

It Does Hurt to Ask

Theory and Evidence on Informal Help-Seeking

A dissertation submitted to the
Department of Social and Decision Sciences
in partial fulfillment of the requirements

for the degree of
Doctor of Philosophy in Behavioral Decision Research
by

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May 2020

Abstract

Informal, interpersonal help—that is, resources voluntarily transferred between individuals without a formal contract—can be hugely valuable for people in need, yet evidence from fields such as finance and medicine suggests that people in need do not always actively seek out such help. Prior work seeking to explain this behavior has largely focused on explanations such as people not recognizing that there is help available or people simply not desiring the help.

In this dissertation, I propose another potential explanation for this puzzle. I hypothesize that one reason why people in need may not ask for help is that they incur a psychological cost in asking for help—that is, in having a conversation with a potential helper about the fact that they would like to receive help. This “pain of asking” may prevent people from asking even when they recognize that there is help available, desire that help, and believe that asking would increase their chances of getting the help.

Across three papers—a theoretical model and two field applications—this dissertation makes three primary contributions. First, it develops a new framework that describes how people in need decide to ask others for help. Second, it empirically demonstrates the existence and importance of the pain of asking. It shows that not only does asking create psychological costs, but those psychological costs then suppress demand for informal help and can harm economic outcomes. Finally, it offers explanations for what contributes to the pain of asking.

Paper 1, written in collaboration with George Loewenstein and drawing on our joint ongoing work with Roland Bénabou, lays the theoretical foundation for the dissertation. It first develops a game theoretic model that captures communication between a person who wants help and a person who can provide help. It proposes that, under certain conditions, people in need face a pain of asking: holding constant whether help is transferred, they feel worse if they asked for help than if they did not. The model further explains how and when the pain of asking can prevent people in need from asking for help. In particular, it argues that the person in need is uncertain about the would-be helper’s generosity toward or valuation of him. He avoids asking out of fear of being rejected and learning through that rejection that the would-be helper does not truly value him. We also present results from several studies, which test and demonstrate support for the predictions of the model.

Paper 2 examines the importance of “the ask” in a financial setting. I first argue that informal loans—loans from friends and family—are a hugely important sector of the economy, yet have received little attention in the literature. Next, I seek to better understand how people decide whether to choose an informal loan over other common alternatives of addressing their financial needs. I find that although people often believe that informal loans are more economically attractive than other alternatives, they also report that seeking such loans forces them to incur psychological and emotional costs, and in particular the pain of asking. I further

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find that anticipation of the pain of asking seems to predict people's unwillingness to ask their friends and family for financial help. While this unwillingness may spare them from incurring some psychological costs, it may also generate economic costs, pushing them towards more expensive methods of addressing their financial needs.

Finally, Paper 3, joint with George Loewenstein and Amit Tevar, tests whether the pain of asking may have literal life-and-death consequences. In particular, it tests whether the pain of asking may contribute to end-stage renal disease (ESRD) patients' unwillingness to ask friends, family, and strangers for potentially life-saving live kidney donations. As predicted, we find that although such patients typically desire and see value in having live kidney donations, only a minority ask potential donors to donate. This pattern of behavior cannot be fully explained by standard economic factors, and instead seems to be driven in large part by the pain of asking.

By incorporating social psychology into a game-theoretic analysis, this dissertation deepens our understanding of the powerful psychology of help-seeking and -giving. Together, the three papers offer a new framework describing how people decide to seek informal, interpersonal help; provide corroborating evidence for the importance of the "pain of asking" in a range of settings; and offer explanations for why, precisely, asking is painful. This work may have important implications for fields such as health, education, and public economics, which are often concerned with how to most efficiently allocate resources to help those in need. Because formal and informal help are often substitutes, deepening our understanding of how people decide to pursue informal help may shed light on the optimal amount and distribution of public spending on formal help. It may also inform non-policy strategies for better connecting those in need to valuable resources. For instance, insights from this research could be used to develop online applications for informal lending or educational materials for ESRD patients seeking live kidney donations.

Acknowledgements

First, I would like to thank my amazing committee—Linda Babcock, Saurabh Bhargava, Alex Imas, and George Loewenstein—and in particular my co-chairs, Alex and George. Their feedback, guidance, and support over this multi-year process has exceeded anything I could have expected, and I am eternally grateful for their roles in shaping me as an academic. I am also incredibly appreciative of Lynn Conell-Price, Gonzalo Escobar, Joel Levin, and Erin McCormick, whose abilities to provide both academic and personal support—as well as to recognize when I needed each—were indispensable to me. I would also like to thank my family—Artur, Maria, and Tomasz Jaroszewicz; and Joanna, Julian, and Robert Lewandowski—for their unfaltering patience and support. Finally, I am grateful for all of the professors, graduate students, and staff of the Social and Decision Sciences department, as well as Martin Greenberg and Robert Letzler, for their advice, ideas, company, and senses of humor.

Of course, an acknowledgements section in a dissertation on help-seeking would be incomplete without any commentary on my experience of the help-seeking and -receiving process. In addition to simply thanking everyone who has helped, I want to additionally say how grateful I am for the fact that they all made the help-seeking process so painless, both by offering help proactively and by always agreeing to help with enthusiasm.

Contents

1	Introduction	7
2	Literature	14
2.1	Introduction	14
2.2	Help-seeking frameworks	16
2.3	Why people may not seek help	18
3	It does hurt to ask: A game-theoretic model of informal help-seeking and -giving	23
3.1	Introduction	24
3.2	Literature	27
3.3	Model	31
3.3.1	Players	31
3.3.2	Payoffs	32
3.3.3	Timing and information	34
3.4	Deriving players' beliefs	34
3.4.1	The Receiver	35
3.4.2	The Sender	40
3.5	Results	41
3.5.1	Comparative statics	44
3.6	Study 1	51
3.6.1	Study 1a	51
3.6.2	Study 1b	55
3.6.3	Discussion	56
3.7	Study 2	57
3.7.1	Study 2a: Consenting	58
3.7.2	Study 2b: Asking	60
3.7.3	Study 2c: Offering	62
3.7.4	Discussion	64

3.8	Conclusion	65
4	The psychological costs of seeking informal loans	69
4.1	Introduction	70
4.2	Definitions	74
4.3	Statistics on informal loans	75
4.4	Factors affecting demand for loans	79
4.5	Study 1	84
4.5.1	Participants	84
4.5.2	Methods	84
4.5.3	Results	85
4.6	Study 2	92
4.6.1	Participants	92
4.6.2	Methods	92
4.6.3	Results	93
4.6.4	Discussion	97
4.7	Conclusion	97
5	Factors affecting end-stage renal disease patients' willingness to seek live kidney donations	99
5.1	Introduction	100
5.2	Background	102
5.3	Methods	106
5.3.1	Recruitment	106
5.3.2	Participants	107
5.3.3	Survey	107
5.3.4	Experiment	110
5.4	Results	112
5.4.1	Participants	112
5.4.2	Descriptive results	113
5.4.3	Experimental results	119
5.5	Conclusion	121
6	Conclusion	123
	References	126
	Appendices	143

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A It does hurt to ask: A game-theoretic model of informal help-seeking and -giving	143
A.1 Carnegie Mellon alumni pilot	143
A.2 Study 1a	144
A.3 Study 1b	147
A.4 Study 2a	151
A.5 Study 2b	154
A.6 Study 2c	156
B The psychological costs of seeking informal loans	160
B.1 Community Human Services survey	160
B.2 Ratings of different methods of acquiring money	160
B.3 Study 1	164
B.4 Study 2	172
C Factors affecting end-stage renal disease patients' willingness to seek live kidney donations	174
C.1 Baseline survey	174
C.2 Followup survey	185

Chapter 1

Introduction

Opportunities for informal helping—i.e., voluntarily transferring resources between individuals without a formal contract—are pervasive. For instance, you may be asked to help a family member pay some bills while he looks for a job, lend a neighbor your car while hers is being repaired, or put in a few hours of work to help your colleague meet a deadline. Such informal help can be hugely valuable for a person in need, and can be an important way of addressing resource inequality.

Most research on helping interactions has focused on the potential help-giver, examining when and why they choose to (not) give to others (Nadler 2015). In this dissertation, I instead focus on the potential help-receiver, examining when and why they choose to (not) ask others for help.

It may seem as though the answer to this question is straightforward. Assuming that a person recognizes that help is available, a standard economic framework might suggest that he will ask for help if the expected present discounted value of utility from having the resources (e.g., a financial loan), minus the time and effort costs associated with asking for the resources, is greater than the expected present discounted value of utility from not having the resources. However, prior work suggests that people often do not ask for help, even when they recognize that help is available, the value of the help is large, and they believe that asking for it will improve their chances of receiving it.

In this dissertation, I offer one potential explanation for this puzzle. I argue that even if people want help, know that it is available, and see value in asking for it, they may not ask because asking is psychologically painful—it forces them to experience a “pain of asking.” Through a theoretical model (Paper 1) and two field applications (Papers 2 and 3), I develop a new framework that captures how people decide to ask for help; demonstrate the existence and importance of the pain of asking, showing that it can decrease willingness to ask for help and harm economic outcomes; and offer explanations for what, exactly, is painful about asking.

To fix ideas, I focus on the following theoretical contexts. First, people must recognize they

have a problem and conclude that they cannot easily alleviate or resolve it on their own. That is, they must believe that they need help.¹ Second, they must recognize that there may be help available. In the context of this work, this implies that a person in need must believe that there is some positive probability that a person would be both able to help and agree to help if asked.² Third, they must desire that help—i.e., they must believe that their utility would be improved from having the additional resources from the potential helper.³

For the purposes of this dissertation, I define informal help as voluntarily transferred resources between individuals without a formal contract. Dissecting this definition, “voluntarily transferred” excludes situations in which it is somebody’s job to provide resources, for instance when a customer asks a store employee (Ames, Flynn, and E. U. Weber 2004) or a crime victim asks a police officer for help. It also excludes situations where there is a threat of harm to someone if they do not transfer resources, such as when an employer asks an employee to do a task (Babcock, Recalde, et al. 2017) and the employee would rather not do it but feels forced to do so.

The “resources” I study in this dissertation are material or effort-based, but many of the same insights could in theory be applied to information, advice, or emotional support (Bamberger 2009; Bonaccio and Dalal 2006; Brooks, Gino, and Schweitzer 2015; Gino, Brooks, and Schweitzer 2012).⁴

The “between individuals” clause excludes situations in which an individual asks a government agency or company (or representative of such an organization) for help, as in take-up of social benefits (Currie 2004; Currie and Gruber 1996), private benefits (e.g., employer-provided 401(k) and health insurance plans; Duflo and Saez 2002; Gruber 1994; Madrian and Shea 2001), physical health services (Facione 1993; Moreira et al. 2005; Shaw et al. 2001), mental health services (Dennis and Chung-Lee 2006; Micheltore and Hindley 2012; Suurvali et al. 2009), interpersonal violence help (McCart, Smith, and Sawyer 2010), and educational services (Aleven et al. 2003). It also excludes situations in which a person negotiates with a representative of a company, such as an employee asking his supervisor for a raise (Babcock, Gelfand, et al. 2006; Bowles, Babcock, and Lai 2007; Kapoutsis, Volkema, and Nikolopoulos 2013; Small, Gelfand, et al. 2007; Volkema 2012; Volkema and Fleck 2012), as well as situa-

¹From a standard economic perspective, “needs” and “wants” are equivalent, and in this document, I use the two terms interchangeably. From a psychological or philosophical perspective, however, they may not be identical (Campbell 1998; Galbraith 1958).

²People may, of course, be biased in these beliefs. For instance, see Bohns 2016 and Flynn and Lake 2008.

³This means that a person in need would believe that, *all else equal*, their utility from having help is greater than their utility from not having help. In the context of the model presented in Chapter 3, this would imply that utility from receiving material resources is positive: $u_R(\nu) > 0$.

⁴Indeed, Brooks et al. view advice-seeking as a type of help-seeking. They further note, however, that advice-seeking differs from other forms of help-seeking in that it entails a request for information for a prescriptive course of action, it allows the seeker to retain a larger degree of agency and control, and it implies that the seeker and giver have a shared set of values. In addition, while advice-seeking can be strategic, help-seeking is typically not.

tions in which a person seeks information or support from a non-human source, such as a book or the Internet. Finally, it excludes situations where an organization or representative of an organization asks an individual for help, as with fundraising or charitable giving (Andreoni 1998; Andreoni, Rao, and Trachtman 2017; DellaVigna, List, and Malmendier 2012; Karlan and List 2007; List 2011; List and Lucking-Reiley 2002).

Finally, the “without a formal contract” clause excludes situations in which help is provided by professionals, such as a hired gardener or a licensed therapist (Cowen 1982).⁵ Instead, I focus on situations in which people in need seek help from non-professional individuals, such as friends, relatives, or acquaintances.

I apply these ideas to two field contexts: finance and health. The first explores people’s willingness to ask friends, family, or other individuals for informal financial loans. The second examines the willingness of people in need of kidney transplants to ask others for a live kidney donation. Other examples explored in scenario studies include asking to borrow a friend’s car, asking a neighbor for help with household tasks after becoming injured, and asking a colleague for help at work.

This dissertation seeks to fill several gaps in the literature, both in economics and in psychology. There is a wealth of evidence on the factors driving the “supply side” of giving, when people give help and why. This work has shown that people often provide help at their own expense (Camerer 2011; DellaVigna, List, and Malmendier 2012; Karlan and List 2007). It has proposed various explanations for this behavior (Andreoni 1990; Bénabou and Tirole 2006; Charness and Rabin 2002; Dana, R. A. Weber, and Kuang 2007; DellaVigna, List, and Malmendier 2012; U. Gneezy and Rustichini 2004; Ottoni-Wilhelm, Vesterlund, and Xie 2017), as well as proposed or documented numerous ways of increasing helping behavior (Andreoni 1998; Bagnoli and Lipman 1989; U. Gneezy, Keenan, and A. Gneezy 2014; Langer, Blank, and Chanowitz 1978; List and Lucking-Reiley 2002; Roghanizad and Bohns 2017; Small, Loewenstein, and Slovic 2007).

There is, however, a comparative dearth on the “demand side” of giving, when people ask others for help and why. Most of the economics work that does exist in this area is on “take-up,” which explores when and why people (do not) seek formal help such as social benefits (Currie 2004; Moffitt 1983) and private benefits (e.g., Duflo and Saez 2002; Gruber 1994; Madrian and Shea 2001).⁶ There is, however, little work exploring informal help-seeking through an economic lens. Yet informal helping interactions are likely to be hugely important in many settings. For instance, loans between family and friends are estimated to amount

⁵Indeed, the coarsest distinction between formal and informal help is simply whether the help is provided by a professional or a non-professional (Cowen 1982). As discussed in greater detail in Chapter 4, however, the “formality” of a contract is a somewhat nuanced and non-binary construct.

⁶Note that based on the definition I provide above, this literature is excluded from my research scope, as asking help of an organization involves fundamentally different psychology.

to \$89 billion/year in the US, nearly double that of payday loans (\$45 billion/year).⁷ This dissertation aims to help fill this gap.

A second gap in the literature this dissertation aims to fill is within psychology. Psychologists have explored informal help-seeking, but our understanding of why people fail to ask for materially valuable and needed help is still incomplete. Some previously offered explanations for why people may not seek informal help include a failure to recognize opportunities to ask (Babcock, Gelfand, et al. 2006), an underestimation of the likelihood that someone would help if asked (Bohns 2016; Flynn and Lake 2008), a desire to avoid stigma or appearing incompetent (Fisher, Nadler, and Whitcher-Alagna 1982; Nadler 2015), a distaste for feeling indebted or unequal to others (Greenberg 1980; E. Walster, Berscheid, and G. W. Walster 1973), and wanting to avoid restrictions to subsequent freedom (Brehm 1989; Fisher, Nadler, and Whitcher-Alagna 1982; Gross, Wallston, and Piliavin 1979).

Researchers have argued that asking for help or advice can be difficult and uncomfortable (Bohns and Flynn 2010; Brooks, Gino, and Schweitzer 2015; N. L. Collins and Feeney 2000; Downey and S. I. Feldman 1996; van Rooy 2003), and some have even provided suggestive evidence that the costs of asking may inhibit willingness to ask for help (Bohns and Flynn 2010; Bowles, Babcock, and Lai 2007; Broll, Gross, and Piliavin 1974; Small, Gelfand, et al. 2007). This topic is, however, still underexplored. Although the literature documents that people often find it difficult to ask, it provides little insights into how the discomfort of asking affects willingness to ask and why, exactly, asking is psychologically painful.

This dissertation aims to help fill these gaps in the literature by making the following contributions. First, it complements the extensive literature on help-giving by exploring informal help-seeking through an economic lens. I do this by presenting a game-theoretic framework describing how people decide to seek informal help, with a focus on the psychological costs of asking. The framework formalizes the utility functions of a person who wants help and a person who may be able to provide help and identifies the conditions under which people experience what we call the psychological “pain of asking.” Second, using both stylized lab studies and two field applications, the dissertation empirically demonstrates the existence and importance of the pain of asking. I show that the pain of asking can decrease willingness to ask for help, and provide suggestive evidence for the fact that it may harm economic outcomes. Finally, I offer explanations for why, precisely, people find asking to be so painful. We present one explanation in the model, and test several other possible explanations in the two applied papers.

Paper 1 sets the theoretical groundwork for the field studies (Papers 2 and 3). This paper,

⁷<https://www.incharge.org/debt-relief/debt-consolidation/how-to-borrow-money-from-family-friends/> Calculated from Federal Reserve Bank Survey of Consumer Finances, 2013. <https://www.economist.com/news/finance-and-economics/21720297-regulators-squeeze-industry-payday-lending-declining> Both accessed 28 March 2018.

which is written with George Loewenstein and draws on our joint ongoing work with Roland Bénabou, develops a game theoretic model that captures communication between a person who wants help and a person who can provide help. In this model, we argue that the person who wants help gets utility from his beliefs about how much the potential helper values him—i.e., how generous she is towards him. At the same time, the potential helper gets image utility from believing that the person in need believes that she is generous. Different actions—offering help, consenting to help after being asking, and refusing to help after being asked—give the person in need different signals about the potential helper’s valuation of him, thus changing both the person in need’s and potential helper’s psychic utilities.

From these signals, we derive what we call the “pain of asking”: a phenomenon in which both the person in need and the potential helper feel worse after there was an ask than if there was no ask, holding constant whether help was provided. That is, the person in need will feel worse after asking and being rejected than if there simply had been no offer for help, and will feel worse if he asks and is consented to than if the helper offers help on her own accord. The same applies to the potential helper: she will feel worse after being asked and rejecting the person in need than if she had not been asked and simply did not offer; and she will feel worse if she is asked and agrees to help than if she had voluntarily offered.

Importantly, our model then goes on to explain how and when the pain of asking can prevent people in need from asking for help. Building on work in information avoidance, we argue that a person in need will fear receiving a rejection and learning through that rejection that the would-be helper does not truly value him. Because the potential psychic cost of receiving such a rejection is larger than the potential gain of having the helper consent to him, a person in need may avoid asking, even when the help would be economically valuable and he recognizes that he cannot get the help without asking. Several studies test and demonstrate support for the predictions of this model.

The next two papers demonstrate the importance of “the ask” in two economically important contexts. Paper 2 examines the importance of the ask in a financial setting. Informal loans are very common, particularly among low-income individuals. Yet despite their prevalence, we know very little about how people decide whether to seek them in the face of a financial emergency, or what the effects of these decisions are. This paper aims to identify the factors that affect people’s willingness to seek informal loans, with a focus on the psychological pain of asking. I find that although people often believe that informal loans are more economically attractive than other common methods of acquiring money, they also anticipate that seeking out such loans would force them to incur a pain of asking. I further find suggestive evidence that trying to avoid the pain of asking can harm economic outcomes, potentially pushing people away from comparatively inexpensive informal loans and towards more expensive alternatives of acquiring funds.

Finally, Paper 3, written in collaboration with George Loewenstein and Amit Tevar, tests

for the importance of the ask in a health domain. Despite major benefits, comparatively few patients with end stage renal disease (ESRD) receive live kidney donations, instead indefinitely staying on dialysis and/or waiting for cadaveric donor transplants. We hypothesized that one potential explanation for this pattern is that the pain of asking suppresses ESRD patients' willingness to ask friends, family, and strangers for these potentially life-saving live kidney donations.

To test this hypothesis, we administered a survey and experiment to current and former ESRD patients. Our survey reveals that although most patients in our sample prefer live kidney donations over other treatment options, and they recognize that it would have positive impacts on their longevity and quality of life, only a minority have ever asked a potential live donor to consider donating to them. Standard economic explanations, such as believing that asking would not increase the likelihood of receiving a donation, are insufficient to explain these results. Instead, participants report that the pain of asking plays a significant role in preventing them from taking this critical action.

Our experiment sought to causally test the role of the pain of asking in people's readiness to ask for help and the number of people they actually ask. Unfortunately, due to a small sample size, the results of the experiment are inconclusive. Nevertheless, taken as a whole, we believe our results speak to the critical importance of incorporating the psychological discomfort of asking into ESRD educational and coaching materials.

The remainder of this document proceeds as follows. Chapter 2 discusses relevant literature. Chapters 3 through 5 contain the three papers described above, while Chapter 6 concludes.

In addition to contributing to several disparate literatures, the insights from this work may add to important policy discussions, as well. First, the decision to seek informal help often has major consequences both on the welfare of the person in need and on those who could help them. Understanding when and why people in need choose to (not) ask for help, as well as what the consequences of those actions are, can be used to help mitigate resource inequality in a way that maximizes social welfare.

Second, to the extent that formal and informal help are substitutes, it is important to understand the different economic and psychological costs and benefits of each, as well as how people trade off those elements. Having better insight into these processes can have important implications for health, development, education, and public economics, which are often concerned with how to most efficiently allocate resources to help those in need. Such insights may help us better answer questions such as whether payday loans should be made less costly to decrease people's need to ask friends and family for informal loans, whether public welfare transfers crowd out private transfers, and whether public welfare transfers get shared with non-beneficiaries of the public transfer (Cox and Jimenez 1990). In the health space, findings from this work can also point to methods of better educating patients in need of organ transplants on how to ask others to consider becoming live organ donors. The findings

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from this work may enrich policymakers' understanding of how people seek informal help and identify ways to better connect those in need to valuable resources, be they formal or informal.

Chapter 2

Literature

2.1 Introduction

Most work on giving has examined the donor’s, or the “supply,” side of giving—when we help one another and why (Karlan and List 2007; List 2011; Simon 1993). This work has shown that it is not uncommon for people to provide help at their own expense, both in response to direct requests for help (Andreoni, Rao, and Trachtman 2017; Langer, Blank, and Chanowitz 1978), as well as volunteering or offering help in the absence of a direct ask (Beck and Clark 2009; Camerer 2011). People give in both formal and informal contexts—that is, to charities or organizations (DellaVigna, List, and Malmendier 2012; Karlan and List 2007) and to individuals, with or without an ongoing relationship (Beck and Clark 2009; Camerer 2011; Gale and Scholz 1994). For instance, well-controlled studies on the dictator game indicate that when given a pot of money, participants will on average give another anonymous participant 20% of it, without any extrinsic incentives to do so (Camerer 2011).

Economists have proposed a number of explanations for giving, including pure altruism (Andreoni, Harbaugh, and Vesterlund 2010; Bénabou and Tirole 2006), impure altruism (Andreoni 1990; Ottoni-Wilhelm, Vesterlund, and Xie 2017), inequity aversion (Charness and Rabin 2002), social pressures (Dana, R. A. Weber, and Kuang 2007; DellaVigna, List, and Malmendier 2012), social reputation (Bénabou and Tirole 2006), social norms (U. Gneezy and Rustichini 2004), the efficiency of giving (Andreoni and Miller 2002), and extrinsic incentives (U. Gneezy and Rustichini 2004; Bénabou and Tirole 2006; U. Gneezy, Meier, and Rey-Biel 2011; Fehr and Gächter 2000). Other researchers have documented or proposed ways of increasing giving, such as through increasing seed money or allowing for refunds (Andreoni 1998; Bagnoli and Lipman 1989; List and Lucking-Reiley 2002), coupling a request with a “reason” for asking (Langer, Blank, and Chanowitz 1978), highlighting “identifiable victims” (Small, Loewenstein, and Slovic 2007), employing different modes of asking (Roghanizad and Bohns 2017), and tackling overhead aversion (U. Gneezy, Keenan, and A. Gneezy 2014).

Research on the recipient's, or the "demand," side of giving, however—when we ask one another for help and why—is far more limited. To the extent it has been explored within economics, most work has been on take-up of formal help: seeking help from organizations and programs. This work, both within economics and in more "applied" fields such as health and education, has highlighted that people do not always acquire resources that might be available to them. For instance, despite significant financial benefits to doing so, only 75% of eligible Americans claim the Earned Income Tax Credit (Bhargava and Manoli 2015), and even fewer claim Temporary Assistance for Needy Families (TANF), Supplemental Security Income (SSI), and the Supplemental Nutrition Assistance Program (SNAP).¹ Some researchers (Hernanz, Malherbet, and Pellizzari 2004) have estimated that across different social assistance and housing programs in OECD countries, only 40 to 80% of people who are eligible for benefits actually claim and receive them. A similar pattern emerges in the domains of private benefits (e.g., employer-provided 401(k) and health insurance plans; Duflo and Saez 2002; Gruber 1994; Madrian and Shea 2001), physical health services (Facione 1993; Moreira et al. 2005; Shaw et al. 2001; Traino, West, et al. 2017), mental health services (Dennis and Chung-Lee 2006; Micheltore and Hindley 2012; Suurvali et al. 2009), interpersonal violence help (McCart, Smith, and Sawyer 2010), and education services (Aleven et al. 2003): people often fail to seek out both formal and informal help for their difficulties, despite arguably large benefits. There is some evidence, moreover, that this problem can be exacerbated among those of low socioeconomic status (Calarco 2011; Eisenberg, Golberstein, and Gollust 2007; J. Hunt and Eisenberg 2010) and those who are most vulnerable (Featherstone and Broadhurst 2003).

There is hardly any work on informal help-seeking within economics. Research from applied fields has revealed that people often seek non-material informal help more readily than formal help. This pattern has been shown in response to facing mental or emotional distress (Grinstein-Weiss, Fishman, and Eisikovits 2005; Micheltore and Hindley 2012; Wills and DePaulo 1991), becoming a victim of crime (Ansara and Hindin 2010; Ashley and Foshee 2005; McCart, Smith, and Sawyer 2010), and facing academic difficulties (Knapp and Karabenick 1988). Nevertheless, these and other field data (Lewis et al. 2005; Micheltore and Hindley 2012; Traino, West, et al. 2017) reveal that even informal help-seeking rates are fairly low. Research in psychology and sociology further shows that people may also fail to seek informal, material help in the lab (Fisher, Nadler, and Whitcher-Alagna 1982; Nadler 2015).

Standard economic theory would argue that such behavior is only rational if the present discounted value of utility from having the resources (e.g., a financial loan, better health), minus the time and effort costs associated with acquiring the resources, is negative. However, some work has proposed that there may be potent psychological costs associated with seeking help, as well (Bertrand, Mullainathan, and Shafir 2006; Bhargava and Manoli 2015; Fisher,

¹Data source: U.S. Department of Health and Human Services, 2007, available at: <https://aspe.hhs.gov/pdf-report/indicators-welfare-dependence-annual-report-congress-2007> Retrieved 1 April 2020.

Nadler, and Whitcher-Alagna 1982; Liang et al. 2005; Moffitt 1983; Nadler 2015). This work has further argued that these psychological costs may help explain why people fail to seek resources when the material benefit of the help appears to be substantially higher than any plausible estimates of time and effort costs. Next, I review previously proposed frameworks that attempt to model how people decide to (not) seek help.

2.2 Help-seeking frameworks

In this section, I review the general structure of these frameworks as a way of (a) organizing the prior literature, and (b) providing a broader context for illustrating what we mean by the psychological costs of asking and how our explanation relates to and differs from prior explanations. Previous frameworks of help-seeking have commonly proposed a three-stage decision process (Featherstone and Broadhurst 2003; Liang et al. 2005; Nelson-Le Gall 1985).

In the first stage, a person must recognize that he has a problem, that he cannot solve it easily on his own, and that there might be help available. If these conditions are met, he moves to stage two, in which he must decide whether he would, in the abstract, want to have help. Should he decide in the affirmative, then in stage 3 he must decide whether he wants to take action to acquire that help. In the context of formal help, this final step may involve actions such as submitting an application for welfare. In the context of informal help, it would involve actually asking another person whether they would be willing to help. Figure 2.1 illustrates these three stages, along with corresponding factors that may prevent a person from seeking help.

To illustrate what it means to have a bottleneck at each of these stages, consider the following example. Imagine we want to understand why Robert, who is struggling to pay his bills this month, has not turned to his colleague Susan, who is relatively well off, for financial help. It is possible that Robert does not think he has a problem—perhaps he is unaware that his expenses this month will exceed his income and savings. Maybe he believes that his boss will give him more hours next week, so he will be able to pay his bills without eliciting outside help. Or perhaps he believes that he does not know anyone who would be able to help him. If he does not seek help for any of these (or similar) reasons, then Robert’s bottleneck is in the first stage.

Suppose now that Robert does recognize he has a problem he cannot solve easily on his own, and that there might be someone who could help him. Next, he must consider whether he would want to receive help. If he decides that he does not like the idea of getting help from Susan—that he would rather find an alternative path to solving his problem, or not solve his problem at all—then he would stall at the second stage of the framework. Possible reasons why he may not want to have help at all are that he is too embarrassed to receive help, he does not want to feel indebted to his colleague, or he is afraid that if he receives help from

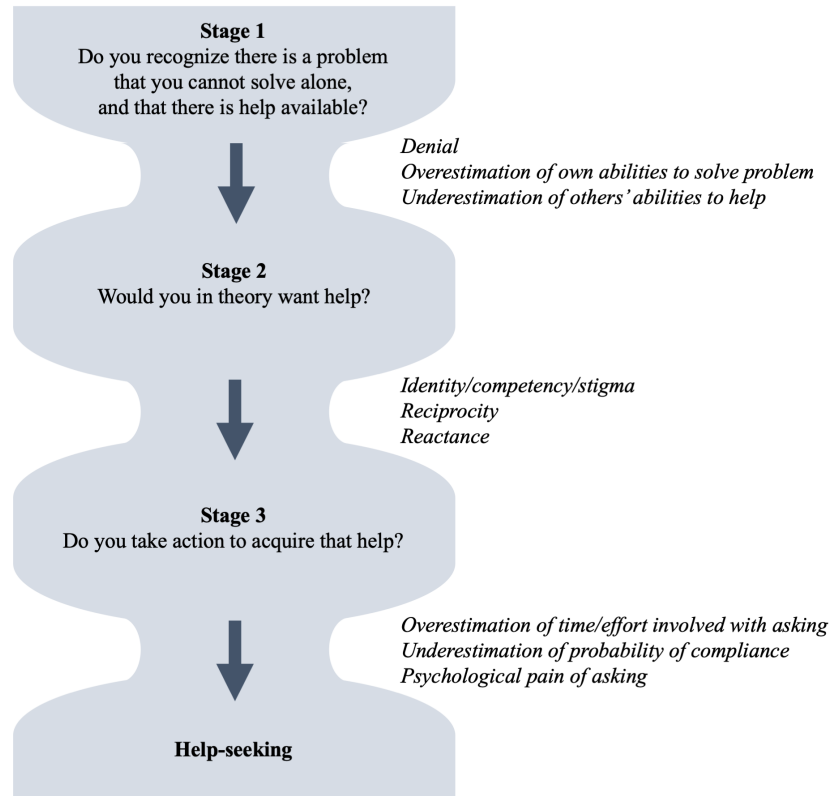


Figure 2.1: An illustration of a commonly-proposed help-seeking framework. Factors that may prevent a person from seeking help are written in italics next to each of the three bottlenecks. The psychological pain of asking—the focus of this dissertation—is shown at the final bottleneck.

Susan, he will have to subsequently be nicer to her.

If, however, Robert decides that he does want the help, then he reaches the final stage, in which he must assess whether he wants to take action to acquire the help—in this case, ask Susan for money. Perhaps Robert believes speaking with Susan would involve too much time or effort, or he believes that asking would not increase the likelihood that Susan helps him financially. Another reason he may not want to ask for help—the focus of this dissertation—is the psychological costs of asking for help. For instance, he may fear the possibility of being rejected and learning that Susan does not value him very much as a friend, or he may be concerned that, by asking, he would be pressuring Susan into helping him. In any of these cases, this would imply Robert has stalled at the third and final stage.

One way to think about the distinction between the final two steps, “deciding one wants help” and “deciding to take action to acquire that help,” would be the following. Suppose that Robert were able to acquire the help from Susan without either of them taking any action. Would this decrease or increase his utility, relative to not having the help at all? If it decreased his utility, this would imply he did not want to have the help, and thus that the bottleneck is in the second stage. If it increased his utility, this would imply he did want to have the help, but did not want to take action to acquire it, suggesting the bottleneck is in the final stage.²

Most literature does not explicitly distinguish between these stages, and in some cases, it is challenging to identify exactly into which stage a particular explanation would fall. For instance, is one’s sense of competence threatened by receiving help (a stage 2 explanation), regardless of the method of acquisition, or specifically by asking for help (a stage 3 explanation)? From a methodological point of view, moreover, it is often difficult to cleanly disentangle the costs of receiving help from the costs of asking for help. Nevertheless, the framework can be helpful from a conceptual and organizational perspective. I next review previously offered explanations for low help-seeking, dividing them by stages in the decision framework.

2.3 Why people may not seek help

Recall that in the first stage of the decision framework, a person must recognize that he has a problem, that he cannot solve it easily on his own, and that there might be help available. Some of the literature within this stage has cited the importance of unawareness of the problem and/or denial, a potentially motivated belief that one does not need help (Dennis and Chung-Lee 2006; Schomerus and Angermeyer 2008; Shaw et al. 2001; Suurvali et al. 2009; Worden

²In the context of the model presented in Paper 1, “being better off with having help” is captured as $u_R(\nu) > 0$. In other words, *ceteris paribus*, the person in need (Receiver) is happier with the helper (Sender) giving him the material resources to fill his need than with the Sender not giving him those resources. However, as we see in that paper, this definition is complicated by the fact that utility from (not) having help interacts with prior actions taken or not taken, and so it is difficult to think of utility from material help in the abstract, without considering the pathway through which the help was (not) transferred.

and Weisman 1975). Other work has pointed to a lack of information or high costs to learning about availability of resources, eligibility for resources, probability of securing those resources, and application rules (Babcock, Gelfand, et al. 2006; Bhargava and Manoli 2015; Liebman and Zeckhauser 2004).

Explanations falling within the second stage imply the main bottleneck in help-seeking behavior is that people do not want help at all. For many if not most recipients of help, there is likely a tradeoff between the financial or material benefit of getting help and some sort of psychological cost, such as shame, conflict, or criticism (Fisher, Nadler, and Whitcher-Alagna 1982; Liang et al. 2005). For this reason, the psychology literature has primarily focused on explanations within this stage. The theories are typically divided into three different classes: stigma (also called shame, attribution, identity threat, or competency theories),³ equity, and reactance (Fisher, Nadler, and Whitcher-Alagna 1982; Gross, Wallston, and Piliavin 1979).

Arguably the most commonly cited class of theories for why people may not want help is that of competency or social stigma, defined as “shame bureaucratized” (R. Walker and Bantebya-Kyomuhendo 2014). Influential theoretical work (e.g., Moffitt 1983) has placed social stigma at the center of the discussion on psychological costs of help-seeking, generating decades of work on the topic (R. Walker and Bantebya-Kyomuhendo 2014). There is widespread enthusiasm for the idea and some evidence for the role of stigma and related concepts such as entitlement (Calarco 2011; Clement et al. 2015; Hall, Zhao, and Shafir 2014; Moffitt 1983; Thom 1986). For instance, research shows that if few people need help, a person may make an internal attribution (“I must be incompetent”), but if many people need help, that same person may make an external attribution (“This problem must be difficult”) (Tessler and Schwartz 1972). A related line of work has argued that people may be more reluctant to seek help if they believe doing so would be inconsistent with an identity they hold (O’Brien, K. Hunt, and Hart 2005) or consistent with a negative stereotype others may have of them (Roberson et al. 2003). Nevertheless, some researchers believe that empirically, social stigma may only be a part of the problem, or may only be a relevant factor in certain situations (Eisenberg, J. Hunt, and Speer 2012; Hoyt et al. 1997; Schomerus and Angermeyer 2008).

A second group of theories relates to equity. These theories have argued that due to strong norms of reciprocity (Gouldner 1960; Kranton 1996) and/or desires for equity, people may not want to seek help because they do not want to feel indebted to others (Greenberg 1980; E. Walster, Berscheid, and G. W. Walster 1973). The primary assumptions of these theories are that (a) people aspire to maintain equity in their interpersonal relations; (b) inequitable relations produce discomfort; and (c) people try to reduce that discomfort either by restoring actual equity or engaging in some cognitive distortions to achieve psychological equity (Fisher, Nadler, and Whitcher-Alagna 1982; E. Walster, Berscheid, and G. W. Walster 1973). This

³As mentioned above, this class of theories could in some cases also be classified as falling into the third stage of the help-seeking framework.

work has shown, for instance, that people will be less likely to seek help from another person if they feel that they will not be able to reciprocate in the future, compared to if they feel it will be possible (Greenberg and Shapiro 1971). A related theory argues that the decision to not seek help may be driven by motivation to stay in power and/or not lose power in an organization (F. Lee 1997).

A third class of theories within the second stage of the decision model builds off of reactance theory, arguing that people do not seek help because receiving help may restrict subsequent freedom (Brehm 1989; Fisher, Nadler, and Whitcher-Alagna 1982; Gross, Wallston, and Piliavin 1979). This restriction may be explicit, as when recipients of unemployment benefits are required to document their job search efforts.⁴ Even when there is no explicit threat to freedom, however, people may still experience reactance towards an implicit restriction, as through a norm to not “bite the hand that feeds you.” Overall, there is mixed support for this theory (Gross, Wallston, and Piliavin 1979).

Stage 3 of the decision framework involves the decision to take action to acquire help. Prior work within this stage has implicitly or explicitly assumed that people would want to have the help if they did not need to take action to acquire it. One reason why people who have reached this stage may not seek help is that they believe that the probability of receiving help if they take action is not substantially higher than the probability of receiving help if they do not take action (Flynn and Lake 2008; Bohns 2016). Another reason could be the perception that the time and effort involved with taking action, e.g. filling out a form to apply for welfare, are too large relative to the potential benefits. Related concepts are those of complexity aversion (Bhargava and Manoli 2015) and hassle costs (Bertrand, Mullainathan, and Shafir 2006). Note that these latter explanations are more likely to apply to formal help than informal help.

In this dissertation, I argue that even if all of these problems were solved, there may be another explanation within the third stage that is preventing people from seeking informal help: the psychological cost of asking.

Researchers have asserted that asking is difficult and often involves consideration of complex social rules (N. L. Collins and Feeney 2000; Downey and S. I. Feldman 1996; van Rooy 2003). Some have provided evidence to support the claim that people dislike asking for help, with some also proposing reasons for why this may be the case. For instance, people rate asking for help as embarrassing, uncomfortable, and awkward (Bohns and Flynn 2010), and believe that seeking advice makes them appear incompetent (Brooks, Gino, and Schweitzer 2015). Women view negotiation, which could be interpreted as a kind of request for help, as difficult, scary, agonizing, and overbearing (Small, Gelfand, et al. 2007). In addition, asking exposes a person to the possibility of rejection, which can be painful (Beck and Clark 2009; Downey

⁴<http://www.twc.state.tx.us/unemployment-benefits-work-search-guidelines> (accessed 14 March 2018); <http://www.uc.pa.gov/faq/claimant/Pages/Work-Search-Work-Registration-FAQS.aspx> (accessed 14 March 2018)

and S. I. Feldman 1996; Epley and Schroeder 2014; MacDonald and Leary 2005). This may be particularly problematic for help-seeking, as there is evidence that people’s decisions to ask are driven at least in part by their subjective probability that the person will consent to the ask (Babcock, Recalde, et al. 2017), and people tend to overestimate the likelihood that their requests for help will be turned down (Bohns 2016; Flynn and Lake 2008). However, despite this suggestive evidence that people find asking for help to be psychologically painful, there is still relatively little evidence exploring why this might be the case.

In addition, we do not have strong evidence that the psychological costs of asking for help inhibit people from asking. The most direct evidence for this effect shows that people will be more likely to obtain help if it is offered than if the person must take action to ask for it. In one study (Broll, Gross, and Piliavin 1974), participants were given a logic puzzle that was virtually impossible to solve in the allotted time. In one condition, an experimenter would stop by the participants’ cubicles every 8 minutes throughout the 35 minute period to offer help. In the other condition, participants had to hang a sign on their cubicle reading “I need help” and repeat those words through an intercom. The results indicated that participants were more likely to obtain aid when it was offered, than when they had to explicitly ask for it. Followup work (Morto-Corse and Carver 1980) uses a similar design. Participants tasked with rating the neuroticism of a recorded conversation were allowed to seek help from an assistant, who would provide them with rating guidelines. In one condition, the assistant walked into the participants’ room periodically to offer help; in the other, participants had to press a button to summon the assistant. This study, too, found that participants in the former group obtained more help than those in the latter. Both these papers suggest that the ask could be an important component of people’s decisions to seek help, and that removing the ask entirely may increase willingness to have help. This work does not, however, show definitive support for our hypothesis that the psychological costs of asking, *per se*, suppress willingness to get help. In these studies, the psychological costs of asking were confounded with several other factors in this study, including default effects, considerations of politeness, and effort levels.

Other work has shown that participants’ ratings of how uncomfortable, embarrassing, and awkward it would be for someone to ask for help mediate the role of perspective (help-seeker versus helper) on how likely they think a person would be to ask (Bohns and Flynn 2010). In addition, women’s nervousness about using an asking script mediates gender differences in reported propensity to initiate negotiations (Bowles, Babcock, and Lai 2007), which, again, can be viewed as asking for help. Finally, women are less likely to ask for resources (initiate negotiations) when the ask is seen as impolite and gender-role-inconsistent, compared to if it is not (Small, Gelfand, et al. 2007), further implying that psychological and/or social costs of asking may affect people’s willingness to ask for help. This work, however, has stopped short of providing direct evidence that the psychological costs of asking for help affect willingness to seek help.

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In summary, the proposed dissertation seeks to fill a few gaps in the literature. First, it aims to complement the expansive economics literature on help-giving by exploring informal help-seeking through an economic lens. To this end, it develops a novel model of help-seeking and help-giving, focusing on the dynamic interactions between the two players. Second, it provides more direct evidence that the psychological costs of asking discourage people from seeking informal help, disentangling the pain of asking from other explanations and demonstrating its effects in both lab and field settings. Finally, it provides explanations for why, exactly, asking is so psychologically painful.

