ESSAYS ON DONATION AND HELPING BEHAVIOR

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Abstract

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In 2015, individual donations were at a $264.58 billion high, accounting for about 72% of overall donations. The proportion of individual donations coming from crowdfunding has had a steep, increasing pattern. In 2015, for instance, $34 billion of the individual donation came from crowdfunding sources, which has nearly doubled since 2014. This share was at about $5 billion in 2013 (Forbes 2015; www.GivingUSA.org 2017). The increasing use of the Internet and the growth in crowdfunding vehicles give rise to more increasing estimates of this share for the years to come.

While it seems intuitive that sharing online crowdfunding campaigns on social media increases donations, since more people get to know about them, the net effect of such sharing has not been studied. In Essay 1, using data scraped from a major crowdfunding website, it is shown that sharing crowdfunded campaigns on social media actually has a negative effect on donations. This is a phenomenon which, in recent literature, has come to be known as slacktivism; the tendency of people to make fast, easy contributions (e.g., sharing a campaign, wearing a bracelet to support a cause, etc.) instead of meaningful, perhaps more difficult contribution (e.g., actually giving money to a cause). It is further shown that consistent with similar online social living (non-donation) campaigns (e.g., Groupon), there is a 'critical mass' beyond which donations increase significantly. The existence of these phenomena in the nonprofit domain has important strategic implications about how awareness is to be made about nonprofit campaigns in the online world.

Building up upon the implications of Essay 1, Essay 2 uses propensity-score matching (PSM) to compare and contrast the success factors of campaigns that are shared both on the

social media and traditional media vis-à-vis those that are merely shared on the social media. Using data scraped from a major crowdfunding website, average treatment effect (ATE) is estimated for various success factors. This research is the first of its kind to measure treatment effects in the online crowdfunding of charitable donations. Further, the literature on this topic does not offer a concrete prediction as to which means of promotion might have a superior effect. This research has important implications for using social media as a promotion tool.

Finally, Essay 3 investigates donations in the not-exactly-cheerful realm of cadaveric organs for transplantation. Given that the rational decision-making framework has not been significantly successful in explaining and predicting behavior in this domain, a conceptual framework is proposed to study cadaveric organ donations using irrational (illogical) beliefs. This research has important implications for reducing the considerable gap between the current supply and demand of cadaveric organs.

Essay 1

An Old Wick in a New Lamp: Slacktivism and Perceived Critical Mass in Online Crowdfunded Donation Campaigns

ABSTRACT

Donations by individuals make up the vast majority of contributions received by nonprofit organizations. Based on the statistics published by Giving USA, around 72% of donations made in 2014 ($258.5 billion) were individual contributions. Not surprisingly, in a digital era, online donation campaigns account for a significant part of contribution figures. Crowdfunding campaigns, in particular, collected about $16 billion in 2014, a 1718% increase from 2010. While it seems intuitive that sharing these campaigns on social media increases donations, as more people get to know about them, the net effect of such sharing has not been studied. Using data collected from a major crowdfunding website, and utilizing three econometrics models, it is shown that sharing crowdfunded campaigns on social media actually has a negative effect on donations. A phenomenon which, in recent literature, has come to be known as slacktivism; the tendency of people to make fast, easy contributions (e.g., sharing a campaign, wearing a bracelet to support a cause, etc.) instead of meaningful, perhaps more difficult contributions (e.g., actually giving money to a cause). It is further shown that consistent with similar social living (non-donation) campaigns (e.g., Groupon), there is a 'critical mass' beyond which donations increase significantly. The existence of these phenomena in the nonprofit domain has important strategic implications about how awareness is to be made about nonprofit campaigns in the online world. It could also lead to more creative social media awareness strategies than merely sharing.

INTRODUCTION

"We make a living by what we get. We make a life by what we give." ~ Winston Churchill

Donation-making entities can be grouped into various categories; individuals, corporations, foundations, etc. Regardless of the type of grouping, donations made by individuals are in the majority. In 2013, donations made by individuals were around a staggering $241 billion. A figure that increased about 7% in 2014 reaching around $258 billion, which made up around 72% of all donations made that year (www.GivingUSA.org). Of all the vehicles for donation-seeking and donation-making, one is of relative recency and technological facility; i.e., online crowdfunding. Crowdfunding has been used to collect the necessary funds for various ends, including entrepreneurial projects, freelance businesses, and so on. It has also come in various forms of funds (e.g., short-term loans, donations, etc.). In 2014, crowdfunding campaigns collected around $16 billion. A figure that was estimated to be around $34 billion in 2015 (Forbes 2015). A few of these crowdfunding websites are devoted exclusively to donation campaigns with reasonable monetary volume. One major donation crowdfunding website, for instance, had around $470 million in transaction volume in 2014 (www.crowdfunding.com). Campaigns on these websites are created by individual users and can be promoted by sharing, tweeting, etc. on the social media. Some of these campaigns are about tragedies of such high level that they become newsworthy and get broadcast on the news media.

Being online businesses, it is natural for these websites to choose other online businesses as their publicity media. As a result, all of these websites have major presence in the social media. Further, sharing in the social media creates the opportunity to address a huge audience. The number of people connected through the social media is estimated to be nearly 2.5 billion individuals by the end of 2018, which is around a third of the Earth's population

(https://www.statista.com/topics/1164/social-networks/, Accessed Aug 8 2017). Twenty eight percent of the online time of the average person is spent on the social media, which is around 1 hour and 40 minutes a day (The Telegraph 2016). Therefore, it makes considerable sense for donation crowdfunding websites to have a social media presence as the social media provide them with relatively costless publicity tools that bring about colossal benefits.

On the social media user's side, however, there may not actually be so many benefits. Prior research has shown that in circumstances where a token display of support is possible (e.g., wearing a bracelet for a cause, signing a petition, changing one's Facebook profile picture, and so on), many people actually stop at merely making this superficial contribution and do not take the extra, meaningful step (e.g., actually doing something for a cause, donating actual money, etc.) to help. This phenomenon has come to be known as 'slacktivism' (Kristofferson et al. 2014; Davis 2011; Morozov 2009). When a crowdfunding donation campaign is shared on Facebook or Twitter, users who see the campaign have one of two choices: (1) to follow the link to the donation website, learn more about the campaign, and potentially contribute to it, and (2) to merely re-share or retweet the campaign for others to see. This second effortless step, which also has the advantage of being publicly visible, could lull the user into thinking that s/he has done what is necessary to ease the plight of those who need help. Therefore, such users do not feel any more emotionally burdened to make a meaningful contribution to these campaigns. As a result, of all the shares of a given campaign, only a few actually bring about what the campaign makers need; in this case, monetary donations. Thus, using the social media to share these campaigns as a publicity tool does not have the immense benefit it was thought to have. One of the purposes of the present research is to show that the slacktivism phenomenon exists in crowdfunded donations

and that it causes the net effect of shares of such campaigns on the social media to be smaller than desired.

Another potential impediment to the success of crowdfunded donation campaigns is the tendency of people to donate more to campaigns that have already received a minimum amount of donations. Known as the 'critical mass,' this minimum acts as necessary condition for the success of cooperative action (Markus 1987). The critical mass phenomenon has been widely observed and studied in the diffusion and adoption of new products. In this domain, critical mass represents a certain number of users of an innovation beyond which the rate of development of that innovation increases dramatically (Rogers 1995). Because many of these donation campaigns act quite similar to new products in terms of diffusion, it seems reasonable to assume that they, too, require a minimum amount of donations or minimum number of donors before they can take off. Another purpose of the present research, then, is to investigate the existence of the critical mass phenomenon in online crowdfunded donation campaigns.

LITERATURE

The Paris attacks that happened in the November of 2015 left 130 dead and hundreds injured (Time 2016). In the aftermath of this tragedy, Facebook created a feature where users could change their profile pictures to one with the French flag as watermark background. Some media, however, scoffed at such displays of empathy and support, referring to them as 'useless slacktivism' (e.g., The Atlantic, International Business Time, and LiveScience, to name a few). It was argued that more useful ways of empathizing with the victims could have been thought of and implemented, such as the Facebook Safety Check feature (The Atlantic 2015). The concern that all of these media are voicing is over a phenomenon that has become way more widespread

because of the online world and the social media: slacktivism (Kristofferson et al. 2014). Intended as a portmanteau word, blending 'slacker' and 'activism,' slacktivism refers to the tendency of individuals to exhibit a relatively costless superficial display of support for a cause, and not engage in more meaningful, more useful activities to contribute to it (Morozov 2009).

One stream of research in support of this phenomena comes from the 'moral licensing' phenomenon. Moral licensing occurs when engaging in prior prosocial behavior leads to less willingness to engage in helpful behavior subsequently. For instance, consumers who engaged in thinking about community service where more prone to choose luxury products over necessity products (Khan and Dhar 2006). In a similar vein, it was shown that consumers who bought a cause marketing product were subsequently less likely to donate to a charitable cause. (Krishna 2011). Based on this line of research, engaging in an initial superficial act of support for a cause could deter more meaningful future contributions.

Nevertheless, one could think of theories that might have different predictions in similar circumstances. In particular, the work on self-consistency suggests that individuals will subsequently choose the course action which is more in line with a prior action. This is done to maintain consistency between past and future actions (Aronson 1968). For instance, the foot-in-door effect posits that individuals are more likely to agree to a larger request when they have initially agreed to a smaller one (Freedman and Fraser 1966). In this case, a prior engagement in an act of token support for a cause should lead to subsequent, potentially more meaningful, contributions; a prediction contrary to the slacktivism phenomenon.

A recent conceptual framework, set forth by Kristofferson et al. (2014), takes the first stab at solving this contradiction. Based on their work, what happens in the aftermath of a superficial display of support is predicated on whether or not the initial act was socially

observable. Basing their work on the literature about 'impression management,' the tendency of individuals to be motivated to present themselves in a positive light, the authors propose that if an initial token display of support is public, it will satisfy the motives regarding impression management, hence leading to a lower likelihood of engaging in subsequent meaningful action compared with a private token display. On the other hand, if the initial token act is private, it will activate the motivations related to consistency, leading to a higher likelihood of subsequent action than a public initial act. In other words, the visibility of the initial, superficial act of support (being public vs. private) moderates the relationship between the initial and the subsequent acts (Kristofferson et al. 2014).

