudes towards organ donation. Your participation is expected to take approximately **five minutes** of your time.

Risks of Participation: The risks that you run by taking part in this study are minimal. It involves no more risk than what a typical person experiences on a regular day. There are some questions that are sensitive and personal, but these questions are the same that are asked at some Departments of Motor Vehicle in the United States. If at any time you are not comfortable answering a question, you may skip it.

Benefits of Participation: We do not expect the study to benefit you personally. This study will benefit the researchers by providing them insight into how placement of questions alters the

answers given. This study is also intended to benefit society through better understanding of question ordering that may be encountered at different department of motor vehicles across the nation.

Compensation: You will be directly compensated the amount of **$0.50** for participating in this study, provided that you follow the instructions for filling out the survey. Failure to correctly follow survey instructions will disqualify you from receiving compensation.

Voluntary Participation: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time without it being held against you. You may refuse to answer any particular question for any reason without penalty. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

Confidentiality: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, we will delete all MTurk ID and IP addresses after participants have been compensated. We will also only report averages and other group level statistics.

Further Information: If you have any questions or would like additional information about this study, please contact Danielle Blazek at danielle.blazek@cgu.edu or Dr. Jason Siegel at 520-975-6264 (Jason.Siegel@cgu.edu). The CGU Institutional Review Board (IRB) has certified this project as exempt. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. You may print and keep a copy of this form for your records if you wish.

Consent: By selecting the "Yes" option below, you indicate that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.

- ○ Yes (1)
- ○ No (2)

End of Block: Informed Consent 2

Start of Block: Equity Instruction

Equity You will be compensated $0.50 in exchange for your careful responding and attention to these items. It is important to the researcher, who is paying you for your responses, that you read each question and consider your answers carefully answer before responding.

Please type the following phrase in the text box below:

I acknowledge that I am being paid in exchange for my responses and I will pay attention

and respond accordingly.

_____

End of Block: Equity Instruction

Start of Block: Real-World Application

Real World These questions can have real-world implications, including the decision to register as an organ donor. This question asks you to consider how you would want your loved ones to respond, should this need arise. Please be on the lookout for this question, and carefully consider your answer to each question before responding.

Please type the following phrase in the text box below:

I acknowledge that my responses can have real-world implications and I will respond accordingly.

_____

End of Block: Real-World Application

Start of Block: Welcome

Start of Block: Health Questions - Donor First

Donor Question First Please answer the following questions.	No (0)	Yes (1)
Would you like to register as an organ donor? If you are already registered as a donor, would you like to re-register? (1)	○	○
Do you have a driver's license? (2)	○	○
Have you ever been convicted for a traffic violation? (11)	○	○
Have you ever been cited for a traffic violation? (12)	○	○
Do you have a pending traffic violation? (13)	○	○
Has your license ever been suspended? (14)	○	○
Has your license ever been revoked? (15)	○	○
Has your license ever been refused? (16)	○	○
Do you have a physical problem, including neurological disability, epilepsy, cardiovascular dementia, loss of consciousness, diabetes, hypoglycemia, or dizzy spells? (17)	○	○
Do you have a mental problem, including a psychological disability? (18)	○	○
Do you have an addiction to drugs? (19)	○	○

Do you have an addiction to liquor? (20)	○	○
Do you now have any other physical problem or disability which may impair your ability to safely operate a motor vehicle? (21)	○	○
Do you now have any other mental problem or disability which may impair your ability to safely operate a motor vehicle? (22)	○	○
Have you experienced a seizure within the last six months? (23)	○	○
Have you ever been convicted of driving under the influence of intoxicating liquor? (24)	○	○
Have you ever been convicted of driving under the influence of drugs? (25)	○	○
Have you failed to appear in court for any traffic citation? (26)	○	○
Have you failed to pay a penalty for any traffic citation? (27)	○	○

End of Block: Health Questions - Donor First

Start of Block: Health Questions - Donor Last (2)

Donor Question Last Please answer the following questions.	No (0)	Yes (1)
Do you have a driver's license? (2)	○	○
Have you ever been convicted for a traffic violation? (11)	○	○
Have you ever been cited for a traffic violation? (12)	○	○
Do you have a pending traffic violation? (13)	○	○
Has your license ever been suspended? (14)	○	○
Has your license ever been revoked? (15)	○	○
Has your license ever been refused? (16)	○	○
Do you have a physical problem, including neurological disability, epilepsy, cardiovascular dementia, loss of consciousness, diabetes, hypoglycemia, or dizzy spells? (17)	○	○
Do you have a mental problem, including a psychological disability? (18)	○	○
Do you have an addiction to drugs? (19)	○	○
Do you have an addiction to liquor? (20)	○	○