Chapter 3

It does hurt to ask: A game-theoretic model of informal help-seeking and -giving

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Abstract

Informal help—that is, resources voluntarily transferred between individuals—can be hugely valuable for people in need, yet many people who would benefit from help fail to ask for it. We propose one possible explanation for why people may fail to seek help: People fear rejection, which they believe would provide a negative signal of the potential help-giver’s feelings about them. Unifying several distinct literatures in economics and psychology, we first lay out a signaling theory of help-seeking and -giving. Next, across several studies, we test and demonstrate empirical support for the theory’s predictions. Our model helps to provide insights into why material inequality persists and how it can be addressed.

3.1 Introduction

In a blog-post titled “Just Ask, Because the Worst They Can Say is No,” Bobbi D. Kelly, the Director of Human Resources at Center for Private Company Excellence extols the advice, captured in the title, of her “Nana.” She reports that she follows the advice, and is more often than not pleasantly surprised when the answer is “yes,” but acknowledges that “sometimes the answer has been no and I have had to get used to that rejection. It isn’t easy and there are times when it still stings.” In this paper we provide a theory for why asking other individuals for help is so fraught. The answer we propose is that, as Kelly observes, rejection “stings”; it is painful to get turned down. We propose a game-theoretic signaling model that describes how someone in need of help decides whether to ask for it, as well as how someone who can help decides whether to provide it (either before or after a potential request for help). The model sheds light on why being rejected for help is painful, and, by extension, why someone who needs help and is aware that another person could provide it at a low cost, might not ask for it. The seemingly simple problem of whether to ask for, offer, and provide requested help turns out to be much more complicated and psychologically rich than a standard economic model might predict.

Informal help—that is, resources voluntarily transferred between two individuals (rather than, for instance, between an individual and an organization)—is of great practical importance for economics. Opportunities for informal helping are pervasive. For instance, a person may be asked to help a family member pay a bill while he looks for a job, to lend a neighbor a car while theirs is being repaired, or to work a few extra hours to help a colleague meet a deadline. Most research on helping interactions has examined the donor’s, or the “supply,” side, examining when people give and what motivates them to do so (List 2011; Simon 1993).

This chapter draws on ongoing work with Roland Bénabou (Princeton University). Linda Babcock, Shereen Chaudhry, Russell Golman, Tomasz Jaroszewicz, Eric Johnson, Danny Oppenheimer, and Matthew Rabin provided invaluable (informal) help and/or comments on this project. Please address all correspondence to ajaroszewicz@hbs.edu

Research on the recipient’s, or “demand,” side of giving, is somewhat rarer; the general assumption is that the potential help-giver will ask for help if they need it. Yet prior work from fields such as psychology, health, and education has robustly demonstrated that people do not always ask others for help, even when that help might be hugely valuable and easily accessible (Fisher, Nadler, and Whitcher-Alagna 1982; Nadler 2015).

There are a range of reasons why someone who would benefit from help might not ask for it. First, they might not know where to find help or who to ask—that is, who would be in a position to provide the help. Second, though they might know someone who could provide the help, they might be reluctant to impose on the other person, perhaps because they care about that person and do not want them to incur the cost of helping. A parent, for example, might be reluctant to ask a professionally successful child for financial help, because they do not want to set the child back economically. Third, they might be reluctant to put themselves into a situation of debt to a help-provider, either because they dislike being in a lower position of power or because they would like to avoid being in a situation in the future in which the roles are reversed and they feel compelled to help the other person (Greenberg 1980; E. Walster, Berscheid, and G. W. Walster 1973). Fourth, they might be reluctant to communicate their need to the other party due to shame or stigma (Moffitt 1983; Tessler and Schwartz 1972; R. Walker and Bantebya-Kyomuhendo 2014). For example, a student might be reluctant to ask a fellow student or a teacher for help because they do not want the would-be helper to realize how far behind they have fallen. That is, they may not want to signal that they may be incompetent or otherwise a “low” type. Finally, and our focus, they might avoid asking for help because they are afraid of the information that would be conveyed if their request were turned down.

We propose a theoretical model to explain why people may not ask for help, even when the help is needed and available and the person in need recognizes that asking will increase the likelihood that they receive help. While not denying that any of the reasons just listed could prevent help-asking in a particular situation, our model focuses only on the last of the reasons listed: the person in need is uncertain about the extent to which the potential helper cares about or for them and they do not want to risk learning (via an ask and subsequent rejection) that the would-be helper does not truly care. This fear of rejection leads them to avoid asking others for help, even when that help would be economically valuable to them.

Our model captures the decisions of two players: a person who is able to help (the “Sender,” referred to with female pronouns) and a person in need (the “Receiver,” designated with male pronouns). The Sender acts first in the model; she has an opportunity to offer help before the Receiver has the option of asking for it. If help is offered, we assume it is accepted. If help is not offered, then the Receiver has the option of asking for it. If the Receiver does not ask, then help is not provided. However, if the Receiver asks for help, then the Sender has the option to either consent to provide help or to reject the request.

We model the person in need as deriving utility not only from the material value of help, but also from feeling valued by the potential-helper—i.e., from believing that the potential helper cares about him (or, equivalently, that the potential helper is generous or altruistic towards him). One way in which this preference for feeling valued manifests itself is that, conditional on the Sender not helping, the Receiver will prefer for the Sender to have an excuse to not help. (Here, we define an “excuse” as any reason to not help that is not simply “the Sender was too selfish or did not care enough about the person in need to help.”) One prominent kind of excuse is that the Sender is unaware of the Receiver’s need. In the absence of a request for help, Senders typically have some uncertainty about another person’s need or desire for help, and Receivers are aware of the Sender’s uncertainty. This uncertainty provides the Sender with an excuse: perhaps she is not helping simply because she does not realize that the Receiver desires help.

However, this excuse is eliminated when a person asks for help: it is now clear to the Sender that the Receiver must be in greater need than her priors would have suggested. Moreover, it is now clear to the Receiver that the Receiver’s needs are clear to the Sender. This elimination of the excuse, we argue, is what makes rejection following an ask so much more painful than simply not receiving an offer for help: it leads the Receiver to believe that it is more likely that the Sender does not truly value him.

Our model further predicts that not only will asking and being rejected be more painful for the Receiver than not asking and not receiving an offer, but the same will hold true when the Receiver does receive help. That is, while both may feel good, the Receiver will feel worse asking for help and receiving it than he would have if the Sender had instead offered help proactively. Moreover, the same will apply to the Sender: she will feel worse if the Receiver asks her for help and she turns him down than if she had simply not offered, and she will feel worse being asked for help and consenting to that ask than offering help proactively. Put simply, holding constant whether help is transferred, both players will feel worse when there was an ask than when there was not. We call this the “pain of asking” (for the Receiver) and the “pain of being asked” (for the Sender).¹

Importantly, the Receiver’s hesitation to ask for help can generate inefficiency. In addition to decreasing the likelihood that the Receiver will obtain the material benefits of getting help, the hesitation to ask can also leave the Sender worse off. In our model, the Sender derives utility from having more material resources (i.e., not paying the instrumental costs of helping). However, she also derives psychic utility from helping: the more generous or altruistic she truly

¹It is worth noting there are likely nuances and exceptions to this. For instance, a Receiver may prefer to ask for help than receive an offer if the offer implies something negative about how the Receiver is perceived, e.g. if it implies that the Sender thinks the Receiver is incompetent. The Sender may similarly be concerned about offering unwanted help for this same reason. Moreover, a Sender may feel flattered or honored to be asked for help if the ask signals that the Receiver trusts or feels close to the Sender—a utility boost she may not receive if the Sender instead offered help and the Receiver accepted it.

is, and the more valuable she believes the help is for the person in need, the more utility she gets from helping. Thus, if the potential helper is sufficiently altruistic, the cost of helping is sufficiently low, and she believes the material benefit to the Receiver of getting help is sufficiently high, the helper would prefer to help someone who is truly in need than not help them. Thus, the Receiver’s failure to ask can prevent a Pareto-improving act of helping from occurring.

To collect preliminary evidence for our hypotheses about the difficulties of asking for help, we asked Carnegie Mellon University alumni and other volunteers ($N=67$) to complete a survey.² Participants were given the following prompt: “[P]lease think about situations in which you may be in a position to ask a friend, family member, or stranger on the street for help. How much do you agree or disagree with the following statements?” Participants then saw the following statements: (1) “I typically only ask for help when I think the thing I’m asking for is reasonable.” (2) “I usually only ask for help when I’m pretty sure the person I’m asking will say yes.” (3) “I’m not typically bothered when I ask someone for something and they turn me down.” (4) “I’m usually comfortable asking even for big things— people can always say ‘no.’” (5) “Sometimes the idea that someone might turn me down to my face makes me not want to ask them for help.” Participants were asked to respond on a scale from 1 (strongly disagree) to 5 (strongly agree). These statements were presented in a random order.

Reverse coding statements (3) and (4), we find that people tend to only ask for help when they think the request is reasonable ($M=4.3$, one sample two-tailed t-test for difference from 3 [“somewhat”], $p < 0.00005$) and if they think the person they are asking will agree to help ($M=3.5$, $p=0.0001$). They tend to be bothered if they are rejected ($M=3.3$, $p = 0.0261$) and are not typically comfortable asking for large things ($M=3.6$, $p=0.0001$). Finally, they indicate that the idea of being turned down to their face sometimes discourages them from asking for help ($M=3.5$, $p = 0.0038$). See Figure 3.1. Thus, we find preliminary support for our intuitive hypotheses.

In Section 3.2, we discuss the relevant literature. Section 3.3 presents the basics of the model. In Section 3.4, we derive and compare the Receiver’s and Sender’s beliefs about the key variable in the model: the Sender’s generosity type. Next, we show results of the model in Section 3.5, including comparative statics. Sections 3.6 and 3.7 provide empirical support for the model, and Section 3.8 concludes.

3.2 Literature

Most work on giving has examined the donor’s, or the “supply,” side of giving (List 2011; Simon 1993), seeking to understand why people give to charities (DellaVigna, List, and Malmendier

²The complete survey was longer than what is presented here. Full materials are included in Appendix A.1.

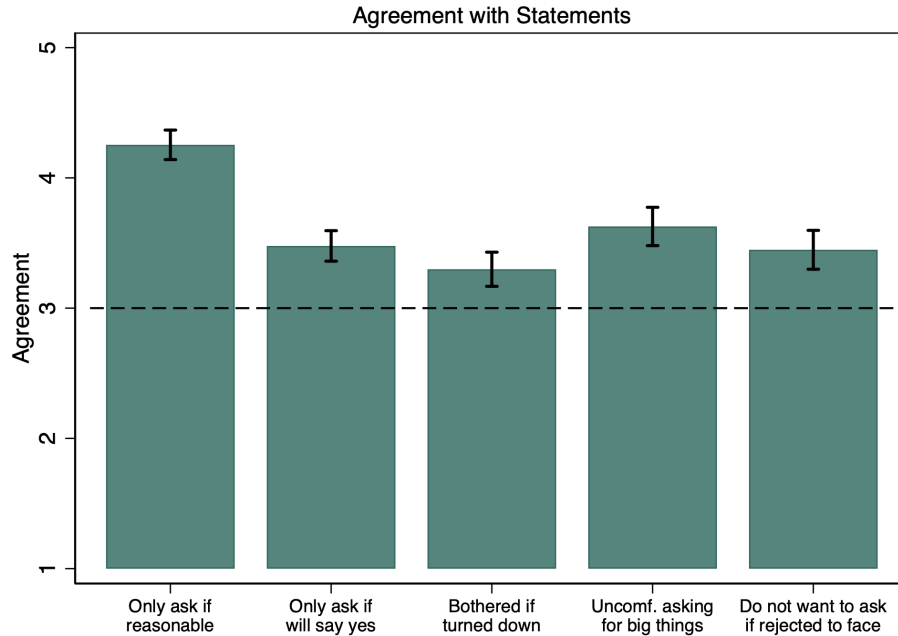


Figure 3.1: $N=67$. Error bars denote mean value ± 1 SE. Dashed line indicates midpoint.

2012; Karlan and List 2007) and other individuals (Beck and Clark 2009; Gale and Scholz 1994). This work has proposed that people give due to pure altruism (Andreoni, Harbaugh, and Vesterlund 2010; Bénabou and Tirole 2006), impure altruism (Andreoni 1990; Ottoni-Wilhelm, Vesterlund, and Xie 2017), inequity aversion (Charness and Rabin 2002), social norms (U. Gneezy and Rustichini 2004), and extrinsic incentives (U. Gneezy and Rustichini 2004; Bénabou and Tirole 2006; U. Gneezy, Meier, and Rey-Biel 2011; Fehr and Gächter 2000).

In our model, we focus on two additional explanations for giving. The first is that people give to communicate information about their type—specifically, to signal their altruism (Bénabou and Tirole 2006; Camerer 1988, Carmichael and MacLeod 1997; Ellingsen and Johannesson 2011; Golman 2016) or familiarity of the recipient and his preferences (Prendergast and Stole 2001).³ The second is that people give due to social pressure. For instance, some work has demonstrated that giving people an option to opt out of fundraising solicitations decreases giving substantially (DellaVigna, List, and Malmendier 2012). Other work has shown that in a charitable giving context, when would-be donors have excuses to not give, they are less likely to give (Exley 2016; Exley 2020). In the context of giving directly to individuals in laboratory experiments, research has found that when people have an excuse to only give

³Indeed, perhaps the paper closest to ours is that of Ellingsen and Johannesson, and in particular their analysis of the Giving Game. Nevertheless, while Ellingsen and Johannesson’s primary focus is on giving and asking for monetary versus non-monetary gifts or help, our focus is on a more fundamental question: when do people ask for help at all?

a small amount, they do indeed give less, presumably because that decreases the likelihood that they are viewed as unfair (Andreoni and Bernheim 2009; Dana, R. A. Weber, and Kuang 2007).⁴

Related to this work is a more recent set of findings on people “avoiding the ask.” This work has found that although being asked for help does increase giving (Andreoni and Rao 2011; Andreoni, Rao, and Trachtman 2017; Flynn and Lake 2008; Roghanizad and Bohns 2017),⁵ people also dislike being asked for help, avoiding it when possible (Andreoni, Rao, and Trachtman 2017; DellaVigna, List, and Malmendier 2012). Our paper complements this work by demonstrating that in addition to potential helpers (Senders) disliking being asked for help, people in need (Receivers) dislike it, too.

Research on the recipient’s, or the “demand,” side of giving—when we ask one another for help and why—is far more limited than research on the supply side of giving. To the extent it has been explored within economics, most work has been on take-up of formal help (seeking help from organizations and programs, rather than individuals).⁶ This work, both within economics and in more applied fields such as health and education, has documented a systematic underuse of available resources and benefits. For instance, despite significant financial benefits to doing so, only 75% of eligible Americans claim the Earned Income Tax Credit (EITC; Bhargava and Manoli 2015), and even fewer claim Temporary Assistance for Needy Families (TANF), Supplemental Security Income (SSI), and Supplemental Nutrition Assistance Program (SNAP).⁷ Other researchers have found that across different social assistance and housing programs in OECD countries, only 40 to 80% of people who are eligible for benefits actually claim and receive them (Hernanz, Malherbet, and Pellizzari 2004). A similar pattern emerges in the domains of private benefits (e.g., employer-provided 401(k) and health insurance plans; Duflo and Saez 2002; Gruber 1994; Madrian and Shea 2001), physical health services (Facione 1993; Moreira et al. 2005; Shaw et al. 2001; Traino, West, et al. 2017), mental health services (Dennis and Chung-Lee 2006; Micheldmore and Hindley 2012; Suurvali et al. 2009), interpersonal violence help (McCart, Smith, and Sawyer 2010), education services (Aleven et al. 2003), and even artificial lab settings (Fisher, Nadler, and Whitcher-Alagna 1982; Nadler 2015): people often fail to seek out both formal and informal help for their difficulties, despite arguably large benefits.

⁴More generally, our work also relates to the literature on psychological games (Geanakoplos, Pearce, and Stacchetti 1989), in which players have preferences over the beliefs of others. In the context of our work, we capture this with the Sender’s image utility, which we model as her beliefs about the Receiver’s beliefs about the Sender’s generosity.

⁵However, other work in a negotiation setting has suggested that the gains to initiating negotiations may be driven at least in part by self-selection (Exley, Niederle, and Vesterlund 2020). That is, forcing people to negotiate does not necessarily increase their economic gains.

⁶Exceptions include Arun G Chandrasekhar, Golub, and H. Yang 2018; Karaivanov and Kessler 2015; and S. Lee and Persson 2016.

⁷Data source: U.S. Department of Health and Human Services, 2007, available at: <https://aspe.hhs.gov/pdf-report/indicators-welfare-dependence-annual-report-congress-2007> Retrieved 1 April 2020.

To explain this underuse, researchers have pointed to various standard economic explanations, such as a lack of information or high costs to learning about one’s ability to secure resources, eligibility for resources, probability of securing those resources, and application rules (Babcock, Gelfand, et al. 2006; Bhargava and Manoli 2015; Liebman and Zeckhauser 2004). Work in psychology and some limited work in economics has also proposed that there may be potent psychological costs associated with seeking help, as well. These theories have pointed towards explanations such as stigma (also called shame, attribution, or competency theories; Moffitt 1983; Tessler and Schwartz 1972; R. Walker and Bantebya-Kyomuhendo 2014), hassle costs (Bertrand, Mullainathan, and Shafir 2006), complexity aversion (Bhargava and Manoli 2015), a desire to not be indebted to others (Greenberg 1980; E. Walster, Berscheid, and G. W. Walster 1973), and a desire to maintain freedom or agency (Brehm 1989; Fisher, Nadler, and Whitcher-Alagna 1982; Gross, Wallston, and Piliavin 1979).

In the current paper, we explore a possible reason for not asking that has been largely overlooked: people dislike asking others for help because they fear rejection, which would signal something negative about how the would-be helper feels about the person in need. While work in psychology and sociology has argued that asking for help is painful, we lack a clear understanding of what exactly is painful about the ask.

Researchers have asserted that asking is difficult and often involves consideration of complex social rules (N. L. Collins and Feeney 2000; Downey and S. I. Feldman 1996; van Rooy 2003). Some have provided evidence to support the claim that people dislike asking for help, with some also proposing reasons for why this may be the case. For instance, researchers have found that people rate asking for help as embarrassing, uncomfortable, and awkward (Bohns and Flynn 2010), and believe that seeking advice makes them appear incompetent (Brooks, Gino, and Schweitzer 2015). Women view negotiation, which could be interpreted as a kind of request for help, as difficult, scary, agonizing, and overbearing (Small, Gelfand, et al. 2007). In addition, asking exposes a person to the possibility of rejection, which can be painful (Beck and Clark 2009; Downey and S. I. Feldman 1996; Epley and Schroeder 2014; MacDonald and Leary 2005). This may be particularly problematic for help-seeking, as there is evidence that people’s decisions to ask are driven at least in part by their subjective probability that the person will consent to the ask (Babcock, Recalde, et al. 2017), and people tend to overestimate the likelihood that their requests for help will be turned down (Bohns 2016; Flynn and Lake 2008). Thus, there is some suggestive evidence that people find asking for help to be psychologically painful, but there is still relatively little evidence exploring why this might be the case.

The current paper seeks to fill these gaps in the literature by offering a novel reason for why the ask is painful. As in some prior work, we model people as having a strong distaste for rejection. Our primary contribution is proposing that the reason that the help-seeker dislikes rejection is because it forces him to revise his beliefs about how much the would-be helper values him downward. This is in contrast to other potential explanations for why people may

dislike rejection, such as disappointment about not receiving the resources one was hoping to receive, pride, losing face, or regret over having paid the time, effort, or social costs of asking without receiving anything in return. We further extend the existing work by showing that the ask is painful for people even when they receive the help: although both situations may feel good, a person will be better off if they receive an offer than if they ask and have the helper agree to help.

We also unify the psychology literature on the discomfort of asking with the economics literature on would-be helpers “avoiding the ask” by demonstrating common threads in the two parties’ psychological processes. Specifically, we show that the same distaste for asking that applies to the people in need (Receivers) also applies to the helpers (Senders). Senders would prefer to not be asked and not offer help, relative to being asked and rejecting somebody; and they would also prefer to offer help than to be asked and agree to help.

The present work also contributes to a larger literature on utility from information. In addition to speaking to the signaling and psychological games literatures (described above), we also build on work demonstrating that not only outcomes, but intentions behind outcomes, matter for psychological payoffs (Rabin 1993). We also add to the burgeoning literature on information avoidance, which demonstrates that people sometimes avoid information that could be hedonically unpleasant, even if it is readily available and useful (Golman, Hagmann, and Loewenstein 2017). In our model, the person in need (Receiver) avoids asking because he is afraid of learning negative information about the would-be helper’s (Sender’s) generosity towards him. This is perhaps most similar to the “optimism maintenance” class of information avoidance types (Golman, Hagmann, and Loewenstein 2017), in which people avoid information that could force them to revise their beliefs about the probability of a positive event or state of the world downwards (Brunnermeier and Parker 2005; Oster, Shoulson, and Dorsey 2013).

3.3 Model

3.3.1 Players

There are two actors, a help Sender S (she), and a help Receiver R (he).

The Receiver varies in his needs, the value of which is denoted with ν . He may have a large need W with prior probability p , or a small need w with probability $1 - p$, where $0 \leq w < W$. We assume the Receiver knows his own type.

The Sender varies in her generosity or altruism towards the Receiver, g , which can be either low (g_L) or high (g_H), with $0 \leq g_L < g_H$. This parameter measures the utility that S receives from R having higher material payoff. We interpret it as relation-specific, but it could also be general, undirected altruism. We assume that S knows her own level of g , but that R does not, and begins with a prior of probability q that $g = g_H$.

Formally, there are thus two types of Receivers, $\nu \in \{w, W\}$ and two types of Senders $g \in \{g_L, g_H\}$.

3.3.2 Payoffs

Each player’s utility is composed of both material and psychological payoffs. We first describe the Sender’s utility function.

The Sender has a material cost c of providing help, where $0 < c$. This cost can be thought of as a net cost, the material cost when subtracting out any possible material benefits to helping.⁸ This cost is paid only if helping occurs— i.e., if $h = 1$. If the Sender does not help, $h = 0$ and no material cost is paid.

In addition to this material payoff, the Sender also has two psychic components to her utility function. First, she derives utility from providing the Receiver with material help. Conditional on helping, her utility is larger the more altruistic she truly is (i.e., the larger g is), and the more valuable she believes that help is (or, equivalently, the larger her expectations about the size of the Receiver’s need, $E[\nu]$).

Second, she derives utility from being perceived as generous—that is, from believing that the Receiver sees her as generous. We denote this utility from image with $u_S(\hat{q})$, where \hat{q} denotes the Sender’s final beliefs about the Receiver’s beliefs about q , the probability that the Sender is truly a high type. This image utility can further be broken down into two components: we denote the second-order beliefs with $E_S[E_R[g]]$ and weight those beliefs with σ . Here, $0 \leq \sigma$ and higher σ values indicate caring more about one’s image. This σ term also serves to rescale the utility the Sender receives from image and place it into the same “units” as the material effects of helping. The Sender’s utility is summarized as:

$$U_S = (gE[\nu] - c)h + u_S(\hat{q}) \quad (3.1)$$

$$U_S = (gE[\nu] - c)h + \sigma E_S[E_R[g]] \quad (3.2)$$

We now turn to the Receiver’s utility. If he receives help (i.e., $h = 1$), either through the Sender offering help or agreeing to help after he has asked, he receives the value ν . If he does not receive help ($h = 0$), no material value of helping is received. Regardless of whether the help is received, the Receiver also receives utility from believing that the Sender is generous towards him—i.e., from believing that the Sender’s generosity g is high. We denote this utility from feeling valued with $u_R(\hat{q})$, where \hat{q} denotes the Receiver’s posterior beliefs about q at the end of the game.

⁸While a good deal of literature has documented the norm of not providing monetary payment for favors (Clark 1984; Clark and Mills 1979; Ellingsen and Johannesson 2011), the potential material benefits of helping could include things like receiving interest payments on a loan to one’s cousin or receiving a meal after helping a friend move. For simplicity, we assume any material costs and benefits are known with certainty.

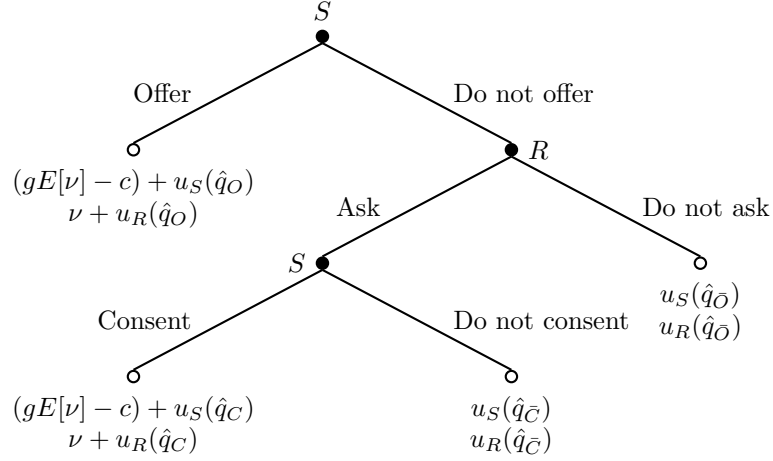


Figure 3.2: The timing of the game. S =Sender, R =Receiver. The first payoff corresponds to the first mover (S). “Offering” and “Consenting” correspond to $h = 1$, while “Not offering” and “Not consenting” correspond to $h = 0$.

This utility from feeling valued can further be broken down into two components. We denote the first-order beliefs about q with $E_R[g]$. These beliefs are further weighted with ρ , where $0 \leq \rho$ and higher values of ρ indicate that the Receiver is more concerned with feeling like the Sender values him. Again, this variable also serves to rescale the psychic term in the Receiver’s utility function, putting it into the same units as the material value of being helped. The Receiver’s utility is summarized as:

$$U_R = \nu h + u_R(\hat{q}) \quad (3.3)$$

$$U_R = \nu h + \rho E_R[g] \quad (3.4)$$

Figure 3.2 summarizes the timing of the game and the players’ utility functions.

Importantly, beliefs about the two players’ types, the Receiver’s need ν and the Sender’s generosity g , change throughout the game. We allow beliefs about these variables to vary as a function of what actions have occurred. While the utility functions presented above do not specify precisely how they vary as a function of the actions, in Section 3.4 we derive those variables’ values based on more fundamental assumptions.

In summary, the key variable in the model is the Sender’s altruism, g —how much the Sender cares about the Receiver. This variable enters into the two players’ utility functions in three ways. First, if the Sender helps, she gets direct utility from being more altruistic. Second, the Receiver gets utility from his first-order beliefs about the value of g —this represents how valued he feels. Finally, the Sender gets indirect utility from her second-order beliefs about g —i.e., from what she believes the Receiver (or others) believe about her own altruism. These

layers of uncertainty about g are what drive behavior in this model. Specifically, the Receiver's fear of updating his beliefs downward about g —i.e., learning that the probability q that he is playing against a g_H type is lower than he currently believes—is what prevents him from asking for help. At the same time, the Sender's enthusiasm to prove that her g is truly high, or her reluctance to reveal that her g is truly low, are in part what drive her to provide help.

3.3.3 Timing and information

1. The game starts with exogenous priors q on S 's type (where q denotes the probability that S is a type g_H) and p on R 's type (where p denotes the probability that R has high need W).
2. S decides to offer help or not, $h = 1, 0$. Observing this, R does a first update to her prior q . If S has offered, then the posterior on q becomes \hat{q}_O .
3. If help has been offered, it must be given—or at least, the cost c must be sunk—without (or before) inquiring further into the extent of R 's need, $\nu \in \{w, W\}$. This can be interpreted either as R always accepting the help, or the cost of helping being sunk even if the help is of little to no value (e.g., S needing to set aside some time or cancel a planned trip or meeting, even if the need is in fact low).
4. If help has not been offered, R decides whether to ask for it or not. Asking involves explaining or even demonstrating one's need, which reveals information about the situation to the potential helper. S thus updates her beliefs on R 's need, moving from p to a posterior \hat{p} . If R has asked, we denote this posterior with \hat{p}_A , and if R has not asked, we denote this posterior with $\hat{p}_{\bar{A}}$.
5. If R does ask for help, S consents to help or does not, $h = 1, 0$. As a result, R does a second update to her belief about S 's altruism. If R asks for help and S consents to it, R 's posterior on S 's generosity goes to \hat{q}_C . If R asks for help and S does not consent to it, R 's posterior on S 's generosity goes to $\hat{q}_{\bar{C}}$. Finally, if R does not ask for help, then the posterior moves to $\hat{q}_{\bar{O}}$.
6. Final payoffs are experienced, whether material, psychological, or reputational.

3.4 Deriving players' beliefs

In Section 3.4.1, we derive the Receiver's beliefs about the Sender's generosity type from more fundamental assumptions. We assume that R knows S 's utility function, her expectations about R 's need ν , the cost of helping c , and how much S cares about her image σ . Given that R

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directly observes h , the only remaining unknown to R is S 's true altruism g . We further assume that first- and second-order beliefs about g move in tandem, such that $E_R[g] = E_S[E_R[g]]$.

There are four possible end points to the game. For each of these cases, we calculate what R would infer about S 's possible g values, given the actions that have been taken.

1. S does not offer, R asks, and S agrees to help ("Consent" or " C "). Let \hat{q}_C denote players' beliefs about q if the players reach this endnode.
2. S does not offer, R asks, and S declines to help ("No consent" or " \bar{C} "). Let $\hat{q}_{\bar{C}}$ denote players' beliefs about q if the players reach this endnode.
3. S offers ("Offer" or " O "). Let \hat{q}_O denote players' beliefs about q if the players reach this endnode.
4. S does not offer and R does not ask ("No offer" or " \bar{O} "). Let $\hat{q}_{\bar{O}}$ denote players' beliefs about q if the players reach this endnode.

After deriving these beliefs, we compare them across end nodes and demonstrate that R will always feel worse after having asked than not having asked, holding constant whether he receives help. In Section 3.4.2, we derive the Sender's beliefs about her image and demonstrate that S will always feel worse after having been asked than not having been asked, holding constant whether she helps.

3.4.1 The Receiver

Deriving the Receiver's beliefs about the Sender's type

Consent If S is asked for help, she will help (consent) i.f.f.:

$$\begin{aligned}
 & U_S(\text{Consent}) > U_S(\text{Reject}) \\
 & g[\hat{p}_A W + (1 - \hat{p}_A)w] - c + \sigma(\hat{q}_C g_H + (1 - \hat{q}_C)g_L) > \sigma(\hat{q}_{\bar{C}} g_H + (1 - \hat{q}_{\bar{C}})g_L) \\
 & g[\hat{p}_A W + (1 - \hat{p}_A)w] + \sigma[(g_H(\hat{q}_C - \hat{q}_{\bar{C}}) + g_L(\hat{q}_{\bar{C}} - \hat{q}_C))] > c
 \end{aligned}$$

In other words, S will only help if the altruistic utility she receives from helping ($g[\hat{p}_A W + (1 - \hat{p}_A)w]$), plus any image boost she receives from consenting rather than rejecting ($\sigma[(g_H(\hat{q}_C - \hat{q}_{\bar{C}}) + g_L(\hat{q}_{\bar{C}} - \hat{q}_C))]$), is greater than the material cost of helping (c). Rearranging this inequality, we can identify the threshold that g must surpass in order for S to consent to help. We call this threshold \widetilde{g}_C .

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$$\begin{aligned}
g &> \widetilde{g}_C \\
g &> \frac{c + \sigma(\hat{q}_{\bar{C}}g_H + (1 - \hat{q}_{\bar{C}})g_L) - \sigma(\hat{q}_Cg_H + (1 - \hat{q}_C)g_L)}{\hat{p}_A W + (1 - \hat{p}_A)w}
\end{aligned} \tag{3.5}$$

No consent Conversely, we also know that if S is asked for help, she will turn down the request (not consent) only if her true g levels are below the threshold identified in equation (3.5). That is:

$$\begin{aligned}
g &< \widetilde{g}_C \\
g &< \frac{c + \sigma(\hat{q}_{\bar{C}}g_H + (1 - \hat{q}_{\bar{C}})g_L) - \sigma(\hat{q}_Cg_H + (1 - \hat{q}_C)g_L)}{\hat{p}_A W + (1 - \hat{p}_A)w}
\end{aligned} \tag{3.6}$$

Offer To calculate when S will offer versus choose to not offer (and potentially then put herself in a position in which she is asked to help), we must consider S 's beliefs about the probability that she would be asked for help and—if she were to be asked—what she would do. To answer this question, in turn, we must first evaluate the situations under which R will ask. Let a denote R 's beliefs about the probability that equation (3.5) will hold—i.e., that S would consent to an ask, if she were to be asked. Further, let expectations about S 's generosity, $E_R[g]$, be equal to the expected value of S 's generosity after S takes a particular action. That is, let it be equal to the probability that S is the high type given that she has taken a particular action (e.g., consented, \hat{q}_C) times the value of the high type (g_H), plus the probability that S is the low type given that she has taken a particular action (e.g., consented, $1 - \hat{q}_C$) times the value of the low type (g_L). Then, R will ask for help iff the expected value of asking, relative to not asking, is positive:

$$\begin{aligned}
U_R(Ask) &> U_R(NoAsk) \\
P(Consent) * U_R(Consent) \\
+ P(NoConsent) * U_R(NoConsent) &> U_R(NoOffer) \\
a[\nu + \rho(\hat{q}_Cg_H + (1 - \hat{q}_C)g_L)] \\
+ (1 - a)[\rho(\hat{q}_{\bar{C}}g_H + (1 - \hat{q}_{\bar{C}})g_L)] &> \rho(\hat{q}_{\bar{O}}g_H + (1 - \hat{q}_{\bar{O}})g_L)
\end{aligned} \tag{3.7}$$

Having identified the conditions under which R chooses to ask, we can now turn to the question of when S chooses to offer help. While the utility from offering is certain, the utility from not offering is a probability-weighted combination of utility from not offering (and not being asked), from being asked and consenting to help, and from being asked and not consenting to help. Thus, what we call the utility from not offering is in fact the expected value of the

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utility from not offering. We use a to denote the probability that S will consent to help and b to denote S 's perceived probability that R will ask her for help. S 's beliefs about her image, $E_S[E_R[g]]$, are calculated as her perceived probability that she is seen as the high type given that she has taken a particular action (e.g., not offered, $\hat{q}_{\bar{O}}$) times the value of being the high type (g_H), plus her perceived probability that she is seen as the low type given that she has taken a particular action (e.g., not offered, $1 - \hat{q}_{\bar{O}}$) times the value of being perceived as the low type (g_L). S will choose to offer iff:

$$\begin{aligned}
U_S(\text{Offer}) &> U_S(\text{NoOffer}) \\
U_S(\text{Offer}) &> P(\text{NoAsk}) * U_S(\text{NoAsk}) \\
&\quad + P(\text{Ask}) * P(\text{Consent}) * U_S(\text{Consent}) \\
&\quad + P(\text{Ask}) * P(\text{NoConsent}) * U_S(\text{NoConsent}) \\
g[pW + (1-p)w] - c + \sigma(\hat{q}_O g_H + (1 - \hat{q}_O)g_L) &> (1-b)\sigma(\hat{q}_{\bar{O}} g_H + (1 - \hat{q}_{\bar{O}})g_L) \\
&\quad + ba[g[\hat{p}_A W + (1 - \hat{p}_A)w] - c] \\
&\quad + ba[\sigma(\hat{q}_C g_H + (1 - \hat{q}_C)g_L)] \\
&\quad + b(1-a)\sigma(\hat{q}_{\bar{C}} g_H + (1 - \hat{q}_{\bar{C}})g_L) \quad (3.8)
\end{aligned}$$

Rearranging,

$$\begin{aligned}
g[pW + (1-p)w] - bag[\hat{p}_A W + (1 - \hat{p}_A)w] &> c \\
&\quad + [(1-b)\sigma(\hat{q}_{\bar{O}} g_H + (1 - \hat{q}_{\bar{O}})g_L)] \\
&\quad + [ba\sigma(\hat{q}_C g_H + (1 - \hat{q}_C)g_L)] \\
&\quad + [b(1-a)\sigma(\hat{q}_{\bar{C}} g_H + (1 - \hat{q}_{\bar{C}})g_L)] \\
&\quad - bac \\
&\quad - \sigma(\hat{q}_O g_H + (1 - \hat{q}_O)g_L)
\end{aligned}$$

As a shorthand, we denote the right hand side below with $\widetilde{g_O}$, such that g must be greater than the threshold $\widetilde{g_O}$ in order for S to offer help.

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$$\begin{aligned}
& c \\
& + [(1-b)\sigma(\hat{q}_{\bar{O}}g_H + (1-\hat{q}_{\bar{O}})g_L)] \\
& + [ba\sigma(\hat{q}_Cg_H + (1-\hat{q}_C)g_L)] \\
& + [b(1-a)\sigma(\hat{q}_{\bar{C}}g_H + (1-\hat{q}_{\bar{C}})g_L)] \\
& - bac \\
& - \sigma(\hat{q}_Og_H + (1-\hat{q}_O)g_L) \\
g & > \frac{[pW + (1-p)w] - ba[\hat{p}_AW + (1-\hat{p}_A)w]}{[pW + (1-p)w] - ba[\hat{p}_AW + (1-\hat{p}_A)w]} \tag{3.9}
\end{aligned}$$

No Offer If S does not offer help, then R infers that S 's true generosity level must fall below the threshold $\widetilde{g}_{\bar{O}}$ identified in equation (3.9). That is,

$$\begin{aligned}
& c \\
& + [(1-b)\sigma(\hat{q}_{\bar{O}}g_H + (1-\hat{q}_{\bar{O}})g_L)] \\
& + [ba\sigma(\hat{q}_Cg_H + (1-\hat{q}_C)g_L)] \\
& + [b(1-a)\sigma(\hat{q}_{\bar{C}}g_H + (1-\hat{q}_{\bar{C}})g_L)] \\
& - bac \\
& - \sigma(\hat{q}_Og_H + (1-\hat{q}_O)g_L) \\
g & < \frac{[pW + (1-p)w] - ba[\hat{p}_AW + (1-\hat{p}_A)w]}{[pW + (1-p)w] - ba[\hat{p}_AW + (1-\hat{p}_A)w]} \tag{3.10}
\end{aligned}$$

Comparing the Receiver's beliefs across end nodes

We can now compare the thresholds identified above in equations (3.5) and (3.9) to identify when R will feel more versus less valued by S (i.e., when his expectations of g will be higher versus lower).

Result 1 *Conditional on asking, R will feel more valued if S consents than if she rejects.*

Proof. This follows directly from equations (3.5) and (3.6). ■

Result 2 *Conditional on not asking, R will feel more valued if S offers help than if she does not offer.*

Proof. This follows directly from equations (3.9) and (3.10). ■

Result 3 *R will feel more valued if S offers help than if R asks for help and S consents.*

Proof. R will feel more valued when S offers help than when S consents to a request iff the threshold $\widetilde{g}_{\bar{O}}$ exceeds the threshold $\widetilde{g}_{\bar{C}}$. Using equations (3.9) and (3.5), respectively, this will

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be true when:

$$\begin{aligned}
& c \\
& + [(1-b)\sigma(\hat{q}_{\bar{O}}g_H + (1-\hat{q}_{\bar{O}})g_L)] \\
& + [ba\sigma(\hat{q}_Cg_H + (1-\hat{q}_C)g_L)] \\
& + [b(1-a)\sigma(\hat{q}_{\bar{C}}g_H + (1-\hat{q}_{\bar{C}})g_L)] \quad c \\
& - bac \quad + \sigma(\hat{q}_{\bar{C}}g_H + (1-\hat{q}_{\bar{C}})g_L) \\
& - \sigma(\hat{q}_Og_H + (1-\hat{q}_O)g_L) \quad - \sigma(\hat{q}_Cg_H + (1-\hat{q}_C)g_L) \\
& \frac{[pW + (1-p)w] - ba[\hat{p}_AW + (1-\hat{p}_A)w]}{[pW + (1-p)w] - ba[\hat{p}_AW + (1-\hat{p}_A)w]} > \frac{c + \sigma(\hat{q}_{\bar{C}}g_H + (1-\hat{q}_{\bar{C}})g_L) - \sigma(\hat{q}_Cg_H + (1-\hat{q}_C)g_L)}{\hat{p}_AW + (1-\hat{p}_A)w} \quad (3.11)
\end{aligned}$$

For simplicity, we assume that the denominator on the left hand side is positive and let $p = \hat{p}_A$. As will be demonstrated in Section 3.5, an R of high need W is more likely to ask for help than a Receiver of low need w . Recognizing this, an ask leads S to update her priors on the likelihood of her counterpart having high need upwards, such that $p \leq \hat{p}_A$. Thus, letting $p = \hat{p}_A$ is a maximally conservative simplifying assumption, but one that allows us to ignore the weighted beliefs about need $(pW + (1-p)w)$ and $\hat{p}_AW + (1-\hat{p}_A)w$ in the denominators. Without loss of generality, we set $\sigma = 1$ and for brevity let:

- $j = \hat{q}_{\bar{O}}g_H + (1-\hat{q}_{\bar{O}})g_L$
- $k = \hat{q}_Cg_H + (1-\hat{q}_C)g_L$
- $m = \hat{q}_{\bar{C}}g_H + (1-\hat{q}_{\bar{C}})g_L$
- $n = \hat{q}_Og_H + (1-\hat{q}_O)g_L$

Rearranging the terms and simplifying,

$$\begin{aligned}
c + (1-b)j + bak + b(1-a)m - bac - n & > (1-ba)(c + m - k) \\
c + (1-b)j + bak + bm - bam - bac - n & > c + m - k - bac - bam + bak \\
(1-b)j + bm - n & > m - k \\
(1-b)j + (b-1)m + k - n & > 0 \quad (3.12)
\end{aligned}$$

Thus, under the conditions specified in inequality (3.12), R will feel more valued if S offers help than if S does not offer (and R does not ask).

■

Result 4 R will feel more valued if S fails to offer help than if R asks for help and S does not consent.

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Proof. S will not offer help if $U_S(\text{Offer}) < U_S(\text{NoOffer})$, meaning the true g value falls below the threshold \widetilde{g}_O . Likewise, S will reject a request for help if $U_S(\text{Consent}) < U_S(\text{NoConsent})$, meaning the true g value falls below the threshold \widetilde{g}_C . Result 3 and the corresponding proof identify the conditions under which $\widetilde{g}_C < \widetilde{g}_O$. Thus, under those same conditions, it must also be true that R will feel less valued (have a lower belief about g) if he asks for help and is rejected than if he simply does not receive an offer. ■

Finally, from the four results presented above, we can also see that R cannot draw any clear conclusions about whether S is more generous in the case that she has not offered help (and R has not asked for it), or in the case that R has asked S for help and S consents to the request.