Consistent with the aforementioned works in this domain, it is predicted here that the initial, token act of support (i.e., sharing on the social media) will not lead to subsequent (potentially more meaningful action) because the initial act is public. In other words, because the initial display of support for a charitable cause by a user is shared, and hence observed by many others, it satisfies the user's motivation for creating a positive impression, and thus, does not lead to a subsequent, more significant contribution. In this case, out of the many shares that a particular campaign might take on the social media, most of them will not turn into real monetary contributions as the campaign maker might have expected. That is, the net effect of sharing on the social media as a promotion tool for online crowdfunded campaigns is not positive; this is contrary to what one would expect intuitively.

The term 'critical mass' has its roots in Physics; it is defined as the amount of mass necessary to make a nuclear chain reaction self-sustaining. From Physics, the term found its way to the social sciences, where it is defined as "the threshold of participants or actions that must be crossed before a social movement can exist" (Oliver et al. 1985; Lim 2014). In other words, the

critical mass are the few who create the necessary condition for the participation of many others (Markus 1987). Subsequently, the term was observed and studied extensively in the new product adoption and diffusion literature. In that domain, the critical mass represents a certain number of users of an innovation beyond which the rate of development of the innovation increases dramatically (Rogers 1995).

Interestingly, many online crowdfunded campaigns follow the same course as a new product. As Figure 1 illustrates, the diffusion of campaigns for the U.S. storms that happened in the January of 2016, and some other campaigns observed since their nascency follows a pattern quite similar to that of a diffusion of a new product.

------ Insert Figure 1 around here ------

Given the similarity, it is expected that there should be a critical mass of donations (donors) beyond which the contributions to a given campaign increase dramatically.

This is also in line with other areas of the literature that have tackled the same phenomenon. For instance, the Goal-gradient Hypothesis posits that "the motivation to reach a goal's end state often increases as the distance to the goal decreases" (Hull 1932; Koo and Fishbach 2012).

Based on these lines of work, one could expect a campaign to be doing much better as it gets closer to its target amount while doing poorly when it is far away from the target amount.

DATA

The data for this research were scraped from a major crowdfunding donation website, dubbed by 'crowfunding.com' to be the number one website in terms of transaction volume in 2014. The website claims they have collected over $2 billion in donations as of June 2016. Individuals can log on to the website and create their own campaigns or donate to the campaigns made by others. Upon creating a campaign, the user can upload a photo or video that depicts the campaign needs or the plight of those in need of money more vividly. Then, the user can add a description to the campaign, explaining the circumstances and reason for the need for help. The total amount of money in each campaign is set by the user. Upon completion, the campaigns do not have to be taken off the website, which allows them to collect beyond the original amount asked.

------ Insert Figure 2 around here ------

The campaign, along with a link to it, can be shared on Facebook and Twitter. This sharing can be done by the campaign creator, as well as by anyone who sees the campaign on the website or the social media mentioned. Users who log on to the website directly or through the share links can also like the campaign photo or video on the website. The choice of the amount of donation is with the user who has decided to donate money. The website has a transparent pricing policy for the campaigns and does not charge any extra hidden or processing fees.

The collection of data started on the 24th day of December in 2015 and ended on the 7th day of January in 2016. The reason for choosing this observation window was that based on a casual study of Google Trends reports, this period could bring about a high degree of variability in the

data. The reason is that many individuals choose to donate on Christmas Eve, Christmas Day, New Year's Eve, New Year's Day, and a couple of days after the start of the New Year. Those who choose to make donations after the New Year's Day potentially put their New Year's Resolution into action. This observation window choice, in sum, did bring about the variability as expected.

The donations can be categorized into six major groups, namely, emergencies, medical, education-related, memorials, sports, and animal helping causes.

------ Insert Table 1 around here ------

There is an immense degree of heterogeneity in these campaigns because they can range from simple one asking for a meager amount to those asking for thousands even millions of dollars.

The website provides information on the cumulative amount of money collected, the amount of money asked, the cumulative number of donors, the number of days passed since the start of the campaign, combined number of shares on Facebook and Twitter, number of campaign photo/video likes, and the names and donation amounts of individuals who have given money to the campaign (donor identity could also be anonymous).

STUDY 1

The purpose of Study 1 is to obtain preliminary evidence of the existence of the slacktivism and critical mass phenomena in the online crowdfunded donation campaigns. As mentioned before, many of the users of social media might merely stop at the token display of support for those in need (by merely sharing the campaigns on Facebook and Twitter), and do not take the

extra step in making a meaningful contribution (actual monetary donation) to these campaigns. Further, it might be the case that donations to campaigns that have already met a critical mass (threshold) is significantly higher than those that have not met the threshold.

To investigate these issues, the following regression model was run on the static data. It should be noted, again, that the purpose here is to paint a broad picture as to how the aforementioned phenomena fit in the grand scheme of things.

------ Insert Equation 1 around here ------

The variables in this regression are based on their daily net values averaged over the observation window. For instance, the dependent variable, 'AvgRaised', is calculated by taking the mean of the net amount of money raised daily by each campaign in the data.

------ Insert Table 2 around here ------

The variables shares and likes as well as the average of their net daily values were chosen because (1) likes are a very good predictor of the amount and rate of raising money (see Figure 3), and (2) shares are the only social media promotion tool these campaigns have, and they are central to proving the notion of slacktivism in online crowdfunded campaigns.

------ Insert Figure 3 around here ------

To provide initial evidence on the existence of critical mass, a dummy variable is defined based on the median split of the total amount of donation to each campaign. It is important to notice that not all campaigns that have had many donors have necessarily collected more money. Conversely, there are campaigns that have fewer donors than other campaigns, but have collected more money than them. Therefore, a necessary condition for the existence of a critical mass is for the coefficient for this dummy variable to turn out positive. Given the aforementioned heterogeneity in donors and donation amounts, a positive coefficient shows that campaigns with more donors necessarily do better. As pointed out, this is merely a necessary condition and is not meant to completely prove the existence of a critical mass.

------ Insert Table 3 around here ------

As hypothesized, the coefficient of the variable 'AvgShares' is negative. This is because many people chose to merely share these campaigns and did not make meaningful (monetary) contributions to these campaigns. Therefore, of all the shares that a given campaign receives, only a small portion actually translated into monetary donation. Therefore, the effect of sharing on the amount raised is actually negative. The coefficient for the variable 'AvgLikes' is positive. This is because these represent the 'like' that a campaign receives on the donation website (as opposed to the social media). As the donation website is a community exclusively aimed at collecting donations, it is reasonable to assume that people who like the victims' photos are more serious, more meaningful contributors than the social media population. Hence, there is a high correlation between being a potential donor and liking the photo of the campaign. The coefficient for the dummy variable 'DonorsDummy' is positive. This means that campaigns that have more

donors do necessarily better than those that have fewer donors. This is the necessary condition for the existence of a critical mass. Note that having more donors does not necessarily correspond to more money and vice versa. Therefore, it is important to establish that campaigns with donors do better before any study of critical mass can be done.

This study provides the preliminary evidence of the existence of slacktivists. It also shows that the necessary condition for the existence of critical mass is met. However, some deeper analysis of the data is necessary to understand the underlying mechanisms that give rise to slacktivism. Study 2 is meant to address this issue.

STUDY 2

Study 2 further analyzes the effects of donating and sharing on the success of a campaign in greater detail. Specifically, this study differentiates between three types of campaigns; those with low amounts of donations received, those with moderate levels, and those with high levels. This categorization allows for a better understanding of sharing and donating at different levels. It could also shine a light on whether slacktivism occurs at all donation levels. Further, it could also show whether campaigns in the high donation category do better due to the existence of critical mass.

As the dependent variable, the amount of donations, is categorical, a multinomial probit model is used with the average rate of sharing and donating as independent variables. The independent variables measure the average 'rate' of donations made to different campaigns as well the average rate of sharing of these campaigns. The average rate, as it should, is a measure of average speed and is calculated by dividing the cumulative amount of donation for each campaign by the number of days it took for those donations to accrue. Therefore, just like

average velocity in Physics, average rate serves as a measure of how fast (on average) the campaigns have moved forward in terms of shares and donations.

------ Insert Table 4 around here ------

Table 4 shows that an increase in sharing increases the probability of a given campaign to be in the low range relative to the medium range. An increase in sharing, however, decreases the probability of a given campaign being in the high range relative to the medium range. In other words, extra shares of a campaign increase the likelihood that those campaigns are doing a poor job and decreases the likelihood that the campaigns do a great job. These likelihoods are relative to the mediocre campaigns. Therefore, sharing does not really improve the status of a campaign with respect to mediocre campaigns. As explained before, this happens because many of the shares of a given campaign do not necessarily translate into actual monetary donations. In other words, slacktivists merely share these campaigns on their own social media pages and stop at that. This is the exactly opposite to the effect that real donations to a campaign can bring about. As Table 4 shows, making actual monetary donations improves the status of the campaigns that are doing poorly (decrease the likelihood of them being low-range campaigns relative to medium-range ones) and increases the likelihood of these campaigns to be in the high range of donations. It is important to note here that, upon reaching their goals, the campaigns do not have to be taken off the website. In fact, many campaigns receive contributions beyond the initial amount demanded; i.e. go beyond 100% completion.

Study 2 provides another level of verification for the existence of slacktivism in online crowdfunded donation campaigns. It also shows that the occurrence of this phenomenon is

independent of how the campaign is doing; that is, slacktivism occurs at all levels of completion of a campaign. It, now, remains for the next study to examine the critical mass phenomenon; that is, the minimum amount of donations (donors) necessary for a campaign before it can collect donations dramatically.