Do you now have any other physical problem or disability which may impair your ability to safely operate a motor vehicle? (21)	○	○
Do you now have any other mental problem or disability which may impair your ability to safely operate a motor vehicle? (22)	○	○
Have you experienced a seizure within the last six months? (23)	○	○
Have you ever been convicted of driving under the influence of intoxicating liquor? (24)	○	○
Have you ever been convicted of driving under the influence of drugs? (25)	○	○
Have you failed to appear in court for any traffic citation? (26)	○	○
Have you failed to pay a penalty for any traffic citation? (27)	○	○
Would you like to register as an organ donor? If you are already registered as a donor, would you like to re-register? (28)	○	○

End of Block: Health Questions - Donor Last (2)

Start of Block: Attitudes

Attitudes
Registering myself as an organ donor would be ...

	Strongly disagree 0 10 20 30 40 50 60 70 80 90 100 Strongly agree
a rewarding act.	
a useful act.	
a good act.	

End of Block: Attitudes

Start of Block: Donor Status

DonorStatus Are you currently a registered organ donor?

- ○ No (0)
- ○ Yes (1)

End of Block: Donor Status

Start of Block: Eligibility

Please indicate if the following statements about **your eligibility** to register as an organ donor reflect your beliefs.

TooSick
I am **too sick** to register as an organ donor.

- ○ No (0)
- ○ Yes (1)

TooOld
I am **too old** to register as an organ donor.

- ○ No (0)
- ○ Yes (1)

TooYoung
I am **too young** to register as an organ donor.

- ○ No (0)
- ○ Yes (1)

AmEligible
I am **eligible** to register as an organ donor.

- ○ No (0)
- ○ Yes (1)

ReligionConflicts
Organ donation **conflicts** with my religious beliefs.

- ○ No (0)
- ○ Yes (1)

End of Block: Eligibility

Start of Block: Fill in the blank

On the next page, there will be a fill-in-the-blank question. It will look like this question is asking you about your favorite food, but instead of answering that question, please type this phrase into the blank: hold the elevator.

Again, rather than answer the question, please type the phrase: hold the elevator.

Page Break

Fill in the Blank What is your favorite food?

_____

End of Block: Fill in the blank

Start of Block: Demos 2

We know you already answered these demographic questions earlier, so thank you for filling them out again.

Sex2
What is your biological sex?

- ○ Male (0)
- ○ Female (1)
- ○ Other (3) _____

Age2
How old are you? Please enter a number.

_____

Ethnicity2
How would you identify yourself? Check all that apply:

- ☐ Caucasian/ White (1)
- ☐ African American/ Black (2)
- ☐ Hispanic/ Latino (3)
- ☐ Asian (4)
- ☐ Pacific Islander (5)
- ☐ Native American (6)
- ☐ Other (7) _____

End of Block: Demos 2

Start of Block: Debrief

Thank you for participating in this survey. The purpose of this study is to learn how responding to questions about your health and your driver's license, that are actually asked in some Departments of Motor Vehicles in the United States, alter your willingness to register as an organ donor. The questions we asked you were actually toned-down versions, and a bit less sensitive, than questions that are actually asked in some Departments of Motor Vehicles. Your responses to this survey will help us understand whether asking these questions prior to be asked about organ donor registration is reducing peoples' willingness to register as organ donors.

While we do not anticipate that the tasks involved in this study would cause any more discomfort than is experienced in every-day life, we apologize if this process has been at all unpleasant. Please feel free to contact us to clarify any remaining concerns you may have or to express comments and questions. You may reach the primary investigator with the contact information provided below. Once again, thank you for your assistance in this research.

If you have any questions please email: danielle.blazek@cgu.edu or jason.siegel@cgu.edu

Comments Do you have any additional comments about this survey that you would like to share?

_____

_____

_____

_____

_____

Thank you again for your participation!

Make sure to **click next to receive the random payment code**.

End of Block: Debrief

Start of Block: Random Code

Thank you for participating in this survey. Your random code is:

Accio${rand://int/10000:99999}Payment

End of Block: Random Code