From this, then, we derive the following ordering of R 's posteriors about S 's generosity at each of the four end nodes (again, given that the conditions in inequality (3.12) hold):

$$\hat{q}_{\bar{C}} < \hat{q}_{\bar{O}}, \hat{q}_C < \hat{q}_O \quad (3.13)$$

and therefore

$$u_R(\hat{q}_{\bar{C}}) < u_R(\hat{q}_{\bar{O}}), u_R(\hat{q}_C) < u_R(\hat{q}_O) \quad (3.14)$$

The Receiver's pain of asking

As explained in Section 3.5, the model shows that S is more likely to help if she is asked than if she is not. However, Results 3 and 4 argue that, holding constant whether help is transferred, a person in need will feel worse having asked for help than not having asked for help (under certain conditions). In other words:

$$u_R(\hat{q}_O) - u_R(\hat{q}_C) > 0 \quad (3.15)$$

$$u_R(\hat{q}_{\bar{O}}) - u_R(\hat{q}_{\bar{C}}) > 0 \quad (3.16)$$

We term these gaps in the psychological payoffs the “**pain of asking.**”

Thus, although asking increases the likelihood that the Receiver gets help, it is also psychologically painful for him, always leaving him worse off in terms of feelings of valuation.

3.4.2 The Sender

The Sender's beliefs about how she is viewed

We can now evaluate the Sender's beliefs about how she is viewed by the Receiver—i.e., what her image utility is at different end nodes.

Comparing the Sender’s beliefs across end nodes

S has accurate information about how she is perceived—i.e., $E_S[E_R[g]] = E_R[g]$ for all actions. Because of this, the results presented above have also allowed us to derive S ’s image at each end node of the game tree. In other words, because R ’s posteriors are such that $\hat{q}_{\bar{C}} < \hat{q}_{\bar{O}}, \hat{q}_C < \hat{q}_O$, and S ’s beliefs about how she is viewed align with what is actually true,

$$u_S(\hat{q}_{\bar{C}}) < u_S(\hat{q}_{\bar{O}}), u_S(\hat{q}_C) < u_S(\hat{q}_O) \quad (3.17)$$

The Sender’s pain of being asked

This ordering suggests that not only does R experience a “pain of asking,” but S experiences her own version of this, as well. Holding constant whether S helps, S accrues more image utility when she is not asked than when she is asked. Or, equivalently, she is worse off when is she is asked than when she is not, holding constant whether she decides to help.

$$u_S(\hat{q}_O) - u_S(\hat{q}_C) > 0 \quad (3.18)$$

$$u_S(\hat{q}_{\bar{O}}) - u_S(\hat{q}_{\bar{C}}) > 0 \quad (3.19)$$

We term these gaps in the psychological payoffs the “**pain of being asked.**”

3.5 Results

If the inequality in (3.5) ever holds, this implies that asking must increase the chances that R receives help (conditional on not having received an offer in the first stage). To understand why, note that, having reached the stage in which he has not received an offer, R will never receive help if he does not ask for it, as there will be no additional opportunity for S to offer help. If there is any possibility that S might consent to an ask (i.e., if there is any possibility for the inequality in (3.5) to hold), then asking increases the chances that R receives help. Under these conditions, thus,

Result 5 *Asking increases the likelihood that R gets help.*

Just as importantly, because R has accurate beliefs about S ’s actions,

Result 6 *R is aware that asking increases the likelihood that he gets help.*

The central reason why R does not always ask for help, even though the help may be valuable, is that R is afraid of learning (via a rejection) that S ’s generosity is low and she does not truly value him. This implies that if R is certain about S ’s type—believing that q is either 0

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or 1—then there is nothing that he can lose in terms of psychic utility by being rejected and there is nothing he can gain in terms of psychic utility by being consented to. At the same time, because asking increases the likelihood that R receives help, there could be something gained by asking: the material benefit of the help ν , should S agree to help.

Result 7 *If R is certain about S 's type, he will always ask (or at least be indifferent between asking and not asking).*

More formally, there are two possible cases: the case in which S is truly a g_L type with certainty (i.e., $q = 0$), and the case in which S is truly a g_H type with certainty (i.e., $q = 1$).

In the first case, if S were truly a g_L type and R were aware of this, she would consent if $g_L[\hat{p}W + (1 - \hat{p})w] - c + \sigma g_L > \sigma g_L$, or $g_L[\hat{p}W + (1 - \hat{p})w] > c$. We again use a to denote the probability that S consents. Then, we can say that R will ask if the expected value of asking exceeds the expected value of not asking. In other words,

$$P(\text{Consent})U_R(\text{Consent}) + P(\text{NoConsent})U_R(\text{NoConsent}) \geq U_R(\text{NoAsk})$$

$$a(\nu + \rho g_L) + (1 - a)(\rho g_L) \geq \rho g_L$$

If $a > 0$ (meaning that there is a positive probability that S will consent) and $\nu > 0$ (meaning that R has any amount of need or desire for help), then R will always ask. If $a = 0$ (meaning that S will not consent) or $\nu = 0$ (meaning that R has no need), R will be indifferent between asking and not asking.

In the second case, if S were truly a g_H type and R were aware of this, she would consent if $g_H[\hat{p}W + (1 - \hat{p})w] - c + \sigma g_H > \sigma g_H$, or $g_H[\hat{p}W + (1 - \hat{p})w] > c$. Once again using a to denote the probability that S consents, and again noting that R will ask if the expected value of asking exceeds the expected value of not asking:

$$P(\text{Consent})U_R(\text{Consent}) + P(\text{NoConsent})U_R(\text{NoConsent}) \geq U_R(\text{NoAsk})$$

$$a(\nu + \rho g_H) + (1 - a)(\rho g_H) \geq \rho g_H$$

If $a > 0$ and need is positive, then R will always ask; if $a = 0$, then R will be indifferent between asking and not asking. Thus, whenever R is certain of S 's type (regardless of whether he is certain that that type is g_L or g_H), R will always weakly prefer to ask for help.

With the utility functions as they are described above, R may not ask for help if the possibility of learning negative information about S 's type is sufficiently large. One possibility, however, is that $u_R(\hat{q})$ is concave, such that the Receiver feels worse from “downgrading” his beliefs about q by some fixed amount than he feels good from “upgrading” his beliefs by that same amount. Such a model extension would mean that people who are more risk averse over

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information about others' generosity types (or, perhaps, a particular other's generosity type) would be less willing to ask for help (risk the possibility of rejection) than those who are more risk seeking in this domain.⁹

Result 8 *The more risk averse R is over information about S 's type, the less willing he will be to ask for help.*

Proof. Recall that $\hat{q}_{\bar{O}}$ captures posteriors about S 's type if S does not offer and R does not ask, $\hat{q}_{\bar{C}}$ captures posteriors about S 's type if R asks for help and S does not consent, and \hat{q}_C captures posteriors about S 's type if R asks for help and S consents. Then, for any situation in which the Receiver expects an equal likelihood of a gain in beliefs or an equal sized loss in beliefs (that is, for $|\hat{q}_{\bar{O}} - \hat{q}_{\bar{C}}| = |\hat{q}_{\bar{O}} - \hat{q}_C|$), a risk neutral Receiver would have $U_R(\text{NoAsk}) = EU_R(\text{Ask})$, while a risk averse Receiver would have $U_R(\text{NoAsk}) > EU_R(\text{Ask})$ due to the concavity of their utility from information function (O'Donoghue and Somerville, 2018). The more risk averse a Receiver becomes—that is, the more concave their utility from information or beliefs becomes—the larger this difference becomes, and thus the less appealing asking becomes. ■

The higher is R 's true need ν , the more likely he is to ask for help (see Section 3.5.1). Conversely, the lower is R 's true need ν , the less likely he is to ask for help. Recognizing this,

Result 9 *An ask leads S to update her beliefs about p , the probability of R having high need W , upwards. That is, her posterior beliefs about the likelihood that R is high need increases (relative to her prior) if R asks: $p < \hat{p}_A$. By the same token, her posterior beliefs about the likelihood that R is high need decreases (relative to her prior) if R does not ask: $\hat{p}_A < p$.*

Result 8 argues that even when R wants help, the fear of learning negative information about S 's generosity towards him may inhibit him from asking for help. Importantly, this hesitation to ask for help can be detrimental not just for R , but also for S .

Result 10 *The pain of asking can generate inefficiency, preventing Pareto-improving acts of helping from occurring.*

To understand why, note that a Sender who is sufficiently generous, who believes that the Receiver's need is sufficiently high, and whose cost of helping c is sufficiently low would rather

⁹ Given the empirical limitations of modeling risk aversion in this way (Rabin 2000; Rabin and Thaler 2001), an alternative way of modeling this would be through reference dependence in beliefs about the Sender's type and loss aversion (Kahneman and Tversky 1979). In such a case, a Receiver may have some reference point in beliefs about the Sender's type (for instance, his priors) and may be hesitant to ask for help because that would risk a possible loss in those beliefs. If the utility loss from downgrading of beliefs is larger than the utility gain from an equal sized upgrading of beliefs, a Receiver may not ask for help due to loss aversion rather than risk aversion.

help than not help. That is, her utility from consenting to a request for help may be higher than her utility from not offering and not being asked. Intriguingly, this may be true even when not taking into account image concerns, so long as $gE[\nu] - c > 0$, or the altruistic utility that S receives from providing R with material help exceeds the material cost of doing so. When R fails to ask S for help, R is depriving his counterpart of experiencing this altruistic utility.¹⁰

3.5.1 Comparative statics

In this section, we calculate comparative statics for each of the three decisions in the tree: the Sender's decision to consent to a request for help, the Receiver's decision to ask for help, and the Sender's decision to offer help. For each, we use the players' beliefs about the unknown variables (p and q), derived in Section 3.4, and expectations of probabilities of different actions. For simplicity, we assume that utility from information (that is, $u_R(\hat{q})$ and $u_S(\hat{q})$) are linear, as in equations (3.2) and (3.4).

Consenting decision

We begin with the last stage of the game, the consent decision. As discussed in Section 3.4.1, if R asked for help, S would only consent if $U_S(\text{Consent}) > U_S(\text{NoConsent})$. We first take the difference between these and call it a function $f(\cdot)$, the net value of consenting, compared to not consenting.

$$\begin{aligned} f(c, g, g_H, g_L, \hat{p}_A, \hat{q}_C, \hat{q}_{\bar{C}}, \sigma, w, W) &= U_S(\text{Consent}) - U_S(\text{NoConsent}) \\ f(c, g, g_H, g_L, \hat{p}_A, \hat{q}_C, \hat{q}_{\bar{C}}, \sigma, w, W) &= g[\hat{p}_A W + (1 - \hat{p}_A)w] - c + \sigma[(g_H(\hat{q}_C - \hat{q}_{\bar{C}}) + g_L(\hat{q}_{\bar{C}} - \hat{q}_C)] \end{aligned}$$

We now calculate the first derivative of the function with respect to each parameter to identify how the net value of consenting (compared to not consenting) changes with the parameter.

¹⁰It is worth noting that the reason that a highly altruistic Sender does not always proactively offer help, even when the cost of helping is fairly low, is because of the possibility that she would need to pay the cost of helping c when in fact the Receiver's need is low.

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$$\begin{aligned}
\frac{\partial f(\cdot)}{\partial c} &= -1 < 0 \\
\frac{\partial f(\cdot)}{\partial g} &= \hat{p}_A W + (1 - \hat{p}_A)w > 0 \\
\frac{\partial f(\cdot)}{\partial g_H} &= \sigma(\hat{q}_C - \hat{q}_{\bar{C}}) \geq 0 \\
\frac{\partial f(\cdot)}{\partial g_L} &= \sigma(\hat{q}_{\bar{C}} - \hat{q}_C) \leq 0 \\
\frac{\partial f(\cdot)}{\partial \hat{p}} &= gW - gw \geq 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_C} &= \sigma g_H - \sigma g_L \geq 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_{\bar{C}}} &= \sigma g_L - \sigma g_H \leq 0 \\
\frac{\partial f(\cdot)}{\partial \sigma} &= g_H(\hat{q}_C - \hat{q}_{\bar{C}}) + g_L(\hat{q}_{\bar{C}} - \hat{q}_C) > 0 \\
\frac{\partial f(\cdot)}{\partial w} &= g - g\hat{p}_A \geq 0 \\
\frac{\partial f(\cdot)}{\partial W} &= g\hat{p} \geq 0
\end{aligned}$$

In words,

- As the material cost to consenting increases, the perceived net value of consenting (relative to not consenting) decreases
- As S becomes more generous, the perceived net value of consenting (relative to not consenting) increases
- As the ceiling for how generous S could be perceived as increases, the perceived net value of consenting (relative to not consenting) increases or stays the same
- As the floor for how generous S could be perceived as increases, the perceived net value of consenting (relative to not consenting) decreases or stays the same
- As the perceived likelihood of R being in high need increases, the perceived net value of consenting (relative to not consenting) increases or stays the same
- As the likelihood of being perceived as a high type after consenting increases, the perceived net value of consenting (relative to not consenting) increases or stays the same
- As the likelihood of being perceived as a high type after rejecting increases, the perceived net value of consenting (relative to not consenting) decreases or stays the same

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- As the extent to which S cares about her image increases, the perceived net value of consenting (relative to not consenting) increases
- As the lowest possible need R could have increases, the perceived net value of consenting (relative to not consenting) increases or stays the same
- As the highest possible need R could have increases, the perceived net value of consenting (relative to not consenting) increases or stays the same

Asking decision

R will only ask for help if $U_R(Ask) > U_R(NoAsk)$ —or, to use the notation we previously used, $U_R(Ask) > U_R(NoOffer)$. We take the difference between these and call it a function $f(\cdot)$, the net value of asking, compared to not asking. We again use a to denote the perceived probability that S would consent, should she be asked for help.

$$\begin{aligned}
 f(a, g_H, g_L, \hat{q}_C, \hat{q}_{\bar{C}}, \hat{q}_{\bar{O}}, \rho, \nu) &= U_R(Ask) - U_R(NoOffer) \\
 f(a, g_H, g_L, \hat{q}_C, \hat{q}_{\bar{C}}, \hat{q}_{\bar{O}}, \rho, \nu) &= a[\nu + \rho(\hat{q}_C g_H + (1 - \hat{q}_C)g_L)] \\
 &\quad + (1 - a)[\rho(\hat{q}_{\bar{C}} g_H + (1 - \hat{q}_{\bar{C}})g_L)] \\
 &\quad - \rho(\hat{q}_{\bar{O}} g_H + (1 - \hat{q}_{\bar{O}})g_L)
 \end{aligned}$$

Next, we calculate the first derivative of the function with respect to each parameter to identify how the perceived net value of asking (compared to not asking) changes with the parameter.

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$$\begin{aligned}
\frac{\partial f(\cdot)}{\partial a} &= \nu + \rho(\hat{q}_C g_H + (1 - \hat{q}_C)g_L) - \rho(\hat{q}_{\bar{C}} g_H + (1 - \hat{q}_{\bar{C}})g_L) \geq 0 \\
\frac{\partial f(\cdot)}{\partial g_H} &= a\rho\hat{q}_C + (1 - a)\rho\hat{q}_{\bar{C}} - \rho\hat{q}_{\bar{O}} \gtrless 0 \\
\frac{\partial f(\cdot)}{\partial g_L} &= a\rho(1 - \hat{q}_C) + (1 - a)\rho(1 - \hat{q}_{\bar{C}}) - \rho(1 - \hat{q}_{\bar{O}}) \gtrless 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_C} &= g_H a \rho - g_L a \rho > 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_{\bar{C}}} &= g_H(1 - a)\rho - g_L(a - 1)\rho > 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_{\bar{O}}} &= g_L \rho - g_H \rho < 0 \\
\frac{\partial f(\cdot)}{\partial \rho} &= a(\hat{q}_C g_H + (1 - \hat{q}_C)g_L) \\
&\quad + (1 - a)((\hat{q}_{\bar{C}} g_H + (1 - \hat{q}_{\bar{C}})g_L)) \\
&\quad - (\hat{q}_{\bar{O}} g_H + (1 - \hat{q}_{\bar{O}})g_L) \gtrless 0 \\
\frac{\partial f(\cdot)}{\partial \nu} &= a \geq 0
\end{aligned}$$

Putting this into words,

- As the perceived probability that S will consent to an ask increases, the perceived net value of asking (relative to not asking) increases or stays the same
- As the ceiling for how generous S could be increases, the effect on the perceived net value of asking (relative to not asking) is indeterminate
- As the floor for how generous S could be increases, the perceived net value of asking (relative to not asking) is indeterminate
- As the likelihood of S being a high type conditional on her consenting increases, the perceived net value of asking (relative to not asking) increases
- As the likelihood of S being a high type conditional on her rejecting increases, the perceived net value of asking (relative to not asking) increases
- As the likelihood of S being a high type conditional on R not asking for help increases, the perceived net value of asking (relative to not asking) decreases
- As the extent to which R cares about feeling valued increases, the effect on the perceived net value of asking (relative to not asking) is indeterminate

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- As R 's need increases, the perceived net value of asking (relative to not asking) increases or stays the same

Offering decision

Finally, we turn to the offering decision, the most complex of the decisions. S will choose to offer help if $U_S(Offer) > U_S(NoOffer)$, where $U_S(NoOffer)$ is the probability-weighted combination of utilities from not being asked, being asked and consenting, and being asked and not consenting. Once again, we first take the difference between the utilities from offering and not offering and call it a function $f(\cdot)$, the perceived net value of offering, compared to not offering.

$$\begin{aligned}
 f(a, b, c, g, g_H, g_L, p, \hat{p}_A, \hat{q}_C, \hat{q}_{\bar{C}}, \hat{q}_O, \hat{q}_{\bar{O}}, \sigma, w, W) &= U_S(Offer) - U_S(NoOffer) \\
 f(a, b, c, g, g_H, g_L, p, \hat{p}_A, \hat{q}_C, \hat{q}_{\bar{C}}, \hat{q}_O, \hat{q}_{\bar{O}}, \sigma, w, W) &= g[pW + (1 - p)w] - c + \sigma(\hat{q}_O g_H + (1 - \hat{q}_O)g_L) \\
 &\quad - (1 - b)\sigma[\hat{q}_{\bar{O}} g_H + (1 - \hat{q}_{\bar{O}})g_L] \\
 &\quad - ba[(g[\hat{p}_A W + (1 - \hat{p}_A)w] - c] \\
 &\quad - ba[\sigma(\hat{q}_C g_H + (1 - \hat{q}_C)g_L)] \\
 &\quad - b(1 - a)\sigma[\hat{q}_{\bar{C}} g_H + (1 - \hat{q}_{\bar{C}})g_L]
 \end{aligned}$$

where b is the perceived probability of R asking for help. We now calculate the first derivative of the function with respect to each parameter:

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$$\begin{aligned}
\frac{\partial f(\cdot)}{\partial a} &= b\sigma(\hat{q}_{\bar{C}}g_H + (1 - \hat{q}_{\bar{C}})g_L) \\
&\quad - bg[\hat{p}_AW + (1 - \hat{p}_A)w] + bc \\
&\quad - b\sigma(\hat{q}_Cg_H + (1 - \hat{q}_C)g_L)) \rlessgtr 0 \\
\frac{\partial f(\cdot)}{\partial b} &= \sigma[\hat{q}_{\bar{O}}g_H + (1 - \hat{q}_{\bar{O}})g_L] \\
&\quad - a[g[\hat{p}_AW + (1 - \hat{p}_A)w] - c + \sigma(\hat{q}_Cg_H + (1 - \hat{q}_C)g_L)] \\
&\quad - (1 - a)[\sigma(\hat{q}_{\bar{C}}g_H + (1 - \hat{q}_{\bar{C}})g_L) \rlessgtr 0 \\
\frac{\partial f(\cdot)}{\partial c} &= -1 + ba \leq 0 \\
\frac{\partial f(\cdot)}{\partial g} &= pW + (1 - p)w - ba(\hat{p}_AW + (1 - \hat{p}_A)w) \rlessgtr 0 \\
\frac{\partial f(\cdot)}{\partial g_H} &= \sigma\hat{q}_O - (1 - b)\sigma\hat{q}_{\bar{O}} - b(1 - a)\sigma\hat{q}_{\bar{C}} - ba\sigma\hat{q}_C > 0 \\
\frac{\partial f(\cdot)}{\partial g_L} &= \sigma(1 - \hat{q}_O) - (1 - b)\sigma(1 - \hat{q}_{\bar{O}}) - b(1 - a)\sigma(1 - \hat{q}_{\bar{C}}) - ba\sigma(1 - \hat{q}_C) \rlessgtr 0 \\
\frac{\partial f(\cdot)}{\partial p} &= gW - gw \geq 0 \\
\frac{\partial f(\cdot)}{\partial \hat{p}_A} &= bagw - bagW < 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_C} &= ba\sigma g_L - ba\sigma g_H < 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_{\bar{C}}} &= -b(1 - a)\sigma g_L - b(1 - a)\sigma g_H < 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_O} &= \sigma g_H - \sigma g_L > 0 \\
\frac{\partial f(\cdot)}{\partial \hat{q}_{\bar{O}}} &= (1 - b)\sigma g_L - (1 - b)\sigma g_H < 0 \\
\frac{\partial f(\cdot)}{\partial \sigma} &= \hat{q}_Og_H + (1 - \hat{q}_O)g_L \\
&\quad - (1 - b)(\hat{q}_{\bar{O}}g_H + (1 - \hat{q}_{\bar{O}})g_L) \\
&\quad - ba(\hat{q}_Cg_H + (1 - \hat{q}_C)g_L) \\
&\quad - b(1 - a)((\hat{q}_{\bar{C}}g_H + (1 - \hat{q}_{\bar{C}})g_L) > 0 \\
\frac{\partial f(\cdot)}{\partial w} &= g(1 - p) - bag(1 - \hat{p}_A) > 0 \\
\frac{\partial f(\cdot)}{\partial W} &= gp - bag\hat{p}_A \rlessgtr 0
\end{aligned}$$

Translating these partial derivatives into words, the model shows that:

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- As the probability that S consents to an ask increases, the effect on the perceived net value of offering (relative to not offering) is indeterminate
- As the probability that R asks for help increases, the effect on the perceived net value of offering (relative to not offering) is indeterminate
- As the material cost to helping increases, the perceived net value of offering (relative to not offering) decreases or stays the same
- As S becomes more generous, the effect on the perceived net value of offering (relative to not offering) is indeterminate
- As the ceiling for how generous S could be perceived increases, the perceived net value of offering (relative to not offering) increases
- As the floor for how generous S could be perceived increases, the effect on the perceived net value of offering (relative to not offering) is indeterminate
- As the prior probability that R has high need increases, the perceived net value of offering (relative to not offering) increases or stays the same
- As the posterior probability that R has high need following an ask increases, the perceived net value of offering (relative to not offering) decreases
- As the likelihood of S being perceived as a high type conditional on S consenting increases, the perceived net value of offering (relative to not offering) decreases
- As the likelihood of S being perceived as a high type conditional on S rejecting increases, the perceived net value of offering (relative to not offering) decreases
- As the likelihood of S being perceived as a high type conditional on S offering increases, the perceived net value of offering (relative to not offering) increases
- As the likelihood of S being perceived as a high type conditional on S not offering (and R not asking) increases, the perceived net value of offering (relative to not offering) decreases
- As the extent to which S cares about her image increases, the perceived net value of offering (relative to not offering) increases
- As the lowest possible need R could have increases, the perceived net value of offering (relative to not offering) increases
- As the highest possible need R could have increases, the effect on the perceived net value of offering (relative to not offering) is indeterminate

In Sections 3.6 and 3.7, we test some of the predictions of the model.

3.6 Study 1

Study 1 tests for the “pain of asking” and the “pain of being asked.”

3.6.1 Study 1a

Methods

In Study 1a we sought to test the ordering of the four parameters for each player: $u_R(\hat{q}_{\bar{C}})$, $u_R(\hat{q}_{\bar{O}})$, $u_R(\hat{q}_C)$, and $u_R(\hat{q}_O)$ for the Receiver, and $u_S(\hat{q}_{\bar{C}})$, $u_S(\hat{q}_{\bar{O}})$, $u_S(\hat{q}_C)$, and $u_S(\hat{q}_O)$ for the Sender. That is, we sought to test the model’s prediction of psychic utility ordering at each of the four end nodes, as captured in equations (3.14) and (3.17).

This study was a 2 (Perspective ordering: Receiver first vs. Sender first) x 4 (Vignette: Bill vs. Work vs. Arm vs. Car) mixed Ss design. Participants ($N = 79$) were recruited from Amazon Mechanical Turk and asked to imagine one of four vignettes in which one person wanted help with something, and another could potentially provide it. The R player module involved evaluating different helping scenarios or outcomes from the perspective of someone who wanted help. The S player module involved evaluating different helping scenarios or outcomes from the perspective of someone who would be able to provide help. Each participant took both the R and S player’s perspective, in randomized order, seeing a different vignette for each perspective.

For instance, those taking R ’s perspective in the Car group saw the following: “Imagine you need a car for a few days. You don’t have a car yourself that you could use, and renting one would be very expensive. You have a friend who you believe would be able to loan you theirs, but you know it would require them to make some sacrifices.” Those taking S ’s perspective instead saw: “Imagine your friend needs a car for a few days. They don’t have a car themselves that they could use, and renting one would be very expensive. You would be able to loan them yours, but it would require you to make some sacrifices.” The other three vignettes described a person needing help paying an unexpected bill, a person needing help from a colleague to complete a work task, and a person who recently broke their arm needing help from a neighbor to complete household tasks.

After reading the vignette, each participant was shown a series of helping scenarios from the framework (plus a few fillers) and asked to rate how negatively or positively the scenarios made them feel (for R ’s perspective) or feel/look (for S ’s perspective). Participants used a scale from -4 (Terrible) to +4 (Great). These questions were intended to capture relative rankings for the utility from beliefs terms for each player, as well as which terms were judged as positive or negative.

Participants were asked to focus only on the psychological and social elements of the outcomes, rather than on the practical effects of help (not) being transferred. The outcomes were presented in a random order. The relevant outcomes¹¹ in the R perspective module were as follows. We list the relevant parameter onto which the scenario maps in parentheses.

1. You are uncertain whether they will agree to help you. You have a conversation to ask them for help and they do not agree to help. ($u_R(\hat{q}_{\bar{C}})$)
2. The person has an opportunity to offer you help, but they don't. You later have an opportunity to ask them for help, but you don't. You're uncertain whether they knew that you wanted help. ($u_R(\hat{q}_{\bar{O}})$)
3. You are uncertain whether they will agree to help you. You have a conversation to ask them for help and they agree to help. ($u_R(\hat{q}_C)$)
4. The person already knows you want help. Before you even have an opportunity to ask them for help, they offer to help you. ($u_R(\hat{q}_O)$)

Those taking the S perspective saw the same outcomes, but from the other person's perspective:

1. The person has a conversation with you in which they ask you for help and you do not agree to help them. ($u_S(\hat{q}_{\bar{C}})$)
2. You have an opportunity to offer the person help, but you don't. They later have an opportunity to ask for help, but they don't. They are uncertain whether you knew they wanted help. ($u_R(\hat{q}_{\bar{O}})$)
3. The person has a conversation with you in which they ask you for help and you agree to help them. ($u_R(\hat{q}_C)$)
4. Before the person even has an opportunity to ask you for help, you offer to help them. ($u_R(\hat{q}_O)$)

Results

The ordering of whether the participant estimated R 's or S 's parameters first mattered somewhat: for about half outcomes tested, there was a statistically or marginally statistically significant difference. This difference could reflect asymmetry in how help-givers and -seekers perceive helping situations (Bohns and Flynn 2010; Bohns and Flynn 2015; Flynn 2003; Flynn and Brockner 2003; Flynn and Lake 2008; Newark, Bohns, and Flynn 2017). Although there

¹¹This study also tested other outcomes, some of which were intended to be fillers. We only present the relevant outcomes here. Appendix A.2 includes a complete list.

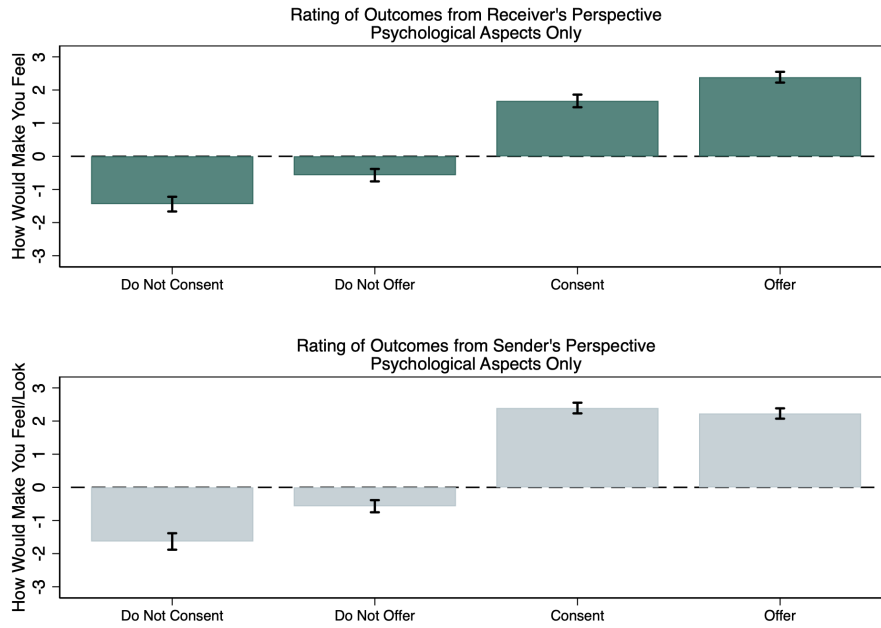


Figure 3.3: Study 1a. $N=79$. Error bars denote mean value ± 1 SE.

were some minor differences across the vignettes, there were no consistent trends. For the reporting of results, we collapse across the ordering and vignettes. However, results are largely unchanged when splitting by ordering and/or vignette.

The main results are displayed in Figure 3.3. The outcomes are ordered on the x-axis in the hypothesized ranking order, from lowest to highest. It is clear from the graph that our hypotheses were largely upheld, with the ordering following almost exactly as we had predicted. The only exception is that consenting has the same psychological effect on S as offering help.

To test for the existence of the pain of asking, we conduct two tests. First, we examine whether participants taking R 's point of view rate a rejection differently from a lack of an offer (the “negative side” of the pain of asking). We find a significant effect ($M_{NoConsent} = -1.44$, $M_{NoOffer} = -0.57$, one sample two-tailed t-test, $p = 0.0001$). Second, we test whether they rate feeling differently if the helper consents to help rather than proactively offers help (the “positive side” of the pain of asking), and again we find a significant effect ($M_{Consent} = 1.67$, $M_{Offer} = 2.49$, one sample two-tailed t-test, $p = 0.0001$). Finally, although the model does not predict whether Receivers will feel better after having not received an offer for help or after asking and being consented to, we find that participants report that they would feel better in the latter case than the former (one sample two-tailed t-test, $p < 0.00005$). In sum, the results of Study 1a provide strong evidence for the model’s predicted rankings in equation (3.14).

We next test whether our predicted ranking of S 's psychic elements was upheld in the data—

i.e., whether there is a pain of being asked. Repeating the exercise from above, we find that failing to consent to an ask is rated as significantly worse than not offering ($M_{NoConsent} = -1.63$, $M_{NoOffer} = -0.57$, one sample two-tailed t-test, $p < 0.00005$). That is, we find that there is a “negative side” pain of being asked. Contrary to the model’s predictions, we do not see evidence for the “positive side” pain of being asked: although the results are directionally consistent, there is no difference between consenting to help after an ask and offering help ($M_{Consent} = 2.39$, $M_{Offer} = 2.55$, one sample two-tailed t-test, $p = 0.175$). Finally, although again the model made no predictions on this matter, we find that not offering is rated as worse than consenting to help after an ask (one sample two-tailed t-test, $p < 0.00005$). Thus, we find partial support for the predicted rankings in equation (3.17).

Although we made no explicit predictions about how the utility from information terms relate to 0, we also find strong evidence for the placement of a “0” into our parameter ranking. For the R player, not receiving help, either through a rejection or a lack of an offer, appears to be staunchly negative. Taking the most conservative test, whether not receiving an offer and not asking was rated as different from 0, we find that, indeed, it is statistically significantly different from 0 (one-sample two-tailed t-test, $p = 0.003$). We also find that on the positive side, asking and being consented to is statistically significantly different from 0, as well (one-sample two-tailed t-test, $p < 0.00005$). This indicates that receiving help, either through a consent to an ask or an offer, is a staunchly positive experience for people taking the perspective of someone in need.

Again taking the most conservative tests, a similar pattern holds for the S player. Not offering and then not being asked is decidedly negative (one sample two-tailed t-test, $p = 0.003$), while both offering help and being asked and consenting to help are decidedly positive (for both tests, one sample two-tailed t-test, $p < 0.00005$). Finally, we find few significant and consistent differences by demographics.

Taken together, this study provides fairly strong support for the model’s predicted ordering of utility from information. We find support for our assumed psychic term ranking for the person in need, as well as largely, though not entirely, for the person who can provide help. In addition, although we did not assume this, we find evidence that both players treat any kind of a failure to transfer help as a decidedly negative psychological experience, whereas any method of transferring help as a decidedly positive one.

This study did, however, have several weaknesses. First, because we simply asked participants in the Sender condition to consider how they would feel or look should different outcomes occur, we did not cleanly distinguish between utility from prosocial giving and image utility. Thus, participants in the Sender condition likely lumped the two together, which would inflate the differences between the help transferred scenarios (C and O) and the help not transferred scenarios (\bar{C} and \bar{O}). Second, despite our instructions to not do so, participants may have placed undue attention on the practical effects of (not) providing or receiving help, rather than

focusing on the psychological elements. While this should not have affected our measurements of the pain of asking, this may have pulled responses to more extreme ends of the scale, and therefore affected our conclusions about the placement of the 0. Finally, presenting each participant with multiple outcomes may have artificially accentuated the differences between the outcomes. Study 1b attempts to address these issues.

3.6.2 Study 1b

Methods

In Study 1b, we aimed to more cleanly measure the pain of asking and the pain of being asked by holding constant receipt of help and varying only the presence or absence of an ask. Participants ($N = 402$) were recruited from Amazon Mechanical Turk for a 2 (Perspective: Receiver vs. Sender) \times 4 (Vignette: Bill vs. Work vs. Arm vs. Car) \times 2 (Help transferred ordering: Help transferred scenarios first vs. Help not transferred scenarios first) mixed Ss design. Each P was randomized to take the perspective of either the Sender or Receiver, and then was presented with one of the same four vignettes that were used in Study 1a (help with paying a bill, help with solving something at work, help with household tasks, and borrowing a car).

Ps were then shown two scenarios (called Scenarios A and B) that held constant whether help was transferred, but varied whether there was an ask. For instance, Ps taking the Receiver’s perspective in the “help transferred” condition and in the work task vignette were shown one scenario that read, “You ask your coworker for help with the task. *They agree to help*” (Ask + Consent), and another scenario that read, “You do not ask your coworker for help with the task. *They offer help. You accept the offer*” (Offer). Ps seeing the “help not transferred” questions were shown one scenario that read, “You ask your coworker for help with the task. *They do do not agree to help*” (Ask + No Consent) and one that read, “You do not ask your coworker for help with the task. *They do not offer help*” (No Offer). In each case, Ps were asked to identify in which of the two scenarios they would feel better (1=Much better in Scenario A; 3=Slightly better in Scenario A; 5=About the same in Scenario A and Scenario B; 7=Slightly better in Scenario B; 9=Much better in Scenario B). The presence/absence of the ask was counterbalanced to be presented as Scenario A or Scenario B.

After completing this first pairwise comparison, all Ps were shown a different vignette with the other possible help transferred condition. That is, if they initially saw the “help transferred” scenarios, they were then shown the “help not transferred” scenarios, and vice versa. Finally, we collected demographics. The full study materials are in Appendix A.3.

Results

The study was preregistered on aspredicted.org (#13042). Our sample consisted of $N = 217$ for the Receiver perspective and $N = 185$ for the Sender perspective. We first reverse code half of the responses such that larger numbers always indicate a preference for the scenario in which there was no ask. We then rescale the dependent measures such that the midpoint of the scale (originally 5, which indicates that the participant believed that they would feel approximately the same in the two scenarios) becomes 0. On the rescaled scale, positive values measure the extent to which Ps believe that they would feel better in a scenario *without* an ask, while negative values measure the extent to which Ps believe that they would feel better in a scenario *with* an ask. Thus, positive values on all four of our dependent measures provide support for the claim that there is both a pain of asking and a pain of being asked. In the analyses below, we collapse across the vignettes and the ordering of scenarios and questions.

We find strong support for our hypotheses. Examining the Receivers' data first, we see that on average, Ps indicate a 1.0 on the rescaled scale for the "help transferred" scenarios (one-sample two-tailed t-test, difference from 0: $p < 0.00005$) and a 1.7 for the "help not transferred" scenarios (one-sample two-tailed t-test, difference from 0: $p < 0.00005$). The same pattern emerges for the Senders: Ps indicate a 0.8 for the "help transferred" scenarios (one-sample two-tailed t-test, difference from 0: $p = 0.0001$) and a 2.0 for the "help not transferred" scenarios (one-sample two-tailed t-test, difference from 0: $p < 0.00005$). Figure 3.4 shows the results. If participants believed that they would feel the same in the two scenarios, their responses would disappear into the dashed line at 0. However, we see that on average, responses fall above the dashed line, indicating that people believe they would feel better in a scenario in which there was no ask.

Interestingly, although we did not predict this, we further see that both the pain of asking and the pain of being asked are stronger when help is not transferred than when it is (Receiver: one-sample two-tailed t-test: $p = 0.0003$; Sender: one-sample two-tailed t-test: $p < 0.00005$). These results are consistent with our Study 1a findings.

3.6.3 Discussion

Studies 1a and 1b provide support for our prediction that there exists both a pain of asking and a pain of being asked. That is, holding constant whether help is transferred, both the person in need and the person able to help feel worse when there is an ask than when there is not.

One limitation of these studies is that we instructed participants to imagine how they would feel if certain outcomes occurred. However, because these outcomes were necessarily partly dependent on their own actions (e.g., they chose to ask for help, they chose to consent to an ask), participants could have "read into" their own actions. For instance, they may have

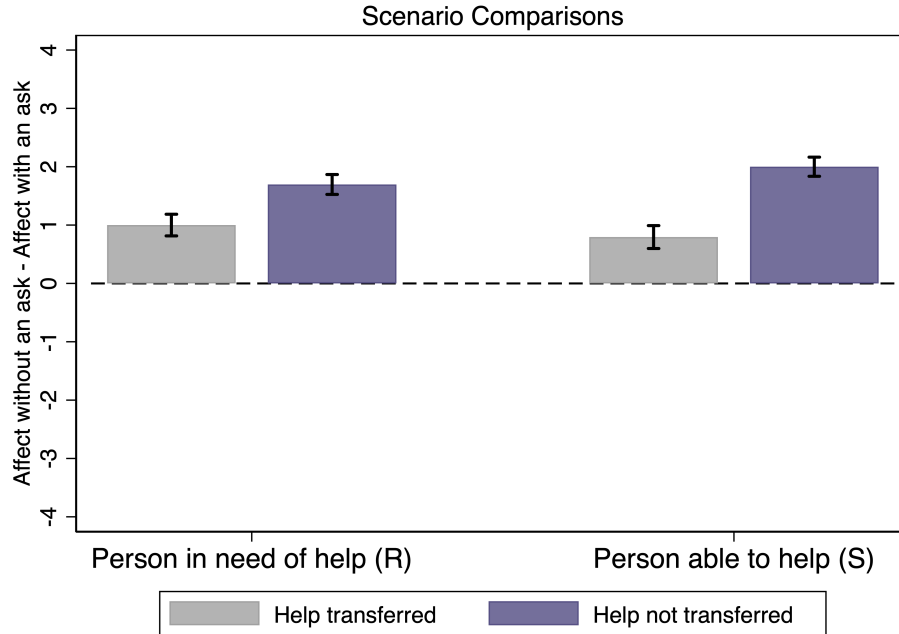


Figure 3.4: Study 1b. $N_R = 217$; $N_S = 185$. Error bars denote mean value ± 1 SE.

inferred that they would not have asked for help unless they believed there was a reasonably large probability the other person would agree to help. This could increase the noise in our data. A second, related, limitation is that some participants may have felt that they would never have taken a particular action—for instance, they would never in real life have asked a family member for help with a bill. While we aimed to describe the scenarios in such a way that there was never a clear best action for either player, this limitation could also generate noise in our data. Nevertheless, the results provide at least initial support for the model’s predictions. In Studies 2a through 2c, we test the model more directly, measuring the effect of a wide range of variables on Receivers’ decisions to ask for help, and on Senders’ decisions to consent to an ask and offer help.

3.7 Study 2

Study 2 tests the comparative statics calculated in Section 3.5.1. Mirroring that section, we test the comparative statics across three separate studies: Study 2a examines the consenting decision, 2b examines the asking decision, and 2c examines the offering decision. Each study follows the same structure. Participants were presented with a hypothetical scenario in which one person (the Receiver) needs financial help and another person (the Sender) has the ability to help. In Studies 2a and 2c, participants took the perspective of the Sender, while in Study

2b, participants take the perspective of the Receiver. Each participant responded to a series of modules (five to eight, depending on the study), each of which tested the effect of one of the variables the model predicts will matter for a person’s decision to consent, ask, or offer. All variables were tested except those for which the model does not make a prediction. In addition, for any variables that were conceptual duplicates of one another (e.g., “probability of being high need,” “level of need if low need,” and “level of need if high need”), they were collapsed into a single variable (in this example, simply “need”).

For each of the tested variables, participants were presented with a pair of scenarios; in one scenario, the variable value was low, and in the other scenario, the variable value was high. The dependent variable is the scenario in which the participant would rather take the target action (consent, ask, or offer). All three studies were pre-registered on aspredicted.org.

3.7.1 Study 2a: Consenting

Methods

Participants were shown the following vignette: *“Imagine that your family member is struggling financially this month and expects that they will be about \$500 short on an important bill. You would be able to help them pay for the bill, though it would impose a financial burden on you to do so. Your family member asks you to help pay for the bill.”* They were then shown six different modules, each of which focused on one of the following variables: c (the material cost of consenting); g (true generosity); \hat{p} , w , and W (tested together as S ’s beliefs about R ’s need); \hat{q}_C (S ’s perceived likelihood of being perceived as a high type, conditional on consenting); $\hat{q}_{\bar{C}}$ (S ’s perceived likelihood of being perceived as a high type, conditional on being asked and not consenting); and σ (the weight S places on her image).

Within each module, the participant was shown two scenarios, labeled “A” and “B,” which varied the level of one of the variables to be low or high. For instance, in the c module, participants were shown the base vignette as a reminder, then asked to consider two scenarios: “Scenario A: It would be financially relatively easy for you to help. Scenario B: It would be financially very difficult for you to help.” They were then asked, “In which scenario would you be more likely to agree to help your family member pay for the bill?” (-2=I would be much more likely to agree in Scenario A; -1=I would be slightly more likely to agree in Scenario A; 0=I would be equally likely to agree in either scenario; 1=I would be slightly more likely to agree in Scenario B; 2=I would be much more likely to agree in Scenario B). The vignette was always repeated at the top of each screen as a reminder. Both the order of the modules and the ordering of the scenarios within each module were randomized. All materials for this study, as well as for Studies 2b and 2c, are in Appendices A.4, A.5, and A.6, respectively.