STUDY 3

In Study 1, it was shown that the necessary condition for the existence of a critical mass was met. Given that campaigns with more donors do not necessarily do better than those with fewer donors, a necessary condition for the critical mass theory to be valid was to show that campaigns with more donors significantly do better than those with fewer donors. This was achieved by showing that the coefficient for a dummy variable made based on a median split of the total number of donors for each campaign was positive. To obtain direct evidence for the existence of critical mass, first an average 'rate' variable is defined as the cumulative amount of the corresponding variable divided by the number of the days it took for the amount to accrue (e.g, Shen et al. 2013). For example, the average rate of raise for a given campaign is the cumulative amount of donations raised by it divided by the number of days it took for this amount to be collected. This average rate, essentially, does the exact same thing that average speed (velocity) does for a car; it shows how much distance was traveled in how long. The importance of such a definition is that one needs to control for the amount of time passed for each campaign. Some campaigns do great in a very short time while others do poorly in a long time. The measure of success for these campaigns is dictated by 'how much money was collected in how much time?' With such an operationalization, one can easily show that there is a critical mass by showing that there is a significant difference in the average rate of raise between fledgling vs. mature

campaigns. Notice that fledgling campaigns may or may not do worse than mature campaign. That is why it is important to measure a variable that controls for both amount of money and time each campaign has had. A t-test, then, determines the significance of such a difference.

------ Insert Figure 4 around here ------

As figure 4 shows, campaigns that are near completion do significantly better than those that are far from completion both in terms of the average rate of raise and donors. It is important to note that a campaign that is near completion should not necessarily have a higher rate of raise. This is because such a campaign might have been in existence for a short or long period of time. That is why the differentiating variable is one that is rooted in both donation amount and time. While it may seem intuitive that more donations should go to campaigns that are lagging, it seems that, in line with similar online communities, the likelihood of action is higher for campaigns that are already doing a good job; thus, proving the existence of critical mass.

The three studies whose results were reported here provide evidence for the existence of two phenomena in online crowdfunded campaigns; one is slacktivism, the tendency of people to stop at a token display of support (sharing) for campaign, and the other is the tendency of people to be more willing to donate to more successful campaigns. These results are consistent with similar results in for-profit as well as non-marketing domains.

DISCUSSION

The importance of the social media and online promotion tools cannot be overemphasized. As many of the conventional tools of the marketing mix migrate to the online realm, new

businesses, with their business models rooted in these new methods, emerge. The move from conventional donation solicitation methods (e.g., donation requests in the mail, the mall, etc.) to online crowdfunded donation campaigns is a very good instance. These modern donation solicitation vehicles naturally opt for promotion methods that are consistent with their online presence and incur the least amount of cost. An example of such a publicity tools for these online businesses is the social media. The social media provide access to a large audience at relatively no cost. That is why most of these crowdfunding websites have a very serious social media presence. They easily provide their users with the means for disseminating information about their cause on various social media (e.g., by sharing on Facebook, tweeting on Twitter, etc.) The users of these social media, then, have the opportunity to know about a need and contribute to it. A trend, however, that has been observed in similar areas is that people stop at a mere token display of support for these campaigns by only sharing them on their own pages on the social media. While this could serve the campaign well by raising awareness about the cause, it could turn out to be a prevalent phenomenon that everybody engages in. This way, most people only share the information about a need and do not bother to take an extra, more meaningful step in alleviating the need. These so-called slacktivists "contribute", ease their conscience, and get satisfaction by doing the easiest. Regrettably, slacktivism is observed even in the most urgent, direst of circumstances. Thus, as far as the occurrence and prevalence of this phenomenon are concerned, donation to charitable causes are no different from political campaigns.

With the importance of 'sharing' diminished as a result of slacktivism, it becomes important to contemplate about two possible strategic directions. First, can the social media come up with something creative which is not as unbinding as sharing? To mention an older, relatively close business model, some debit/credit cards automatically donate to a cause when used. This

donation is made by the issuing bank/credit card company and does not deduct any money from the card user. This could be used to make the sharing process a little more binding, at least for the social media. Second, what happens if conventional publicity tools (e.g., TV, radio, etc.) are used in conjunction with the social media tools (e.g., sharing)? The importance of such a question is twofold. First, a preliminary analysis of the data about campaigns that are featured in both the traditional as well as the social media does not necessarily point to their superior performance relative to those that have only used the social media tools. Second, if the campaigns that utilize modern and traditional promotion tools turn out to do better, would it be profitable for all campaigns to utilize the traditional tools as well? That is, considering the cost of advertising, will the campaigns still be more profitable than the ones that use only the social media.

Another unfortunate aspect of online crowdfunding campaigns is their similarity to other online cooperative activities (e.g., Groupon) in the necessity for a few minimum people to start doing something before everybody else decides whether or not to chime in. These few early movers create the critical mass beyond which the outcome of interest improves dramatically. While this phenomenon has been observed and studied a lot in the new product diffusion and adoption literature, it is rather surprising to even exist in the donation domain. Different streams of literature have the potential to explain the existence of the critical mass in this domain (e.g., marginal utility, goal-gradient hypothesis, and small area hypothesis, to name a few), but studies that address these streams in making their hypotheses are very scarce. Therefore, in this research, we tried to develop our hypotheses and show initial evidence of their validity using the critical mass literature. Similar hypotheses can be developed using other theories and can be tested using primary or secondary data.

LIMITATIONS AND FUTURE RESEARCH

In addition to what was described in the previous section about using the traditional as well as digital promotion tools, one other major source of limitation for the present study comes from the restrictions of collecting secondary data from the Internet. First, there are some variables of interest that cannot be scraped from a website, yet might be available by the owners of the website. For instance, one of the major concerns in modeling the arrival of the potential donors to the website is how they get there. While some people follow the links that are available when the campaigns are shared on the social media, others log on to the website directly or through the search engines. Such information can only be acquired by asking the website for their data. Second, delving deeper into the nature of the phenomena and arguing for potential underlying mechanisms is harder (if not impossible) with the data of this nature. Improving these aspects is an interesting direction for future studies. It is also possible that some of the online crowdfunding businesses collect demographic data on their users. The availability of such data could help in conducting a more thorough empirical analysis which results in a better understanding of who exactly slacktivists are. For instance, it might be the case that younger, less educated individuals with less income engage in slacktivism more than others. Such knowledge has important implications about the nature of slacktivism and also about the potential targeting tools for different demographic segments of potential donors.

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APPENDIX: FIGURES AND TABLES

FIGURE 1

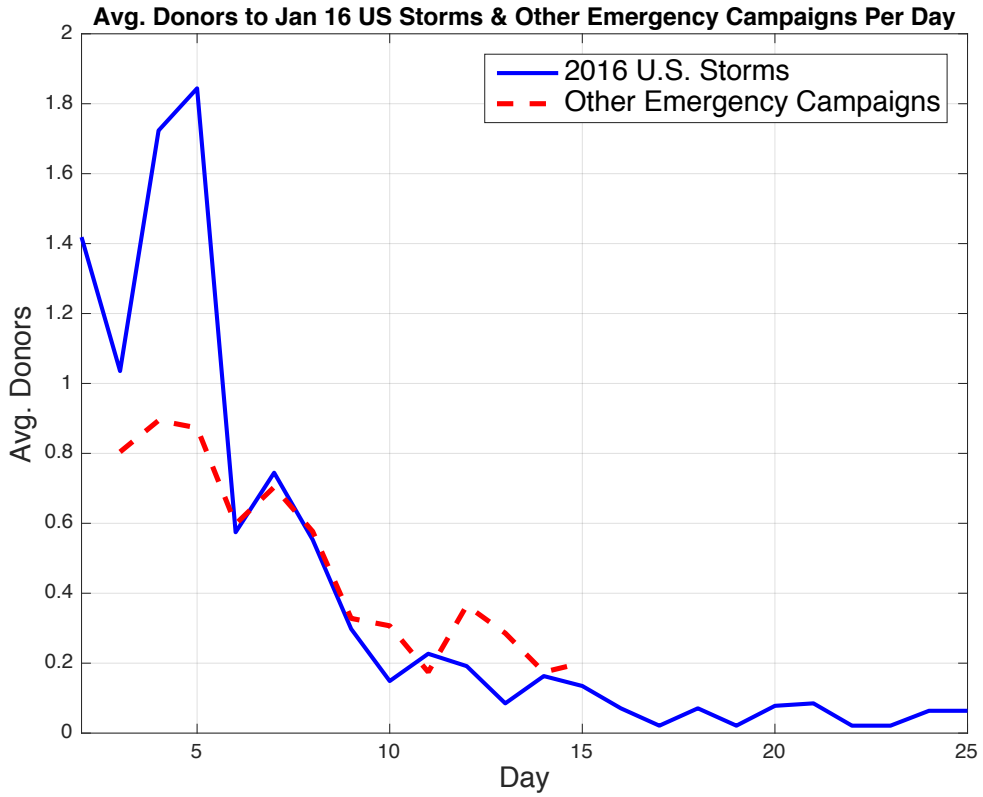


FIGURE 2

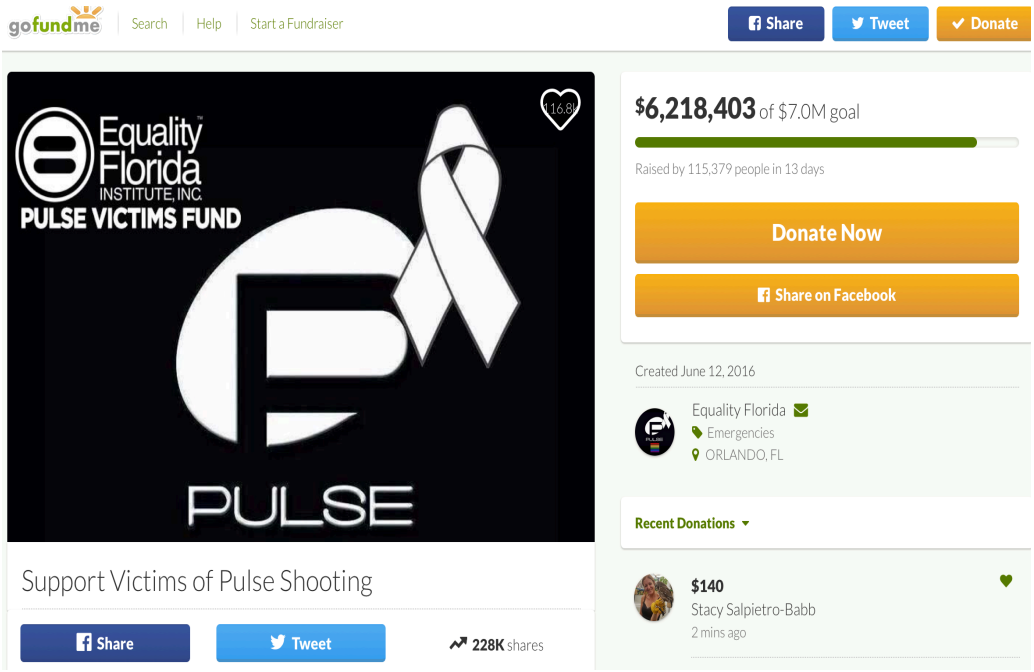


TABLE 1

DESCRIPTION OF CAMPAIGN TYPES

	Cumulative Amount Raised		
Campaign Type	Mean	Std. Deviation	N
Medical	13,323.5	13,770.0	181
Emergency	7,007.6	9,404.5	342
Education	5,852.1	7,964.9	189
Memorial	9,251.2	10,447.8	175
Sports	3,352.5	3,548.2	190
Animals	3,322.1	5,118.4	192
All Campaigns	6,940.9	9,568.3	1,269

EQUATION 1

$$AvgRaised_i = \alpha + \beta_1 \times AvgShares_i + \beta_2 \times AvgLikes_i + \beta_3 \times DonorsDummy_i + \epsilon_i$$

TABLE 2
DESCRIPTION OF THE VARIABLE USED IN EQUATION 1

Variable	Description	Mean
AvgRaised	Mean of daily net raised amounts	51.35
AvgShares	Mean of daily net FB & Twitter shares	3.21
AvgLikes	Mean of daily net likes	0.58
DonorsDummy	Assumes 0 for campaigns with lower than median donors; 1 otherwise	0.23

TABLE 3
REGRESSION RESULTS

Variable	Coefficient	P>|t|	95% Confidence Interval	
Constant	1.33	0.390	-1.71	4.37
AvgShares	-1.48	0.000	-1.82	-1.13
AvgLikes	75.08	0.000	71.41	78.75
DonorsDummy	35.37	0.000	26.51	44.22
Prob > F	0.0000			
R-squred	0.7826			
Adjusted R-squared	0.7820			

TABLE 4

MULTINOMIAL PROBIT MODEL RESULTS

Raise Rate	Variable	Coefficient	P>|z|
Low	Share Rate	0.01	0.104
	Donation Rate	-0.621	0.000
	Constant	0.733	0.000
Medium	Base Outcome		
High	Share Rate	-0.008	0.023
	Donation Rate	0.338	0.000
	Constant	-1.039	0.000
Log Likelihood	-1014		

FIGURE 3: CONTOUR OF THE LOG OF THE NUMBER OF SHARES AND LIKES VS. THE TOTAL AMOUNT OF MONEY RAISED

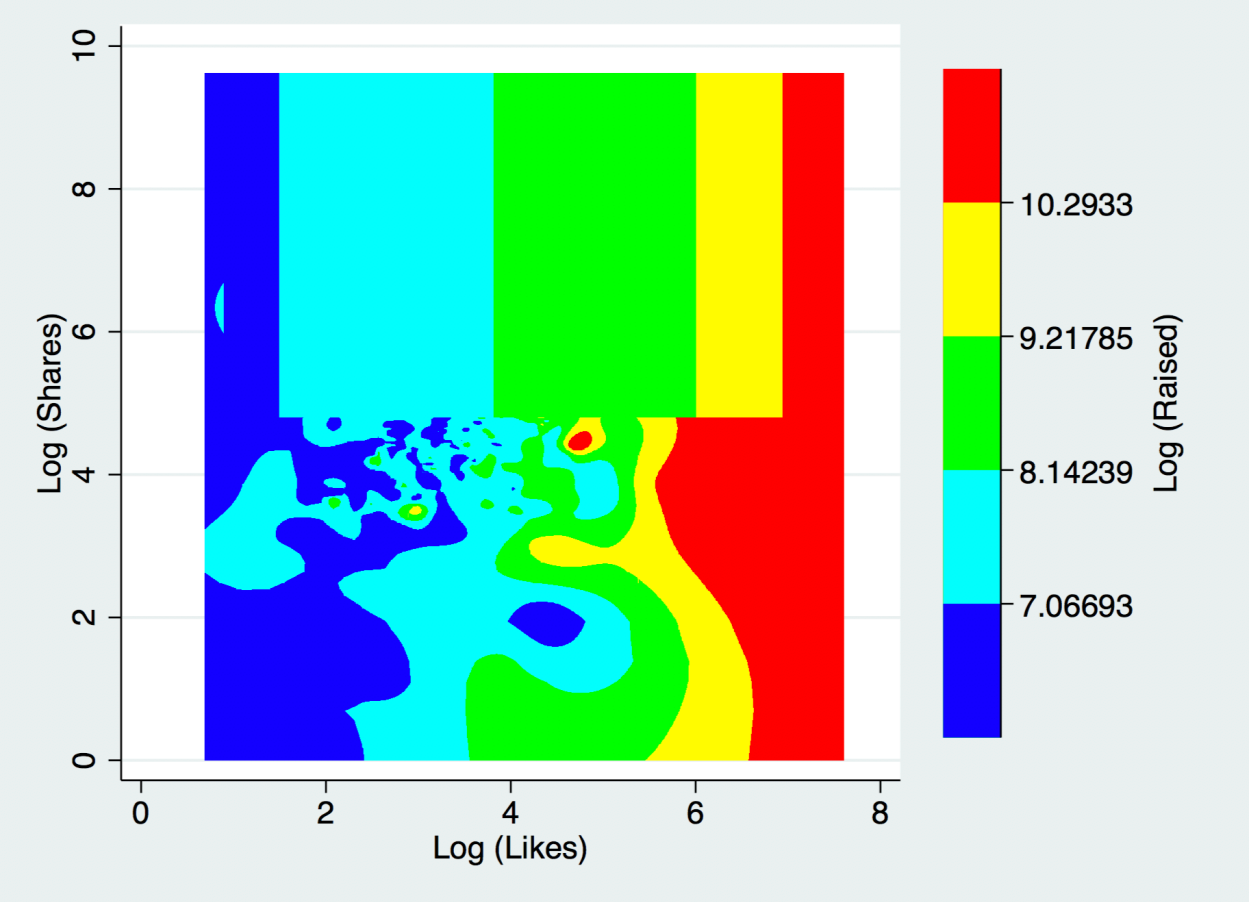
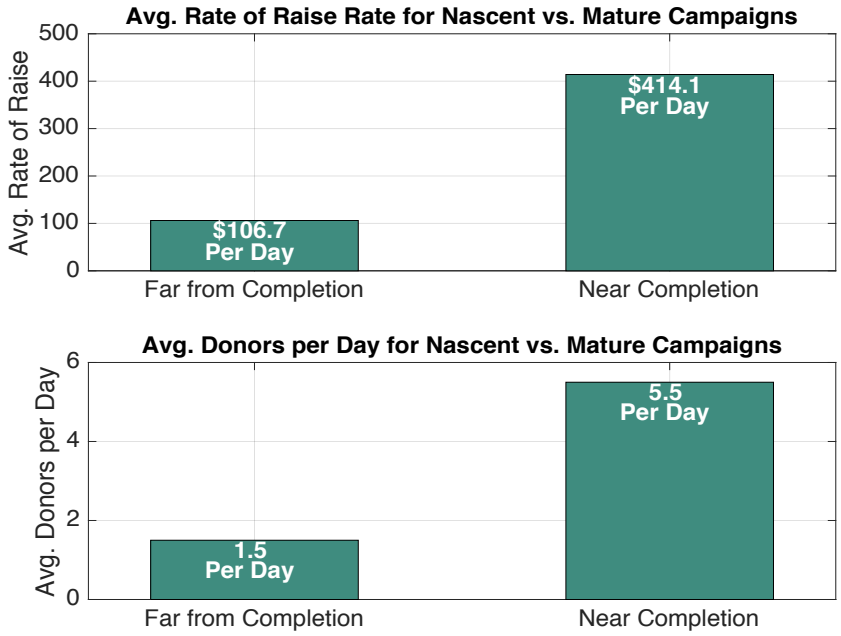


FIGURE 4



t-test significant; p-value = 0.0000

Essay 2

The Effect of Conventional Donation Solicitation Methods on Modern Crowdfunded Donation Campaigns

ABSTRACT:

Current methods of creating awareness about online crowdfunded donation campaigns are mostly limited to online tools (e.g., sharing, tweeting, and so on). Until the social media come up with other, more creative methods of raising awareness that do not allow for slacktivism to occur, the only other way of sharing information is through the conventional media (e.g., TV, radio, etc.) Specifically, the news media have recently begun to share the news about some of these campaigns that have been deemed newsworthy (e.g., the Orlando shooting, Flint water crisis, etc.). Since the aim of this research is to measure the effect of an intervention (treatment) using secondary data, one might argue that other factors besides the treatment produce the results; a problem which is easily addresses in experimental settings through randomization. Propensity-score matching (PSM) is used to address this issue. Given a number of observable characteristics of the donation campaigns, propensity scores are estimated and closest observations are matched and compared (nearest neighbor method). Consistent with the literature on news media coverage, we find that campaigns that are shared on both the social media and news media do significantly better than those that are merely shared on the social media. Our particular context (online donation crowdfunding) has never been studied. Our work has important implications for raising awareness about crowdfunding donation campaigns.

INTRODUCTION

In 2015, individual donations were at a $264.58 billion high, accounting for about 72% of overall donations. The proportion of individual donations coming from crowdfunding has had a steep increasing pattern. In 2015, for instance, $34 billion of the individual donation came from crowdfunding sources, which has nearly doubled since 2014. This share was at about $5 billion in 2013 (Forbes 2015; www.GivingUSA.org 2017). The increasing use of the Internet and the growth in crowdfunding vehicles give rise to more increasing estimates of this share for the years to come.

The social media have grown drastically in the recent years as well. In 2016, 78% of Americans were reported to have social media presence (Statista 2016). It was also reported that the average individual spends 1 hour and 40 minutes on the social media which is about 28% of the time spent online (The Telegraph 2016). These growing social media are the very vehicles used by crowdfunding websites to promote their donation campaigns. This is the case because creating links from these online campaigns to the social media is very easy and free of charge. Also, the social media could provide instantaneous audiences who will be informed about and potentially contribute to any given crowdfunding campaign. Nevertheless, based on previous research (Essay 1), expecting actual contributions to crowdfunding campaigns might be too optimistic.