After responding to these modules, participants were asked an incentivized attention check question about the vignette, as well as a series of demographic questions.

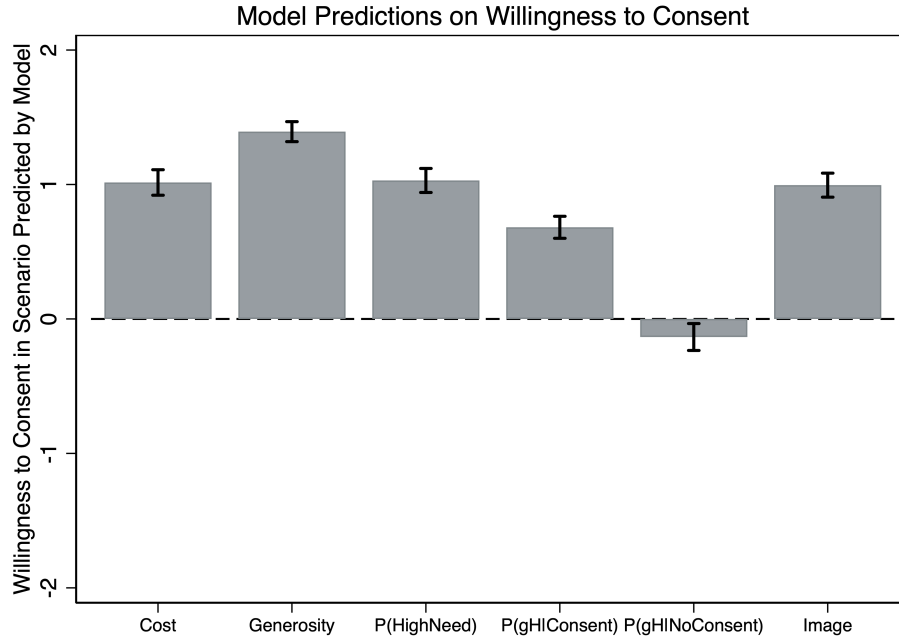


Figure 3.5: Study 2a. $N=201$. “Cost” is c ; “Generosity” is g ; “ $P(HighNeed)$ ” is \hat{p} , w , and W ; “ $P(gH|Consent)$ ” is \hat{q}_C ; “ $P(gH|NoConsent)$ ” is $\hat{q}_{\bar{C}}$; and “Image” is σ . Error bars denote mean value ± 1 SE.

Results

Two hundred one Mechanical Turk participants completed the study. To analyze responses, we first collapse across the ordering of the modules. We then reverse code half of the responses such that +2 always corresponds to the participant choosing the scenario the model predicts they would choose, -2 corresponds to them choosing the other scenario, and 0 corresponds to indifference between the two scenarios.

To analyze the responses, we conduct six separate t-tests, one for each module, to assess whether the mean value differs significantly from the midpoint (0). Figure 3.5 summarizes our results. If the variables affect participants’ responses in the way the model predicts, each bar will be significantly above 0. If the variables affect participants’ responses in a way that is opposite of what the model predicts, each bar will be below 0. As seen in the figure, overall, we find strong support for our hypotheses. Participants reported being more willing to agree to help when:

- It is relatively financially easy (rather than difficult) for them to help (c ; $t(200)=10.711$, one-sample two-tailed t-test: $p < 0.00005$)
- They care a lot about the Receiver (rather than not very much) (g ; $t(200)=18.748$,

one-sample two-tailed t-test: $p < 0.00005$)

- They think the Receiver’s need is high (rather than low) (\hat{p} ; $t(200)=11.510$, one-sample two-tailed t-test: $p < 0.00005$)
- They think that if they agreed to help, the Receiver would believe that the Sender cares a lot about him (rather than the Receiver believing that the Sender does not care very much) (\hat{q}_C ; $t(200)=8.323$, one-sample two-tailed t-test: $p < 0.00005$)
- They care a lot (rather than a little) about how they are perceived (σ ; $t(200)=11.135$, one-sample two-tailed t-test: $p < 0.00005$)

In addition, we do not find a significant difference for the $\hat{q}_{\bar{C}}$ module. In contrast to our predictions, participants do not report that they would be significantly more likely to agree to help if they believed that they would be perceived as very selfish (rather than not very selfish) if they did not agree to help after being asked ($t(200)=1.341$, one-sample two-tailed t-test: $p = 0.181$).

As a robustness check, we repeat these analyses only using data from participants who passed the attention check (87% of our sample). We find that our conclusions are qualitatively unchanged.

3.7.2 Study 2b: Asking

Methods

Participants in Study 2b saw the same vignette as those in Study 2a, but from the perspective of the Receiver. Specifically, they were shown the following: *“Imagine that you are struggling financially this month and expect you will be about \$500 short on an important bill. You have a family member who you think may be able to help you pay for the bill, though it would impose a financial burden on them to do so. Although they had an opportunity to offer you help, they did not offer. You are not sure whether they know that you need help.”*

In this study, we tested the following five variables: a (the probability that S would agree to help, if R were to ask); \hat{q}_C (the probability that S is a high type, conditional on her consenting); $\hat{q}_{\bar{C}}$ (the probability that S is a high type, conditional on R asking and S not consenting); $\hat{q}_{\bar{O}}$ (the probability that S is a high type, conditional on S not having offered and R not asking); and ν (the size of R ’s need). These variables were tested using the same procedure as we had used in Study 2a. Our dependent variable is responses to the question, “In which scenario would you be more likely to ask your family member to help pay for the bill?” (-2=I would be much more likely to ask in Scenario A; -1=I would be slightly more likely to ask in Scenario A; 0=I would be equally likely to ask in either scenario; 1=I would be slightly more likely to ask

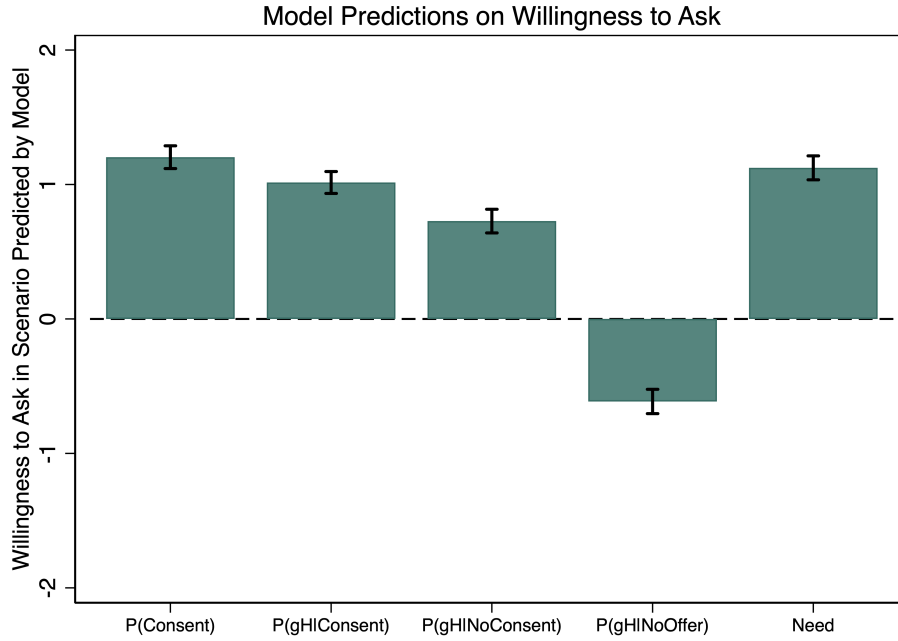


Figure 3.6: Study 2b. $N=202$. “ $P(\text{Consent})$ ” is a ; “ $P(gH|\text{Consent})$ ” is \hat{q}_C ; “ $P(gH|\text{NoConsent})$ ” is $\hat{q}_{\bar{C}}$; “ $P(gH|\text{NoOffer})$ ” is $\hat{q}_{\bar{O}}$; and “Need” is ν . Error bars denote mean value ± 1 SE.

in Scenario B; 2=I would be much more likely to ask in Scenario B). Again, both the order of the modules and the ordering of the scenarios within each module were randomized.

As in Study 2a, participants were asked an incentivized attention check question about the vignette, as well as several demographic questions.

Results

We recruited participants from Amazon Mechanical Turk ($N = 202$). For our primary analyses, we again collapse across the ordering of modules and scenarios within each module and code all responses such that positive values correspond to participants choosing the scenario the model predicts they would choose. We then conduct separate t-tests for each of the five variables we tested. The results are displayed in Figure 3.6. Once again, we find support for most of our hypotheses—in this case, four out of the five. In particular, we see that participants report being more willing to ask for help when:

- They think it is quite likely (rather than unlikely) that the Sender will agree to help, if asked (a ; $t(201)=14.218$, one-sample two-tailed t-test: $p < 0.00005$)
- They believe that, conditional on agreeing to help, the Sender has agreed to help because

they care about the Receiver (rather than helping for another reason) (\hat{q}_C ; $t(201)=12.469$, one-sample two-tailed t-test: $p < 0.00005$)

- They believe that, conditional on not agreeing to help, the Sender has turned them down because it was difficult for them to help (rather than because they did not care about the Receiver) (\hat{q}_C ; $t(201)=8.275$, one-sample two-tailed t-test: $p < 0.00005$)
- Their need for help is high (rather than low) (ν ; $t(201)=12.621$, one-sample two-tailed t-test: $p < 0.00005$)

In addition, in contrast to our hypotheses, we find the opposite result of what the model predicts for \hat{q}_O . While we had hypothesized that participants would be more likely to ask if they believed that if they do *not* ask, they would infer that the Sender probably does not care about them (rather than cares), in fact we found the opposite ($t(201)=6.790$, one-sample two-tailed t-test: $p < 0.00005$).

In this study, 84% of the sample passed the attention check. Again, our conclusions do not change when we restrict our analyses to only these participants.

3.7.3 Study 2c: Offering

Methods

In Study 2c, participants again saw the same vignette as the one from Study 2a. However, instead of telling participants that they had been asked for help, they were told that they had not been asked, but might be. Specifically: *“Imagine that your family member is struggling financially this month and expects that they will be about \$500 short on an important bill. You would be able to help them pay for the bill, though it would impose a financial burden on you to do so. Your family member has not yet asked you for help with the bill, but you think that they might.”*

The variables tested in this study were: c (the material cost of helping); p and w (tested together as S ’s beliefs about R ’s need at the time that S is deciding whether to offer); \hat{p}_A (S ’s expectation of what her beliefs about R ’s need would be, should R ask for help); \hat{q}_C (S ’s perceived likelihood of being perceived as a high type, conditional on consenting); $\hat{q}_{\bar{C}}$ (S ’s perceived likelihood of being perceived as a high type, conditional on being asked and not consenting); \hat{q}_O (S ’s perceived likelihood of being perceived as a high type, conditional on offering); $\hat{q}_{\bar{O}}$ (S ’s perceived likelihood of being perceived as a high type, conditional on not offering and not being asked); and σ (the weight S places on her image). The dependent variable was participants’ responses to the question, “In which scenario would you be more likely to offer your family member help with paying for the bill?” (-2=I would be much more likely to offer in Scenario A; -1=I would be slightly more likely to offer in Scenario A; 0=I

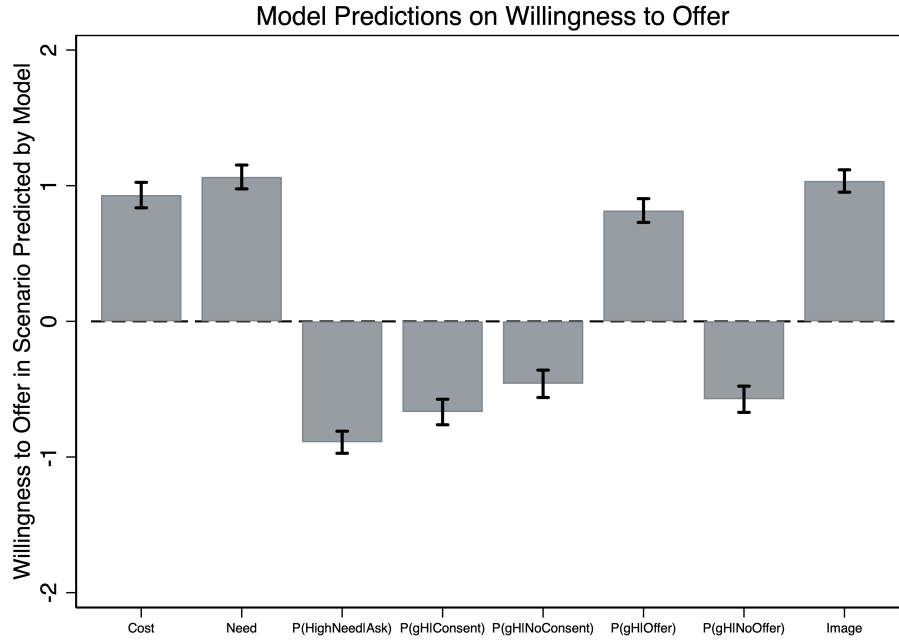


Figure 3.7: Study 2c. $N=202$. “Cost” is c ; “Need” is p and w ; “ $P(HighNeed|Ask)$ ” is \hat{p}_A ; “ $P(gH|Consent)$ ” is \hat{q}_C ; “ $P(gH|NoConsent)$ ” is $\hat{q}_{\bar{C}}$; $P(gH|Offer)$ ” is \hat{q}_O ; $P(gH|NoOffer)$ ” is $\hat{q}_{\bar{O}}$; and “Image” is σ . Error bars denote mean value ± 1 SE.

would be equally likely to offer in either scenario; 1=I would be slightly more likely to offer in Scenario B; 2=I would be much more likely to offer in Scenario B). As in the other studies, both the order of the modules and the ordering of the scenarios within each module were randomized. The study concluded with the same incentivized attention check question as was used in the other studies, and several demographic questions.

Results

We recruited 202 Mechanical Turk participants. As in the previous studies, we collapse across the ordering of modules and scenarios within each module and code all responses such that positive values correspond to participants choosing the scenario the model predicts they would choose. For our primary analyses, we conduct separate t-tests for each of the eight variables tested. Figure 3.7 shows our results. In this study, we find that only half of our model’s predictions were upheld. As we had predicted, we find that participants are more willing to offer help when:

- It is relatively financially easy (rather than difficult) for them to help (c ; $t(201)=9.897$, one-sample two-tailed t-test: $p < 0.00005$)

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- They believe R 's need for help is high (rather than low) (p ; $t(201)=12.100$, one-sample two-tailed t-test: $p < 0.00005$)
- They think that if they offered help, they would be perceived as caring about the Receiver a lot (rather than like they were helping for another reason) (\hat{q}_O ; $t(201)=9.315$, one-sample two-tailed t-test: $p < 0.00005$)
- They care a lot (rather than a little) about how they are perceived (σ ; $t(201)=12.532$, one-sample two-tailed t-test: $p < 0.00005$)

In addition, in contrast to the model's predictions, we find that participants also report being more willing to offer when:

- They think that if the person in need asked them later, they would conclude that that person's need is likely high (rather than low) (\hat{p}_A ; $t(201)=10.935$, one-sample two-tailed t-test: $p < 0.00005$)
- They think that if they were asked for help later and agreed to help, they would be perceived as caring about the Receiver very much (rather than not that much) (\hat{q}_C ; $t(201)=7.110$, one-sample two-tailed t-test: $p < 0.00005$)
- They think that if they were asked for help later and did not agree to help, they would be perceived as caring about the Receiver, but having not helped for another reason (rather than being perceived as not caring at all) ($\hat{q}_{\bar{C}}$; $t(201)=4.558$, one-sample two-tailed t-test: $p < 0.00005$)
- They think that if they did not offer help, they would be perceived as caring about the Receiver, but having not helped for another reason (rather than being perceived as not caring at all) ($\hat{q}_{\bar{O}}$; $t(201)=12.532$, one-sample two-tailed t-test: $p < 0.00005$)

Similar to the previous studies, the majority (88%) of participants answered the attention check question correctly. Our results are qualitatively unchanged when limiting our analyses to just these participants.

3.7.4 Discussion

Across three studies, we find fairly strong support for our model: out of 19 predictions, 13 were upheld, even with strict multiple hypothesis testing corrections. There was some variability across the different decision stages in the model: while nearly all predictions were upheld in the consenting and asking stages, only half were upheld in the offering stage. A closer look at the predictions that were not upheld reveals a possible (albeit post-hoc) explanation. It appears as though in almost all of the findings that were null or the opposite of what was predicted,

the scenarios involved a more complicated chain of reasoning (one that began with “if you do *not* consent / ask / offer...”), and participants were more likely to choose the scenario in which the Sender was truly more generous or being perceived as such.

For instance, in the asking decision where we manipulate \hat{q}_O , participants were shown two scenarios. In one, they were told, “If you do not ask, you will be left thinking that they probably do not care about you.” In the other, they were told, “If you do not ask, you will be left thinking that they probably care about you, but it was likely difficult for them to help you.” While the model predicts that participants will be more likely to ask in the former, we found that participants reported being more likely to ask in the latter. Similarly, in the offering decision where we manipulate \hat{q}_C , in one scenario participants were told, “If you do not offer now, but later they ask you for help and you agree to help, it is unlikely that they would come to believe that you care about them.” In the other scenario, they were told, “If you do not offer now, but later they ask you for help and you agree to help, there are reasons that they might still come to believe that you care about them.” Again, while the model had predicted that participants would be more likely to offer in the former than the latter, we found the opposite.

In fact, in every scenario that involved such a chain of reasoning, we see that the results did not adhere to the model’s predictions: participants always chose the scenario in which the Sender was truly more generous or was perceived as such. This pattern suggests that participants may be using something akin to a “closeness” or “warmth” heuristic, being more willing to engage in a helping interaction (either by asking for help or helping) if they feel closer to their counterpart. Ironically, although the results did not adhere to our predictions, this closeness heuristic explanation is in fact quite consistent with the spirit of our model, the crux of which is that Receivers want to interact with generous Senders, and Senders want to be perceived as generous.

Finally, there is one prediction that was not upheld that does not follow the above pattern: the willingness to offer for the \hat{p}_A variable. While the model predicts that Senders would be more willing to offer if \hat{p}_A is low (i.e., that, conditional on R asking, S would come to believe that R ’s need is low), we found that in fact they are more willing to offer if \hat{p}_A is high. This result can be explained by the Sender inferring that a higher \hat{p}_A may mean a higher p at the time of the offering decision, which should indeed increase willingness to offer help, in accordance with our model.

Future studies should aim to better control for these unexpected inferences and better ensure that participants fully think through the information provided them.

3.8 Conclusion

Bridging across several distinct literatures, this paper develops a novel game-theoretic signaling model that attempts to explain why people might not ask for informal help, even when that

help is materially valuable and desired. Our model argues that people fear rejection, which they interpret as a signal of a would-be helper’s low valuation of them. The reason that an explicit rejection after asking for help is more painful than a lack of an offer is that asking for help removes a prominent excuse that the would-be helper otherwise would have had: that they simply did not know that help was desired.

Our model generates several novel predictions. Among others, it proposes that under certain conditions, people in need face a “pain of asking”: that is, holding constant whether help is transferred, they always feel worse when they asked for help than when they did not. Although asking for help increases the chances that they receive help, it also forces them to face a psychic cost. The model also predicts that under those same conditions, people able to help face a “pain of being asked”: holding constant whether help is transferred, they always feel worse when they were asked for help than when they were not.

The model also shows how the pain of asking (and specifically, feeling worse after asking and being rejected, relative to not asking and not receiving an offer) can lead people to not ask for help: the person in need may not ask for help if he fears learning how the would-be helper feels about him. This is more likely when the potential psychic losses from being rejected are comparatively greater, when the potential psychic gains from being consented to are comparatively smaller, and when the person is more risk averse over receiving this type of information.

We also demonstrate support for our model across several studies. In particular, we show evidence for the pain of asking and the pain of being asked (Studies 1a and 1b) and support for most of the variables in the model (Studies 2a, 2b, and 2c). Although not all predictions were upheld in Study 2, a closer look at those predictions that were not upheld reveal that the results may nevertheless be consistent with the spirit of the model, if not the mathematical execution.

In addition to generating several novel predictions, our model also provides a coherent framework for organizing and better understanding several existing findings in the literature. First, it identifies a common thread between the existing psychology literature on people’s reluctance to ask and the economics literature on people’s reluctance to be asked.

Second, asking people for help directly and verbally has been found to substantially improve the likelihood of receiving help, compared to non-verbal asks (e.g., asks through a flyer, eye contact, email, or bell-ring) (Andreoni, Rao, and Trachtman 2017; Flynn and Lake 2008; Roghanizad and Bohns 2017). This framework provides a potential explanation for this finding. Potential helpers (Senders) may dislike being asked to help, but still help in response to an ask, because direct verbal asks removes a plausible excuse for not helping: ignorance about need. Once the excuse is removed, people are effectively forced to either help or incur a large image cost, pushing people towards helping.

Third, one result of our model is that if a Receiver does not ask for help, the Sender de-

creases her subjective probability estimate that the Receiver has high need. This is consistent with a claim made by Bohns and Flynn, who suggest that people in a position to help may interpret others' unwillingness to ask as a reflection of the fact that they do not want help, rather than want help but are too uncomfortable to ask (Bohns and Flynn 2010). One implication of our model is that a lack of an initial ask may decrease the likelihood of receiving an offer later. Suppose that the game were modified such that, if the Receiver did not ask, the Sender had a second opportunity to offer help. If a lack of an ask leads the Sender to update her beliefs about the Receiver's need downward, then this suggests that the Sender would be even less likely to offer in a subsequent offering stage than she had been in the first stage, before the Receiver had any opportunity to ask. Thus, by not asking, the Receiver may not only be directly decreasing the likelihood that he gets help (by forgoing the possibility of a Sender consenting to an ask), but may also be indirectly decreasing the likelihood by inadvertently signaling that he is unlikely to need help, and thus does not want an offer.

Finally, prior work in charitable and prosocial giving has argued that one key way of encouraging people to help is to remove excuses to not help (Exley 2020; Linardi and McConnell 2011). While our model also captures this insight, it simultaneously cautions that there may be a psychological cost to removing excuses. If a would-be helper chooses to not help despite the fact that an excuse has been removed, it may make both the person in need and the would-be helper feel worse.

It is also worth commenting on the extent to which the model is realistic. Our model has three stages: an offering stage, an asking stage, and a consenting stage. However, such well defined stages are somewhat artificial, and in reality, helping interactions are often substantially more fluid. That is, people may have multiple opportunities to offer and ask for help, and in some cases may not even be aware of the fact that such an opportunity exists or has passed. Similarly, we have assumed that offered help is always accepted. In some cases, however, even a person who needs help turns it down when it is offered.

Moreover, while we have assumed that both players know who the Sender and Receiver are, in field settings it may not always be obvious. Players sometimes switch roles, or shift between roles depending on the context. For instance, a parent may be a Sender and a teenage child may be a Receiver in a financial context, but the roles may reverse when physical labor is needed. Similarly, the child may come to be the parent's financial helper as both age. Toggling between these roles allows for reciprocity, a key component of many helping relationships (Desmond 2016; Greenberg 1980). Finally, some variables we had assumed are known to players may in reality be uncertain. For instance, not only might the Receiver be uncertain about the Sender's costs of helping, the Sender herself might not know the complete costs of helping until she begins to or even concludes helping.

In addition to contributing to several distinct literatures, our work also generates policy implications. In particular, it suggests that removing the ask when possible may be better

for both parties. If a person is able and willing to help, it may be better for this person to offer help rather than wait to see if she will be asked. If the ask cannot be removed and the would-be helper cannot help, our model suggests that providing the person in need with a different way of feeling valued, such as via a different excuse, may improve the person in need's psychic utility.

We note that although we have focused on informal material helping in this work, our model may also apply to a wide range of other settings. For instance, it may apply to negotiations in work settings, where a failure to secure a successful negotiation may lead the employee to believe that he is a low value worker or his contributions are not appreciated. Likewise, it may apply to unemployment and job search (Falk, Huffman, and Sunde 2006a; Falk, Huffman, and Sunde 2006b), as well as romantic relationships (Downey and S. I. Feldman 1996), where rejections may even more directly signal low valuation. Finally, while in the model presented above, we have described the Sender's helping as bringing positive utility to the Receiver, we can also think of her "helping" as undoing disutility she was causing to the Receiver. For example, suppose that the Sender is sexually harassing or bullying the Receiver, or engaging in behavior that puts his health at risk, such as driving at unsafe speeds while he is a passenger. Such a Receiver may consider asking the Sender to stop her behavior. While there are likely many reasons why a Receiver may not want to ask (e.g., fear of retaliation), our model may provide additional insights into a Receiver's hesitation: the Receiver may be afraid of learning that the Sender does not value the Receiver and his preferences enough to stop her harmful and unwanted behavior.

Chapter 4

The psychological costs of seeking informal loans

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“It [is] next to impossible for people to survive deep poverty on their own.”

“Through everyday interaction, the poor have picked up ... that there is a delicate art to ‘the ask.’ Knowing how to ask for help—and, in turn, when to extend or withhold aid—is an essential skill for managing poverty.”

-Matthew Desmond, *Evicted*

Abstract

Informal loans—that is, financial loans or gifts between friends or family that are not captured through a formal contract—are very common, particularly among lower income groups. Despite the prevalence of informal loans, however, we know very little about how people decide whether to seek them in the face of a financial emergency, or what the effects of these decisions are. This paper aims to identify the economic, psychological, and emotional factors that affect people’s willingness to seek informal loans. I find that although people recognize that—compared to other alternatives—informal loans are often an economically sensible method of acquiring money, people also report potent psychological and emotional costs to seeking such loans. I further show evidence that these psychological costs are often specific to the actual act of asking rather than the cost of *having* the loan. Finally, I find suggestive evidence that these psychological costs can have economic consequences, potentially pushing people towards more expensive alternatives of acquiring funds. These results suggest that practices that decrease the discomfort of asking friends and family for loans, or policies that make other alternatives of acquiring funds more financially attractive, may have psychological and/or economic benefits for people struggling to make ends meet.

4.1 Introduction

Four in ten Americans report that they would be unable to cover an unexpected \$400 expense using cash, savings, or a credit card paid off at the next statement. An additional one in ten report that they would be unable to pay for such an expense using any method at all (Reserve 2019). Such statistics underscore the staggering amount of financial insecurity in the United States and have fueled a large body of research examining how people address both acute and chronic financial difficulties. This literature has examined decisions such as take-up of government or social services help (Currie 2004), credit card usage (S. Agarwal, Skiba, and Tobacman 2009; S. Agarwal, Driscoll, et al. 2008; Calem and Mester 1995), and payday loan usage (S. Agarwal, Skiba, and Tobacman 2009; Bhutta, Goldin, and Homonoff 2016).

However, evidence suggests that informal loans—voluntarily provided financial loans or gifts between individuals that are not captured through a formal contract—may be equally if not more prevalent than those more formal methods of addressing financial needs. In a nationally representative US sample, 14% of respondents reported having borrowed from family or friends

I gratefully acknowledge financial support from the Department of Health & Human Services, Association of Children and Families. I am indebted to Jon Hoffman, Anne Kainaroi, and staff at the Community Human Services for data collection and sharing. Hunt Allcott, Linda Babcock, Saurabh Bhargava, Kareem Haggag, Alex Imas, George Loewenstein, and Jonathan Zinman provided invaluable comments. Please address all correspondence to ajaroszewicz@hbs.edu.

in the last 12 months (World Bank, 2014).¹ By contrast, fewer than 1% reported having borrowed from a private lender, which includes but is not even limited to payday lenders—a nearly 20-fold difference. The same survey shows that globally, about 24% of respondents reported having borrowed from family or friends in the last 12 months. Despite the prevalence of informal loans, however, we know very little about how people decide whether to use them when faced with a financial emergency, or what the effects of those decisions are.

This paper aims to address the disproportionate focus on more formal money-acquisition methods by providing initial insights into the factors that affect people’s willingness to seek informal loans. To motivate the work, I measure people’s beliefs and feelings about acquiring formal loans (e.g., credit cards or payday loans) and informal loans. I find that although people believe that informal loans are more financially attractive than formal loans, they also believe that they are more psychologically and emotionally aversive.

In Study 1, I aim to understand what, exactly, the psychological and emotional costs of asking for help are. I find that one of the psychological costs that people anticipate experiencing when they ask for informal loans is the “pain of asking” (Jaroszewicz and Loewenstein 2020), a psychological cost that is specific to the act of asking for help and distinct from simply having or having had the help. I test whether this pain of asking can predict reported (un)willingness to ask for help in real life financial emergencies, and find that it indeed can.

In Study 2, I test whether these psychological costs may have economic consequences. Participants were asked for their willingness to pay to avoid asking for an informal loan in the face of a financial emergency. I find that on average, people display a strong aversion to informal loans, reporting being willing to pay roughly 13% to 22% of the size of a bill to be able to pay using another method. This effect appears to be stronger among people who have more negative feelings about the prospect of asking others for a loan, suggesting that the effect may be driven at least in part by the psychological costs of securing or having such loans. These results suggest, therefore, that the psychological costs of asking for financial help can have economic consequences, potentially pushing people towards more expensive—but less psychologically painful—alternatives of acquiring more money.

One of the primary ways through which informal financial transfers have been examined in economics is through the lens of inter vivos transfers, financial transfers between living people. In the US, intended inter vivos transfers have been found to account for at least 20% of aggregate wealth and amount to half the size of bequests (Gale and Scholz 1994). Such transfers are typically studied or modeled as downstream intergenerational transfers—i.e., transfers from parents to children. Most, if not all, of the literature surrounding this topic has focused on the benefactor. Researchers have examined what factors are correlated with giving (Cox and Jimenez 1990; Dunn and J. W. Phillips 1997; Norton and Van Houtven

¹All World Bank statistics are calculated from the 2014 Global Financial Inclusion database, available at <http://datatopics.worldbank.org/financialinclusion/>.

2006; Norton, Nicholas, and Huang 2013), put forth theories for why people may give (Gary S. Becker 1974; Bernheim, Shleifer, and Summers 1986; McGarry 1999; Pollak 1988), and tested which theories of giving are upheld in data (Altonji, Hayashi, and Kotlikoff 1992; Cox 1987; Cox and Rank 1992). Many of these papers omit discussion of whether transfers are initiated by the benefactor or the beneficiary, and/or implicitly assume that they were initiated by the benefactor. This paper, on the other hand, is specifically interested in the role of the beneficiary in initiating these subsidies or loans.

The present work also relates to several literatures in development economics. In 2011 alone, global remittance payments amounted to over \$350 billion, a value three times greater than total official development assistance (Batista and Umblijs 2016). As with the inter vivos transfers literature, a large portion of the remittances literature has examined the factors that affect migrants' decisions to give. For instance, many models of remittance-giving seek to distinguish between two leading hypotheses, altruism and insurance (or "self-interested" motivations more broadly) (R. Agarwal and Horowitz 2002; Batista and Umblijs 2016; Cox, Eser, and Jimenez 1998; Lucas and Stark 1985), with the majority of studies suggesting that altruism is unlikely to be the primary motive (Batista and Umblijs 2016; Clarke and Wallsten 2003, D. Yang and Choi 2007; D. Yang 2008). Barring a few exceptions,² the recipient is typically seen as passive in these exchanges.

Closely related to the remittances work are the literatures on inter-household transfers and intra-household bargaining (Manser and Brown 1980; Strauss, Mwabu, and Beegle 2000). As with the other literatures mentioned above, most of this literature has sought to understand the determinants of giving. Among the inter-household transfers literature, researchers have examined motives such as altruism (Park 2003; Schoeni 1997) and social insurance (Cox and Jimenez 1990). The intra-household bargaining literature has primarily focused on determinants such as spousal control (Ashraf 2009) and asymmetric information (Ashraf, Field, and J. Lee 2014; Castilla and T. Walker 2013) or preferences (Anderson and Baland 2002).

Finally, the present work relates to a line of research on informal risk sharing arrangements (Fafchamps 2011). In contrast to most of the inter vivos transfers, remittances, and inter/intra-household bargaining research, the informal risk sharing literature views the person in need

²For instance, in a framework exploring the role of both family networks and information asymmetries in Tanzanian remittances, de Weerdt, Genicot, and Mesnard highlight the role of the recipient in determining migrant flows (De Weerdt, Genicot, and Mesnard 2019). Using surveys, the authors estimate the extent to which migrants and recipients misperceive one another's wealth, and the degree to which these misperceptions co-move with remittances. They find that remittance transfers co-move with the recipient's misperception of the donor's wealth, but not with the donor's misperception of the recipient's wealth. This is consistent with the explanation that recipients have bargaining power, setting the terms of the transfers either through social pressure or promised exchanges. Batista and Narciso also demonstrate that improved telephone communication between a migrant and her host country has a positive impact on the value of remittances the migrants send, an effect that could be due to social pressures from the family at home to send more remittances (but could also be due to other factors, such as better migrant control over remittance use, or increased trust in remittance channels) (Batista and Narciso 2018).

as a more active agent. While the topic is commonly studied through the lens of information economics, contract theory, and mechanism design (Besley 1995; Udry 1994), examining what occurs once an arrangement has already begun, some researchers have also examined take-up of informal risk sharing arrangements, examining questions such as how people substitute between formal and informal insurance (Fafchamps and Lund 2003; Flory 2015; W. Lin, Liu, and Meng 2014; Mobarak and Rosenzweig 2013). One important difference between that work and the questions I seek to answer here, however, are that people typically take up informal risk sharing arrangements before a need arises (i.e., as insurance, not as a method of addressing an already-known financial need). In contrast, this article focuses on situations in which people request resources for needs they already have—a situation that potentially results in a very different psychology of “take up.” Second, I expand on the existing work by moving from a development context to the United States.

The present work is particularly pertinent in light of two recent movements. One movement has sought to expand financial inclusion to all. For instance, the central mission of the Consultative Group to Assist the Poor (CGAP), a global partnership housed at the World Bank, is to advance financial inclusion to improve the lives of people in poverty. The Federal Deposit Insurance Corporation (FDIC), similarly, conducts a biennial survey specifically to learn about and improve financial inclusion of unbanked and underbanked Americans.³ Much of the academic literature related to this movement has examined barriers to formal finance (Demirguc-Kunt et al. 2015; Semenova and Kulikova 2016) and alternatives to formal financial tools, including rotating savings and credit associations (ROSCAs; Anderson and Baland 2002; Besley, Coate, and Lounsbury 1993), self-help groups (Fafchamps and La Ferrara 2012), microfinance (Braun and Woller 2004), and peer-to-peer lending (P2P; Duarte, Siegel, and Young 2012; M. Lin, Prabhala, and Viswanathan 2013). Many of these tools could plausibly be seen as imperfect substitutes for informal loans.

At the same time, policy makers and researchers alike have also recently been reexamining how to regulate payday lending (Trusts 2012; Bhutta, Goldin, and Homonoff 2016). This reexamination has broadly stemmed out of concern for the financial well-being of at-risk populations, who often find themselves trapped in financially unsustainable payday lending cycles (Bureau 2013; Trusts 2012). Restricting access to payday lending may increase demand for substitutes, such as loans from friends and family. Yet, we know very little about how people decide to ask friends and family for loans and what the economic and psychological consequences of asking for informal loans may be.

Providing a clearer understanding of the psychological barriers to acquiring informal loans can help policymakers identify how to connect those in need to the financial services that would benefit them most, be they formal or informal. The results of these studies may also

³National Survey of Unbanked and Underbanked Households: <https://www.fdic.gov/householdsurvey/>; accessed 29 March 2018.

help generate non-policy solutions, such as improving third party applications and services to facilitate informal lending (see, for instance, LoanBack, Prosper Inc., and TrustLeaf).

The rest of the paper proceeds as follows. In Section 4.2, I provide definitions of formal and informal loans, then provide statistics on informal loans in Section 4.3. Section 4.4 reviews what is known about the factors that affect willingness to seek formal and informal loans, as well as what is not known. In Sections 4.5 and 4.6, I present two studies that seek to provide initial evidence on some of the gaps identified in Section 4.4. Finally, Section 4.7 concludes.

4.2 Definitions

The “formality” of a loan is more of a spectrum than a binary measurement. On the most formal end are loans (transfers of money between two parties) that involve a formal contract specifying terms such as the amount of the loan, interest rates, the date on which the loan should be paid back, and/or consequences if the loan is not repaid. Prototypical examples include personal loans from a bank or credit union, credit card loans (i.e., charges that are not paid off by the next statement), title loans, mortgage refinancing, reverse mortgages, and payday loans.⁴

On the most informal end of the spectrum are loans that involve no contract, or only an implicit contract. Because of this, the terms of informal loans tend to be more negotiable and involve more flexible expectations about repayment (Morduch and Schneider 2014; Platteau and Abraham 1987), potentially relying on something akin to “psychological contracts” (S. L. Robinson and Rousseau 1994; Rousseau 2001). Such “loans” may even be given with no expectation of repayment, and therefore more of a gift than a loan.⁵

While formal lenders typically rely on material goods for collateral, informal lenders typically leverage their personal relationships with the borrower and instead rely on social capital as collateral (Karlan, Mobius, et al. 2009; Light and Pham 1998). They also often operate on a shorter time horizon and can be “in the legal shadows” (Adams 1989).⁶ Compared to formal lenders, informal lenders tend to have worse access to capital, limiting the possible size of loans (Adams 1989; S. Lee and Persson 2016). Because informal lenders tend to know the borrower personally, however, informal lenders also tend to have better information about

⁴Note that this definition does not include 401(k) loans. Although such loans are a major source of liquidity for Americans (Beshears et al. 2012), they do not involve transfers of money between two parties—only transfers between oneself at two different time points. In this sense, they are more akin to drawing down savings than borrowing money, *per se*.

⁵Indeed, some researchers explicitly explore the differences between transfers that are intended to be gifts (typically from close family members) and transfers that are intended to be loans (also known as “quasi-credit,” typically from friends or more distant relatives; Platteau and Abraham 1987; Fafchamps 2011). Given that the lines between the two categories are often blurry, however, and the fact that the requester may not always know at the time of asking if granted help would be a gift or a true loan, the present work does not explicitly distinguish between these.

⁶Adams’ definition of informal finance includes, but is not limited to, loans from friends and relatives.

the borrowers and therefore lower monitoring and enforcement costs. This can reduce moral hazard and adverse selection (Giné 2011; Guirking 2008) and allow borrowers to secure loans with lower contractual risk (Boucher and Guirking 2007; Guirking 2008).

Importantly, there is also evidence suggesting that in the US, informal loans often have 0 or even negative interest rates (Bond and Townsend 1996; McKean, Lessem, and Bax 2005), where a negative interest rate occurs when the loan is never repaid. Such interest rates are, of course, substantially more attractive than those of alternatives such as payday loans or credit cards.⁷ Payday loans, for instance, charge an average Annual Percentage Rate of 391% (Trusts 2012).

Falling in between the “formal” and “informal” extremes of the spectrum are loans such as microcredit (Banerjee, Karlan, and Zinman 2015). While microcredit is typically given by a stranger or institution and involves some type of contract (and thus, in this sense, is more like a formal loan), it also typically relies, at least in part, on groups of borrowers rather than the lender themselves to enforce those contracts (and thus, in this sense, is more like an informal loan; Giné et al. 2010). Similarly, peer-to-peer (P2P) lending (Duarte, Siegel, and Young 2012; Emekter et al. 2015; M. Lin, Prabhala, and Viswanathan 2013) also falls somewhere in between formal and informal. While the lender is typically an individual, does not require material collateral, and does not require an onerous application (and thus, in this sense, are more like informal lenders), the investors are typically strangers who loan the money with the intention of earning a profit (and thus, in this sense, are more like formal lenders). While recognizing the continuous nature of loan formality, for the remainder of this article I will follow the literature’s tendency in discussing formal and informal loans in a largely binary fashion.

4.3 Statistics on informal loans

Statistics on informal loans are, by nature, difficult to capture. However, the estimates that do exist suggest that informal loans are a critical part of the economy, both domestically and abroad. In 2013, informal loan transactions amounted to an estimated \$89 billion/year in the US,⁸ almost twice that of payday loans (\$45 billion/year).⁹ These statistics are particularly striking in light of the fact that three-quarters of payday loan dollars advanced, and three-quarters of fees generated from those loans, are concentrated among 48% of payday loan consumers (Bureau 2013, calculated from Figure 5).

⁷In low-income countries, this relationship may be reversed, where informal loans can have much higher interest rates than formal bank loans (Guirking 2008; Hoff and Stiglitz 1990).

⁸<https://www.incharge.org/debt-relief/debt-consolidation/how-to-borrow-money-from-family-friends/> Calculated from Federal Reserve Bank Survey of Consumer Finances, 2013. Accessed 28 March 2018.

⁹<https://www.economist.com/news/finance-and-economics/21720297-regulators-squeeze-industry-payday-lending-declining> Accessed 28 March 2018.

Although the precise figures vary widely by sample, definition, and time period, it is clear that loans between friends and family are fairly common. Among Americans who indicated that in the last year they spent more than they earned, a nationwide survey (Reserve 2017) finds that 41% relied only on friends and family to cover the gap (compared to 60% who used savings and 45% who used multiple sources). Other researchers have similarly documented the prevalence of informal loans among mostly low-to-moderate-income Americans (Dezső and Loewenstein 2012; McKean, Lessem, and Bax 2005; Morduch and Schneider 2014). An international survey conducted by the World Bank (2014) indicates that informal loans may be even more prevalent globally.

Many of these loans are fairly small. For instance, McKean et al. find that the majority of loans their participants reported having were under \$100 (McKean, Lessem, and Bax 2005). However, it appears that people use informal loans for larger purchases, as well: the Fed survey finds that 20% of first-time home buyers used friends or family to help fund the purchase, with 8% saying they relied exclusively on these groups for the down payment (Reserve 2017). Thus, there is ample evidence to suggest that informal loans are an integral part of the economy.

While there is not much research describing how people acquired these loans, there is some suggestive evidence that most are acquired through the borrower asking the lender for money. One survey, which targeted low-to-moderate income households in the US, shows that only about 5% of survey respondents report lending money to a friend or family member in the last 12 months without having been asked (McKean, Lessem, and Bax 2005).

For a significant proportion of people, family and friends seem to serve as an important source of financial support when an unexpected expense arises. When asked how they would pay for an unexpected expense amounting to 5% of Gross National Income per capita (GNI PC; roughly \$2870 in the US at the time of the survey) in the next month, 30% of American respondents who believed they could pay for the bill somehow but not through savings said they would turn to friends and family. For comparison, 30% of people indicated that they would get money from working or a loan from an employer, 22% stated they would use a credit card or a different type of formal loan, and 0% said they would use a private lender. See Figure 4.1. The Federal Reserve Board survey similarly finds that among people who could not cover a \$400 emergency expense without using cash or its functional equivalent, 29% say they would borrow from friends and family (compared to 45% who would put it on credit card and 5% who would use a payday loan, deposit advance, or overdraft; Reserve 2017). A Canadian household survey (Arrowsmith and Pignal 2010) and a survey of low-income Americans (Morduch and Schneider 2014) find comparable results.