One of the problems with sharing these campaigns in the social media as a promotion tool is that the very act of sharing is very easy. So, it might be possible that some users just re-share these campaigns to demonstrate a token display of support and actually refrain from making monetary contributions; a phenomenon known as ‘slacktivism.’ This means that in spite of being a powerful tool for the diffusion of donation campaigns, the social media might

simultaneously give rise to another powerful force which acts in the opposite direction. For online crowdfunding campaigns which are shared on social media (Facebook and Twitter), slacktivism seems to be very prevalent. That is, most of the people who are exposed to the call for monetary need through Facebook and Twitter prefer to re-share and/or retweet them in lieu of taking a more helpful step, which is making a donation.

The occurrence of slacktivism in this context raises some important practical questions. One of the most important of these questions is "what can we do instead of using social media for promoting online crowdfunding campaigns?" The social media might not be as impactful in promoting crowdfunding campaigns as we thought, but they are, in many aspects, the best existing way; they are fast, convenient, and popular. In the future, we might be able to come up with ways of making social media less susceptible to slacktivism, but until such time, they are the best tool we have. Thinking forward, the preceding argument might be true, but thinking more conventionally, we might be able to take a little help from the more traditional vehicles for promotion (i.e. using TV, traditional websites, print press, etc.). This is particularly intriguing in that without anyone trying to test the 'traditional vehicles' hypothesis, they are already being used for promoting crowdfunding campaigns! In fact, some of these campaigns are about events so tragic that they become newsworthy. For instance, in June 2016, one of U.S. Navy Blue Angel pilots crashed in Tennessee. The news of this tragic event was first broadcast on TV news. After a short while a crowdfunding campaign for the family of the departed pilot was established which was also included in TV news pieces. The campaign was also shared on Facebook and Twitter 48,000 times. 4301 people contributed to the campaign which raised $379,364 (www.gofundme.com/jeffkuss). This is an example of a campaign about which people hear both on the social media and traditional media (in this case, TV news media). There are many

donation crowdfunding campaigns which, along with the social media, have also been shared on the news media (both on TV and online).

Based on the preceding argument about the possibility of combining the use of social media with more traditional media as promotion tools for online crowdfunding campaigns, and since for many campaigns this is already in practice, our core question becomes, "do the campaigns that are shared across both types of media necessarily do better than those only shared on the social media?"

The effect of media coverage on charitable giving has been well studied. Brown and Minty (2008), for instance, found that any additional minute of nightly news broadcast dedicated to donation stories increases charitable giving by up to 21%. Similarly, Simon (1997) found that news coverage increases the aggregate donations made by individuals. The social media, on the other hand, might be more effective in eliciting donations because of their "informal, social, and interactive nature" (Lobb, Mock, and Hutchinson 2012). Based on this line of literature, the featuring of online crowdfunding campaigns on the news should increase the amount of donations. In other words, campaigns that are shared on both the social media and traditional media (in this case, different forms of news media) should do better in terms of accumulating donations than those that are only shared on the social media. This prediction, however, has not been studied in the context of online crowdfunding for charitable causes. The aim of this research is to investigate the efficacy of a more traditional promotion method on a modern vehicle.

LITERATURE

From an economic standpoint, there are two major reasons for making donations. The public goods model assumes the donors anticipate some private return from the public good (Warr 1982). The private consumption model, on the other hand, assumes consumers gain some utility from the act of giving (e.g., utility from helping others somehow entering one's own utility equation or utility from the philanthropic image created by the act) (Steinberg 1987). These factors are further classified and explained under the "rationalistic model of altruism", which posits charitable giving takes place because of reciprocity, vicarious enjoyment or as result of evolution and natural selection (Khalil 2004). "Normative models of altruism," on the other hand, attribute the charitable behavior to intrinsic motivations. Andreoni (1990), for instance, categorizes altruism into "pure altruism", "desire for warm glow", and a hybrid of the two referred to as "impure altruism". Pure altruism refers to circumstances where charitable giving is done merely to improve the circumstances in which the recipient exists. Desire for warm glow, on the other hand, refers to situation where giving increases the self-esteem of the donor. The study of charitable behavior has also been done using other schools of thought in psychology, anthropology, and sociology. Intrinsic factors (e.g., social justice, sympathy, etc.), demographic variables (e.g., age, income, etc.), perceptual variables (e.g., fit with self, stimulus strength, noise, etc.), and other factors (e.g., number of victims) have been studied widely (see, e.g., Sargeant 1999; Lunt et al. Forthcoming).

Of the different methods people can be informed about a donation campaign, news media are a prominent one (Brown and Minty 2008). One of the examples of how news media can influence donation behavior is the 1984 famine and drought in Ethiopia. It was on October 23, 1984 that the news first appeared on the U.S. networks. NBC Nightly News reported the

following: “if ever there was an example of the saying ‘out of sight, out of mind,’ it is what is happening in Ethiopia. Until three weeks ago, most Americans didn’t care about the situation there, because we didn’t know about it.” (Boyer 1986). There was a reported increase in the amount of donations to relief organizations after this broadcast. Catholic Relief Services and Save the Children USA organizations, for instance, reported an overall donation of more than $4.4 million (Simon 1997). Another good case that suggests some form influence of media on charitable giving is the 1994 genocide in Rwanda. Although at the beginning, individual donations to the relevant relief agencies were high, they decreased after the media started to shift focus on the O. J. Simpson and Tonya Harding cases (Brown and Minty 2008). Even without those cases, the attention of the media to crisis situations tends to be short-lived giving rise to the proposition “… [media] say the most when the least is known, and say progressively less as more is learned.” (Lobb, Mock, and Hutchinson 2012).

The disaster relief cases mentioned above, along with considerable other anecdotal evidence, point to the fact that the ability of charity organizations to attract funding is not much by itself. Media coverage seems to be necessary since it informs the potential donors about the existence of a charitable cause and a charitable organization which donates to the cause (Simon 1997).

In the light of these anecdotal pieces of evidence, more rigorous studies have been conducted to verify that the media are indeed responsible for the observed changes in donation behavior. The first group of such studies are laboratory experiments (see, e.g., Petty and Cacioppo 1986). In line with the experimental rationale, subjects in these studies are randomly assigned to treatment and control groups, where the treatment group is exposed to a particular message and the control group is exposed to a different message or non at all. These studies are

usually higher in statistical power (Rushton 1979), and given their design, establish causality in a more convincing manner. However, the most frequent criticism of this methodology in this context is whether the same communication leads to the same results in the actual world (i.e., generalizability) (Simon 1997). The second group is the field studies. These studies rely on multiple methodological tools ranging from correlation to time series analysis (see, e.g., Rogers and Dearing 1986; MacKuen and Coombs 1981). Unlike the experimental approach, these studies are not successful in rigorously establishing causality. Some of these studies are well-known for trying to introduce more rigor into the analysis. For instance, to solve the endogeneity problem, Simon (1997) constructed an instrument variable which comprises factors that are exogenous to the situation under study. Internet data is usually used to control for the time lag between the broadcast of the news and the reception of the donations (see, e.g., Brown and Minty 2008).

Regardless of the philosophical and methodological approach, all of the studies in this domain seem to point in the direction of news media impacting donation campaigns positively.

One fairly recent form of donation-seeking is through crowdfunding. A subset of crowdsourcing, crowdfunding refers to "funding behavior in which funders provide money to fund seekers in the absence of banks and other conventional financial intermediaries, typically through the medium of web-enabled information systems." (Gleasure and Feller 2016) Besides the obvious differences in technology and infrastructure, crowdfunding donations differ from traditional donation seeking in three major respects: (1) anonymous donations are much more easily accomplished in an online context limiting the capability of explaining donation behavior through social image, (2) geography and social relationships do not necessarily explain or predict

behavior, and (3) proactive donation behavior is observed where individuals do not necessarily wait for a call for help to engage in charitable giving (Gleasure and Feller 2016).

The present research investigates the effect of traditional and social media coverage on donations to online crowdfunding campaigns visa-a-vis those that merely receive social media coverage. Aside from examining the effect of news media in a new context, this topic is particularly interesting given that the preliminary analysis of our data point to a weak effect of the traditional media.

----------Insert Figure 1 here----------

METHOD

Measuring the effect of an intervention or treatment has been well studied in the econometrics literature (Greene 2012). One of the most valuable methods for this type of measurement is random assignment, which guarantees that the only source of difference between the control and treatment groups is the intervention. However, the use of random assignment is not always feasible. If random assignment is not possible, then participation in the treatment is not random, and therefore, treatment and control groups might differ in other characteristics besides the intervention. This would make the treatment measurement results biased. One way to address this issue is to find the observations in the treatment and control groups that have the highest degree of similarity, and draw the comparison on them. This idea of matching has become more doable with the advances in computer processing capability. One of the methods developed to implement this idea is known as propensity score matching (PSM). The propensity score is defined as the probability that an observation receives the treatment given a set of

observed variables (Rosenbaum and Rubin 1983). Implicit in using PSM are two assumptions: (1) given the observable covariates, the outcomes are independent of treatment status, and (2) given the covariate, there is a positive probability for being both treated and untreated.

----------Insert Eq. 2a and 2b here----------

A number of matching algorithms can be used to perform propensity score matching. The nearest neighbor, caliper, radius, and normal kernel methods are among the most commonly used approaches. In general, there is not a blue print as to when one should use which of these methods. A good model, however, produces means that are robust to the method used (Heinrich, Maffioli, and Vázquez 2010).

Balancing tests are performed to ensure that the propensity scores properly balance characteristics across treatment and control groups (Heinrich, Maffioli, and Vázquez 2010).

----------Insert Eq. 3 here----------

For the present study, we use the observable campaign characteristics as the covariates that determine the propensity scores. These covariates include total amount of donation asked, amount of time since the creation of the campaign, number of shares, number of likes, shares × likes, and amount raised / number of donors. Note that, the latter two covariates were created to increase the accuracy of the results and decrease the bias. The number of shares and likes, specifically, is a good endogenous predictor of media coverage, as shown below.

----------Insert Figures 2a and 2b here----------

The covariates are used to estimate a probit model with news media coverage as the dependent variable. The corresponding propensity scores are then used to match the observations in the treatment and control groups.

DATA

The data for this research were scraped from a major donation crowdfunding website. Users of the website can create an account and start their campaign. Typically, campaigns have a photo or video uploaded by the campaign creator, which is related to the cause. The campaign creator also inputs information about the cause which serves as campaign description. The campaign creator has to specify the amount of money needed as well. This amount can be modified as the campaign progresses at no extra charge. Potential donors must log in to the website and make a donation, but they can choose to remain anonymous. The campaign creator receives information on the individual donations as well as overall donations and timing. The website also creates Facebook and Twitter links to the campaign. Users of Facebook and Twitter can reshare and retweet the link so that their friends and followers see the campaign and potentially donate to it. This is the only method of promotion offered by the website. If the users decide to share their campaigns on other online media, they have to do so manually. The website focuses only on monetary donations to various causes and does not engage in any other form of crowdsourcing. The scraping returns all the observable features of any given campaign, including the amount of money the campaign needs, the amount of money raised so far, the amount of time since the creation of the campaign, the number of donors, the total number of

social media (Facebook and Twitter) shares, the number of likes, and the news media coverage the campaign has had (if any). The last variable (news media coverage) serves as the treatment variable. This coverage could be online, on TV, or both, depending on the severity of the cause of the campaign, and how much news media deem the campaign as newsworthy. The dataset includes 440 observations which are balanced across the treatment and control groups. A dummy variable (Promo_dum) is created which takes on the value of 1 when a campaign is shared on the news media and 0 otherwise.

----------Insert Table 2 here----------

The choice of the campaigns that received the treatment (had news media coverage) and those that did not receive any coverage was random.

RESULTS

The propensity score matching algorithm was run using Stata (StataCorp. 2015). The commands psmatch2 and pstest (Leuven and Sianesi 2003) were used to calculate propensity scores and perform the matching. The matching was done using the nearest neighbor algorithm comparing observations with one of the closest matches. Using more than one nearest neighbors did not change the results.

----------Insert Table 3 here----------

Balancing tests were performed to see whether the estimated propensity scores balance the characteristic across the treatment and control groups properly.

----------Insert Table 4 here----------

The pure mean difference between the treatment and control groups is enhanced after matching. This shows that matching has reduced the bias associated with observable variables (Heinrich, Maffioli, and Vázquez 2010). Rosenbaum and Rubin (1985) suggest using a standardized difference where the size of the difference in means is scaled by the square root of the average of their variances. A standardized difference of 20 or more should be viewed as large. While matching does improve the raw difference, it does not produce promising results when the standardized difference is estimated. A number of ways have been proposed in the literature to deal with this problem. Adding more variables to the model or making new variables out of those that have high standardized difference is among them (Heinrich, Maffioli, and Vázquez 2010). However, neither of those methods alleviates this problem in this case.

The treatment overlap condition (Eq. 2b) was tested before measuring the treatment effects. All observations that violated this assumption were dropped. The distribution of propensity scores for the control and treatment groups is as follows.

----------Insert Figure 3 here----------

Given that one major goal of this research is to investigate whether being featured on the news media could help crowdfunding donation campaigns, the average treatment effect (ATE) was estimated for the population. ATE was estimated on three key variables, i.e., rate of raising money, amount of money raised, and the number of donors. As before, the propensity scores were estimated using probit. For matching, however, more than one nearest neighbors were

considered to increase accuracy. The number of nearest neighbors for RaiseRate was set at 10, and at 15 for Donors and Raised. All observations that did not support the overlap condition were dropped.

----------Insert Table 5 here----------

As shown, campaigns that are shared on the news media have a lower rate of raise. However the total amount raised and the number of donors are significantly more for these campaigns. In other words, campaigns that are shared on the social media and the more traditional news media collect $19648.37 more than those that are shared on social media only. Such campaigns also have around 151 more donors. Their rate of raising money, on the other hand, is at $428.62 per day lower than campaigns that are shared on social media only. This is because these campaigns remain online an average 242.66 days more than campaigns that are just on social media, as shown by a pre-match t-test on the variable Days.

----------Insert Table 6 here----------

DISCUSSION

The major finding of the previous line of research, as shown in Essay 1, is that social media are not of a tremendously high impact when it comes to promoting online donation campaigns. That conclusion was shown to be true by running a serious of linear (and nonlinear models) that yielded a negative coefficient for "sharing" campaigns on the social media (Facebook and Twitter, in this case) as independent variable, and with the amount of donations

or number of donors as dependent variable. One argument in the face of such findings is, "***what else can we do?***" We might stumble upon other creative methods of promotion (besides social media sharing) in the future, but as of present time, one way is for these campaigns to be shared through the conventional methods of promotion (e.g., sharing on TV news, radio commercials, magazine ads, etc.) This is especially intriguing since quite a few of these campaigns are for such dramatic causes that they become newsworthy, and find their way into the National TV news segments. The Orlando Shooting tragedy is one example of such an incident. The online campaign raised about $4 million in two days. Based on such campaigns, the major question put forward in this essay is whether campaigns like the Orlando Shooting which are shared both on the social media and the traditional media do a better job than those that are merely shared on the social media.

The data collected for this study came from the same source as in Essay 1. Data were scraped randomly from a major donation crowdfunding website, forming a dataset of campaigns that were shared on both the social and traditional media and those merely shared on the social media. The sizes of the two samples were equal. Propensity score matching (PSM) was used to identify and match observations across the treatment and control groups that have the highest degree of similarity. Propensity scores were estimated using a number of covariates. These covariates are the observable characteristics of the campaigns. The number of comparisons made to estimate the average treatment effect (ATE) were increased to ensure a high degree of precision. ATE was estimated on three key variables, i.e., rate of raising money, number of donors, and the total amount of money raised. Consistent with the literature on news media effect on charitable giving, we find that campaigns that are shared on the social media and are given news media coverage do better in terms of the total amount of money raised and the number of

donors. Although the general effect of news media coverage on charitable giving is known, it has never been studied in the context of online donation crowdfunding campaigns. Also, another aim of this research is to investigate whether more traditional sharing of the donation campaigns does a better job than mere social media sharing. This was motivated by the fact that social media sharing does not have a high impact on donations since it encourages a phenomenon called slacktivism. In the light of the results of the present research, one good strategy for increasing donations to a campaign would be to increase awareness about it using the more traditional methods of promotion.

One question about these results is how we determine that the effects come from news media coverage and not from the very tragic nature of the campaigns that find their way to the news media. It should be noted that not all campaigns that are shared on all news media are very tragic or urgent in nature. While we do not know the exact criteria editors use to decide whether or not to feature a piece of news in their coverage, our data comprises news media coverage of campaigns that are not tragic. Donations to sports teams, school renovations, and funding poor neighborhoods are among such campaigns. In other words, the data is heterogeneous in terms of the type of the campaigns and their severity.

LIMITATIONS AND FUTURE RESEARCH

One of the limitations of the present research comes from our data collection method. There are a limited number of variables that we can observe and scrape. Therefore, in constructing the covariates that are used to estimate the propensity scores, we are bound to use fewer variables than the ideal level for good propensity score estimates. This, also, creates problems for the balancing test, as shown in Table 4a. It becomes harder to justify the

assumption that given the propensity scores and the covariates, treatment is independent if the observed covariates.

Another limitation of this study comes from the number of observations. Since the data required scraping, which can be a time-consuming process, we were limited by the amount of time we allocated to data collection. Ideally, more observations are preferred for PSM. However, some econometricians argue that any significance coming out of huge datasets needs to be interpreted with caution since the size of the dataset might have driven the significance and not the power of PSM model (Heinrich, Maffioli, and Vázquez 2010).

One way to address these issues is to enhance the quality of the data. The website has access to a number of other variables that we cannot observe (e.g., precise timing of donations, donors' IP address which gives their approximate location, etc.) It also can easily provide access to the entire users of the website as observations. Writing a proposal to the owners of the website used for the present studies or other entities active in the donation crowdfunding domain is the next step we are considering to improve the quality of the data.

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APPENDIX: EQUATIONS, TABLES, AND FIGURES

$F(\mathbf{X}_i)$ = Prob $(D_i=1 \mid \mathbf{X}_i)$ where D=1 if the observation is assigned to treatment, 0 otherwise.
(EQ. 1)

$(\mathbf{Y_1}, \mathbf{Y_0}) \perp D|\mathbf{X}$ where $\mathbf{Y_1}$ is the outcome under assignment and $\mathbf{Y_0}$ is the outcome without assignment, D indicates assignment status, and $\mathbf{X}$ is the covariates matrix.
(EQ. 2A)

Prob $(D=1 \mid \mathbf{X})>0$
(EQ. 2B)

$D \perp \mathbf{X} \mid p(\mathbf{X})$
(EQ. 3)

TABLE 2
DESCRIPTIVE STATISTICS OF VARIABLES

Variable	Description	Mean	Std. Dev.
Raised	Amount of money raised by the campaign	88966.83	498670.3
Total	Amount of money asked by the campaign	111510.6	604895.2
Donors	Number of donors	1439.26	7230.19
Days	Amount of time since the creation of the campaign (days)	146.72	173.9
Shares	Number of Facebook and Twitter shares	5406.09	20961.59
Likes	Number of campaign photo likes	1467.88	7211.84
N = 440			

TABLE 3
PROBIT MODEL OUTPUT

Promo_dum	Coef.	Std. Err.	P > |z|
Total	0.000	0.000	0.503
Days	0.018	0.002	0.000
Shares	0.000	0.000	0.001
Likes	0.000	0.000	0.928
Shares * Likes	0.000	0.000	0.770
Raised / Donors	0.001	0.004	0.749
Cons	-2.83	0.441	0.000

TABLE 4A
BALANCING TEST

Variable	Mean		Control - Treated	% Bias	T-test
	Treated	Control			P > |t|
Total	200,000	62,586	-137,414	22.9	0.01
Days	268.05	277.54	9.49	-7.6	0.000
Shares	10,009	1,015.1	-8,994	43.9	0.000
Likes	2,756.8	1,212.6	-1,544	21.7	0.012
Shares * Likes	260,000,000	1,200,000	-258,800,000	16.6	0.083
Raised / Donors	77.1	53.4	-23.7	29.4	0.002