Finally, while there is evidence that informal loans are used by people of all income levels, they seem to be particularly important for people who are low-income and/or liquidity constrained (Bond and Townsend 1996). Both in the US and globally, when asked to indicate which source(s) they have borrowed from in the last 12 months, lower income respondents

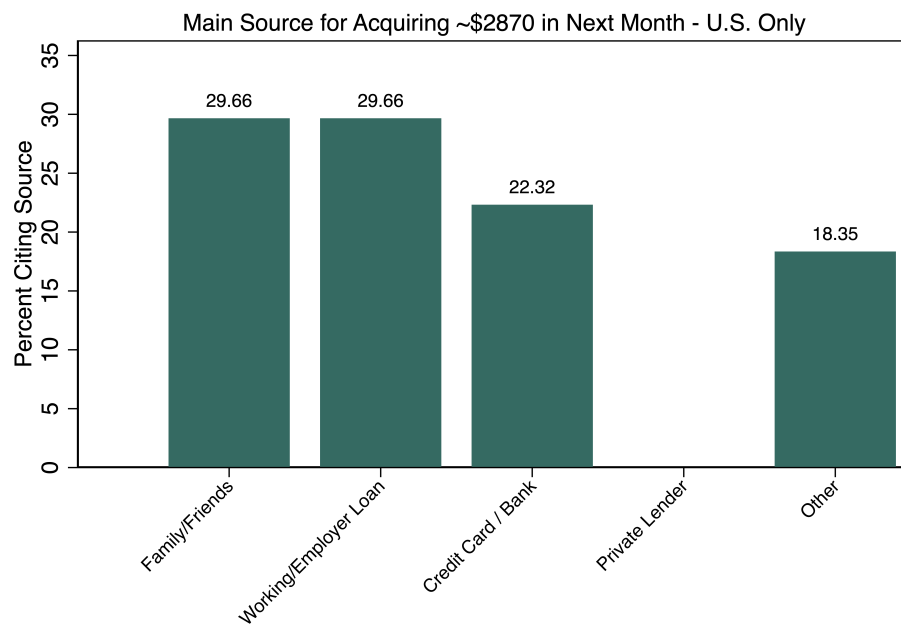


Figure 4.1: Data source: Global Financial Inclusion database, World Bank, 2014. U.S. respondents only, $N = 327$. Primary source through which would acquire 5% of GNI PC (approximately \$2870) in an emergency in the next month. Graph excludes respondents who indicate that they could pay for the emergency through savings and those who indicate that acquiring the funds would be impossible.

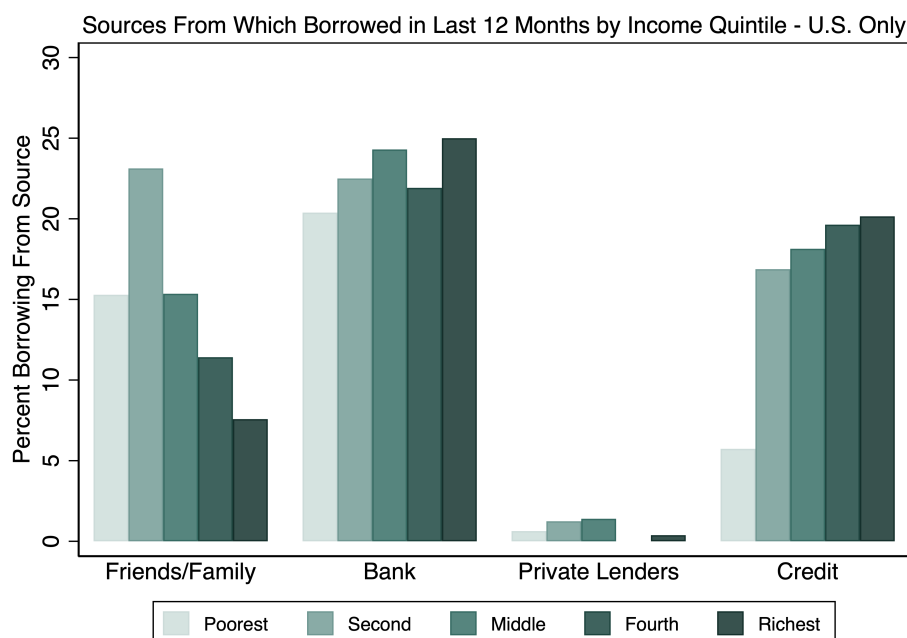


Figure 4.2: Data source: Global Financial Inclusion database, World Bank, 2014. $N = 1021$. Each respondent could choose up to four categories.

were more likely to indicate using informal loans, compared to higher income respondents (although in the US, this relationship is not monotonic, as indicated in Figure 4.2). In addition, the more difficult it is to come up with emergency funds equivalent to 5% of GNI PC in the next month, the more likely it is for a person to use friends and family as the main source of those emergency funds—see Figure 4.3. Within the US, among those who indicated it would be “very possible” to come up with the money, 5% said they would use friends and family; among those who said it would be “somewhat possible,” 21% would use friends and family; and among those who said it would be “not very possible,” 40% would use friends and family. In the Morduch and Schneider survey, respondents below the supplemental poverty measure threshold were roughly 10 to 15 percentage points more likely to have outstanding informal loans from friends and/or family at the time they were surveyed than those who were above the threshold. The researchers further find that those with informal loans were not necessarily unbanked: 89% had bank accounts and 54% had credit cards (Morduch and Schneider 2014).

Taken together, thus, these data suggest that informal loans are frequently used, particularly in comparison to other loan sources such as credit cards and payday loans; they often serve as a critical safety net in response to an unexpected expense; and they are particularly important for those who are poorer and/or more liquidity constrained.

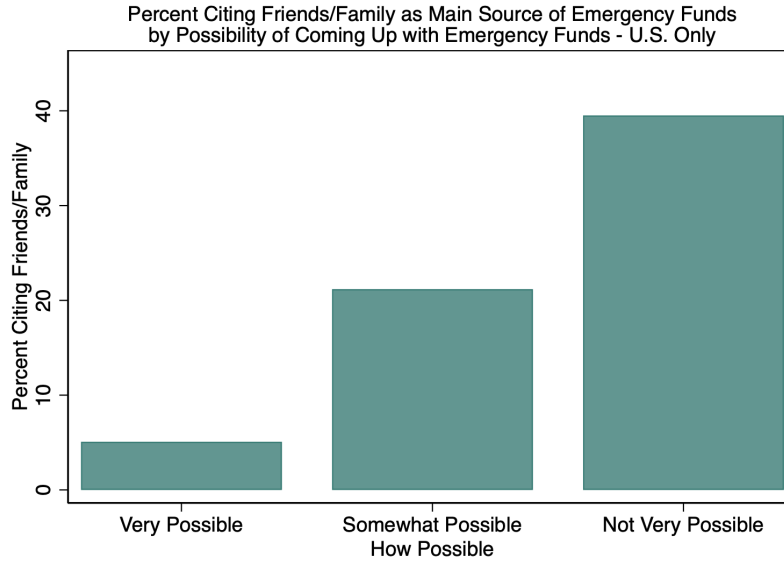


Figure 4.3: Data source: Global Financial Inclusion database, World Bank, 2014. $N = 822$. Emergency funds are 5% of GNI PC in next month (about \$2870). ‘Not At All Possible’ category omitted.

4.4 Factors affecting demand for loans

Next, I turn to the question of the factors underlying demand for different types of loans. Prior work has demonstrated that standard economic factors such as interest rates (Bertrand, Karlan, et al. 2010; Ferman 2015), risk (Attanasio, Augsburg, and De Haas 2019), and grace periods (Field et al. 2013) affect consumers’ willingness to take out formal loans. Other work has pointed to the importance of psychological factors, including saliency of interest rates (Ferman 2015) and seemingly irrelevant factors such as a photo of an attractive person (Bertrand, Karlan, et al. 2010).

Given the lower interest rates, greater term flexibility, and lack of requirement for material collateral, one might think that liquidity-constrained consumers would always prefer informal loans over formal ones, conditional on having access to an informal lender with sufficient capital. Indeed, some work has pointed out that it would be sensible for consumers—especially low-income consumers, who may be particularly harmed by the financial requirements of formal loans—to only use informal loans, assuming they have access to them (Karaivanov and Kessler 2015). Yet other work has also shown that households use informal credit only when they lack access to more attractive formal credit (Bose 1998; Guérin et al. 2012).¹⁰ Indeed, as access to formal credit increases, people seem to shift towards it (Karaivanov and Kessler 2015). The

¹⁰Cf. Bond and Townsend 1996.

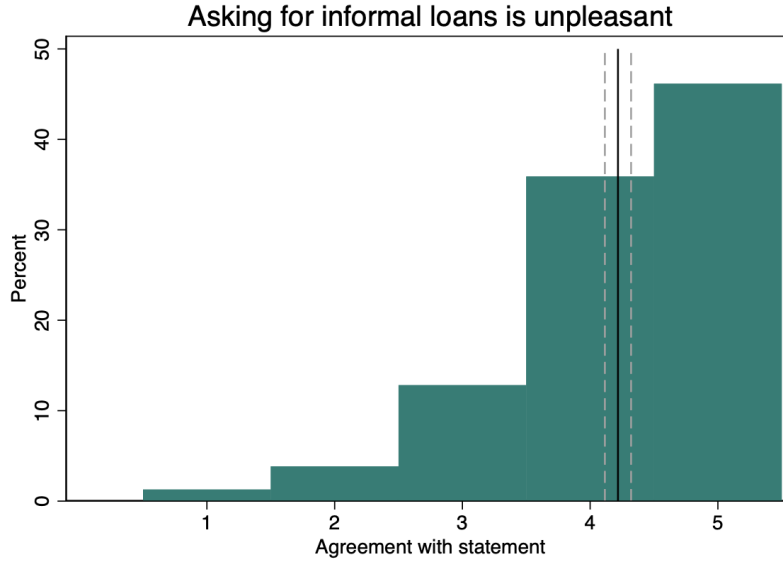


Figure 4.4: $N = 78$. Responses to question: “How much do you agree with the following statement? ‘I find the idea of asking friends and family for financial help to be unpleasant.’” Participants responded on a scale of 1=strongly disagree, 2=somewhat agree, 3=neutral, 4=somewhat agree, 5=strongly agree. Black solid line indicates mean, and grey dashed lines indicate mean value ± 1 SE.

fact that the fraction of informal credit in total lending is larger in countries with less developed formal banking sectors is also consistent with the proposition that if borrowers have a choice, they prefer to use formal credit markets (Karaivanov and Kessler 2015). These findings are also consistent with the pattern displayed in Figure 4.3.

Studies in Bangladesh, India, and South Africa further indicate that although loans from friends and relatives are often cheap and prevalent, people report wanting to limit their dependency on relatives (D. Collins et al. 2009; Guérin et al. 2012).

To test whether this pattern also holds in the US, I conducted a survey in southwestern Pennsylvania with people who were homeless, in unstable housing, or facing eviction ($N = 78$), and who had come to a social services agency (Community Human Services) for financial help. When asked to what extent they agreed with the statement, “I find the idea of asking friends and family for financial help to be unpleasant,” I find that the overwhelming majority report agreeing ($M = 4.22$ on a scale from 1=strongly disagree, 2=somewhat agree, 3=neutral, 4=somewhat agree, 5=strongly agree; one-sample two-tailed t-test of difference from midpoint 3: $p < 0.00005$).¹¹ See Figure 4.4.

At first blush, these findings may seem inconsistent with the statistics presented in Section 4.3: although people seem to use informal loans quite a bit, they also seem to have a strong

¹¹More details on this study are available in Appendix B.1.

aversion to them. To better understand what drives this pattern of results, I recruited participants ($N = 201$) from Amazon Mechanical Turk. They were asked to imagine that they had an emergency, that they needed to pay \$1000 in the next month, and that they could not pay it through savings. They were then asked to rate both formal loans (e.g., credit cards or payday loans) and informal loans (from friends or relatives) on four dimensions.¹² Three of the dimensions captured key standard economic considerations: how financially attractive the method is (1=Not at all financially attractive; 5=Extremely financially attractive), the time or effort costs required to secure the funds through that method (1=No time/effort; 5=A great deal of time/effort), and how possible it would be to secure the funds conditional on exerting the required time and effort (1=Not at all possible; 5=Extremely possible). The final dimension asked participants to rate how trying to acquire money through each method would make them feel from a psychological and/or emotional perspective (1=Very poor; 5=Excellent). Participants saw the dimensions in random order and were asked to rate the methods of money acquisition within each dimension before moving onto the next dimension. See Appendix B.2 for all materials.

To analyze the results, I first reverse code the time/effort variable so that higher values on all four dimensions indicate that it is better. I find that informal loans are perceived as being more financially attractive than formal loans ($M_{Formal} = 1.97$; $M_{Informal} = 2.46$; two-tailed t-test: $p < 0.00005$) and as requiring the same amount of time/effort ($M_{Formal} = 3.58$; $M_{Informal} = 3.62$; two-tailed t-test: $p = 0.642$). However, informal loans are perceived as being less possible to secure conditional on putting in the time and effort ($M_{Formal} = 3.58$; $M_{Informal} = 3.24$; two-tailed t-test: $p = 0.0005$) and—importantly—as being worse on the psychological and emotional dimension ($M_{Formal} = 2.36$; $M_{Informal} = 2.18$; two-tailed t-test: $p = 0.036$). These results, thus, hint at the possible tradeoffs that people may consider when choosing between formal and informal loans in the face of a financial emergency. See Figure 4.5.

What might the psychological and emotional costs of informal loans be? Most prior work has pointed to the social costs of having informal loans. Some have argued that the “most important feature” of loans from friends and relatives is reciprocity, “the expectation that the borrower is willing to provide a loan to the lender sometime in the future.” (Adams 1989, p 10). Indeed, economic anthropology has focused on the social, not financial, meaning of debt (for a review, see Guérin et al. 2012). Much of the literature has focused specifically on the social costs of defaulting, contending that when a borrower defaults on an informal loan, she and/or the lender(s) pay social and psychological costs (Anderson and Francois 2008, Besley

¹²Although I do not present the results here, participants were also asked about two other important channels of acquiring more funds: working more for pay and securing money from the government or a non-profit organization. See Appendix B.2 for complete materials. Figure B.1 in Appendix B.2 shows the results for all four money acquisition methods.

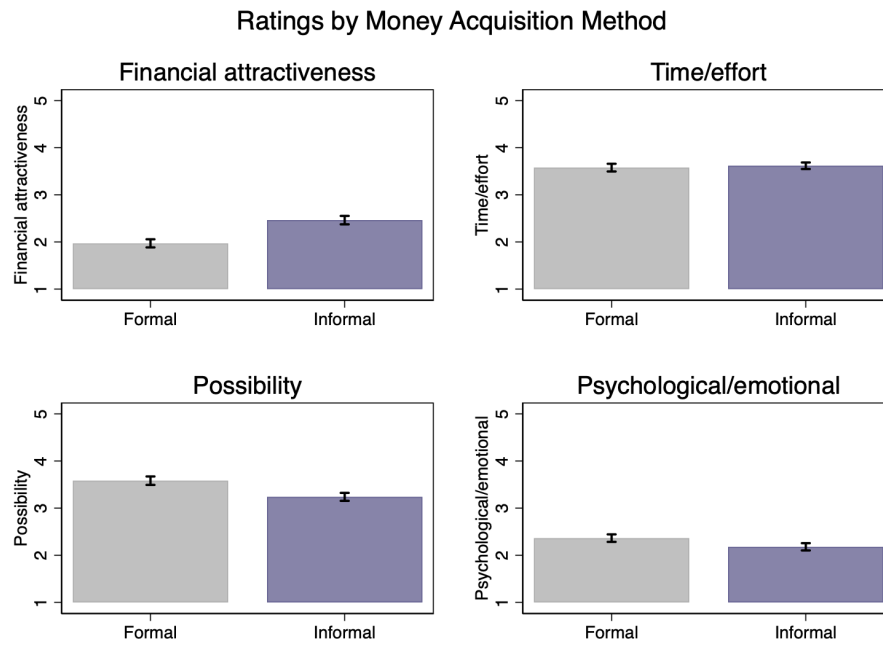


Figure 4.5: $N = 201$. Ratings of formal and informal loans on four different dimensions. The time/effort variable is reverse coded. Thus, higher values on all four dimensions are more desirable. Error bars denote mean value ± 1 SE.

and Coate 1995; Besley, Coate, and Loury 1993; Dezső and Loewenstein 2012; Karaivanov and Kessler 2015; Karlan, Mobius, et al. 2009; S. Lee and Persson 2016).¹³¹⁴ A related literature on take-up of social benefits (e.g., government welfare programs; Currie 2004; Moffitt 1983) has pointed to stigma or shame of being a welfare-recipient as a potential barrier to people’s willingness to apply for such benefits.

To my knowledge, there has been no work examining the psychological costs of *asking* for informal loans, distinct from the costs of *having* loans.¹⁵ However, prior work in other domains has argued that asking for help can be awkward and unpleasant (Bohns and Flynn 2010; Brooks, Gino, and Schweitzer 2015; Small, Gelfand, et al. 2007). Theoretical work has modeled why exactly this occurs (Jaroszewicz and Loewenstein 2020) and has applied it to a health context (Jaroszewicz, Loewenstein, and Tevar 2020). Indeed, there is reason to believe that these psychological costs of asking may be accentuated in the financial context: interactions governed by market norms are somewhat different than those governed by social norms, and people are often uncomfortable with monetizing formerly non-monetary interactions (Ariely 2008; Clark 1984; Clark and Mills 1979), even when monetizing may be more efficient (Camerer 1988; Ellingsen and Johannesson 2011). Moreover, the U.S. has a long history of attributing financial need to individuals’ personal failings (laziness, immorality, lack of skill, etc.) rather than environmental circumstances or luck (Cozzarelli, Wilkinson, and Tagler 2001; J. W. Robinson 2009; Vance 2016), meaning that people are often particularly reluctant to reveal financial need as opposed to a need that is less stigmatized.

I hypothesize that one explanation for why demand for informal loans is lower than one might expect, given its attractive financial features, is that people incur a psychological cost when they ask another person to loan them money—a “pain of asking” (Jaroszewicz and Loewenstein 2020). I argue further that this cost is distinct from those previously studied—e.g., that people incur this cost even when they do not have concerns about reciprocity, being in debt to someone they know, or defaulting. In addition, I hypothesize that this cost may suppress demand for informal loans and can result in large economic costs. In Studies 1 and 2, I test and provide support for these hypotheses.

¹³Interestingly, Karaivanov and Kessler (2015) also model informal lenders as incurring social costs if they refuse to provide a loan when asked.

¹⁴Taking a sociological perspective, Wherry, Seefeldt, and Alvarez argue that formal loans may have social costs, as well, and that people are particularly averse to formal loans when those loans start interfering with debtors’ relationships with their loved ones Wherry, Seefeldt, and Alvarez 2019.

¹⁵Some prior work has hinted at the difference between disutility from having help versus disutility from taking steps to acquire that help. For instance, the literature on social and private benefit take-up has argued that complexity aversion (Bhargava and Manoli 2015) and hassle costs (Bertrand, Mullainathan, and Shafir 2006) may decrease willingness to apply for benefits. This literature, however, has focused on an overestimate or overweighting of the time or effort costs associated with acquiring the help, rather than an aversion to the psychological or emotional costs of acquiring that help.

4.5 Study 1

In Study 1, I delve into the source of the psychological and emotional costs of informal loans and examine whether these costs can predict real world decisions on how to acquire more money after facing serious financial strain. The study is preregistered on aspredicted.org and was approved by the Carnegie Mellon University Institutional Review Board. I report all measures and exclusions. Complete materials are available in Appendix B.3.

4.5.1 Participants

Participants ($N = 463$) were recruited from Amazon Mechanical Turk. Because the primary goal of the study was to establish the predictors of “real life” willingness to ask friends and family for financial help, participants were screened on whether they reported ever having felt, in their adult life, like they could not handle their financial responsibilities with the money that they had. This question was embedded among several others to maximize the likelihood that participants were truthful in their responses. Eighty-seven percent of recruited participants reported having such an episode, resulting in a final sample of 405.

Participants were limited to the U.S. Forty percent were women and 57% had at least a four-year college degree. Roughly 14% had an annual household income under \$20,000; 25% had income between \$20,000 and \$40,000; 26% had income between \$40,000 and \$60,000; 15% had income between \$60,000 and \$80,000; and the remainder had incomes above that. Participants were majority (64%) White. One-quarter identified as Black or African American, 4% identified as Hispanic, 4% identified as Asian, and the remainder identified as “other” or a mix, or did not report their race. Almost one-quarter reported being under 30, 48% were in their 30s, 17% were in their 40s, and the remainder were 50 or older.

4.5.2 Methods

Participants were first asked to think about the last time in their adult lives when they felt as though they could not handle their financial responsibilities or needs with the money that they had. To make the event more vivid and concrete in their minds, they were asked to describe the event in detail, such as what had happened and what they needed the money for. They were further asked whether the event was currently occurring or was fully in the past. Based on participants’ answer to this question, all subsequent questions used either present or past tense. After describing this event, participants were asked to identify what alternatives for temporarily alleviating their financial difficulty—such as pursuing welfare, using a credit card, selling possessions, or asking friends and family for help—they recognized were in their choice set at the time that they were facing the financial strain. Participants could choose multiple items from the closed form list, as well as write in their own.

Participants were then asked to think of who is or was the person they would be most likely to ask for help, or, if they had asked multiple people, who was the first person they did ask. To ensure the participant was thinking of a single specific person, the participant was asked to write that person's initials and their relation to them (e.g., partner, sibling, or neighbor). They were then asked to rate the extent to which various reasons could have decreased their willingness to ask that particular person for help. These reasons included standard economic factors (e.g., beliefs that it would be too expensive to get money from that person or that that person would not be able to give enough help to solve the problem), previously studied psychological factors (e.g., shame or a desire to not feel indebted to the person), and several factors related specifically to the discomfort of having a conversation about needing help—that is, “the pain of asking” (e.g., beliefs that it would be uncomfortable to ask or a fear of learning that the person did not care enough about the participant to enthusiastically help). These reasons were presented in random order. Each reason was in the form of a statement that the participant could not at all agree with (1), agree with a little (2), agree with a moderate amount (3), agree with a lot (4), or agree with a great deal (5).

Finally, participants whose financial stress episode had concluded were asked what they had ultimately done to address their financial situation, if anything, while participants whose financial stress episode was ongoing were asked about their intentions on how they would address their financial situation. Participants were given the same closed-form set of options that were provided in the question on what they viewed as being in their choice set, and they were asked to check any box(es) corresponding to actions that they took or planned to take. They were also given an “Other” option which they could fill in as desired. Responses to this question served as the primary dependent measure.

Participants who indicated that they had asked a friend, relative, or other individual for help—or that they were planning on asking—were asked about how they asked or would ask. Specifically, participants reported whether that ask was/would be direct (such that the potential helper had to explicitly provide a “yes,” “no,” or “maybe” response), indirect (such that they try to communicate their need but not in such a way that the potential helper has to provide an explicit response), through a third party (such that somebody else asks on their behalf), or via an announcement (such as a post on social media). Participants were also given the option to add an “other” option or to indicate that they were not sure. The survey concluded by asking for demographics.

4.5.3 Results

Approximately 41% of people reported that the last time they felt unable to handle their financial responsibilities was an event that was ongoing. For brevity, the results presented below collapse across people whose last episode was in the past or present. At the end of this

section, however, I discuss some of the differences in the two groups.

When asked about what alternatives they recognized as being in their choice set at the time of the financial difficulty, asking friends, family, or other individuals for help was the second most cited category, with 49% of respondents indicating that they recognized that option at the time. In addition, 59% recognized using a credit card, 48% recognized the option of working more for pay, 47% recognized that they could sell possessions, 30% recognized they could use their savings, 22% recognized they could take out a payday loan, 16% recognized pursuing financial support from the government, 16% recognized they could get a bank loan, 12% recognized pursuing support from a non-profit organization, 6% recognized an advance on their paycheck, 4% recognized some other alternative, and fewer than 1% recognized no possible options. (Results do not add to 100 because participants could choose multiple categories.) Of the 197 participants who indicated that they viewed asking friends and family as part of their choice set, only 11 did not cite any other alternative.

A plurality (42%) of participants indicated that the first person who they had asked for help, or the person who they would be most likely to ask, would be a parent. In addition, 23% indicated that they would ask a friend, 11% would ask a partner, and 10% would ask a sibling.

To capture the different facets of the pain of asking, I take an average of participants' responses to six questions (Cronbach's alpha: 0.80), where "[my relation]" was filled in with the relationship the participant indicated having with his or her potential helper (e.g., "my partner," "my sibling," or "my neighbor"). See Appendix B.3 for a table of interitem correlations.

1. I am afraid of learning that maybe [my relation] doesn't care about me enough to enthusiastically help me.
2. I am afraid that asking [my relation] would pressure him/her into helping me.
3. I do not know how to ask [my relation] for financial help.
4. I think I would feel worse if [my relation] turned me down after I asked him/her than if he/she simply didn't offer.
5. I believe it would be uncomfortable or unpleasant to ask [my relation] for help.
6. I feel it would be inappropriate to ask [my relation] for help.

I find that on average, participants' "pain of asking" score is 3.1 ($SD = 1.0$), corresponding to something slightly above "agree with a moderate amount." See Figure 4.6. Table 4.1 compares the pain of asking statements to other psychological and standard economic statements. The three statements with which people agreed with the most related to indebtedness (Greenberg 1980; Greenberg, Block, and Silverman 1971), a belief that it would be uncomfortable to

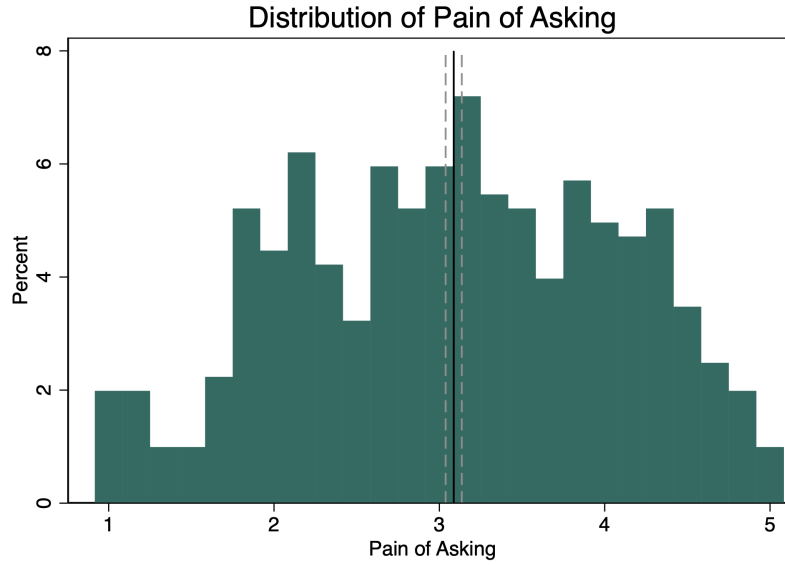


Figure 4.6: $N = 403$. Study 1 results, distribution of the pain of asking index. Black solid line indicates mean, and grey dashed lines indicate mean value ± 1 SE.

ask (part of the pain of asking), and not wanting to take resources from the helper (a prosocial intent).

Turning now to the primary dependent variable, how people ultimately addressed their financial difficulty (if at all), or how they planned on addressing this difficulty, I code a person as having taken a particular action as a 1 if they reported doing so or planning on doing so (regardless of any other action(s) they also reported taking), and as a 0 if they did not. I find that the three most common ways of addressing a financial emergency are through working more for pay (51%), using a credit card (31%), and asking friends and family for help (27%). Of the 11 people who said that the only option they perceived themselves as having was asking friends or family for help, eight of them (73%) did in fact indicate that they did or would ask friends or family for help.

To identify what factors seem to best predict a person's willingness to ask for an informal loan, I run a logistic regression where the dependent variable is having asked (or planning on asking) a friend, family member, or other individual(s) for help. Note that this dependent variable does not restrict responses to being only about the individual the participant had identified earlier as being the person they would be most likely to ask, or the first person that they did ask. As explanatory variables, I use the index for the pain of asking, as well as indices for standard economic factors and other psychological factors. I use the same method for creating the "standard economic factors" ($\alpha=0.88$) and "other psychological factors" ($\alpha=0.66$) indices as I did for creating the pain of asking index. Table 4.1 describes which

Reason	Mean	SD
<i>Do not want to owe the helper money</i>	3.8	1.2
*Feel it would be uncomfortable to ask	3.7	1.2
<i>Do not want to take resources from the helper</i>	3.6	1.3
<i>^ Ashamed of needing help</i>	3.5	1.3
*Want to avoid pressuring helper	3.3	1.3
<i>Afraid of defaulting</i>	3.2	1.4
*Afraid of rejection	3.2	1.4
*Feel it would be inappropriate to ask	3.2	1.4
Prefer to not have help at all	3.0	1.4
Believe help would be insufficient for addressing the problem	2.8	1.4
*Do not know how to ask	2.8	1.4
Believe it would take too much effort to ask	2.7	1.5
Believe informal loan would be too expensive	2.5	1.4
<i>^ Afraid that the helper would reveal need to others</i>	2.5	1.5
Believe asking would not increase the probability of getting help	2.4	1.4
*Afraid to learn the helper does not care about the relationship	2.4	1.5
Believe it would take too much time to get money from the helper	2.3	1.5
Have not thought to ask	2.3	1.5

Table 4.1: $N = 405$. Study 1 results. Agreement with different statements that could affect willingness to ask an individual for financial help during the participant’s last financial emergency (1 to 5 scale, 1=do not agree at all, 5=agree a great deal). Statements related to the pain of asking begin with an asterisk. Statements that might relate to the pain of asking begin with a caret. Statements related to other psychological factors are italicized. All other statements are classified as relating to standard economic factors. See Appendix B.3 for exact wording of statements.

statements fall into which category.¹⁶

Table 4.2 shows regression results.¹⁷ I find that the pain of asking appears to be a significant contributor to a person’s unwillingness to ask for help (Column 1), and that this effect is robust to including a series of covariates related to the asking situation and demographics (Column 2). However, the effect size drops and the pain of asking index variable loses significance once the standard economic and other psychological factor indices are added to the regression (Columns 3 and 4).

	(1)	(2)	(3)	(4)
Pain of asking	-0.272** (0.123)	-0.442*** (0.160)	0.0422 (0.205)	0.0557 (0.270)
Standard economic factors			-0.264 (0.166)	-0.881*** (0.228)
Other psychological factors			-0.157 (0.183)	0.126 (0.232)
Covariates	No	Yes	No	Yes
Constant	-0.175 (0.380)	1.614 (1.837)	0.0369 (0.450)	2.121 (2.061)
N	397	388	397	388
Pseudo R^2	0.012	0.174	0.020	0.211

Table 4.2: Study 1 results. Logistic regressions where the dependent variable is whether the participant asked or plans on asking a friend, family member, or other individual for financial help. Covariates are whether the financial emergency episode is still ongoing (binary indicator), the participant’s relation to the person the participant (would) ask for help, gender, age, education, income, and race. To ensure comparability across columns, these analyses exclude participants who are missing any data (8 observations). N varies across columns due to certain covariate values perfectly predicting the outcome variable and therefore being dropped from the regression. Standard errors are robust and in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

To better understand why the pain of asking index variable drops in effect size and loses significance once the other indices are added, I calculate correlations between them. These analyses reveal that the pain of asking is strongly correlated with the other indices: it has a 0.73 correlation with the standard economic factor index and a 0.76 correlation with the other psychological factor index. Table 4.3 reports the results of the same regressions but breaking out the factors individually. Column (1) reveals that the strongest pain of asking predictor of

¹⁶For the purposes of the regression, the statements that could be construed as relating to the pain of asking (those denoted with a caret) are classified only as relating to “other psychological factors.”

¹⁷To ensure that the results are comparable across columns, these analyses drop eight observations that provided incomplete covariate data. See Appendix B.3 for this same table that includes all participants.

an unwillingness to ask friends and family for a loan is a belief that it would be inappropriate to ask ($\beta = -0.257$, $p = 0.014$). Adding in the psychological factors in Column (2) does not change this result, and we additionally see that a distaste for being indebted predicts unwillingness to ask to a similar extent ($\beta = -0.263$, $p = 0.023$).¹⁸ However, including the pain of asking and the standard economic factors in the regression (Column (3)) reveals that all pain of asking factors lose significance and the only economic factor that is significant is simply a preference to not have help ($\beta = -0.261$, $p = 0.017$). Once all factors are included (Column (4)), none are significant at a standard $p = 0.05$ level, let alone at a level that uses a multiple hypothesis testing correction.

Finally, I find tentative evidence that the pain of asking may also predict the way in which someone asks for help, conditional on asking at all. I code a person as having asked or planning on asking directly if they checked the box corresponding to that option, regardless of which other box(es) they may have also checked. I code them as not asking directly if they do not check that box. I find that the higher the pain of asking, directionally-speaking, the less likely a person is to ask directly, instead using indirect methods such as hinting, asking someone else to ask on their behalf, posting an announcement on social media, or indicating that they are not sure how they will ask ($\beta = -0.36$, $p = 0.175$). Although the result is not statistically significant, it is directionally consistent with the idea that the pain of asking might lead to not just a diminished willingness to ask, but also asking through methods that are less effective (Roghanizad and Bohns 2017).

As mentioned above, the results are largely the same regardless of whether the financial need episode is in the past or present. Nevertheless, there are some differences. For instance, people whose episode is ongoing are more likely to view working to earn more money and selling possessions as being in their choice set of ways to address their financial needs (working: logistic regression treating ongoing as a binary explanatory variable, $\beta = 1.029$, $p < 0.0005$; selling: logistic regression treating ongoing as a binary explanatory variable, $\beta = 0.866$, $p < 0.0005$). Surprisingly, ratings of the importance of standard economic factors and the pain of asking both seem to be lower among those whose event is still ongoing (standard economic factors: $M_{Past} = 2.75$, $M_{Present} = 2.31$, two-sample two-tailed t-test: $p = 0.0001$; pain of asking: $M_{Past} = 3.19$, $M_{Present} = 2.94$, two-sample two-tailed t-test: $p = 0.009$), while there seem to be no differences in other psychological factors ($M_{Past} = 3.36$, $M_{Present} = 3.28$, two-sample two-tailed t-test: $p = 0.374$). This would suggest that there may be factors that inhibit willingness to ask in the moment that we did not capture in our survey, that there are differences in abilities to introspect or remember what factors mattered, and/or that there are population differences between the two samples.

In summary, the results of this study show that in addition to the psychological and emo-

¹⁸Shame is also significant in this regression, but in the opposite direction ($\beta = 0.220$, $p = 0.047$).

	(1)	(2)	(3)	(4)
Fear learning helper does not care	-0.0224 (0.111)	0.0125 (0.121)	0.0702 (0.127)	0.0873 (0.134)
Fear pressuring helper	-0.167* (0.0982)	-0.144 (0.106)	-0.124 (0.0991)	-0.114 (0.107)
Do not know how to ask	0.0204 (0.112)	0.00741 (0.117)	0.0475 (0.114)	0.0107 (0.119)
Pain of rejection	0.133 (0.0993)	0.145 (0.101)	0.123 (0.102)	0.133 (0.106)
Uncomfortable to ask	-0.00253 (0.111)	0.0186 (0.120)	0.0196 (0.119)	0.0323 (0.129)
Inappropriate to ask	-0.257** (0.105)	-0.254** (0.108)	-0.154 (0.116)	-0.174 (0.115)
Do not want to be indebted		-0.263** (0.115)		-0.235* (0.122)
Afraid helper would reveal need		-0.0624 (0.117)		-0.0174 (0.111)
Do not want to take resources from helper		0.0734 (0.0918)		0.0878 (0.0988)
Ashamed of needing help		0.220** (0.111)		0.216* (0.116)
Afraid of defaulting		-0.0876 (0.0966)		-0.0815 (0.0977)
Have not thought to ask			0.0296 (0.111)	0.0214 (0.110)
Informal loan too expensive			-0.0760 (0.110)	-0.109 (0.115)
Too much effort to ask			-0.0538 (0.124)	-0.0642 (0.131)
Too much time to get informal loan			0.176 (0.126)	0.187 (0.130)
Informal loan is insufficient			-0.0673 (0.0991)	-0.0774 (0.106)
Probability get help if ask			-0.141 (0.119)	-0.0960 (0.121)
Prefer to not have help			-0.261** (0.109)	-0.222* (0.114)
Constant	-0.115 (0.400)	0.0108 (0.501)	0.197 (0.438)	0.216 (0.526)
N	403	403	403	403
Pseudo R^2	0.036	0.057	0.058	0.074

Table 4.3: Study 1 results. Logistic regressions where the dependent variable is whether the participant asked or plans on asking a friend, family member, or other individual for financial help. To ensure comparability across columns, analyses only use participants who provided data for all listed variables. Standard errors are robust and in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

tional costs of *having* informal loans, people also face psychological costs of *asking for* such loans—that is, they face a pain of asking. I further find that these costs can predict people’s unwillingness to ask friends and family for help when they are facing real financial strain. However, I also find that the pain of asking seems to be highly correlated with both standard economic factors and other psychological factors, suggesting that additional research will be needed to identify how this construct compares to and differs from those other factors.

4.6 Study 2

In Study 2, I measure whether people are willing to pay a premium to avoid asking friends and family for loans, and if so, whether that willingness to pay seems to be associated with the anticipated pain of asking for an informal loan. The study was approved by the Carnegie Mellon University Institutional Review Board. It was preregistered on aspredicted.org. I report all measures and exclusions. Complete materials are available in Appendix B.4.

4.6.1 Participants

Participants ($N = 301$) were recruited from Amazon Mechanical Turk. Recruitment was restricted to the US. About half were women (49%) and 49% had a college degree or higher. Roughly 10% had an annual household income under \$20,000; 26% had income between \$20,000 and \$40,000; 24% had income between \$40,000 and \$60,000; 21% had income between \$60,000 and \$80,000; and the remainder had incomes above that. The participants were majority White (72% identified as such), with an additional 13% identifying as Black or African American, 5% identifying as Hispanic, 7% identifying as Asian, and the remainder identifying as other or a mix. Finally, participants were fairly young (27% reported being under 30, 45% were in their 30s, 14% were in their 40s, and the remainder were 50 or older).

4.6.2 Methods

Following the wording of the World Bank’s Global Financial Inclusion survey (2014), participants were asked to imagine having a financial emergency that required them to pay a certain amount of money within the next month. They were further asked to imagine that they could not pay for it through savings, and the only way that they could pay for it is by asking a friend and/or relative to loan them the money. To encourage participants to vividly imagine the situation, they were asked to describe who and how they would ask for the money, as well as how they would feel doing it. I used stimulus sampling for the amount of money the participants needed to pay, varying it to be either \$200 ($N = 108$), \$1000 ($N = 86$), or \$5000 ($N = 106$).

On the next page, participants were asked to imagine an additional possibility: instead of paying the original bill size over the next 30 days by asking a friend/relative for a loan, they would instead have the option to pay the bill later on their own, provided that they were willing to pay a larger amount. This scenario reflects a commonly experienced tradeoff: addressing a financial problem quickly by turning to a source of money that is often readily available (friends and family), or addressing it in a different way but potentially at a larger final cost (e.g., by going into formal loan debt or delaying addressing the problem and incurring late fees). They were then asked to identify their willingness to pay (WTP) to take this alternative option. Put differently, they were asked to identify the premium they would be willing to pay to avoid asking friends and family for help. This premium was elicited as the maximum amount they would be willing to increase the bill to in order to ensure they could pay for it themselves, without asking for help. They were instructed that if they would not be willing to increase the bill at all, they should simply write in the original bill amount. Responses to this question served as the primary dependent measure.

4.6.3 Results

To account for outliers, I winsorize responses at the 95% level. To establish a maximally conservative estimate, I do this only for the upper bound. I convert the maximum amount that people would be willing to pay to a percentage above the original bill level, which allows me to compare the results across conditions.

The primary test of my hypothesis is whether, for each of the three conditions, the average WTP (as a percent of the original bill level) is greater than 0. As predicted, I find that for each of the three conditions, people report being willing to pay positive amounts. In the \$200 condition, they are willing to pay an additional 21% (SE=0.015; two-tailed t-test for difference from \$200: $p < 0.0005$); in the \$1000 condition, they are willing to pay an additional 22% (SE=0.019; two-tailed t-test for difference from \$1000: $p < 0.0005$); and in the \$5000 condition, they are willing to pay an additional 13% (SE=0.013; two-tailed t-test for difference from \$5000: $p < 0.0005$). See Figure 4.7. These results are robust to using the raw, rather than winsorized, data values. Thus, it appears that people have a preference to not have informal loans if they have an alternative method of acquiring additional funds, and they are willing to incur financial costs to pursue that alternative method.

To test whether this willingness to incur additional financial costs is associated with the anticipated pain of asking for an informal loan, I conduct sentiment analysis on the open text responses using the R package “sentimentr.”¹⁹ This analysis examines each sentence as an individual unit and calculates the text polarity sentiment at the sentence level. More specifically, it first uses the sentiment dictionary to tag polarized words (Jockers 2017). Each

¹⁹This analysis was not preregistered.

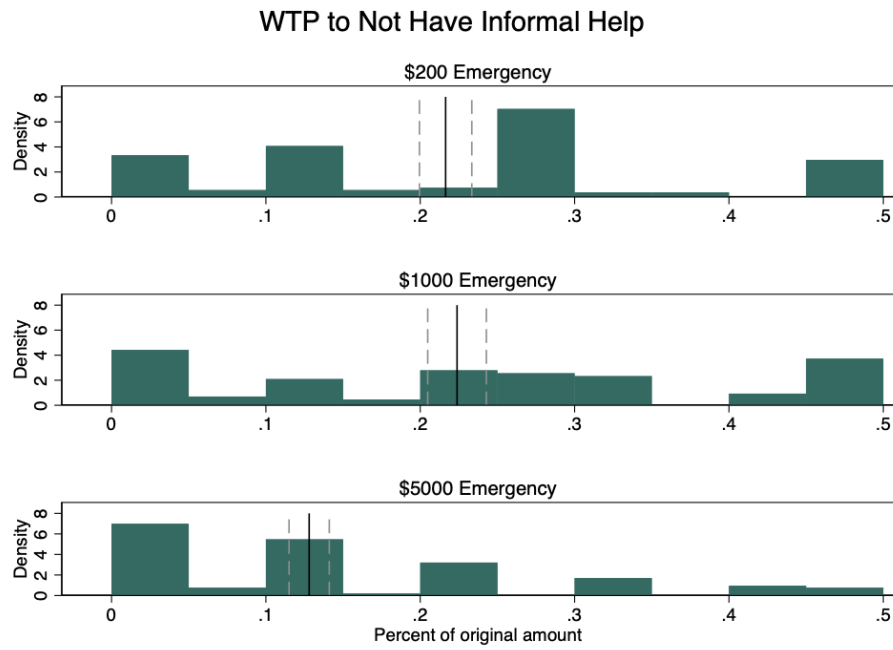


Figure 4.7: $N_{200} = 108$, $N_{1000} = 86$, $N_{5000} = 106$. Study 2 results. 95% Winsorization (upper values only). Solid black lines represent means. Grey dashed lines represent mean value ± 1 SE.

sentence is broken into an ordered bag of words. Punctuation is removed, except for pause punctuation (commas, colons, semicolons), which are themselves considered words (this is because they signal a change in thought and the fact that the words immediately before and after them are not necessarily related). Positive and negative words are tagged with a +1 and a -1, respectively; neutral words do not count towards the overall rating, but do affect word count. Polarized words are additionally weighted by valence shifters, which are negators (e.g., “not”), amplifiers or intensifiers (e.g., “very”), de-amplifiers or down-toners (e.g., “a little”), and adversative conjunctions (e.g., “but”). The final weighting considers the rate of polarized terms and valence shifters relative to the number of words.