TABLE 4B
T-TESTS BEFORE MATCHING

Variable	Mean		Control-Treated	P > |t|
	Treated	Control		
Total	199,614.3	23,406.9	-176,207.4	0.010
Days	268.1	25.4	-242.7	0.000
Shares	10,009.2	803.0	-9,206.2	0.000
Likes	2,756.8	179.0	-2,577.8	0.000

TABLE 5
AVERAGE TREATMENT EFFECTS

ATE	Coeff.	AI Robust Std. Err.	P > |z|
RaiseRate	-400.69	178.25	0.025
Raised	10734.3	4722.5	0.023
Donors	187.1	70.9	0.008

TABLE 6
T-TESTS BEFORE MATCHING FOR VAR. DAYS

Variable	Mean		Control-Treated	P > |t|
	Treated	Control		
Days	268.1	25.4	-242.7	0.000

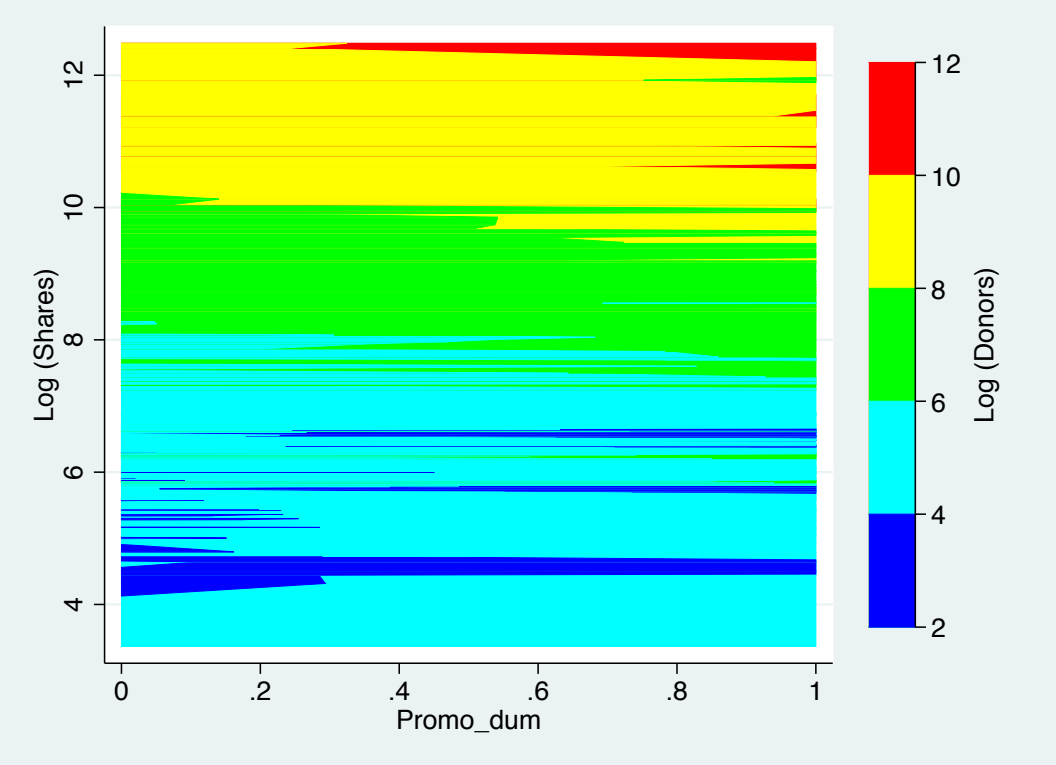

FIGURE 1: TWO WAY CONTOURS OF SHARES, NEWS MEDIA FEATURING, AND THE NUMBER OF DONORS

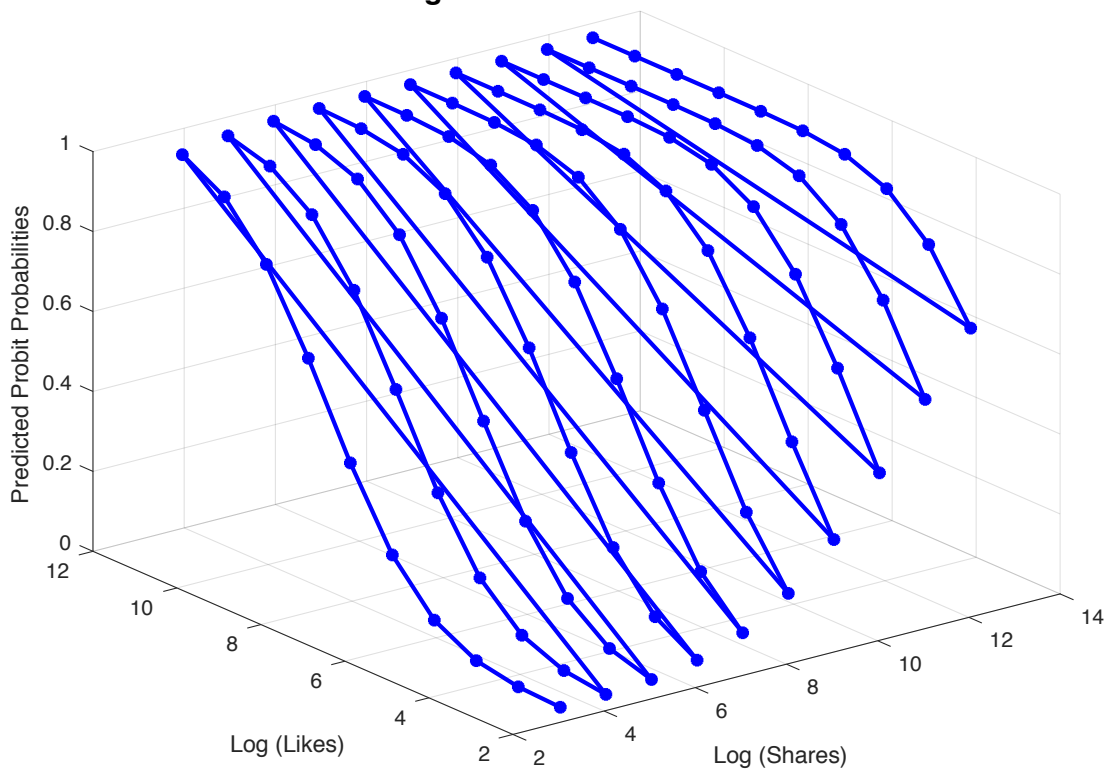

FIGURE 2A: PREDICTED PROBABILITIES OF BEING FEATURED ON THE NEWS MEDIA VS. SHARES AND LIKES

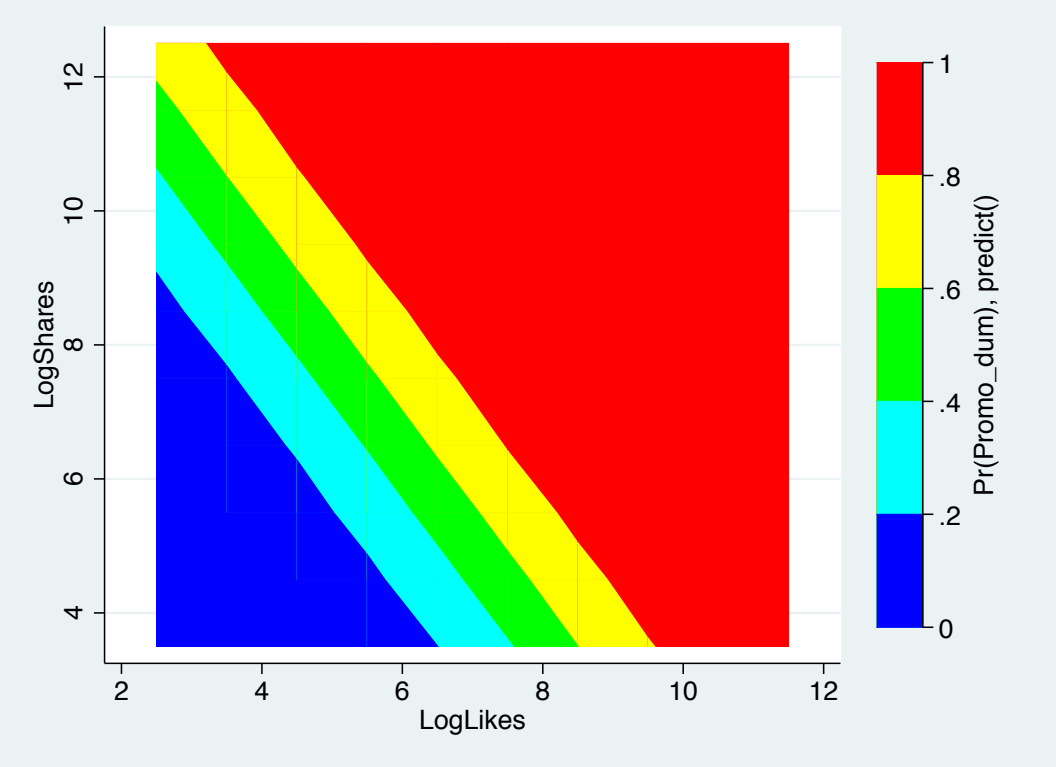

FIGURE 2B: TWO WAY CONTOURS OF SHARES, LIKES, AND THE PROBABILITY OF BEING FEATURED ON THE NEWS MEDIA

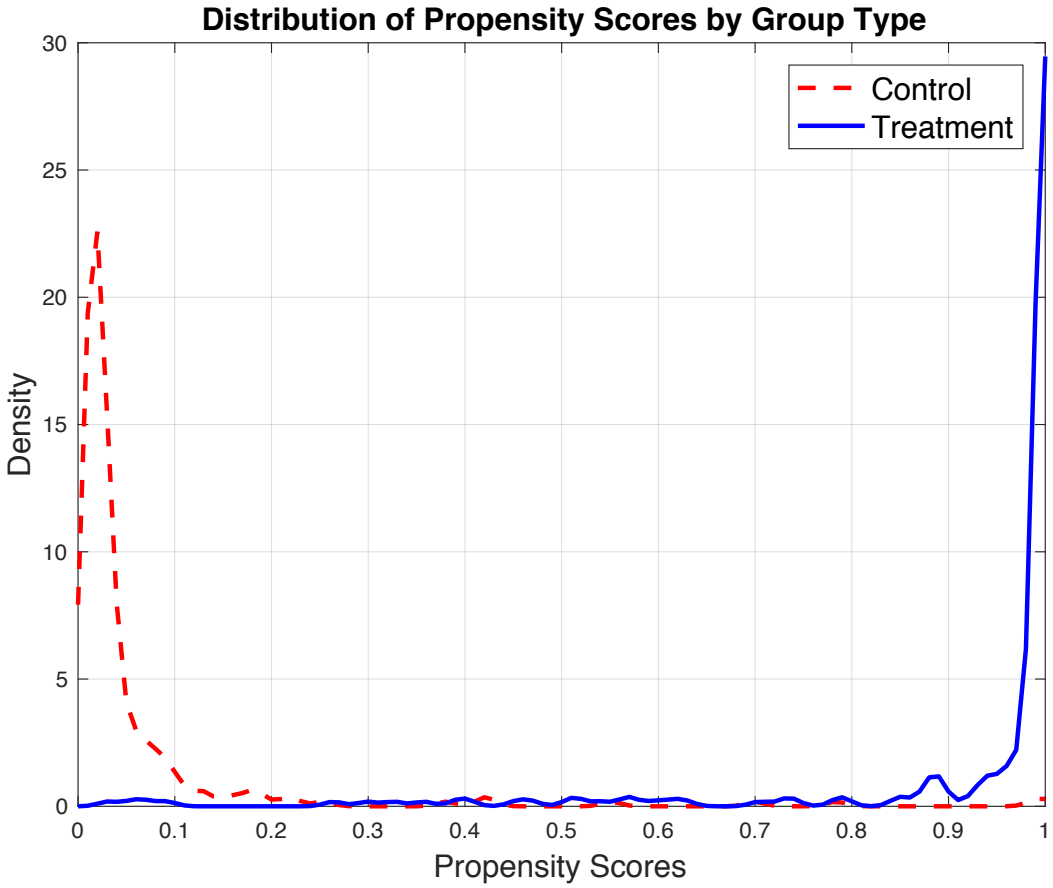

FIGURE 3: DISTRIBUTION OF PROPENSITY SCORES FOR THE CONTROL AND TREATMENT GROUPS.

Essay 3

A Conceptual Framework for Studying the Effect of Irrational Beliefs on Cadaveric Organ Donation Volunteering

ABSTRACT

There is a considerable gap between the supply and demand of human body organs for transplant. This shortage of supply used to be attributed to people's disagreement with the idea of removing their body organs after death. In this day and age, however, study after study of this issue show that the majority of people support the idea and are willing to volunteer to donate their organs posthumously. The actual behavior, nevertheless, tells a completely different story; i.e., a lot of people choose to not grant consent to remove their organs after death. Research has tried to resolve this contrast between and attitude and behavior. Most of these studies have relied on a rational decision-making framework. Regrettably, these studies lack powerful explanatory and/or predictability power. Relying on preliminary evidence from qualitative work on this issue, the present study seeks to shed light on the mystery using the irrational (illogical) beliefs approach. Specifically, it is proposed that the reluctance / refusal of people to donate their organs after death comes from beliefs that are not veridical, i.e., peculiar beliefs, magical thinking, and superstitious beliefs. It is further proposed that the effect of these beliefs on behavior is moderated by the notion of karma, which has nascent roots in consumer behavior and psychology.

INTRODUCTION

A total of 117,257 individuals are on the waitlist to receive an organ transplant (United Networks for Organ Sharing Database, accessed July 15, 2017). These transplants include sensitive body organs including, heart, liver, kidney, lung, intestine, and pancreas. Throughout the years 2012 to 2016, deceased organ donors have constituted the majority of donations.

----------Insert Figure 1 here----------

There is absolutely no question about the importance of organ donation, especially deceased individual or cadaveric organ donation. The advances in medicine and technology, combined with the increases awareness about the importance of organ donations, seem to have been able to solve the organ shortage problem. Unfortunately, however, this is not the case. At the end of 2015, for instance, 122,071 individuals were on the waitlist to receive a transplant and 30,975 transplants surgeries were done (Organ Procurement and Transplantation Networks 2017). This is especially surprising since surveys on organ donation show that the majority of people support/strongly support the idea of being an organ donor (US Department of Health and Human Service 2013).

----------Insert Figure2 here----------

Qualitative studies also show that people often express surprise at the idea of not volunteering to be an organ donor (see, e.g., Morgan, Harrison, Long, Afifi, and Stephenson

2008). In the light of these facts, potential organ donors, candidates, and academics have been asking themselves why people decide not to volunteer to donate their organs after death.

Considering the results of studies conducted between 1993 and 2012 (Figure 2), awareness about the importance of organ donation can be ruled out as a reason why more people do not volunteer to donate their organs . Similarly, attitude on this issue cannot be strong at explaining this reluctance. In fact, studies based on a rational decision making framework have not been strong in explaining or predicting the decision to be an organ donor (Morgan, Harrison, Long, Afifi, and Stephenson 2008).

Based on the aforementioned facts, the aim of this research is to take the mysterious reluctance of individuals to donate their organs after death to the realm or irrational beliefs. In consumer behavior, irrational (illogical) beliefs encompass peculiar beliefs, superstitious beliefs, and magical thinking (Kramer and Block 2011).

The study of such beliefs is motivated by observations that show people can have a high degree of irrationality when believing non-veridical matters. For instance, studies show that around half of individuals in America believe in ghosts, about a quarter of them have either seen or been in the presence of a ghost, and one in five believes in witchcraft (Alfano 2005; Handwerk 2009). Studies also show that such beliefs have important implications for behavior (Berenbaum, Boden, and Baker 2009).

This research proposes a qualitative theoretical framework to study the mechanism through which irrational beliefs affect the decision to be a cadaveric organ donor. It is also suggested that the proposed effect does not affect individuals similarly; i.e., individuals who believe in the concept of karma are less likely to be affected by irrational beliefs in making a decision to be an organ donor that those who do not believe in karma.