Such an analysis, thus, can be suggestive of how positively or negatively a participant felt about the prospect of asking a friend or family member for financial assistance. For instance, the following statement received the most negative sentiment rating (-0.62): “i would ask my father for it, I would say hey I need to help please lend some money I’ll pay you back, I’d feel bad about it because i Hate begging but i’d do it if I had to and i’d feel guilty and sad and depressed”. This statement received the most positive sentiment rating (0.67): “I would ask my best friend and just call them and explain to them the situation and they would understand as we help each other out like this. I’d also let them know the schedule i plan to pay them back on and I would feel guilty but grateful and appreciative that i could count on her”. Finally, an example of a statement that was rated as perfectly neutral (0.00) is, “I would ask my parents by going to their house and being direct and telling them what I need the money for and what will happen if I do or do not get the money.”

First, I find that sentiment levels collapsing across conditions were on average 0.028 (minimum: -0.623; maximum: 0.673; $SD = 0.181$). There were no differences across conditions ($M_{200} = 0.034$; $M_{1000} = 0.019$; $M_{5000} = 0.030$; all pairwise t-test p-values at least 0.568). These results suggest that the expressed sentiment is similar regardless of the ask amount (within this range), hinting that people may experience a sort of fixed psychological cost rather than a variable cost of asking for money (consistent with the model and empirical findings of Moffitt 1983).

Next, I test whether the sentiment levels in the open text responses predict the WTP to not ask. I find that the more positive the sentiment, the smaller the WTP to not seek informal help; or, conversely, the more negative the sentiment, the higher the WTP to not seek informal help (OLS regression with robust SE, $\beta = -0.231$, $p < 0.00005$). See Table 4.4. I further find these results are robust to including the bill size, word count, and demographic variables. These results are consistent with the explanation that the psychological costs of asking for informal loans push people away from informal loans and toward potentially more expensive alternatives.

	(1)	(2)	(3)	(4)
Sentiment level	-0.226*** (0.0501)	-0.223*** (0.0488)	-0.209*** (0.0477)	-0.208*** (0.0515)
Bill=\$1000		0.00796 (0.0232)	0.00572 (0.0227)	0.0131 (0.0237)
Bill=\$5000		-0.0824*** (0.0195)	-0.0838*** (0.0188)	-0.0766*** (0.0202)
Word count			0.00134*** (0.000270)	0.00133*** (0.000288)
Covariates	No	No	No	Yes
Constant	0.190*** (0.00924)	0.217*** (0.0147)	0.145*** (0.0192)	-0.238*** (0.0618)
N	297	297	297	297
R ²	0.066	0.133	0.184	0.242

Table 4.4: Study 2 results. OLS regressions. Outcome variable: WTP as a percent of the original loan amount, winsorized on the upper end at the 95 percent level. Demographic covariates (age, gender, education, race, and household income) are suppressed for clarity. To ensure comparability across columns, analyses only include participants who provided data for all listed variables. Standard errors are robust and in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

4.6.4 Discussion

The results of Study 2 reveal that people display a strong preference for acquiring funds themselves rather than asking friends and family for financial assistance. The magnitude of this preference is large, with people reporting being willing to pay between 13% and 22% of the original bill amount to avoid needing to seek informal loans. Moreover, the sentiment analysis results suggest that this aversion to informal loans may in part be driven by the negative affect associated with seeking them. Together, these analyses hint that the psychological pain of asking could push people away from informal loans and towards more expensive—but less psychologically aversive—alternatives.

Nevertheless, the study does suffer from several limitations. First, it is hypothetical. Second, the way in which the survey question was asked could be construed as leading. Although participants were explicitly told how to respond to the question if they were not willing to pay to avoid asking, participants may have nevertheless inferred from the question that they “should” have a positive willingness to pay.

Finally, one feature of this study is that people were asked to imagine that the alternative to asking a friend or relative for help was that they could pay the bill later on their own. Thus, the elicitation of WTP in this measure could be capturing not just the different method (paying for a bill on one’s own rather than asking for help) but also paying the bill at a later time. This could in theory bias results upwards if people wanted to put off an aversive action (paying a bill). However, there are also two arguments against this. First, although borrowing money from someone now to pay a bill involves formally paying for the bill sooner, the actual debt—paying the friend or relative—must still be paid later. Thus, the actual amount of time required to earn the money for oneself is likely equivalent. Second, prior work shows that people often prefer to experience negative events, such as a visit to the dentist, sooner (Loewenstein and Prelec 1991). This would therefore suggest that the results here are in fact likely a conservative measure. Regardless of the direction of any potential bias, the scenario in this study captures a tradeoff people frequently make: they can either address a financial problem immediately by asking for help, or they can pay to address the problem later (e.g., by going into formal loan debt or incurring late fees).

4.7 Conclusion

Income variability is one of the hallmarks of living in poverty, a reality that often forces people to use a patchwork of measures to address both chronic and acute financial needs. Informal loans are a vital part of this patchwork (Desmond 2016), yet we know very little about how people decide to pursue them. This paper aims to both highlight the need for research on this topic, as well as provide initial suggestions and evidence for avenues that may be worth

exploring. In particular, I argue that one major factor that likely affects people’s decisions on whether or not to pursue an informal loan is the psychological cost of asking for it. Despite recognizing that informal loans are financially attractive, people also seem to anticipate that they will incur a “pain of asking” if they pursue them—a pain that potentially pushes them towards more economically costly alternatives of addressing financial strain. Future work can more cleanly identify the causal effect of the pain of asking on willingness to ask, as well as precisely how much people would be willing to pay to avoid needing to ask.

These results suggest two possible courses of action to help people both financially and psychologically. The first could be to develop tools and practices that make it easier for people in financial need to ask their friends and family for financial resources. For instance, an app or platform could allow people to easily generate requests that are automatically sent to particular potential helpers, and attempt to eliminate possible excuses for the potential helper to not help. Similarly, an app or platform could remove the need to ask entirely by allowing people to offer help proactively.

A second possible implication of this work is that policies should aim to make formal loans, welfare, and other such money-acquisition alternatives more economically attractive. If people will face psychological costs to asking friends and family for financial resources, improving access to and the terms of these alternatives could help people avoid the negative psychological outcomes of asking friends and family while not imposing major economic costs.

This work does not make any normative claims about what behavior is optimal—i.e., if people should be asking friends and family more or less. There are two primary reasons for this. First, this work has shown that asking friends and family for financial help may be economically beneficial but psychologically harmful. It is not clear how to weigh these two countervailing forces against one another. Second, to identify what is economically optimal, it is important to consider not just the help-seeker, but the help-giver, as well. Prior work in economics has shown that people often dislike being asked for charitable donations (Andreoni, Rao, and Trachtman 2017; DellaVigna, List, and Malmendier 2012; Exley and Petrie 2018), and sociologists have documented the possible negative financial, social, and psychological consequences of being asked for informal loans—part of a broader literature on “negative social capital” (Portes 1998; Wherry, Seefeldt, and Alvarez 2019). On the other hand, other work has suggested that informal credit relationships—borrowing from friends and family—may help to maintain strong ties in a community, and removing people’s need to borrow from one another may weaken community connections (Banerjee, Arun G. Chandrasekhar, et al. 2018). Thus, to identify what amount of asking would be optimal from a social welfare perspective, it is important to consider both the help-seeker’s and the (would-be) help-giver’s perspectives, and assess the impact of an ask on not just economic outcomes, but psychological and social ones, as well.

Chapter 5

Factors affecting end-stage renal disease patients' willingness to seek live kidney donations

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“Asking someone to consider kidney donation may be one of the hardest questions you ever face.”

—The National Kidney Foundation
“The Big Ask, The Big Give” handbook

Abstract

Despite its benefits relative to dialysis or cadaveric donor transplants, comparatively few patients with end stage renal disease (ESRD) receive live kidney donations. To investigate reasons for this outcome, we administered a survey to current and former ESRD patients. Our study reveals that one possible reason that ESRD patients may not receive live transplants is that they do not ask potential donors to donate. Although most patients prefer live kidney donations over other treatment options and believe that asking would increase the likelihood of receiving a donation, only a minority of our sample have ever asked a potential live donor to consider donating to them. Moreover, we find that various psychological factors—and in particular, the psychological discomfort of asking someone for help—prevent ESRD patients from taking this potentially life-saving action. Our results speak to the critical importance of taking the psychological discomfort of asking into account when creating ESRD educational and coaching materials.

5.1 Introduction

Kidney disease killed 47,000 Americans in 2013 alone, claiming more lives than prostate or breast cancer.¹ Patients who have lost major functioning of their kidneys—i.e., those who have end-stage renal disease (ESRD)—typically have three treatment options, which can be pursued concurrently. They can go on dialysis (which involves regularly using a machine that serves the functions of the kidney), wait for a deceased-donor (cadaveric) donation, and/or try to secure a live-donor donation. Live donor transplants (LDT) are typically the best treatment option for such patients, yet only about one in three donations are from live donors. Meanwhile, approximately 100,000 people are on the kidney transplant waitlist in the US and nearly 5,000 die each year waiting for any transplant at all.²

The research reported in this paper seeks to better understand why people might not receive live kidney donations, even if they want them. While it is obvious that at least part of the reason why people may not receive live kidney donations is that not all healthy people are willing to become live donors, we examine why ESRD patients who are eligible for and want live kidney donations do not actively seek them out.

Prior work has demonstrated that factors such as a lack of information (Traino, Nonterah, et al. 2016) and concerns about being able to pay for their medication and operation (Dageforde et al. 2015) can affect ESRD patients' decisions to seek live donations. Other work has shown

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¹<https://www.niddk.nih.gov/health-information/health-statistics/kidney-disease> . Calculated from Center for Disease Control & Prevention, 2013.

²<https://www.kidney.org/news/newsroom/factsheets/Organ-Donation-and-Transplantation-Stats> . Accessed 18 February 2020.

that psychological factors, including communication self-efficacy (Traino, West, et al. 2017), concern for the donor, and fear of adverse effects on relationships (Sieverdes et al. 2015), also matter.

In this paper, we report findings from a study designed to identify whether another psychological factor—the “pain of asking” friends, family members, and strangers for help (Jaroszewicz and Loewenstein 2020)—might also contribute to the low rates of live donor transplants. Prior work has demonstrated that people often face an intense psychological pain when they ask, or even imagine asking, others for help. This effect has been modeled theoretically (Jaroszewicz and Loewenstein 2020), as well as demonstrated in a financial context (Jaroszewicz 2020).

Indeed, there is suggestive evidence that the psychological costs of asking someone for a donation may contribute to low live-donor transplant rates. In one survey seeking to identify why people stay on dialysis (Salter et al. 2014), the second most frequently cited reason was that people “felt uncomfortable asking someone to donate a kidney.” In a different study, 70% of respondents cited “not knowing how to ask someone for their kidney” as a barrier to securing a living kidney donation (Barnieh et al. 2011). Kranenburg and colleagues find, moreover, that a reluctance to discuss the issue with potential donors was the main reason patients waiting for a kidney transplant did not pursue living kidney donation (Kranenburg et al. 2007). Other work has found that kidney recipients prefer to wait for a donor to offer a kidney than to ask a potential donor directly (Waterman et al. 2006).

Our study, which was targeted at both current and former ESRD patients, had three central aims. First, we sought to identify the importance of the pain of asking in hindering a patient’s willingness to secure a live donation. Second, we aimed to measure its importance relative to other potential reasons for why people may choose to not ask, such as actively preferring a different treatment option or holding incorrect beliefs about the costs and benefits of different options. Third, we aimed to identify what, exactly, about the ask is painful. We test explanations such as being afraid of a rejection, not wanting to impose, and fearing that, by asking, the patient would be pressuring the potential donor into making a donation they would prefer not to make.

Our data reveal several striking results. First, we confirm that the majority of patients do in fact prefer live donor transplants over other treatment options. They also believe that live donor transplants will increase their longevity and quality of life, relative to other treatment options or no treatment.

Second, we find that despite this, only a minority of our respondents report ever having asked anybody to consider becoming a live donor. A similarly small number of respondents report ever having asked anybody to consider becoming a champion for them (a person who searches for a live donor on behalf of the patient).

Third, we find that simple costs and benefits seem to be insufficient to explain this pattern of

behavior. Participants indicate that on average, they do not expect to receive a deceased-donor transplant particularly soon: they expect to wait an additional four years. Most respondents indicate that they know at least a couple of people who might be willing to donate, and that they believe that asking for a kidney could substantially increase the probability that they receive a kidney.

Our fourth and final result is that ESRD patients' reluctance to approach potential live donors does indeed seem to be driven in large part by the pain of asking. In particular, a fear of imposing, an inference that others' lacks of offers likely mean that they are unwilling to donate, and a belief that others already know about the patient's need (and thus there is no benefit in asking) seem to be the primary psychological impediments to asking in this context.

5.2 Background

Chronic kidney disease (CKD) occurs when the kidneys gradually lose their function over a period of months or years. The severity of CKD is typically described by "stages," with the first stage occurring when there is only slightly diminished kidney function, and the fifth and final stage occurring when the kidneys are either largely or completely unable to serve their primary function: excreting waste products. In this project, we focus on people who have reached this final stage of CKD—people who have end-stage renal disease (ESRD).

Both incidence and prevalence of ESRD have been increasing over the last several decades in the US. While there are many possible causes of ESRD, the two primary ones are diabetes and hypertension. ESRD does not affect all demographic groups equally. For instance, the prevalence rate of ESRD is about 0.1% for people aged 22-44, 0.35% for people aged 45-64, and 0.6% for people aged 65 or older. It also disproportionately affects racial minorities, particularly native Hawaiian and Pacific Islander groups (System 2017).

Patients who have lost major functioning of their kidneys and who are eligible for a kidney transplant typically have three treatment options, which are not mutually exclusive and can be pursued concurrently. They can go on dialysis, wait for a deceased-donor kidney transplant (DDT), and/or try to secure a live-donor kidney transplant (LDT), during which a healthy person who is a good medical match for the ESRD patient donates one of her kidneys while retaining the other for her own use. Not all patients are eligible for transplants—for instance, patients with serious conditions such as chronic infections or cancer are ineligible. Doctors may also discourage patients from pursuing any treatment option, including dialysis, if the patients are elderly and also battling other chronic diseases. Most patients, however, are eligible for both dialysis and transplants and are free to choose whichever option(s) they want and are able to secure.

During dialysis, patients are connected to a machine that artificially removes waste and excess water from the blood. Dialysis sessions are often time-consuming, requiring most patients

to travel to dialysis centers approximately three times per week, each time for several hours. The sessions are often physically draining and may, by themselves, generate additional medical complications. They are, however, typically the patient's only option for survival, barring a kidney donation; without it, a person with nonfunctional kidneys typically dies in about 10 days. Thus, about 97% of ESRD patients will begin with dialysis, even if they will ultimately receive—or would like to receive—a kidney transplant (System 2017).

The need for kidney donations is acute: across the US, about 100,000 people are waiting for a deceased-donor kidney. Indeed, over 80% of patients on any transplant waitlist are waiting for a kidney.³ The gap between the supply and demand of kidneys, moreover, has been growing rapidly over the last several decades; in 2005 there were approximately seven people in need of a kidney for every one kidney transplant that occurred (Gary S Becker and Elías 2007). Many factors contribute to how quickly a given patient can receive a DDT, including her match for available kidneys, medical factors, geographic location, and whether she has previously donated an organ. Typically, however, the wait time is non-trivial; nationally, the median wait time is 3.9 years (System 2017). Once a person is registered on a waitlist, the process of receiving a deceased-donor organ is fairly passive: if a kidney becomes available for that person, she receives a phone call and the transplant operation occurs within the next couple of days. Otherwise, she continues waiting.

Securing an LDT, on the other hand, is an active process. A patient must typically begin by finding a live donor who may be willing to donate to her. If she succeeds at this, the potential donor must undergo extensive physical and psychological screening to verify his eligibility to donate and the degree to which his kidney would be a good match for the person to whom he would like to donate. If he is eligible to donate and his kidney is a good match for the target patient (based on factors such as blood type, antibody compatibility, and age), then he can donate to the patient directly. Even if the potential donor is not a good match for the target patient, however, but he is physically and psychologically fit to donate, he may still be able to secure her a kidney through what is called a “donation chain” or “kidney paired donation.”

In donation chains, incompatible pairs of patients and donors are connected to other incompatible pairs until every patient has a donor with whom he or she is compatible. For instance, suppose donor D1 would like to donate to patient P1, while donor D2 would like to donate to patient P2. If D1 and P1 are not compatible, and D2 and P2 are not compatible, but D1 is compatible with P2 and D2 is compatible with P1, then a donation chain may be formed so that both P1 and P2 can receive kidneys from the other patient's partner.⁴

LDTs are widely viewed as medically superior to both DDTs and dialysis for several reasons. Although any kind of an organ transplant dramatically improves an ESRD patient's survival

³<https://www.organdonor.gov/statistics-stories/statistics.html#waiting-list> Accessed 18 February 2019.

⁴Under rare circumstances, donors are “altruistic,” donating their kidneys without a particular patient in mind. In these cases, a patient can receive a living-donor organ without needing to find a donor herself.

odds (System 2017), research examining the breakdown between living- and deceased-donor transplantations finds that live transplants are more effective than cadaveric transplants at prolonging the patient's life (Glanton et al. 2003; Pauly et al. 2009). For instance, the 60-month survival rate of remaining on hemodialysis is 41.8, of remaining on peritoneal dialysis is 51.7, of receiving a DDT is 75.6, and of receiving an LDT is 87.6 (System 2017, vol. 2, Table 5.3). A different statistic shows that relative to remaining on dialysis, LDTs on average increase a patient's longevity by 12 to 20 years, depending on the patient's age. For comparison, DDTs on average increases a patient's longevity by only 8 to 12 years.⁵ Transplants are particularly effective at prolonging the lives of younger recipients (although this may be due to non-random assignment of kidneys, whereby younger, healthier kidneys are more likely to be given to younger ESRD patients).

LDTs also tend to result in improved graft survival rates, compared to DDTs (Nemati et al. 2014). One reason why living-donor organs may improve medical outcomes, relative to deceased-donor organs, is that they tend to be higher quality. In addition, donations from a relative often result in closer tissue matches, decreasing the likelihood that the recipient's body rejects the transplanted organ.

A second reason that LDTs are medically superior to dialysis is that there is evidence that the longer a patient stays on dialysis, the lower is the success rate of transplant operations and her subsequent survival (Mange, Joffe, and H. I. Feldman 2001). Even just 6 to 12 months on dialysis increases the mortality risk after transplant by 21%, compared to a preemptive transplant (Meier-Kriesche et al. 2000). Because people must often wait years for deceased donor organs but could, at least in theory, receive a live donation much sooner, live donations have the potential to increase patient survival indirectly, as well.

These findings underscore the fact that from a medical perspective, live donations are nearly always the best treatment option for patients. Nevertheless, some ESRD patients must also base their treatment decision on financial considerations. Although the exact cost of a kidney transplant varies by the location, hospital, and insurance coverage, making it difficult to make general claims about the financial aspects of different treatment options, there is some evidence that live donations may be financially sensible, as well.

From 30 days pre-operation to 180 days post-operation discharge, the average estimated billed charges for a kidney transplant amount to about \$415,000 (collapsing across both living- and deceased-donor donations, presumably). For comparison, a pancreas transplant costs \$347,000 and an intestine transplant costs \$1,147,000 (Bentley and S. J. Phillips 2017). This cost is typically covered by the kidney recipient's health insurance.⁶ The recipient's insurance is also responsible for covering the donor's direct costs of donating, including the evaluation,

⁵<http://www.bidmc.org/Centers-and-Departments/Departments/Transplant-Institute/Kidney/The-Benefits-of-Transplant-versus-Dialysis.aspx>

⁶<http://health.costhelper.com/kidney-transplant.html#extres1>

surgery, and some follow-up tests and medical appointments. In addition, follow-up medical costs resulting from any medical complications with the operation are typically covered for Medicare patients, though they may not be covered by other insurances plans. Incidental costs to the donor—such as transportation, lodging, and lost wages—are not covered in most states. The donor is usually discharged from the hospital within a week, and is allowed to return to work within a month.⁷ Thus, while the financial costs to recipients and donors are not be trivial, they are largely covered if the recipient has insurance.

In addition, to the extent that live donations can help an ESRD patient receive a donation sooner, live donations have the potential to improve an ESRD patient’s employability, as well. As Becker and Elias write, “Most people waiting for transplants are unable to work. The difference in employment rates among people on the kidney waiting list and those who have received a kidney transplant is at least 15 percentage points” (Gary S Becker and Elías 2007). Finally, a successful transplantation can substantially improve quality of life compared to remaining on dialysis (Gary S Becker and Elías 2007). Taken together, these statistics suggest that live donations may not just be medically optimal—they may be financially sensible, as well.⁸

Of course, unlike deceased donations, which are unlikely to negatively impact the donor or her family, live donations can be harmful to the donor. In the US, the risk of death for a live kidney donor from the operation is 0.01%, while the risk of serious complications during the operation or within the first 30 days following it is 0.8%. Having only one kidney, a donor is more likely to experience kidney problems later in her life than a non-donor, controlling for health. While the risk of such adverse events is quite low compared to the potential benefits, transplant centers take these risks very seriously and have put into place a wide range of precautions to ensure that donors are not only aware of the risks and ready to accept them, but are also unlikely to regret their decisions.⁹ In addition, to address the possibility of live

⁷<https://www.medicare.gov/coverage/transplants-kidney-adults.html> ; <http://transplantsurg.wustl.edu/en/Patient-Care/Kidney-Treatment/Kidney-Transplant-FAQs>; <http://livingdonationcalifornia.org/how-living-donation-works/who-pays-for-living-donation-and-kidney-transplants/> . Accessed 6 April 2018.

⁸In addition, transplants are likely economically preferable for society, as well. Although the ESRD population accounts for less than 1% of the total Medicare patient population, it accounts for roughly 7% of Medicare fee-for-service spending. The vast majority of these costs—nearly \$30 billion/year—are for dialysis (System 2017).

⁹For instance, at the University of Pittsburgh Medical Center, potential live donors complete a wide range of physical and psychological evaluations and are barred from participating if there is any non-trivial risk of physical or mental harm, including depression, anxiety, or suicide. The potential live donors must volunteer on their own and set up their own screening appointments; the ESRD patient cannot refer or sign up potential donors herself. The visits and conversations with the doctors are conducted privately to provide the donors the opportunity to speak frankly about their feelings without the possibility of the patient overhearing. While coercion and payment for organs is already illegal, the potential live donors are questioned and interviewed repeatedly during these visits to detect any suspicious motives. At nearly every opportunity, the medical professionals stress that the potential live donor is not required to donate, that they can delay or quit the process at any point up to a day before the operation, and that the center can provide the patient with a “legitimate” reason for the withdrawal to allow the donor to save face. In addition, the team of people dedicated to ensuring the safety

donors developing kidney problems themselves in the future, live donors are subsequently prioritized in cadaveric transplant waitlists. These precautionary measures help to ensure that encouraging ESRD patients to pursue live kidney donations is not only individually optimal, but likely socially optimal, as well.

Despite the major benefits to ESRD patients and the limited risk to potential donors, however, only about one-third of transplanted kidneys are from live donors (System 2017). We hypothesize that one possible explanation for this puzzling result is that patients face potent psychological costs to asking friends, family members, and strangers to consider becoming live organ donors. We test this hypothesis in a rich descriptive survey and experiment administered to both current and past ESRD patients in the US and Canada. We next describe the methods and results of the survey and experiment, concluding with a discussion of implications for policy and practice.

5.3 Methods

The study was preregistered on the Open Science Framework (osf.io/b9x2s/). We report all measures and data exclusions. The complete study materials for the survey and experiment are available in Appendices C.1 and C.2.

5.3.1 Recruitment

One of the authors (AJ) requested access to closed dialysis and kidney disease support groups on social media (Facebook and Reddit). The criteria for the groups were that they were primarily focused on support and/or discussion (rather than, for instance, dating) and that the group was based in the US or Canada (the Canadian kidney donation system is similar to that of the US). Where it was not clear where the group was based, the author requested access, so long as it was clear that the group was not specifically intended for people outside of the US or Canada. The author was granted access to 15 groups (14 on Facebook and one on Reddit) and was permitted to post in 13 of those (12 on Facebook and one on Reddit).

With permission from the administrators, the survey was posted once on each page, with the postings done in a pre-determined random order in January and February 2020. To minimize the potential participants' concerns about data mining and illegal kidney trafficking, adhere to social norms, and build rapport, the survey was posted using the author's personal account on Facebook and an anonymous experimenter account on Reddit. The same script was always used. In addition, participants were encouraged to share the survey with others they thought might be eligible. The survey was advertised as taking 15 to 20 minutes and being about how

and well-being of the live donors is entirely separate from the team of doctors conducting the transplants, and the former does not report to the latter.

people with ESRD make treatment decisions. Eligibility criteria were described in the posting.

5.3.2 Participants

Respondents were eligible for the survey if they were at least 18 years old and met one or more of the following inclusion criteria:

1. They were currently approved for listing for renal transplant (on a waitlist for a cadaver) and currently living in the US or Canada;
2. They had previously received a transplant (from a deceased or live donor) and were living in the US or Canada at the time they learned they would receive the transplant; and/or
3. They were previously listed but then removed without receiving a transplant, and they were living in the US or Canada at the time that they were removed from the waitlist.

Participants (Ps) were not paid for their participation. Given the lack of payment, we feel fairly confident that there were not many incentives to lie about one's kidney disease status. Nevertheless, we included screening questions both at the beginning and end of the survey. Respondents whose answers to the opening screening questions indicated that they were not eligible were not allowed to proceed with the survey. The screening question at the end of the survey aimed to verify that Ps could answer a basic question about their kidney disease: the name of the transplant center(s) at which they were listed. We preregistered that we would not include those respondents who could not or did not name a transplant center, as well as people who indicated that they had already taken the survey.

5.3.3 Survey

Regardless of the criteria met, all participants answered approximately the same questions. However, depending on which of the three criteria were met, the time point to which the questions referred were slightly different. If they met the first criteria, the respondent was asked to report how they felt and what they thought in the current moment.

If a respondent met the second criteria but not the first, they were asked to report how they felt and what they thought immediately before they learned they would receive a transplant (if they received more than one kidney, they were instructed to think about their most recent kidney transplant). In addition, they were asked another question about whether their transplant was from a deceased or live donor.

If they met the third criteria but not either of the first two, they were asked to report how they felt and what they thought immediately before they learned they were removed from the transplant waitlist. In addition, they were asked another question on why they were removed from the list.

In the methods described below, we focus on the participants who met the first criteria, both because they formed the largest group in our sample, and because this population should have the best ability to introspect into the time of their life when they are faced with the decision of whether to ask a potential live donor.

There were four main sections to the survey. The first asked about treatment preferences and beliefs, the second about prior asking behavior and current readiness to ask, and the third about possible factors that may inhibit a person's willingness to ask. The final section collected demographics and other covariates. We describe each of these in turn.

In the first section, after Ps had been screened and provided informed consent, they were asked to rank order their preferences for different treatments or actions: dialysis, deceased-donor transplant (DDT) from a healthy donor who was a good match, living-donor transplant (LDT) from a healthy and willing donor who was a good match, or no treatment. If they indicated that LDT ranked third or fourth out of these options, they were asked to explain why they were not very interested in this treatment option. Next, Ps were asked to rate their health-related quality of life now, in their current state of health, as well as to estimate what it would be if they received a DDT (and the surgery was successful), and if they received an LDT (and the surgery was successful). Next, they were asked to estimate how much longer, counting from that day, they expected they would need to wait before they received a DDT. The final question in this section asked Ps how long they expected to live if they received no transplant, if they received a DDT, and if they received an LDT.

In the second section, Ps were asked a series of questions on their past experiences with asking people to consider becoming live kidney donors or champions (people who seek out a kidney on behalf of the patient). Turning first to the questions on donors, Ps were asked whether they knew anybody who they believed might be willing to donate (and if so, how many people); whether anyone had already offered to donate (and if so, how many people, and whether the respondent accepted the kidney(s)); whether the respondent had directly asked¹⁰ anyone to consider becoming a live donor (and if so, how many people); and whether they had hinted¹¹ to anyone that they would like them to consider becoming a live donor (and if so, how many people). Ps who indicated that they had not directly asked anyone or hinted to anyone were asked in open response text box why not. All Ps were then asked to consider the person who they would be most likely to ask to be a donor to them, and what the probability was that the person would offer a kidney if they did not ask at all, hinted, or directly asked (in random order). They were also asked whether they had ever posted about their need for a kidney publicly or semi-publicly, such as through a newsletter, advertisement, or social media.

¹⁰“Asking directly” was defined as asking with the expectation that the listener would give a direct “yes,” “no,” or “maybe” response.

¹¹“Hinting” was defined as trying to make it clear to someone that the P wants a donation, and doing so with the hope that they might offer help, but without explicitly asking for a donation.

Next, Ps were asked about champions. We included a section on champions because we reasoned that asking champions for help was likely to feel like a “smaller ask” than asking donors directly, but might still be an effective strategy for locating a live donor. Champions might be helpful not just because they can increase the size of the pool of possible people to ask, but also because they can “shelter” the patient from needing to hear a rejection. Ps were asked whether anyone had offered to be a champion (and if so, how many people), whether they had directly asked anyone to consider becoming a champion (and if so, how many people), whether they had hinted to anyone that they would like them to consider becoming a champion (and if so, how many people), and what is the probability that the person they would be most likely to ask to be a champion would offer if the P did not ask at all, hinted, or directly asked (in random order).

In the final two questions of this section, Ps were asked how ready they felt to ask someone to consider becoming a donor for them (on a 1 to 10 scale, where 1=not at all ready and 10=extremely ready) and how ready they felt to ask someone to consider becoming a champion for them (using the same scale).

Ps then proceeded to the third section of the survey, which aimed to identify the factors that might inhibit a person from asking people to consider becoming a live donor. All the questions in this section took the form of agreement with statements of the form, “I haven’t asked more people to consider becoming a live donor for me because. . .” with a response scale from 1 to 10 (where 1=do not agree at all, and 10=strongly agree). Ps were first asked about standard economic factors (such as believing that a live kidney donation would not improve their life very much) and psychological factors not related to the discomfort of asking (such as not wanting to put the donor in harm’s way).

Next, Ps were asked explicitly about the extent to which the discomfort or psychological pain of asking may have inhibited them from asking. They were first asked about the extent to which they agree with the statement, “I haven’t asked more people to consider becoming a live donor for me because I find it hard or unpleasant to ask others to consider donating.” This question was intended to capture the general pain of asking. They then answered an open-ended question, “What about the conversation or the process of asking do you think makes you most hesitant to approach others for a live donation?” followed by a series of closed-ended questions on possible reasons why asking may be difficult for people. Finally, they were asked about factors that might make them more willing to ask, as well as their belief in the value of asking (rather than waiting for an offer) and their perceived knowledge of how to find and approach a possible live donor.

The final section asked a series of questions about their medical condition, as well as demographics. Ps were asked to rate the severity of the state of their kidney, and to provide the

approximate dates on which they were placed on the transplant waitlist and began dialysis.¹² Ps’ knowledge of the risks of death in various situations was also assessed. Finally, we collected state of residence (if in the US), age, sex, race, education, and household income.

5.3.4 Experiment

While the primary purpose of the study was to collect descriptive survey data, we also embedded an experiment towards the end of the study, immediately before the section on covariates. The primary purpose of the experiment was to provide causal evidence that the psychological pain of asking contributes to people’s unwillingness to ask others to consider becoming live donors. To this end, we aimed to help patients overcome the psychological pain of asking, then measured whether it helped them feel more ready to ask others for help and/or increased how many people they asked for help.

To help participants overcome the psychological costs of asking potential donors and champions, we employed a “saying is believing” intervention. In the classic demonstration of this effect (Higgins, Rhodewalt, and Zanna 1979), subjects wrote a message to another person based on some given information about the person’s beliefs and, in the process of writing this message, internalized the contents of the message and subsequently aligned their beliefs with the message rather than with the original information. Specifically, participants were given information about a target individual (the “stimulus”) and were instructed to write a message to another participant (the “audience”). The authors found that when the audience purportedly had a positive (negative) opinion of the stimulus person, participants varied the content of their messages to be more positive (negative), and subsequently seemed to have a more positive (negative) memory of the stimulus, even after a couple of weeks. Participants who were instructed to prepare for writing a message, but did not actually write a message, exhibited a smaller bias.

In a more applied demonstration of the effect, Aronson and colleagues find that prompting undergraduates to write letters to “at risk” middle school students about the malleability of intelligence seemingly led the undergraduates themselves to internalize their own words (J. Aronson, Fried, and Good 2002). Several months after the intervention, they appeared to be more academically engaged, enjoy academia more, and have a higher GPA than those in the control group. A related literature on hypocrisy (see Fried and E. Aronson 1995 for a review) shows that when a person is both prompted to advocate a certain position and is made aware of their previous failures to act in accordance with that position, they feel hypocritical. This generates a feeling of dissonance, which in turn can generate behavior and/or attitude change.

Building on this work, our intervention sought to encourage Ps to internalize advice they

¹²For people who had previously received a kidney, the second date question was replaced with a question on when they received their kidney. For people who were listed and then removed, the second date question was replaced with a question on when they removed from the list.

provided to another patient. Specifically, we randomly assigned Ps who indicated that they were on the waitlist for a kidney into two groups, the Asking and Control groups. The Asking group was asked to write a letter to someone who was recently diagnosed with ESRD providing advice on: (a) how to approach a potential champion to ask them to consider being a champion; or (b) how to approach a potential donor to ask them to consider being a donor. Ps were further told that we would share their response with someone recently diagnosed with ESRD (anonymously).¹³

The purpose of giving Ps the option to write about how to approach a champion (rather than only instructing them to write about how to approach a donor) was twofold. First, if a person believes she cannot provide advice on how to approach a potential donor, but that, based on the prompt, she “should” know how to do this, she may feel discouraged and the prompt may backfire. Providing the other, somewhat easier prompt, thus, may help ensure that Ps feel as though they have something valuable to share with their pen pals. Second, as mentioned above, having a champion should increase the likelihood of finding a donor. Thus, decreasing the barriers to finding a champion may also improve health outcomes.

Ps in the Control group were asked to write a letter to someone who was recently diagnosed with ESRD providing advice on: (a) how to maintain a healthy diet; or (b) how to maintain a healthy exercise routine. These topics were chosen as ones that could plausibly benefit recently-diagnosed ESRD patients, but that would not affect the extent to which Ps in our study felt comfortable with asking potential donors or champions for help.

Following this manipulation and the section on demographics and covariates, we asked waitlisted participants if they would be willing to be contacted for a short follow-up survey and if so, to provide their email address. Ps who agreed to be contacted a second time were emailed two weeks after they completed the survey.¹⁴ In this follow-up survey, we repeated several of the questions that they were asked in the baseline survey. Specifically, we asked whether, since they had taken the first survey a few weeks earlier, they had directly asked anyone to consider becoming a donor (and if so, how many people), hinted to anyone that they would like them consider becoming a donor (and if so, how many people), publicly or semi-publicly posted about their need for a kidney, directly asked anyone to consider becoming a champion (and if so, how many people); and/or hinted to anyone that they would like them to consider becoming a champion (and if so, how many people). In addition, they were asked how ready they currently felt to ask someone to be a donor and how ready they currently felt to ask someone to be a champion (both on the same 1 to 10 scale as was used in the baseline survey). To ensure that we could directly compare responses across the baseline and follow-up surveys, all questions were phrased identically and presented in the same order across the two

¹³This was true; the Ps’ letters were later shared with other ESRD patients.

¹⁴Participants who did not fill out that followup survey within eight days of the first email were emailed again on the eighth day with a reminder.

surveys.

We hypothesized that compared to those in the Control group, Ps in the Asking group would (a) report having asked more people to help (where “asking” was defined as a sum of direct asks and hints to both donors and champions); (b) be more likely to report having posted about their need for a kidney; and (c) report feeling more ready to ask donors and champions. Support for these hypotheses would provide direct, causal evidence that the psychological costs of asking contribute to people’s unwillingness or inability to secure an LDT.

5.4 Results

5.4.1 Participants

One hundred thirty participants began the survey and 74 completed it. One person was excluded for reporting having taken the survey before, and six were excluded for not reporting the transplant center(s) at which they were listed. The analyses below include available data from participants who began but did not complete the survey. Except where noted otherwise, all analyses pool across participants who were on the waitlist at the time of the survey, those who had previously received a kidney but were no longer on the waitlist, and those who were once on the waitlist but then removed without receiving a kidney.

Among those who began the survey, half were on the waitlist at the time of the survey, 47% had previously received a kidney but were no longer on the waitlist, and 3% were once on the waitlist but then removed without receiving a kidney. These percentages do not change substantively when examining those who completed the survey. In the primary description of our analyses, we pool across participants who are currently on the waitlist, those who have previously received a transplant, and those who were listed for transplant but then removed. However, the results are qualitatively similar when examining only those who are currently on the waitlist.

The average age of our participants was 49 years ($SD=13.5$). Approximately 64% identified as female, 87% identified as White, 8% identified as Black or African-American, 3% identified as Asian, and 3% reported a mixed race or a race that was not listed. Ten percent reported that their highest level of education completed was high school or less and 75% reported that they had at least some college. Annual household income was bimodal, with about a third of respondents indicating a range of \$10,000 to \$40,000, and another third reporting an income between \$80,000 and \$150,000.

Turning to medical covariates, we find that half of our participants who had received a kidney transplant previously (but were not on the waitlist again) had most recently received a donation from a deceased donor, and half had received a donation from a live donor. Note that this is a higher proportion of live donor receipts than the national average (roughly a

third), suggesting that the results that follow may provide a conservative lower bound on our estimates of these participants' comfort with and willingness to seek out live kidney donations. Participants self-report that the severity of the state of their kidney was roughly an 8.8 on a scale from 1 to 10 (1=not at all severe, 10=extremely severe) at the time of their relevant event (for waitlist participants: the present; for prior kidney recipients: immediately before finding out that they would receive a kidney; for people listed and then removed without receiving a kidney: immediately before finding out that they were removed from the list).

Roughly 30% of our respondents who were currently on the waitlist were placed on it in 2019—i.e., had been on the waitlist for no more than about a year—and two-thirds were placed on it in 2016 or later. The majority of respondents (both when pooling across different types and when looking at only the waitlisted respondents), about 80%, indicated having received at least one offer for a donation, with about two-thirds of those having received between one and three offers. About half of these offers were accepted. Only about 30% of respondents indicated having a champion.

5.4.2 Descriptive results

Our first main result is that the vast majority of respondents want live donor transplants (LDTs) and recognize that they are medically superior. Nearly three-quarters (73%) of people indicated that their first choice treatment was an LDT, and only two individuals indicated that it was neither their first nor second choice treatment. Participants also indicated believing that LDTs would improve their lives. They report believing they would live the longest (to 79 years) if they received an LDT, compared to 72 for a DDT (two-tailed t-test for difference from LDT: $t(111) = 10.198$, $p < 0.00005$) and 59 for remaining in their current state of health (two-tailed t-test for difference from LDT: $t(109) = 17.899$, $p < 0.00005$). In addition, using a scale from 0 (worst imaginable quality of life) to 100 (best imaginable quality of life) (Ubel et al. 2001), they indicate believing that receiving an LDT would yield them the highest quality of life: a score of 90. In contrast, DDTs yielded, on average, a 84 (two-tailed t-test for difference from LDT: $t(115) = 6.571$, $p < 0.00005$), and remaining in their current state of health yielded a 57 (two-tailed t-test for difference from LDT: $t(113) = 14.965$, $p < 0.00005$). Table 5.1 summarizes these results.

Yet, despite the fact that people want LDTs and recognize that they are medically superior, few people report having asked for a kidney. Sixty-two percent of people report never having directly asked anyone to consider becoming a live donor. Perhaps even more strikingly, almost the same percentage (63%) also report never having hinted to anyone that they would like them to consider becoming a live donor, and 57% report never having posted about their need for a kidney publicly or semi-publicly (e.g., on social media). Repeating the same questions for champions, 93% indicate never having directly asked anyone to consider becoming a champion,

Treatment	Preference	Longevity	Quality Of Life
LDT	1.3 (0.5)	79 (14)	90 (12)
DDT	1.9 (0.5)	72 (13)	84 (14)
Dialysis	3.1 (0.5)	59 (14)	57 (21)
No Treatment	3.7 (0.7)		

Table 5.1: Participant preferences for different treatments (on a scale from 1 to 4, where 1 is most preferred), the age to which they expect to live if they receive the different treatments, and their expected quality of life if they receive the different treatments. The first number represents the mean, while the number below it in parentheses represents the SD. “LDT” stands for “living donor transplant,” and “DDT” stands for “deceased donor transplant.” The longevity and quality of life figures in the dialysis row represent the perceived longevity and quality of life if the participant continued in their current state, which for the majority of respondents is dialysis.

and 88% report never having hinted to anyone that they would like them to consider becoming a champion.

Why might people not actively seek out potential donors or champions? One possibility is that they believe that there are no possible donors. However, approximately 70% of respondents believe that they know at least one person who might be willing to donate (regardless of whether or not they would be able to do so). Among those, the median number of potential donors the respondents list is about four donors.

Another possibility is that ESRD patients do not believe that asking would increase the odds that they would get a donor or champion. We do not find any evidence supporting this explanation, however. Recall that we had asked participants to consider the person that they would be most likely to ask to be a donor and to assess the probability that they would receive an offer from this person if they did not ask, hinted, or asked directly. Respondents reported that they believe that asking directly would substantially increase the likelihood of receiving an offer, relative to either hinting or not asking at all ($M_{NoAsk}=45\%$, $M_{Hint}=53\%$, $M_{Direct}=64\%$; two-tailed t-test for difference between hinting and asking directly: $t(75) = 3.715$, $p = 0.0004$; two-tailed t-test for difference between not asking at all and asking directly: $t(71) = 2.914$, $p = 0.005$). A similar pattern holds for the question on champions. Again, participants

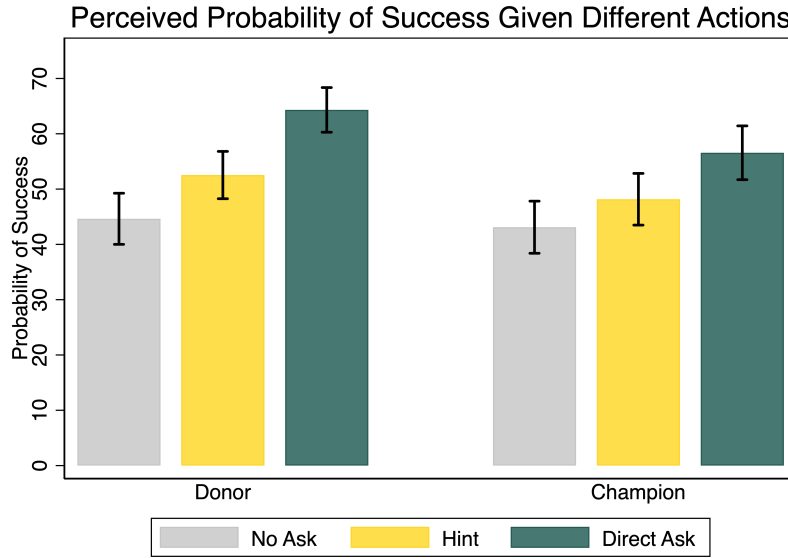


Figure 5.1: $N=95$. The left side of the graph depicts responses to the question, “Think of the person you would be most likely to ask to be a donor for you. What do you think is the probability this person would offer to donate an organ to you if you... ...did NOT ask them to consider donating an organ to you? ...HINTED that you’d like them to consider donating an organ to you? ...DIRECTLY asked them to consider donating an organ to you?” The right side of the graph depicts responses to the question, “Think of the person you would be most likely to ask to be a champion for you. What do you think is the probability this person would become a champion for you if you... ...did NOT ask them to become a champion for you? ...HINTED that you’d like them to become a champion for you? ...DIRECTLY asked them to become a champion for you?” Error bars denote mean value \pm 1 SE.

indicated that they believe that asking directly would increase the likelihood of receiving an offer from someone to be a champion ($M_{NoAsk}=43\%$, $M_{Hint}=48\%$, $M_{Direct}=57\%$; two-tailed t-test for difference between hinting and asking directly: $t(68) = 3.374$, $p = 0.001$; two-tailed t-test for difference between not asking at all and asking directly: $t(71) = 1.978$, $p = 0.052$). These results suggest that people see value in asking. See Figure 5.1.

A final possibility is that people believe that they may receive a DDT very shortly, and thus that there is no need to ask donors directly. This, however, is also incompatible with our data. When asked to indicate how much longer they believed it would take for them to receive a DDT, the median response was three years, and the average was 3.75, roughly tracking the national average. Figure 5.2 illustrates these results.

Thus, although standard economic factors may play some role in ESRD patients’ reluctance to ask donors and champions for help, these factors seem insufficient to fully explain this reluctance. Next, we aim to identify what other factors might explain this reluctance to ask.

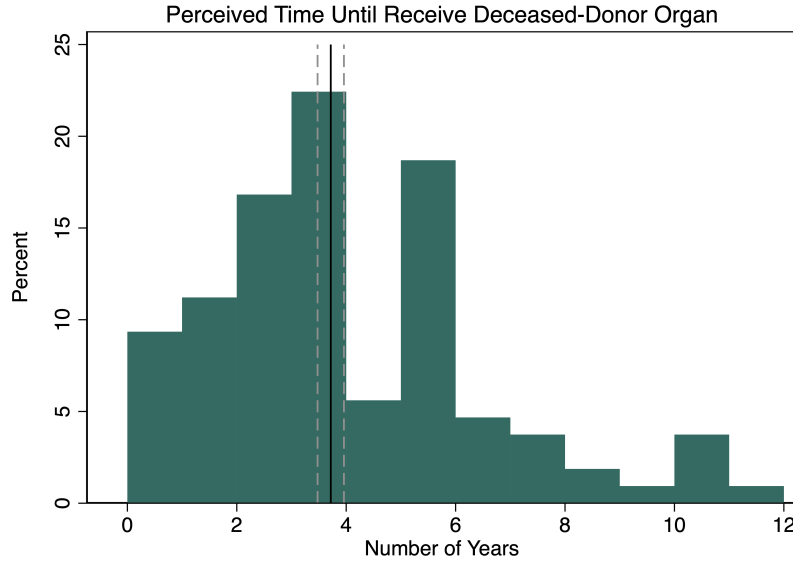


Figure 5.2: $N=107$. Responses to question, “Counting from today, what is your best guess as to how much longer it would take for you to receive a deceased-donor (cadaveric) organ for transplant?” Solid black line indicates mean; dashed grey lines indicate mean \pm 1 SE.

We asked participants to indicate which of a series of economic and psychological factors were most important in contributing to their unwillingness or inability to ask more potential donors to consider donating. To begin, we asked only about factors not related to “the ask.” Using a scale from 1 (do not agree at all) to 10 (strongly agree), Ps indicated that the two most important factors were not knowing anyone who would be willing and able to donate ($M = 5.8$) and being afraid the surgery would harm the live donor ($M = 5.6$).

Next, we tested our primary hypothesis: whether the discomfort of asking prevented ESRD patients from asking more people to consider being a live donor. We find strong support for this hypothesis. Again using a scale from 1 (do not agree at all) to 10 (strongly agree), Ps indicated that the fact that it is hard and unpleasant to ask others to consider donating does indeed prevent them from asking more people to consider being a live donor ($M = 7.6$, $SD = 2.8$; two-tailed t-test from midpoint 5: $t(78) = 8.130$, $p < 0.00005$).

Turning to which particular aspects of the ask were most important to contributing to this reluctance or hesitation, we find that Ps report that the factors that were most important in preventing them from approaching more people to consider becoming live donors are that they “fear that a live donation would be too much to ask for” ($M = 7.8$), an inference that “if [others] haven’t offered to donate yet, it probably means they’re not willing to donate” ($M = 7.2$), and a belief that “[others] probably already know about [the patient’s] need, so there is no point in asking” ($M = 6.8$).

Reason	Mean	SD	N	p-value
*Too much to ask for	7.8	2.9	74	< 0.001
*Hard/unpleasant to ask	7.6	2.8	79	< 0.001
*Lack of offer suggests not willing	7.2	3.0	73	< 0.001
*Donor already knows about need	6.8	3.1	72	< 0.001
*Would be pressuring donor	6.8	3.1	71	< 0.001
*Inappropriate to ask	6.2	3.2	69	0.003
Do not know anybody	5.8	3.3	77	0.037
*Do not know how to approach topic	5.7	3.4	71	0.088
Physical harm to donor	5.6	3.3	70	0.115
*Donor does not care enough	5.0	3.3	71	0.943
*Would feel worse if turned down	5.0	3.3	68	0.971
*Asking would harm relationship	4.6	3.3	62	0.365
Will receive DDT soon	4.2	3.3	65	0.057
Ashamed about need	3.6	2.9	63	< 0.001
Would not improve life	2.3	2.5	54	< 0.001
Physical harm to self	1.8	2.0	49	< 0.001

Table 5.2: Factors affecting ESRD patients’ (un)willingness to approach living donors, with factors related to the “pain of asking” denoted with an asterisk (*). The means and SDs reflect participants’ agreement with statements beginning with “I haven’t asked more people to consider becoming a live donor for me because...” (1 to 10 scale, 1=do not agree at all, 10=strongly agree). In the table “donor” is shorthand for “would-be donor.” The *p*-value refers to one-sample two-tailed t-tests testing for the difference from the midpoint of the scale. All survey materials are reported in Appendix C.1.

Table 5.2 ranks all of the reasons participants were asked about. The table shows that the six highest ranked reasons are all related to the pain of asking, and even the lowest rated explanations related to the pain of asking still outrank several of the standard economic and non-ask-related psychological factors.

Finally, we find that participants’ readiness to ask potential donors and/or champions for help is very bimodal, with many participants indicating that they are either not at all ready (1) or extremely ready (10). See Figure 5.3.

In summary, we find that although the overwhelming majority of our sample want an LDT, only a minority have actively sought it out. Our results further reveal that this hesitation to seek out LDTs cannot be fully explained by standard economic explanations, and instead seems to be driven in large part by a psychological “pain of asking,” a potent discomfort with asking others for help.

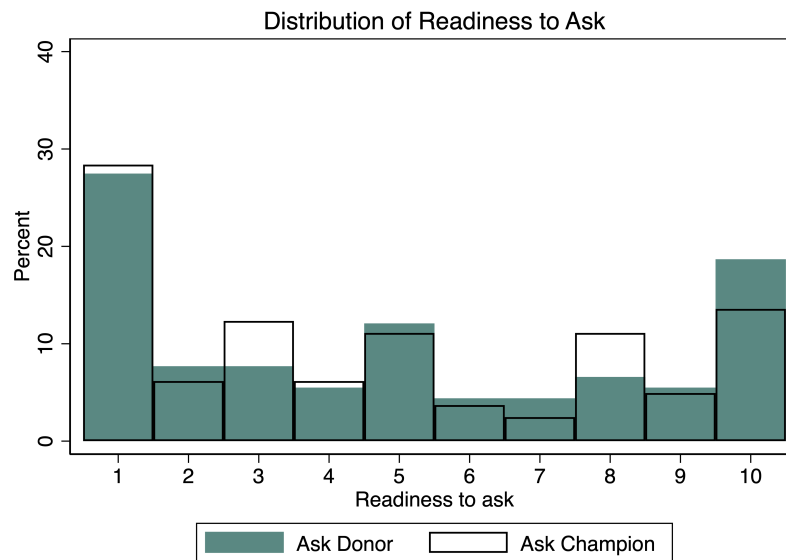


Figure 5.3: Participants’ reported readiness to ask a potential live donor to consider becoming a donor (“On a scale from 1 to 10, where 1 is ‘not at all ready’ and 10 is ‘extremely ready,’ how ready do you currently feel to ask someone to consider becoming a *live donor* for you?”), and readiness to ask a potential champion to consider becoming a champion (“On a scale from 1 to 10, where 1 is ‘not at all ready’ and 10 is ‘extremely ready,’ how ready do you currently feel to ask someone to consider becoming a *champion* for you?”). Both questions were anchored with 1=Not at all ready and 10=Extremely ready. $N=91$ for donor question, $N=81$ for champion question.

5.4.3 Experimental results

Only 27 participants were eligible to be included in the experiment, agreed to participate, and provided their contact information for the follow-up survey. Of these, only 15 began the follow-up survey, and only 14 completed any dependent measures ($N = 9$ for the Control group, $N = 5$ for the Asking group). All results should therefore be interpreted with extreme caution, both due to the very small sample size and the non-generalizability of the sample. All 15 participants who began the follow-up survey had written some advice in the baseline survey and thus are coded as “treated.” Because of this, the intent to treat and treatment on the treated analyses are identical.

We have nine dependent measures:

1. The number of times the participant directly asked a potential live donor to consider becoming a donor
2. The number of times the participant hinted to a potential live donor that they would like them to consider becoming a donor
3. Whether the participant has posted about their need for a kidney publicly or semi-publicly
4. The number of times the participant directly asked a potential champion to consider becoming a champion
5. The number of times the participant hinted to a potential champion that they would like them to consider becoming a champion
6. Current readiness to ask a potential donor to consider becoming a donor
7. Change in readiness to ask a potential donor to consider becoming a donor (difference from the baseline measure)
8. Current readiness to ask a potential champion to consider becoming a champion
9. Change in readiness to ask a potential champion to consider becoming a champion (difference from the baseline measure)

Table 5.3 shows the results. For eight out of the nine variables, there is either no difference between the groups or it is impossible to calculate the test statistic because there is no variance in responses. For the remaining variable, change in readiness to ask a potential donor, our analyses reveal the opposite of what we had hypothesized: writing advice on how to ask a potential donor or champion in fact made people feel less, not more, ready to ask a potential donor.

Variable	Control	Asking	<i>p</i> -value
Number donor direct asks	0.0 (0.0)	0.4 (0.9)	0.190
Number donor hints	0.1 (0.3)	0.0 (0.0)	0.478
Donor post (Y/N)	0.3 (0.5)	0.4 (0.5)	0.803
Number champion direct asks	0.0 (0.0)	0.0 (0.0)	
Number champion hints	0.0 (0.0)	0.0 (0.0)	
Current readiness to ask donor	1.9 (1.4)	2.0 (1.0)	0.900
Change in readiness to ask donor	-0.2 (1.6)	-6.0 (3.6)	0.002
Current readiness to ask champion	1.9 (1.3)	2.3 (1.2)	0.605
Change in readiness to ask champion	-0.7 (2.1)	-3.0 (3.6)	0.184

Table 5.3: Experiment results. Means and SDs (SDs in parentheses) for the Control and Asking groups for nine dependent measures. The *p*-value refers to two-sample two-tailed t-tests testing for the difference between the Control and Asking groups, except for the *Donor Post* variable, which shows the *p*-value for the beta coefficient on the treatment group dummy variable from a logistic regression. An SD of 0 indicates no variance in responses for a particular variable. Missing *p*-values indicate no variance in either the Control or Asking responses for a particular variable.

There is good reason to believe that this result is not capturing a true effect. First, there was not initial balance on that variable: while the Control group indicated having an average readiness of 2.2, the Asking group indicated having an average readiness of 7.8 (two-sample two-tailed t-test for difference: $p = 0.0003$). Second, with nine dependent measures it is reasonably probable that one would see spurious relationships. Nevertheless, it is in theory possible that this is a real effect.

One potential explanation for this unexpected result is that the readiness measures are simply very volatile. This seems plausible, given that the measure asks about current feelings, rather than something more stable (e.g., how the person has felt over the last week). A second potential explanation is that people do not feel qualified to give advice. While the champion question was included as a way of decreasing the likelihood of this possibility, participants may nevertheless have felt as though they were not in a position to advise others, and this may have led the intervention to backfire. Indeed, the average advice word length was longer for the Control condition (advising people on how to maintain a healthy lifestyle) than for the Asking condition (advising people on how to ask a donor or champion), although this difference is not significant (median for Control group: 56 words, mean for Control group: 116 words, median for Asking group: 98 words, mean for Asking group: 98 words; two-sample two-tailed t-test for difference in means: $p=0.867$). This pattern also holds for the main sample of participants—i.e., including those participants who did not take the followup survey (median for Control group: 1 word, mean for Control group: 73 words, median for Asking group: 1 word, mean for Asking group: 28 words; two-sample two-tailed t-test for difference in means: $p=0.221$).

One possibility is that simply taking the survey—20 minutes of largely psychological questions aimed at understanding why people may not be asking potential live donors—was by itself a treatment, helping participants feel more ready to ask, or conversely, making them feel as though they are not ready. Directionally, we find that on average, people seem to feel less ready to ask someone for help in the second survey, relative to the first (mean change in readiness to ask donor=-1.7; mean change in readiness to ask champion=-1.3). However, this difference is not significant (donor: one-sample two-tailed t-test testing difference from 0: $t(11) = 1.743$, $p = 0.109$; champion: one-sample two-tailed t-test testing difference from 0: $t(11) = 1.670$, $p = 0.119$).

5.5 Conclusion

Despite major benefits, comparatively few people with end-stage renal disease receive live donor transplants. The traditional approach to addressing this problem has focused on donors, examining how people decide to donate and how to encourage more donation (Howard 2007; Johnson and Goldstein 2003; Simpkin et al. 2009; Sque, Long, and Payne 2005). While certainly not denying the critical importance of this traditional approach, our approach to

the question involved examining the other side of the interaction: how patients decide to ask potential live donors to consider donating.

We have four primary results. First, we find that people prefer live donations to other treatment options and recognize that live donations will maximize their longevity and quality of life. Second, despite this, it seems that most people have never asked anyone for a kidney, either directly or indirectly (e.g., through hinting or posting about their needs on social media or in newsletters).

Third, we find that standard economic explanations seem to be insufficient to fully explain these findings. Our participants could typically identify at least one or two people who they believed might be willing to donate to them, and they believed that asking would substantially increase the chances of a potential donor verbally indicating they would give a kidney. Moreover, standard economic explanations such as fear of becoming physically harmed during the surgery do not at all seem to contribute to people's reluctance or hesitation to reach out to potential donors.

Our fourth and final result is that the discomfort of asking appears to be a significant factor in preventing people from approaching more potential live donors. In addition to the overarching reason that it is hard or unpleasant to ask, the most commonly cited factors related to "the ask" were a fear that a kidney was "too much to ask for" (suggesting a concern about imposing on others), that a lack of an offer suggests that the would-be donor is probably unwilling to donate, and that the would-be donor already knows about the patient's need and thus there is no benefit in asking.

Our data have several limitations. Most notably, the sample is small and somewhat select, drawing only on a pool of people who use social media and are willing to take an extended survey for no pay. In particular, a substantially larger sample would be needed to properly test the experimental intervention. In addition, even if the experimental hypotheses had been upheld, the dependent variables do not capture actual health outcomes. While readiness to ask and the number of people one has reported asking for help are likely good proxies for actual asks, and may increase the likelihood that one actually receives an LDT, additional research would be needed to show that this intervention can improve health outcomes, as well.

Nevertheless, our results do suggest that the psychological costs of asking decrease ESRD patients' willingness to seek potentially life-saving live kidney donations. Importantly, they also provide initial insights into what exactly is painful about asking. We hope that findings from this work can be used to better design educational and guidance materials for people with ESRD. By incorporating the pain of asking into these materials, we may be able to decrease the barriers to asking, increase the number of live donations, and ultimately help patients live longer, healthier lives.

Chapter 6

Conclusion

Although helping interactions are ubiquitous, most research on the topic has focused primarily on the behavior and psychology of the potential help-giver. In this dissertation, I focus instead on the potential help-receiver, identifying when a person in need will feel comfortable asking a friend, family member, or stranger for help. Specifically, I (a) present a new framework describing how people decide to seek such help; (b) provide evidence that one reason why people may not seek informal help, even when it is likely available and materially beneficial, is the psychological pain of asking; and (c) propose a mechanism to explain precisely why asking is so painful.

While this dissertation helps to fill some gaps in the literature, many remain. First, the research on what contributes to the pain of asking is far from conclusive. Note that the mechanism we propose in the model—fear of learning that one is not valued—is not strongly supported in either the informal loans or kidney context in the way that we have tested it. This does not, of course, mean that this mechanism cannot truly be affecting people’s behavior and well-being. It is possible that the methods used were inappropriate, perhaps because people do not consciously perceive how the mechanism affects their behavior, or they have difficulty articulating it. At a minimum, however, the data suggest that this effect may be complex and multifaceted.

Second, one perennial question within the take-up literature is whether economic and psychological barriers to applying for or receiving help are efficient. Given that help resources are typically limited, an optimal distribution of resources would be one where those who need help receive help, whereas those who do not need help do not. An efficient barrier, thus, would be one that discourages people of low need from seeking help, but does not discourage those of high need (Blackorby and Donaldson 1988; Currie 2004). The present work cannot speak to this question, and future work will be needed to test the extent to which the psychological costs of asking are a function of need.

Third, throughout this work, I have remained agnostic about whether not seeking help is a

mistake. To answer this question, it is important to consider both economic and psychological or social factors. Addressing first the economic factors, one question is whether asking is actually useful. As discussed in the literature section of the model chapter, there is evidence that asking does increase the amount of resources people have (Andreoni and Rao 2011; Andreoni, Rao, and Trachtman 2017; Flynn and Lake 2008; Roghanizad and Bohns 2017). For instance, people who negotiate their salaries on average have higher wages (Babcock and Laschever 2009). While this effect could be driven by self-selection (Exley, Niederle, and Vesterlund 2020), and there is evidence that some types of asks can lead to social backlash (Bowles, Babcock, and Lai 2007), it does in general seem as though asking is effective at helping to secure more resources. Intuitively, it seems as though the economic gains from asking would be largest in situations in which the would-be helper could not plausibly know about the other person's needs. Indeed, in the transplant research, we observed that our respondents believed that there was no reason to ask for a kidney if the would-be donors were already aware of their need.

Another important consideration in identifying the normatively optimal level of asking is what the economic effects of helping would be on the helper. In our studies, it is likely individually economically optimal for the person in need to ask for help: the time and effort costs of asking for help are likely substantially smaller than the material benefits of receiving an interest-free loan or a kidney. However, because the material costs to the potential helper are unobserved, it is challenging to determine whether the benefits to the potential help-recipient exceed the costs to the potential help-giver. While in general, the marginal unit of resources is worth more to those who have little than to those who have a lot, in any particular case, the effect on overall social welfare may be ambiguous.

Importantly, we also cannot say if not seeking help is a mistake once we consider the psychological and social costs of asking, which, as established in this dissertation, may apply to both the person in need and the would-be helper. Ultimately, the evaluation of whether not seeking help is a mistake may be specific to the context and individuals involved.

Despite the many questions that remain, the work presented in this dissertation takes a first step at shedding light on some of the causes and consequences of asking for informal help. In addition to contributing to our theoretical understanding of help-seeking, this work may have important implications for fields such as public economics, health economics, and development economics. These and similar fields frequently grapple with the question of how to optimally allocate scarce public resources to those in need. The optimal amount of public spending on people in need should depend on the amount of private spending on people in need, which, presumably, depends on the extent to which people in need ask for resources. The work presented in this dissertation may help us gain a more complete understanding of how people make the decision to ask for informal help, as well as how to incorporate the psychological costs of asking for help into policies and practices.

In particular, three broad policy recommendations come out of this research. The first, and potentially most sobering, is to simply eliminate the need for asking when possible. If one is able and willing to help, one should simply offer help rather than forcing the person in need to ask. In a financial context, policymakers may improve psychological outcomes by limiting the extent to which people need to ask their social networks for financial support. This may involve, for instance, making (affordable) payday loans or credit cards more available, automatically enrolling people in welfare programs, or even implementing a universal basic income policy.

A second policy or practice implication would be to make asking easier whenever possible. This might involve creating apps that can automatically connect people in need to potential helpers. Another way of accomplishing this is encouraging people in need to hint about their needs instead of asking directly. For instance, some organizations that aim to encourage live kidney donations (e.g., the National Kidney Foundation and the Live Kidney Donor Network) have begun to emphasize the strategy of simply “sharing one’s story”—not asking potential living donors for kidneys per se, but instead simply telling them about one’s needs in the hopes that they spontaneously offer. While such approaches are likely less effective at securing donations than direct asks, they are also likely less psychologically painful for the person in need, and may ultimately be the only type of “ask” that people can bring themselves to do.

A final implication of this work is that even if one cannot eliminate the need for asking or make asking easier, one can otherwise target the part(s) of asking that are most painful. For instance, suppose that, as we argue in Paper 1, one reason why people do not like to ask is because they fear learning through a rejection that the would-be helper does not value them. This would suggest that even if a would-be helper is unable or unwilling to help a person in need, they can improve the person in need’s psychic utility by otherwise making them feel valued—e.g., offering an apology, an explanation, an offer to help at a different time, or even a general expression of how much they value that relationship.

While substantially more work is needed on this topic, this dissertation sheds some light onto how people decide to seek informal help, as well as what the consequences of those decisions are. It further offers initial insights into how to better connect those in need to the services that would benefit them the most, whether those services are formal or informal.

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Appendix A

It does hurt to ask: A game-theoretic model of informal help-seeking and -giving

A.1 Carnegie Mellon alumni pilot

Materials

Participants answered a hypothetical version of a modified dictator game. All participants were the receiver in the dictator game. They were allowed to write a message to the dictator. We varied whether the message was sent, as well as how much money they then received from the dictator. Afterwards, we elicited positive and negative affect, as well as willingness to punish or reward the dictator. After this, they were asked the following.

In this next section, please think about situations in which you may be in a position to ask a friend, family member, or stranger on the street for help. How much do you agree or disagree with the following statements? *[Scale from 1 (strongly disagree) to 5 (strongly agree). Items were presented in random order.]*

- I typically only ask for help when I think the thing I'm asking for is reasonable.
- I usually only ask for help when I'm pretty sure the person I'm asking will say yes.
- I'm not typically bothered when I ask someone for something and they turn me down.
- I'm usually comfortable asking even for big things— people can always say "no."
- Sometimes the idea that someone might turn me down to my face makes me not want to ask them for help.
- If I have the option of solving a problem on my own or asking someone for help, I often first try to solve it on my own.
- Even if I'm pretty sure a person already knows I need help, I still usually ask them for help.

A.2 Study 1a

Materials

[Receiver perspective: Bill]

Imagine you unexpectedly receive a large bill. You are unable to pay it on your own. You have a family member who you believe would be able to help you pay the bill, but you know it would require them to make some sacrifices.

[Receiver perspective: Work]

Imagine your boss at work has told you to complete a task. You don't understand how to do it. You have a coworker who you believe would be able to help you with the task, but you know it would require a lot of their time and effort.

[Receiver perspective: Arm]

Imagine you break your arm. Many things that were previously easy for you have now become very difficult (e.g., grocery shopping, cooking, laundry, typing). You have a neighbor who you believe would be able to help you with these tasks, but you know it would require a lot of their time and effort.

[Receiver perspective: Car]

Imagine you need a car for a few days. You don't have a car yourself that you could use, and renting one would be very expensive. You have a friend who you believe would be able to loan you theirs, but you know it would require them to make some sacrifices.

For each of the scenarios below, please indicate *how you would feel about the situation* if it were to happen to you. Please do your best to think only about the emotional, psychological, and social aspects of the situation, NOT the practical aspects of receiving or not receiving the help. Please use the scale below, where -4 is "I would feel terrible," 0 is "neutral," and +4 is "I would feel great." [scale from -4 to +4, marked with Terrible, Neutral, and Great. Order of statements randomized].

- You are *uncertain* whether they will agree to help you. You have a conversation to ask them for help and they do not agree to help. ($u_R(\hat{q}_{\bar{C}})$)
- The person has an opportunity to offer you help, but they don't. You later have an opportunity to ask them for help, but you don't. You're *uncertain* whether they knew that you wanted help. ($u_R(\hat{q}_{\bar{O}})$)
- You are *uncertain* whether they will agree to help you. You have a conversation to ask them for help and they agree to help. ($u_R(\hat{q}_C)$)
- The person already knows you want help. Before you even have an opportunity to ask them for help, they offer to help you. ($u_R(\hat{q}_O)$)
- You are *certain* they will agree to help you. You have a conversation to ask them for help and they agree to help.

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- You do not ask the person for help. They later have an opportunity to offer you help, but they don't. You're *uncertain* whether they knew that you wanted help.
- You do not ask the person for help. They later have an opportunity to offer you help, but they don't. You're *certain* they knew that you wanted help.
- You do not ask the person for help. They later have an opportunity to offer you help, and they do.
- The person has an opportunity to offer you help, but they don't. You later have an opportunity to ask them for help, but you don't. You're *certain* they knew that you wanted help.
- You later help someone else with a similar problem and they seem very grateful.
- The person seems genuinely happy to help you.
- You identify a way to easily solve your problem yourself, without getting help.

[Sender perspective module: Bill]

Imagine your family member unexpectedly receives a large bill. They are unable to pay it on their own. You would be able to help them pay the bill, but it would require you to make some sacrifices.

[Sender perspective module: Work]

Imagine your coworker's boss has told your coworker to complete a task. Your coworker doesn't understand how to do it. You would be able to help them with the task, but it would require a lot of your time and effort.

[Sender perspective module: Arm]

Imagine your neighbor breaks their arm. Many things that were previously easy for them have now become very difficult (e.g., grocery shopping, cooking, laundry, typing). You would be able to help them with these tasks, but it would require a lot of your time and effort.

[Sender perspective module: Car]

Imagine your friend needs a car for a few days. They don't have a car themselves that they could use, and renting one would be very expensive. You would be able to loan them yours, but it would require you to make some sacrifices.

For each of the scenarios below, please indicate *how you would feel about the situation*, or *how it would make you look in the eyes of others*, if it were to happen to you. Please do your best to think only about the emotional, psychological, and social aspects of the situation, NOT the practical aspects of providing or not providing the help. Please use the scale below, where -4 is "I would feel / look terrible," 0 is "neutral," and +4 is "I would feel / look great." *[scale from -4 to +4, marked with Terrible, Neutral, and Great. Order of statements randomized].*

- The person has a conversation with you in which they ask you for help and you do not agree to help them. ($u_S(\hat{q}_{\bar{C}})$)

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- You have an opportunity to offer the person help, but you don't. They later have an opportunity to ask for help, but they don't. They are *uncertain* whether you knew they wanted help. ($u_R(\hat{q}_{\bar{O}})$)
- The person has a conversation with you in which they ask you for help and you agree to help them. ($u_R(\hat{q}_C)$)
- Before the person even has an opportunity to ask you for help, you offer to help them. ($u_R(\hat{q}_O)$)
- The person has an opportunity to ask you for help, but they don't. You later have an opportunity to offer them help, but you don't. They are *uncertain* whether you knew they wanted help.
- The person has an opportunity to ask you for help, but they don't. You later have an opportunity to offer them help, but you don't. They are *certain* you knew they wanted help.
- The person has an opportunity to ask you for help, but they don't. You later have an opportunity to offer them help, and you *do*.
- You have an opportunity to offer the person help, but you don't. They later have an opportunity to ask for help, but they don't. They are *certain* you knew they wanted help.

Gender:

- o Male
- o Female
- o Non-conforming

Age:

- o Under 20
- o 20-29
- o 30-39
- o 40-49
- o 50-59
- o 60-69
- o 70 or over

Education:

- o Less than high school
- o High school graduate / GED
- o Some college
- o 2 year degree
- o 4 year degree
- o Professional degree
- o Master's degree

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o Doctorate

Race:

- o White
- o Black or African American
- o Hispanic (non-white)
- o Asian
- o Other / mix
- o Prefer not to answer

Annual household income, before taxes and deductions:

- o \$0 - \$10,000
- o \$10,000 - \$20,000
- o \$20,000 - \$40,000
- o \$40,000 - \$60,000
- o \$60,000 - \$80,000
- o \$80,000 - \$100,000
- o \$100,000 - \$150,000
- o over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? [*Open ended*]

A.3 Study 1b

Materials

[*Receiver perspective: Bill*]

Imagine you have a serious and urgent plumbing problem in your home, and the plumber says that fixing it will be expensive. You are unable to pay the plumbing bill on your own. You have a family member who knows about your problem and the fact that you could use help. They would be able to help you pay the bill, though it would require them to make some sacrifices. Please imagine the following scenarios.

[*Help transferred condition*]

Scenario A: You ask your family member for help with the bill. *They agree to help.*

Scenario B: You do not ask your family member for help with the bill. *They offer help.* You accept the offer.

[*Help not transferred condition*]

Scenario A: You ask your coworker for help with the task. *They do not agree to help.*

Scenario B: You do not ask your coworker for help with the task. *They do not offer help.*

[*Receiver perspective: Work*]

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Imagine your boss at work has asked you to complete a task, but you don't understand how to do it. You have a coworker who understands the task and knows that you could use help. They would be able to help you with the task, but you know it would require a lot of their time and effort. Please imagine the following scenarios.

[Help transferred condition]

Scenario A: You ask your coworker for help with the task. *They agree to help.*

Scenario B: You do not ask your coworker for help with the task. *They offer help.* You accept the offer.

[Help not transferred condition]

Scenario A: You ask your coworker for help with the task. *They do not agree to help.*

Scenario B: You do not ask your coworker for help with the task. *They do not offer help.*

[Receiver perspective: Arm]

Imagine you break your arm. Your garbage has piled up, but it would be very difficult for you to take it out to get it picked up. You have a neighbor who knows about your problem and the fact that you could use help. They would be able to help you take out the garbage, but it is an unpleasant task. Please imagine the following scenarios.

[Help transferred condition]

Scenario A: You ask your neighbor for help with the garbage. *They agree to help.*

Scenario B: You do not ask your neighbor for help with the garbage. *They offer help.* You accept the offer.

[Help not transferred condition]

Scenario A: You ask your neighbor for help with the garbage. *They do not agree to help.*

Scenario B: You do not ask your coworker for help with the task. *They do not offer help.*

[Receiver perspective: Car]

Imagine you don't have a car and need one to run an errand. You have a friend who knows that you need to borrow a car. They would be able to loan you their car, but would have to take public transportation to work that day. Please imagine the following scenarios.

[Help transferred condition]

Scenario A: You ask your friend to loan you their car. *They agree to loan it to you.*

Scenario B: You do not ask your friend to loan you their car. *They offer to loan it to you.* You accept the offer.

[Help not transferred condition]

Scenario A: You ask your friend to loan you their car. *They do not agree to loan it to you.*

Scenario B: You do not ask your friend to loan you their car. *They do not offer to loan it to you.*

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[All Receiver conditions]

In which scenario do you think you'd feel better? [1=*Much better in Scenario A*; 3=*Slightly better in Scenario A*; 5=*About the same in Scenario A and Scenario B*; 7=*Slightly better in Scenario B*; 9=*Much better in Scenario B*].]

[Sender perspective: Bill]

Imagine your family member has a serious and urgent plumbing problem in their home, and the plumber says that fixing it will be expensive. They are unable to pay the plumbing bill on their own. You know about their problem and the fact that they could use help, and they know that you know. You would be able to help them pay the bill, though it would require you to make some sacrifices. Please imagine the following scenarios.

[Help transferred condition]

Scenario A: Your family member asks you for help with the bill. *You agree to help.*

Scenario B: Your family member does not ask you for help with the bill. *You offer help.* They accept the offer.

[Help not transferred condition]

Scenario A: Your family member asks you for help with the bill. *You do not agree to help.*

Scenario B: Your family member does not ask you for help with the bill. *You do not offer help.*

[Sender perspective: Work]

Imagine your coworker's boss has asked your coworker to complete a task, but your coworker doesn't understand how to do it. You understand the task and know that they could use help, and they know that you know. You would be able to help them with the task, but it would require a lot of your time and effort. Please imagine the following scenarios.

[Help transferred condition]

Scenario A: Your coworker asks you for help with the task. *You agree to help.*

Scenario B: Your coworker does not ask you for help with the task. *You offer help.* They accept the offer.

[Help not transferred condition]

Scenario A: Your coworker asks you for help with the task. *You do not agree to help.*

Scenario B: Your coworker does not ask you for help with the task. *You do not offer help.*

[Sender perspective: Arm]

Imagine your neighbor breaks their arm. Their garbage has piled up, but it would be very difficult for them to take it out to get picked up. You know about their problem and the fact that they could use help, and they know that you know. You would be able to help them take out the garbage, but it is an unpleasant task. Please imagine the following scenarios.

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[Help transferred condition]

Scenario A: Your neighbor asks you for help with the garbage. *You agree to help.*

Scenario B: Your neighbor does not ask you for help with the garbage. *You offer help.* They accept the offer.

[Help not transferred condition]

Scenario A: Your neighbor asks you for help with the garbage. *You do not agree to help.*

Scenario B: Your neighbor does not ask you for help with the garbage. *You do not offer help.*

[Sender perspective: Car]

Imagine your friend doesn't have a car and needs one to run an errand. You know that they need to borrow a car, and they know that you know. You would be able to loan them your car, but you would have to take public transportation to work that day. Please imagine the following scenarios.

[Help transferred condition]

Scenario A: Your friend asks you to loan them your car. *You agree to loan it to them.*

Scenario B: Your friend does not ask you to loan them your car. *You offer to loan it to them.* They accept the offer.

[Help not transferred condition]

Scenario A: Your friend asks you to loan them your car. *You do not agree to loan it to them.*

Scenario B: Your friend does not ask you to loan them your car. *You do not offer to loan it to them.*

[All Sender conditions]

In which scenario do you think you'd feel better? *[1=Much better in Scenario A; 3=Slightly better in Scenario A; 5=About the same in Scenario A and Scenario B; 7=Slightly better in Scenario B; 9=Much better in Scenario B).]*

Gender:

- ☐ Male
- ☐ Female
- ☐ Non-conforming

Age:

- ☐ Under 20
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60-69
- ☐ 70 or over

Please do not cite without permission.

Education:

- ☐ Less than high school
- ☐ High school graduate / GED
- ☐ Some college
- ☐ 2 year degree
- ☐ 4 year degree
- ☐ Professional degree
- ☐ Master's degree
- ☐ Doctorate

Race:

- ☐ White
- ☐ Black or African American
- ☐ Hispanic (non-white)
- ☐ Asian
- ☐ Other / mix
- ☐ Prefer not to answer

Annual household income, before taxes and deductions:

- ☐ \$0 - \$10,000
- ☐ \$10,000 - \$20,000
- ☐ \$20,000 - \$40,000
- ☐ \$40,000 - \$60,000
- ☐ \$60,000 - \$80,000
- ☐ \$80,000 - \$100,000
- ☐ \$100,000 - \$150,000
- ☐ over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? *[Open ended]*

A.4 Study 2a

Materials

Imagine that your family member is struggling financially this month and expects that they will be about \$500 short on an important bill. You would be able to help them pay for the bill, though it would impose a financial burden on you to do so. Your family member asks you to help pay for the bill.

On each of the next 6 pages, we will show you 2 different scenarios. Your task will be to decide in which of the 2 scenarios you would be more likely to agree to help. The text from the last page will be repeated in grey font each time as a reminder.

Please pay close attention, as the differences between the scenarios may be subtle. There will be a comprehension check question. If you answer it correctly, you will get an extra \$0.10 bonus.

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[Vignette from above repeated.]

Consider two scenarios:

[Participants were shown the following six pairs of scenarios in random order. After each, they were asked the key question of interest, the scenario in which they would be more likely to agree to help. Which scenario was presented as being “Scenario A” versus “Scenario B” was counterbalanced. Each pair of scenarios and the outcome variable were displayed on a separate page.]

[c, material cost of consenting]

Scenario A: It would be financially **relatively easy** for you to help.

Scenario B: It would be financially **very difficult** for you to help.

[g, true generosity]

Scenario A: You **do not care that much** about them.

Scenario B: You **care a lot** about them.

[\hat{p}, w, and W, beliefs about R’s need]

Scenario A: You think that **they would be able to get by with paying the bill a little later.**

Scenario B: You think that **they absolutely must pay the bill this month.**

[\hat{q}_C, perceived likelihood of being perceived as a high type after consenting]

Scenario A: You think that if you agree to help, **they will still think that you care about them somewhat** (and if you do not agree to help, they will think that you do not care about them at all).

Scenario B: You think that if you agree to help, **they will think that you care about them a lot** (and if you do not agree to help, they will think that you do not care about them at all).

[\hat{q}_{\bar{C}}, perceived likelihood of being perceived as a high type after rejecting]

Scenario A: You think that if you do not agree to help, **they will think that you do not care about them at all** (and if you do agree to help, they will think that you care about them a lot).

Scenario B: You think that if you do not agree to help, **they will still think that you care about them somewhat** (and if you do agree to help, they will think that you care about them a lot).

[\sigma, how much S cares about her image]

Scenario A: You **do not care that much** about what they think about you.

Scenario B: You **care a lot** about what they think about you.

In which scenario would you be more likely to agree to help your family member pay for the

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bill? I would be... [-2=*Much more likely to agree in Scenario A*; -1=*Slightly more likely to agree in Scenario A*; 0=*Equally likely to agree in either scenario*; 1=*Slightly more likely to agree in Scenario B*; 2=*Much more likely to agree in Scenario B*]

In the story we showed you earlier, how much more money did your family member need in order to pay for the bill this month?

- ☐ \$100
- ☐ \$250
- ☐ \$300
- ☐ \$500
- ☐ \$1000

Gender:

- ☐ Male
- ☐ Female
- ☐ Non-conforming

Age:

- ☐ Under 20
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60-69
- ☐ 70 or over

Education:

- ☐ Less than high school
- ☐ High school graduate / GED
- ☐ Some college
- ☐ 2 year degree
- ☐ 4 year degree
- ☐ Professional degree
- ☐ Master's degree
- ☐ Doctorate

Race:

- ☐ White
- ☐ Black or African American
- ☐ Hispanic (non-white)
- ☐ Asian
- ☐ Other / mix
- ☐ Prefer not to answer

Annual household income, before taxes and deductions:

Please do not cite without permission.

- o \$0 - \$10,000
- o \$10,000 - \$20,000
- o \$20,000 - \$40,000
- o \$40,000 - \$60,000
- o \$60,000 - \$80,000
- o \$80,000 - \$100,000
- o \$100,000 - \$150,000
- o over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? (optional) *[Open ended]*

A.5 Study 2b

Materials

Imagine that you are struggling financially this month and expect you will be about \$500 short on an important bill. You have a family member who you think may be able to help you pay for the bill, though it would impose a financial burden on them to do so. Although they had an opportunity to offer you help, they did not offer. You are not sure whether they know that you need help.

On each of the next 5 pages, we will show you 2 different scenarios. Your task will be to decide in which of the 2 scenarios you would be more likely to ask for help. The text from the last page will be repeated in grey font each time as a reminder.

Please pay close attention, as the differences between the scenarios may be subtle. There will be a comprehension check question. If you answer it correctly, you will get an extra \$0.10 bonus.

[Vignette from above repeated.]

Consider two scenarios:

[Participants were shown the following five pairs of scenarios in random order. After each, they were asked the key question of interest, the scenario in which they would be more likely to ask for help. Which scenario was presented as being “Scenario A” versus “Scenario B” was counterbalanced. Each pair of scenarios and the outcome variable were displayed on a separate page.]

[a, probability S consents]

Scenario A: You think it is **quite unlikely** that they will agree to help if you ask them.

Scenario B: You think it is **quite likely** that they will agree to help if you ask them.

[\hat{q}_C , probability that S is high type, conditional on consenting]

Scenario A: If they agree to help you, you will conclude that **they may care about you, but they may also have helped you for some other reason.**

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Scenario B: If they agree to help you, you will conclude that **they probably care about you a lot.**

[$\hat{q}_{\bar{C}}$, probability that S is high type, conditional on rejecting]

Scenario A: If they turn you down, you will conclude that **it would not have been difficult for them to help and they must not care about you.**

Scenario B: If they turn you down, you will conclude that **it may have been difficult for them to help or they may not care about you.**

[$\hat{q}_{\bar{O}}$, probability that S is a high type, conditional on S not offering and R not asking]

Scenario A: If you do not ask, you will be left thinking that **they probably do not care about you.**

Scenario B: If you do not ask, you will be left thinking that **they probably care about you, but it was likely difficult for them to help you.**

[ν , size of need]

Scenario A: You **would be able to get by** with paying the bill a little later.

Scenario B: You **absolutely must** pay the bill this month.

In which scenario would you be more likely to ask your family member to help pay for the bill? I would be... [-2=*Much more likely to ask in Scenario A*; -1=*Slightly more likely to ask in Scenario A*; 0=*Equally likely to ask in either scenario*; 1=*Slightly more likely to ask in Scenario B*; 2=*Much more likely to ask in Scenario B*]

In the story we showed you earlier, how much more money did you need in order to pay for the bill this month?

- ☐ \$100
- ☐ \$250
- ☐ \$300
- ☐ \$500
- ☐ \$1000

Gender:

- ☐ Male
- ☐ Female
- ☐ Non-conforming

Age:

- ☐ Under 20
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59

Please do not cite without permission.

- o 60-69
- o 70 or over

Education:

- o Less than high school
- o High school graduate / GED
- o Some college
- o 2 year degree
- o 4 year degree
- o Professional degree
- o Master's degree
- o Doctorate

Race:

- o White
- o Black or African American
- o Hispanic (non-white)
- o Asian
- o Other / mix
- o Prefer not to answer

Annual household income, before taxes and deductions:

- o \$0 - \$10,000
- o \$10,000 - \$20,000
- o \$20,000 - \$40,000
- o \$40,000 - \$60,000
- o \$60,000 - \$80,000
- o \$80,000 - \$100,000
- o \$100,000 - \$150,000
- o over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? (optional) [*Open ended*]

A.6 Study 2c

Materials

Imagine that your family member is struggling financially this month and expects that they will be about \$500 short on an important bill. You would be able to help them pay for the bill, though it would impose a financial burden on you to do so. Your family member has not yet asked you for help with the bill, but you think that they might.

On each of the next 8 pages, we will show you 2 different scenarios. Your task will be to decide in which of the 2 scenarios you would be more likely to offer help. The text from the last page will be repeated in grey font each time as a reminder.

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Please pay close attention, as the differences between the scenarios may be subtle. There will be a comprehension check question. If you answer it correctly, you will get an extra \$0.10 bonus.

[Vignette from above repeated.]

Consider two scenarios:

[Participants were shown the following six pairs of scenarios in random order. After each, they were asked the key question of interest, the scenario in which they would be more likely to agree to help. Which scenario was presented as being “Scenario A” versus “Scenario B” was counterbalanced. Each pair of scenarios and the outcome variable were displayed on a separate page.]

[c, material cost of consenting]

Scenario A: It would be financially **relatively easy** for you to help.

Scenario B: It would be financially **very difficult** for you to help.

[p and w, S’s beliefs about the probability that R’s need at the time S is making the offering decision]

Scenario A: You think that **they would be able to get by with paying the bill a little later.**

Scenario B: You think that **they absolutely must pay the bill this month.**

[\hat{p}_A, S’s beliefs about the probability that R is high need, given that R has asked)]

Scenario A: Right now, you think that they do not need help urgently. If you don’t offer and they end up asking you for help, **it will not convince you** that they absolutely must pay the bill this month.

Scenario B: Right now, you think that they do not need help urgently. If you don’t offer and they end up asking you for help, **it will convince you** that they absolutely must pay the bill this month.

[\hat{q}_C, perceived likelihood of being perceived as a high type after consenting]

Scenario A: If you do not offer now, but later they ask you for help and you agree to help, **it is unlikely that they would come to believe that you care about them.**

Scenario B: If you do not offer now, but later they ask you for help and you agree to help, **there are reasons that they might still come to believe that you care about them.**

[\hat{q}_{\bar{C}}, perceived likelihood of being perceived as a high type after rejecting]

Scenario A: If you do not offer now, then later they ask you for help and you still don’t agree to help, **they will think that you probably do not care about them at all.**

Scenario B: If you do not offer now, then later they ask you for help and you still don’t agree to help, **they will think that you may care about them, but it may have also been difficult for you to help.**

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[\hat{q}_O , perceived likelihood of being perceived as a high type after offering]

Scenario A: If you offer help, they will think that **you might care about them a lot, but that it is also possible you just helped so that you would look generous.**

Scenario B: If you offer help, they will think that **you probably care about them a lot, and probably were not helping just to look generous.**

[$\hat{q}_{\bar{O}}$, perceived likelihood of being perceived as a high type after not offering]

Scenario A: You think that if you do not offer help, **they will think that you probably do not care about them at all.**

Scenario B: You think that if you do not offer help, **they will think that you may care about them, but it may have also been difficult for you to help.**

[σ , how much S cares about her image]

Scenario A: You **do not care that much** about what they think about you.

Scenario B: You **care a lot** about what they think about you.

In which scenario would you be more likely to offer your family member help with paying for the bill? I would be... [-2=Much more likely to offer in Scenario A; -1=Slightly more likely to offer in Scenario A; 0=Equally likely to offer in either scenario; 1=Slightly more likely to offer in Scenario B; 2=Much more likely to offer in Scenario B]

In the story we showed you earlier, how much more money did your family member need in order to pay for the bill this month?

- ☐ \$100
- ☐ \$250
- ☐ \$300
- ☐ \$500
- ☐ \$1000

Gender:

- ☐ Male
- ☐ Female
- ☐ Non-conforming

Age:

- ☐ Under 20
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60-69
- ☐ 70 or over

Education:

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- o Less than high school
- o High school graduate / GED
- o Some college
- o 2 year degree
- o 4 year degree
- o Professional degree
- o Master's degree
- o Doctorate

Race:

- o White
- o Black or African American
- o Hispanic (non-white)
- o Asian
- o Other / mix
- o Prefer not to answer

Annual household income, before taxes and deductions:

- o \$0 - \$10,000
- o \$10,000 - \$20,000
- o \$20,000 - \$40,000
- o \$40,000 - \$60,000
- o \$60,000 - \$80,000
- o \$80,000 - \$100,000
- o \$100,000 - \$150,000
- o over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? (optional) [*Open ended*]

Appendix B

The psychological costs of seeking informal loans

B.1 Community Human Services survey

Materials

This study was administered to people who had contacted a southwestern Pennsylvanian social services agency, Community Human Services, for financial help. Participants were all very low-income, and most were homeless, facing eviction, or otherwise living in unstable housing. Participants were asked to complete this survey using pencil and paper while waiting for an interview with the social services agency, at which stage the agency would determine how much help the participants would receive. The question below is only one question in a broader survey. The other questions on the survey asked about what kinds of needs the participant had, when they had identified that they had a problem, when they had identified that the social services agency might be able to help, what they had done so far to address their problem, why they may have delayed coming to the agency for help, and why or how they had ultimately decided to ask the agency for help.

How much do you agree with the following statement? “I find the idea of asking friends and family for financial help to be unpleasant.” [1=Strongly disagree; 2=Somewhat disagree; 3=Neutral; 4=Somewhat agree; 5=Strongly agree]

B.2 Ratings of different methods of acquiring money

Materials

Imagine that you have an emergency and you need to pay \$1000 in the next month. Imagine further that you cannot pay for it through savings. Consider the following 4 possible sources or methods of acquiring more money:

1. Working more for pay

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2. Borrowing money from friends or relatives
3. Getting financial resources from the government or a non-profit organization
4. Borrowing money on a credit card or through a different formal source (e.g., a payday loan)

[Participants then saw the following four modules in randomized order. For each, they were asked to rate the four methods of acquiring money on the relevant dimension before moving onto the next dimension.]

Assume you could get financial resources through each of the four methods. How financially attractive do you think each of these methods is? Consider the fees and interest you would pay with each one, based on the speed with which you could get the money and the terms of the conditions. *[1=Not at all financially attractive; 2=Slightly financially attractive; 3=Moderately financially attractive; 4=Very financially attractive; 5=Extremely financially attractive.]*

Assume you could get financial resources through each of the four methods. How much time / effort do you think it would take to acquire money through each one? Consider any applications you would need to submit to try to acquire the money, conversations you would need to have, etc. *[1=No time/effort; 2=A little time/effort; 3=A moderate amount of time/effort; 4=A lot of time/effort; 5=A great deal of time/effort.]*

How possible do you think it would be to get money through each method, if you put in the time / effort to get it? Consider what it would be like for you given where you are in your life right now. *[1=Not at all possible; 2=Slightly possible; 3=Moderately possible; 4=Very possible; 5=Extremely possible.]*

How would you feel trying to acquire money through each method? Consider how you would feel both psychologically and emotionally. *[1=Very poor; 2=Poor; 3=Fair; 4=Good; 5=Excellent.]*

Age:

- ☐ Under 20
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60-69
- ☐ 70 or over

Gender:

- ☐ Male
- ☐ Female
- ☐ Non-conforming

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Education:

- ☐ Less than high school
- ☐ High school graduate / GED
- ☐ Some college
- ☐ 2 year degree
- ☐ 4 year degree
- ☐ Professional degree
- ☐ Master's degree
- ☐ Doctorate

Race:

- ☐ White
- ☐ Black or African American
- ☐ Hispanic (non-white)
- ☐ Asian
- ☐ Other / mix
- ☐ Prefer not to answer

Annual household income, before taxes and deductions:

- ☐ \$0 - \$10,000
- ☐ \$10,000 - \$20,000
- ☐ \$20,000 - \$40,000
- ☐ \$40,000 - \$60,000
- ☐ \$60,000 - \$80,000
- ☐ \$80,000 - \$100,000
- ☐ \$100,000 - \$150,000
- ☐ over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? *[Open ended]*

Additional figures

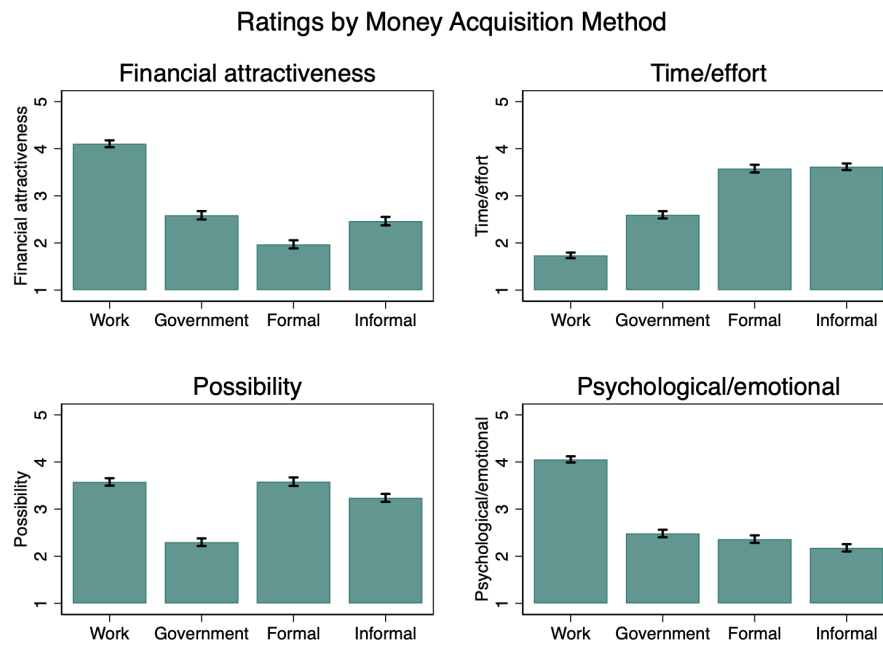


Figure B.1: $N = 201$. The time/effort variable is reverse coded such that higher values on all four dimensions are more desirable. Error bars denote mean value ± 1 SE.

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B.3 Study 1

Materials

Before we begin, we would like to see if you are eligible for this study.

Have you ever owned a credit card in your name?

- ☐ No
- ☐ Yes

Have you ever in your adult life felt like you could not handle your financial responsibilities/needs with the money that you had?

- ☐ No
- ☐ Yes

Have you ever taken out a payday loan?

- ☐ No
- ☐ Yes

[Participants who responded “yes” to the second question were allowed to proceed; all others were not.]

Welcome! Please think about the LAST time in your adult life when you felt as though you could not handle your financial responsibilities / needs with the money that you had. This can be something in the past, or something that you are currently experiencing. What happened? What did/do you need the money for? *[Open ended]*

Was this in the past, or is it still happening now?

- ☐ Fully in the past
- ☐ Still happening now

[Based on responses to this question, the remainder of the survey was presented either in the present or past tense. For brevity, the questions below use only the past tense.]

Over the next few pages, we will ask you about how you decided to address this financial difficulty, if at all. Please do your best to think about how you felt at the time.

First, we would like you to think about what options you believed were available to you for getting more money. Please check off which of the following options you recognized were available to you at some point during the episode you described above. For instance, if you knew that 1 way that you could temporarily address your financial issues was by putting expenses on a credit card until you could get more money to pay off the credit card bill, please check off “Paying bills with a credit card until I could get more money”— even if you never actually did this.

- ☐ Working more for pay
- ☐ Pursuing financial support from the government (e.g., welfare)

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- o Pursuing financial support from non-profit organizations / charities
- o Asking friend(s)/family/other individual(s) for help
- o Paying bills with a credit card until I could get more money
- o Taking out payday loan(s)
- o Taking out bank loan(s)
- o Getting an advance on my paycheck
- o Pulling money from savings accounts or assets (e.g., a home)
- o Selling possessions
- o Other: *[Text box]*
- o None of the above

Sometimes people who face financial problems ask a friend, relative, or someone else they know for help. If you asked one or more individuals for help, please think of the FIRST person you asked. If you never asked any individual person for help with this problem, please think of the person you would have been MOST LIKELY to ask for financial help.

Write their initials here. (E.g., write “JD” for “Jane Doe.” Leave this blank if you don’t know the person’s initials.) *[Text box]*

Which of the following best describes their relation to you? They are/were my...

- o Partner / significant other
- o Parent
- o Child
- o Sibling
- o Other relative
- o Friend
- o Acquaintance
- o Neighbor
- o Coworker / colleague
- o Boss / supervisor
- o Religious community leader
- o Other community leader
- o Stranger

On the next few pages, we will ask you about your thoughts and feelings about asking this particular person for help at the time that you were going through the financial stress you described earlier.

[For each of the statements below, “[my relation]” was replaced with the participant’s answer from the previous question, e.g. “my neighbor” or “my child.”]

At the time I was trying to decide what to do, I did not think about the possibility of asking [my relation]. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

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At the time I was trying to decide what to do, I thought it would be too expensive to get money from [my relation]. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I thought it would be too much effort to ask [my relation]. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I did not want to owe [my relation] money. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I was afraid of learning that maybe [my relation] didn't care about me enough to enthusiastically help me. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I was afraid that asking [my relation] would pressure him/her into helping me. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I thought it would take too much time to get the money from [my relation]. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I believed [my relation] would not be able to give me enough help to solve my problem. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I was afraid that [my relation] would tell other people about my problem. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I was concerned about taking money from [my relation] when I knew s/he needed her/his money, too. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I did not know how to ask [my relation] for financial help. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I thought I would feel worse if [my relation] turned me down after I asked him/her than if he/she simply didn't offer. *[1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]*

At the time I was trying to decide what to do, I did not believe that asking [my rela-

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tion] would increase the chances that s/he gave me help. [1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]

At the time I was trying to decide what to do, I believed that I would not want help from [my relation], even if I did not have to ask for it (e.g., even if s/he offered me help on her/his own accord). [1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]

At the time I was trying to decide what to do, I was ashamed of revealing to [my relation] that I needed money. [1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]

At the time I was trying to decide what to do, I was afraid that if I got a loan from [my relation], I would not be able to pay him/her back. [1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]

At the time I was trying to decide what to do, I believed it would be uncomfortable or unpleasant to ask [my relation] for help. [1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]

At the time I was trying to decide what to do, I felt it would have been inappropriate to ask [my relation] for help. [1=Do not agree at all; 2=Agree a little; 3=Agree a moderate amount; 4=Agree a lot; 5=Agree a great deal]

What did you ultimately do to address your financial situation (if anything)? Please check all that apply.

- o Worked more for pay
- o Pursued financial support from the government (e.g., welfare)
- o Pursued financial support from non-profit organizations / charities
- o Asked friend(s)/family/other individual(s) for help
- o Paid bills with a credit card until I could get more money
- o Took out payday loan(s)
- o Took out bank loan(s)
- o Got an advance on my paycheck
- o Pulled money from savings accounts or assets (e.g., a home)
- o Sold some possessions
- o Other: [Text box]
- o Nothing

[Participants who checked off the box indicating that they had asked friend(s), family, and/or other individual(s) for help were asked the following question.]

How did you ask the person / people you asked? Please check all that apply.

- o I asked directly, such that the person/people had to explicitly give me a “yes,” “no,” or “maybe” response
- o I asked indirectly, such that I tried to communicate to a specific person that I wanted help,

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- but not in a way where they had to explicitly give me a “yes,” “no,” or “maybe” response
- o I asked someone else to ask on my behalf
 - o I posted an announcement on social media, in a newsletter, or elsewhere so that a large number of people would see my request
 - o Other: *[Text box]*
 - o Not sure

Age:

- o Under 20
- o 20-29
- o 30-39
- o 40-49
- o 50-59
- o 60-69
- o 70 or over

Gender:

- o Male
- o Female
- o Non-conforming

Education:

- o Less than high school
- o High school graduate / GED
- o Some college
- o 2 year degree
- o 4 year degree
- o Professional degree
- o Master’s degree
- o Doctorate

Race:

- o White
- o Black or African American
- o Hispanic (non-white)
- o Asian
- o Other / mix
- o Prefer not to answer

Annual household income, before taxes and deductions:

- o \$0 - \$10,000
- o \$10,000 - \$20,000
- o \$20,000 - \$40,000
- o \$40,000 - \$60,000

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- o \$60,000 - \$80,000
- o \$80,000 - \$100,000
- o \$100,000 - \$150,000
- o over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? *[Open ended]*

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Additional tables

	Caring	Pressure	How to ask	Rejection	Uncomf.	Inapprop.
Caring	1.000					
Pressure	0.293	1.000				
How to ask	0.613	0.316	1.000			
Rejection	0.527	0.251	0.414	1.000		
Uncomf.	0.298	0.424	0.431	0.356	1.000	
Inapprop.	0.354	0.460	0.465	0.252	0.545	1.000
<i>N</i>	403					

Table B.1: Study 1 interitem correlations for all pain of asking measures. See Appendix B.3 for precise measures.

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	(1)	(2)	(3)	(4)
Pain of asking	-0.283** (0.123)	-0.442*** (0.160)	0.0374 (0.205)	0.0557 (0.270)
Standard economic factors			-0.257 (0.165)	-0.881*** (0.228)
Other psychological factors			-0.173 (0.182)	0.126 (0.232)
Covariates	No	Yes	No	Yes
Constant	-0.148 (0.379)	1.614 (1.837)	0.0827 (0.448)	2.121 (2.061)
N	403	388	403	388
Pseudo R^2	0.013	0.174	0.021	0.211

Table B.2: Study 1 results while retaining participants who provided incomplete data. Logistic regressions where the dependent variable is whether the participant asked or plans on asking a friend, family member, or other individual for financial help. Covariates are whether the financial emergency episode is still ongoing (binary indicator), the participant's relation to the person the participant would or did ask for help, gender, age, education, income, and race. Standard errors are robust and in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

B.4 Study 2

Materials

Imagine that you have an emergency and you need to pay [\$200 / \$1000 / \$5000] in the next 30 days. Imagine further that you cannot pay for it through savings and the only way that you would be able to pay for it is by asking a friend and/or relative to loan you the money. In as much detail as possible, please describe who you would ask (without using their full name), how you would do it, what you would say, and how you would feel about it. *[Text box.]*

Now please imagine that instead of paying the [\$200 / \$1000 / \$5000] bill in the next 30 days (which you could not pay without asking a friend/relative for a loan), you have the option to pay the bill later. You know that if you had enough time, you could eventually pay the bill yourself. However, you are told that because you would be paying the bill later, you would need to pay a larger amount.

What is the maximum amount you would be willing to increase the bill to in order to ensure you could pay for it yourself, without asking for help? Please write the *total amount* of the bill. For instance, if you would be willing to pay a [\$240 / \$1200 / \$6000] bill to avoid asking friends/relatives for help, write [“\$240” / “\$1200” / “\$6000”]. If you would not be willing to increase the bill at all, write [“\$200” / “\$1000” / “\$5000”]. *[Text box.]*

Age:

- ☐ Under 20
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60-69
- ☐ 70 or over

Gender:

- ☐ Male
- ☐ Female
- ☐ Non-conforming

Education:

- ☐ Less than high school
- ☐ High school graduate / GED
- ☐ Some college
- ☐ 2 year degree
- ☐ 4 year degree
- ☐ Professional degree
- ☐ Master’s degree
- ☐ Doctorate

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Race:

- ☐ White
- ☐ Black or African American
- ☐ Hispanic (non-white)
- ☐ Asian
- ☐ Other / mix
- ☐ Prefer not to answer

Annual household income, before taxes and deductions:

- ☐ \$0 - \$10,000
- ☐ \$10,000 - \$20,000
- ☐ \$20,000 - \$40,000
- ☐ \$40,000 - \$60,000
- ☐ \$60,000 - \$80,000
- ☐ \$80,000 - \$100,000
- ☐ \$100,000 - \$150,000
- ☐ over \$150,000

Do you have any final comments to give us? In particular, did you find anything to be strange or unclear? *[Open ended]*

Appendix C

Factors affecting end-stage renal disease patients' willingness to seek live kidney donations

C.1 Baseline survey

Materials

Are you currently on a waitlist to receive a kidney transplant (also known as being “approved for listing” for renal transplant)?

- ☐ No
- ☐ Yes

Were you ever on a waitlist to receive a kidney transplant (also known as being “approved for listing” for renal transplant), but then removed without receiving a transplant?

- ☐ No
- ☐ Yes

Have you previously received a kidney transplant?

- ☐ No
- ☐ Yes

[Respondents who answered “yes” to at least one of the three questions above were allowed to continue; all others were not.]

[For respondents who answered “yes” to the waitlist question:]

Where do you primarily live now?

- ☐ US
- ☐ Canada
- ☐ Neither

[For respondents who answered “yes” to the kidney receipt question:]

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Where were you primarily living immediately before you learned you would receive a kidney transplant?

- ☐ US
- ☐ Canada
- ☐ Neither

[For respondents who answered “yes” to the question on being removed from a waitlist:]

Where were you primarily living immediately before you were removed from the kidney transplant waitlist?

- ☐ US
- ☐ Canada
- ☐ Neither

[Respondents who answered “US” or “Canada” to at least one of the three questions above were allowed to continue; all others were not.]

[Participants who indicated that they were currently on the waitlist saw the next statement:]

Welcome! We appreciate your participation in this research. This study will ask you about your experiences with end stage renal disease (ESRD), as well as your beliefs, views, and opinions about your treatment options. If at any point you are uncomfortable, you may stop taking the survey without penalty. Thank you!

[Participants who indicated having previously received a kidney transplant (and not currently being on the waitlist) saw the next three questions/statements:]

Welcome! We appreciate your participation in this research. This study will ask you about your experiences with end stage renal disease (ESRD), as well as your beliefs, views, and opinions about the treatment options you had before you learned you would receive a transplant. If at any point you are uncomfortable, you may stop taking the survey without penalty.

First, was your transplant from a deceased donor (cadaver) or from a living donor? If you received more than one transplant, please tell us about the *last* transplant you received.

- ☐ Deceased donor
- ☐ Living donor

Okay, thanks. For much of this survey, we'll ask you to think about how you felt and what you thought immediately before you learned you would receive a transplant. If you received more than one transplant, please think about how you felt and what you thought immediately before the LAST transplant you received.

[Participants who indicated previously being on the waitlist and then being removed without receiving a kidney (and not currently being on the waitlist) saw the next three questions/statements:]

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Welcome! We appreciate your participation in this research. This study will ask you about your experiences with end stage renal disease (ESRD), as well as your beliefs, views, and opinions about the treatment options you had before you were removed from the transplant waitlist. If at any point you are uncomfortable, you may stop taking the survey without penalty.

First, can you tell us why you were removed from the kidney transplant waitlist?

- o I decided to remove myself
- o Someone else removed me for health reasons (but I would have wanted to stay on the list)
- o Someone else removed me for other reasons (but I would have wanted to stay on the list)
- o Other (please fill in): *[Text box]*

Okay, thanks. For much of this survey, we'll ask you to think about how you felt and what you thought immediately before you were removed from the transplant waitlist.

[The remainder of the survey was similar for all three groups of participants, except where explicitly marked. For brevity, the questions below are written as they were for participants who indicated being actively on the waitlist. For participants who indicated having previously received a kidney transplant (and not currently being on the waitlist), the questions did not refer to the present, but instead to the time period immediately before they learned they would receive a transplant. For participants who indicated previously being on the waitlist and then being removed without receiving a kidney (and not currently being on the waitlist), the questions referred to the time period immediately before they learned they were being removed from the list.]

First, we'll ask you some questions on how you feel about different treatments.

Imagine that you could get any of the following four treatments. Which would you want the MOST? *[Responses presented in random order.]*

- o Live-donor kidney transplant from a willing, healthy donor who was a good match
- o Deceased-donor kidney transplant from a healthy donor who was a good match
- o Being on dialysis for the remainder of your life
- o No treatment (stopping dialysis or never going on)

Okay, now of the following three treatments, which would you want the MOST? *[Same responses as above, minus the one the participant chose.]*

Okay, now of the following two treatments, which would you want the MOST? *[Same responses as above, minus the one the participant chose.]*

[For participants who indicated that the live donor kidney transplant was one of the two least preferred options:]

Can you please explain why you are not very interested in receiving a live kidney donation?
[Text box.]

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Please think about your quality of life. On a scale from 0 to 100, where 0 is “worst imaginable quality of life” and 100 is “best imaginable quality of life,” what do you think is your health-related quality of life now, in your current state of health? *[Slider from 0 to 100.]*

Suppose that you received a *deceased-donor organ transplant* and the surgery was successful. In that situation, what do you think your health-related quality of life would be? *[Slider from 0 to 100.]*

Now, suppose that you received a *living-donor organ transplant* and the surgery was successful. In that situation, what do you think your health-related quality of life would be? *[Slider from 0 to 100.]*

Suppose you do not receive a live donor organ for transplant. Counting from today, what is your best guess as to *how much longer* it would take for you to receive a deceased-donor (cadaveric) organ for transplant? Please input response in years, months, and days. For instance, if you think it will take 5 years, 3 months, and 15 days, input 5, 3, and 15 into the three boxes, in that order. If you think it will take 0 years, 0 months, and 10 days, input 0, 0, and 10 into the three boxes, in that order. Select “never” if you think you will never receive one. *[Three boxes, labeled “Years,” “Months,” and “Days.” Next to these was an option labeled “Never.”]*

If you had to guess, how old do you think you would live to be if you *did not receive any transplant*? *[Slider from 20 to 120.]*

If you had to guess, how old do you think you would live to be if you received a *deceased-donor organ transplant*? *[Slider from 20 to 120.]*

If you had to guess, how old do you think you would live to be if you received a *living-donor organ transplant*? *[Slider from 20 to 120.]*

As you may know, there is some risk associated with surgery. What do you think is the risk of death you would face in the first 30 days following a *deceased-donor organ transplant*? You can write this using a percent or fraction. *[Text box.]*

Now please consider the risk of death you would face in the first 30 days following a *living-donor organ transplant*. Do you think it would be less risky than a deceased-donor organ transplant, equally risky, or more risky?

- ☐ Less risky
- ☐ Equally risky
- ☐ More risky

What do you think is the risk of death a *donor* would face in the first 30 days following a living-donor operation? Again, you can write this using a percent or fraction. *[Text box.]*

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Is there anybody who you think might be willing to make a live kidney donation to you if they knew you needed a kidney? Please do not think about whether they would be physically able to donate, or whether they might be a match— just think about whether they might be willing.

- ☐ No
- ☐ Yes

[For participants who answered “Yes” to the last question:]

How many people do you know who you think might be willing to make a live kidney donation to you if they knew you needed a kidney? Again, please do not think about whether they would be physically able to donate, or whether they might be a match— just think about whether they might be willing. *[Text box.]*

Has anyone offered to donate a kidney to you?

- ☐ No
- ☐ Yes
- ☐ Not sure

[Participants who answered “Yes” to the last question saw the following three questions; all others skipped them.]

How many people have offered to donate a kidney to you? *[Text box.]*

And did you accept this kidney (or these kidneys)?

- ☐ No
- ☐ Yes
- ☐ Mix (accepted some, turned down others)

Can you please explain what happened? *[Text box.]*

One way to identify whether someone might be willing to be a live donor for you is to ask them directly. By “ask directly,” we mean that you expect that they will give you a direct “yes,” “no,” or “maybe” response. Have you, yourself, directly asked anyone to consider becoming a live donor for you? Please only consider people you directly asked yourself— i.e., do not count people who someone else asked on your behalf, and do not count people who offered without you asking.

- ☐ No
- ☐ Yes

[For participants who answered “Yes” to the last question:]

How many people have you directly asked to consider becoming a live donor for you? Again, please only consider people you directly asked yourself— i.e., do not count people who someone else asked on your behalf, and do not count people who offered without you asking. *[Text box.]*

Another way to identify whether someone might be willing to be a live donor for you

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is to hint that you want a donation. By “hint,” we mean that you try to make it clear to someone that you want a donation, and that you do this with the hope that they might offer you help, but you do not explicitly ask for a donation. Have you, yourself, *hinted* to anyone that you would like them to consider becoming a live donor for you? Please do NOT consider hints that other people made on your behalf, or things like posts to Facebook or newsletters—we’ll get to those in a second.

☐ No

☐ Yes

[For participants who answered “Yes” to the last question:]

To how many people have you *hinted* that you would like them to consider becoming a live donor for you? Again, please do NOT consider hints that other people made on your behalf, or things like posts to Facebook or newsletters. *[Text box.]*

[For participants who answered “No” to both the direct ask and hinting questions:]

Do you have a sense of why you haven’t asked anyone to consider becoming a live donor for you? *[Text box.]*

Think of the person you would be *most* likely to ask to be a donor for you. What do you think is the probability this person would offer to donate an organ to you if you...

[Questions presented in random order, each on a 0-100 scale]

...did NOT ask them to consider donating an organ to you?

...HINTED that you’d like them to consider donating an organ to you?

...DIRECTLY asked them to consider donating an organ to you?

Have you ever posted about your need for a kidney publicly or semi-publicly, such as through a newsletter, an advertisement, Facebook, Reddit, or a different web platform?

☐ No

☐ Yes

[For participants who answered “Yes” to the last question:]

Can you briefly explain what you posted, where you posted, and what happened after you posted? *[Text box.]*

Now I’d like you to think about “champions.” As you may know, “champions” or “surrogates” are people who try to find a live donor for you. Has anyone offered to be a champion for you?

☐ No

☐ Yes

☐ Not sure

[For participants who answered “Yes” to the last question:]

How many people have offered to be a champion for you? *[Text box.]*

Have you, yourself, directly asked anyone to consider becoming a champion for you?

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Again, by “ask directly,” we mean that you expect that they will give you a direct “yes,” “no,” or “maybe” response. Again, please only consider people you directly asked yourself—i.e., do not count people who someone else asked on your behalf, and do not count people who offered without you asking.

- ☐ No
- ☐ Yes

[For participants who answered “Yes” to the last question:]

How many people have you directly asked to consider becoming a *champion* for you? *[Text box.]*

Have you, yourself, hinted to anyone that you would like them to become a *champion* for you? Again, by “hint,” we mean that you try to make it clear to someone that you want them to be a champion, and that you do this with the hope that they might offer you help, but you do not explicitly ask them to be a champion. Please do NOT consider hints that other people made on your behalf, or things like posts to Facebook or newsletters.

- ☐ No
- ☐ Yes

[For participants who answered “Yes” to the last question:]

To how many people have you hinted that you would like them to become a *champion* for you? *[Text box.]*

[For participants who answered “No” to both the direct ask and hinting questions:]

Do you have a sense of why you haven’t asked anyone to consider becoming a champion for you? *[Text box.]*

Think of the person you would be *most* likely to ask to be a champion for you. What do you think is the probability this person would become a champion for you if you...

[Questions presented in random order, each on a 0-100 scale]

...did NOT ask them to become a champion for you?

...HINTED that you’d like them to become a champion for you?

...DIRECTLY asked them to become a champion for you?

On a scale from 1 to 10, where 1 is “not at all ready” and 10 is “extremely ready,” how ready do you currently feel to ask someone to consider becoming a live donor for you? *[1=Not at all ready; 10=Extremely ready]*

And how ready do you currently feel to ask someone to consider becoming a champion for you? *[1=Not at all ready; 10=Extremely ready]*

There are lots of reasons why people may not ask others for a live donation. We’re going to ask you to think about why you may have not asked more people to consider becoming a live donor. You’ll see some statements and then tell us how much you agree with each statement. *[Order of statements randomized.]*

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Here's the first one:

How much do you agree with this statement? "I haven't asked more people to consider becoming a live donor for me because I don't know anyone who is willing and able to donate." [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? "I haven't asked more people to consider becoming a live donor for me because I don't feel a living donor organ transplant would improve my life much." [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? "I haven't asked more people to consider becoming a live donor for me because I think I will receive a deceased-donor organ soon." [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? "I haven't asked more people to consider becoming a live donor for me because I am afraid I would be physically harmed during the surgery or recovery." [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? "I haven't asked more people to consider becoming a live donor for me because I am ashamed about my need for an organ." [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? "I haven't asked more people to consider becoming a live donor for me because I'm afraid the surgery would harm the live donor." [1=Do not agree at all; 10=Strongly agree]

Thanks for your responses. One reason why people sometimes struggle to secure a live donation is that it is hard or unpleasant to ask family members, friends, or strangers to consider donating to them. On a scale from 1 to 10, how much do you agree with the following statement? "I haven't asked more people to consider becoming a live donor for me because I find it hard or unpleasant to ask others to consider donating." [1=Do not agree at all; 10=Strongly agree]

[For participants who answered anything except for "1" on the previous question:]

What about the conversation or the process of asking do you think makes you most hesitant to approach others for a live donation? If you would like to discuss specific people, please don't use their names or identifying information about them—just use terms like "my doctor" or "my sister." [Text box.]

Now, you're going to see another list of statements.

How much do you agree with this statement? "I haven't asked more people to consider becoming a live donor for me because I don't know how to approach such a sensitive topic." [1=Do not agree at all; 10=Strongly agree]

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How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because I am afraid of learning that the person I ask doesn’t care enough about me to help.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because I fear a live donation would be too much to ask for.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because I feel that asking would harm my relationship with the person I asked.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because I think I’d feel worse if someone turned me down after I asked than if they simply didn’t offer.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because I am afraid that by asking, I would be pressuring someone into donating.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because I feel it’s inappropriate to ask for an organ.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because they probably already know about my need, so there is no point in asking.” [1=Do not agree at all; 10=Strongly agree]

Last one: How much do you agree with this statement? “I haven’t asked more people to consider becoming a live donor for me because if they haven’t offered to donate yet, it probably means they’re not willing to donate.” [1=Do not agree at all; 10=Strongly agree]

Okay, so we just went through some reasons that sometimes make people LESS willing to ask potential donors to consider donating. Now, I’d like you to think about the opposite. What do you think might make you MORE willing to ask? [Text box.]

And using the same 1 to 10 scale, from “do not agree at all” to “strongly agree,” how much do you agree with this statement? “The fact that people might not know that I need an organ makes me more willing to ask them to consider becoming a live donor for me.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “If I ask, it’ll be hard for them to say ‘no,’ so I’ll be more likely to get an organ.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “If somebody wants to donate to me,

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they will; there is no benefit in asking for a kidney directly.” [1=Do not agree at all; 10=Strongly agree]

How much do you agree with this statement? “I feel I know how to find and approach a living donor.” [1=Do not agree at all; 10=Strongly agree]

[For participants in the waitlist Treatment condition:]

Talking to people about medical needs can be challenging and uncomfortable. Please write a letter to someone recently diagnosed with end-stage renal disease with advice on one of the following topics:

(a) How can you approach a potential champion to ask them to consider becoming a champion?

or

(b) How can you approach a potential donor to ask them to consider becoming a donor?

Please note that we will share your response with someone recently diagnosed with ESRD. Your response will not be tied to your identity. *[Text box.]*

[For participants in the waitlist Control condition:]

Maintaining a healthy lifestyle after a renal disease diagnosis can be challenging. Please write a letter to someone recently diagnosed with end-stage renal disease with advice on one of the following topics:

(a) How can you maintain a healthy diet?

or

(b) How can you maintain a healthy exercise routine?

Please note that we will share your response with someone recently diagnosed with ESRD. Your response will not be tied to your identity. *[Text box.]*

Which transplant center(s) are you listed at? If you are not listed at any transplant center, please write “NA” into the first box. If you are listed at more than 3 centers, please just write in the first 3 that you were listed at. *[Three text boxes.]*

How severe do you think the state of your kidney is? You can use a scale from 1 to 10, where 1 is “not at all severe,” and 10 is “extremely severe.” [1=Not at all severe; 10=Extremely severe]

Approximately when were you placed on the kidney transplant waitlist? *[Dropdown menus of month and year]*

[For participants currently on the waitlist:]

Approximately when did you begin dialysis? (Leave blank if you’re not on dialysis.) *[Dropdown menus of month and year]*

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[For participants who have received a kidney and were not currently on the waitlist:]

Approximately when did you receive your kidney? *[Dropdown menus of month and year]*

[For participants who were on the waitlist, were removed without receiving a kidney, and were not currently on the waitlist:]

Approximately when were you removed from the kidney transplant waitlist? *[Dropdown menus of month and year]*

[For participants who indicate living in the US:]

In which state do you live? *[Dropdown menu of US states]*

Age: *[Text box]*

Sex:

- ☐ Male
- ☐ Female
- ☐ Non-binary

Race:

- ☐ White
- ☐ Black or African American
- ☐ Hispanic (non-white)
- ☐ Asian
- ☐ Other / mix
- ☐ Prefer not to answer

What is your highest level of education achieved?

- ☐ Less than high school
- ☐ High school graduate / GED
- ☐ Some college
- ☐ 2 year degree
- ☐ 4 year degree
- ☐ Professional degree
- ☐ Master's degree
- ☐ Doctorate / PhD

Approximately what is your annual household income, before taxes and deductions?

- ☐ \$0 - \$10,000
- ☐ \$10,000 - \$20,000
- ☐ \$20,000 - \$40,000
- ☐ \$40,000 - \$60,000
- ☐ \$60,000 - \$80,000
- ☐ \$80,000 - \$100,000
- ☐ \$100,000 - \$150,000

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o over \$150,000

Have you taken this survey before? It's not a problem if so— we just want to know!

o No

o Yes

o Maybe / unsure

[For participants currently on the waitlist:]

Thank you so much for your time! One final question: Is it okay for us to contact you again in the next couple of weeks to send you a very quick followup survey (3-5 minutes)? It would be a huge help to us!

o No, please do not contact me

o Yes, I am okay with being contacted

[For participants who answered “Yes” to the previous question:]

Great, thank you so much! What is the best email address to reach you at for the one-time followup survey? (We will not use your email address for anything else, we promise.) *[Text box]*

That's it! Do you have any final comments? *[Open ended]*

Thank you for your time! Do you have any friends who are currently or were previously listed for a kidney transplant? If so, can you please share a link to this survey with them? The more responses we get, the more we can learn—and, hopefully, the more people we can help. To share the survey, please copy-paste this link: *[link]* If your friend is taking the survey on the same computer as you, you may need to clear cookies or open the link in an incognito window.

[For participants who indicated that we could contact them again:]

Finally, we will contact you in the next couple of weeks to send you a quick followup survey. We hope that you will be willing to take it! Thank you again!

C.2 Followup survey

Materials

Welcome and thank you so much for your participation! Some of the questions in this survey may be hard for you to think about. Remember, you are free to stop anytime. Thank you again for participating— we hope that your responses will help other people with ESRD.

First, please verify the email address to which we sent this survey. *[Text box.]*

Thanks! Last time, you answered some questions about how you thought and felt about different renal disease treatment options. In this survey, we'd like to ask you about your experiences since that last survey.

One way to identify whether someone might be willing to be a live donor for you is to

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ask them directly. By “ask directly,” we mean that you expect that they will give you a direct “yes,” “no,” or “maybe” response. Since that last survey a couple of weeks ago, have you, yourself, directly asked anyone to consider becoming a live donor for you? Please only consider people you directly asked yourself— i.e., do not count people who someone else asked on your behalf, and do not count people who offered without you asking.

- ☐ No
- ☐ Yes

[For participants who answered “Yes” to the last question:]

How many people have you directly asked to consider becoming a live donor for you since that last survey a couple of weeks ago? Again, please only consider people you directly asked yourself— i.e., do NOT count people who offered without you asking. *[Text box.]*

Another way to identify whether someone might be willing to be a live donor for you is to hint that you want a donation. By “hint,” we mean that you try to make it clear to someone that you want a donation, and that you do this with the hope that they might offer you help, but you do not explicitly ask for a donation. Since that last survey a couple of weeks ago, have you, yourself, hinted to anyone that you would like them to consider becoming a live donor for you? Please do NOT consider hints that other people made on your behalf, or things like posts to Facebook or newsletters— we’ll get to those in a second.

- ☐ No
- ☐ Yes

[For participants who answered “Yes” to the last question:]

To how many people have you hinted that you would like them to consider becoming a live donor for you since that last survey a couple of weeks ago? Again, please do NOT consider hints that other people made on your behalf, or things like posts to Facebook or newsletters. *[Text box.]*

Since that last survey a couple of weeks ago, have you posted about your need for a kidney publicly or semi-publicly, such as through a newsletter, an advertisement, Facebook, Reddit, or a different web platform?

- ☐ No
- ☐ Yes

Now we’d like you to think about “champions.” Recall that “champions” or “surrogates” are people who try to find a live donor for you. Since that last survey a couple of weeks ago, have you, yourself, directly asked anyone to consider becoming a *champion* for you? Again, by “ask directly,” we mean that you expect that they will give you a direct “yes,” “no,” or “maybe” response. Again, please only consider people you directly asked yourself— i.e., do not count people who someone else asked on your behalf, and do not count people who offered without you asking.

- ☐ No
- ☐ Yes

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[For participants who answered “Yes” to the last question:]

How many people have you *directly* asked to consider becoming a *champion* for you since that last survey a couple of weeks ago? *[Text box.]*

Since that last survey a couple of weeks ago, have you, yourself, *hinted* to anyone that you would like them to become a *champion* for you? Again, by “hint,” we mean that you try to make it clear to someone that you want them to be a champion, and that you do this with the hope that they might offer you help, but you do not explicitly ask them to be a champion. Please do NOT consider hints that other people made on your behalf, or things like posts to Facebook or newsletters.

☐ No

☐ Yes

[For participants who answered “Yes” to the last question:]

To how many people have you *hinted* that you would like them to become a *champion* for you since that last survey a couple of weeks ago? *[Text box.]*

On a scale from 1 to 10, where 1 is “not at all ready” and 10 is “extremely ready,” how ready do you currently feel to ask someone to consider becoming a *live donor* for you? *[1=Not at all ready; 10=Extremely ready]*

And how ready do you currently feel to ask someone to consider becoming a *champion* for you? *[1=Not at all ready; 10=Extremely ready]*

That’s it! Is there anything else you would like to add? (Optional)