LITERATURE

The huge gap between the supply and demand of organs is not unique to the U.S. Other countries, to varying extents, suffer from the same problem as well. In the U.S. and Britain, half of the families that were approached with a cadaveric organ donation request did not agree to grant consent to donate their organs. The proportion was 20% in Spain and 30% in France (Abadie and Gay 2006). This reluctance to grant consent becomes more intriguing when one realizes that most people show a favorable attitude towards making cadaveric organ donations. A famous Gallup survey indicated that around 85% of Americans support organ donation and 69% would like to donate their organs after death; however, only 28% grant actual permission to remove their organs posthumously (Gallup 1993). Another interesting aspect of this reluctance is that it is actually a casual waste of a very precious commodity which could be used to save human lives (Abadie and Gay 2006).

From a merely administrative point of view, a number of solutions have been proposed to decrease the gap between supply and demand. Presumed (implied) consent, financial incentives, and education campaigns are among them, with presumed consent showing the highest promise (United Network for Organ Sharing 2002). Opponents of presumed consent, however, insist that the method is based on controversial ethical standing since it does not respect "individual donation preferences in the event of donation candidacy" (U.S. Department of Health and Human Services 1993).

A substantial number of studies in the cadaveric organ donation literature have tried to investigate the reluctance of individuals to donate their organs posthumously. Most of these studies mention a number of antecedents to attitude towards cadaveric organ donation; this attitude is deemed to be responsible for the observed behavior (see, e.g., Radecki and Jaccard

1997 for a review). These antecedents are mostly salient beliefs about cadaveric organ donations. Radecki and Jaccard (1997) categorize these beliefs into religious, cultural, knowledge, altruistic, and normative beliefs. A brief description of these beliefs follows.

Religious Beliefs. Many religions support the idea of donating one's organ after death. Christianity, for instance, considers it as an instance of charity and love (Woo 1992). At the same time, religion can be considered as an impediment to willingness to donate one's organs. Pearl (1990) cites conservatism within the Jewish community about cadaveric organ donation. The issue is with proper and timely burial as well as unwanted afterlife effects.

Cultural Beliefs. Cultural beliefs corresponding to various ethnic groups have been known to affect attitude towards organ donation. In the spotlight are the African American, Asian, and Hispanic cultures. Lack of confidence in medical doctors, sanctity of a dead body, myth, and superstition have been mentioned as the reasons for reluctance among these groups.

Knowledge Beliefs. These beliefs tend to emanate from an external source. The external source could have varying degrees of accuracy. This knowledge, often, comes from nonmedical sources which mostly lack accuracy (Wakeford and Stepney 1989). Radecki and Jaccard (1997) compile some of these inaccurate accounts as follows: premature declaration of death to remove the organs, keeping the individual on life support for too long to preserve the organs, the possibility of recovery from brain death, and the possibility of severe body disfiguration as a result of organ removal.

Altruistic Beliefs. Affective responses with respect to other human beings give rise to altruistic beliefs. A brief review of altruism models is provided in Essay 2. Monetary inducements are often known to be ineffective on the donation decision of people for whom altruism is the main driver of response (Davidson and Devney 1991).

Normative Beliefs. How other people think about an individual and what their perceptions might be about the act of donation give rise to normative beliefs. Family objections, for instance, have been known to affect the individual's willingness to donate their organs (Cleveland and Johnson 1970).

The potential donor's attitude toward cadaveric organ donation has often been central to studying this phenomenon. Most of studies in this context mention attitude and its consequent effect on behavior (Winkel 1984). Recent measurements of attitude on organ donation after death cast doubt on the viability of using this particular construct. Recent studies by the U.S. Department of Health and Human Service's Health Resources and Services Administration organizations that are in charge of coordinating donation efforts across the country (e.g., United Network for Organ Sharing, Organ Procurement and Transplantation Network, and the like) suggest that an increasing majority of people support the idea of donating their organs after death. Some scholars, however, argue that this positive change in people's attitude toward organ donation might be because the measurement in different studies has been done differently. These measurements might include attitude toward the donation of tissues, organs or both. These scholars conclude that drawing inference under these circumstances should be done with caution, but do not completely rule out an increasing positive trend (Radecki and Jaccard 1997). The problem with their argument is that organizations that use comparable instruments for data collection, and therefore have measures that are similar, corroborate the increasing positive attitude. This lends more credence to the idea that attitude toward donation is not a proper variable. It also sheds some light on why studies that use a rational decision-making approach to studying cadaveric organ donation cannot explain actual donor behavior (Morgan, Harrison, Long, Afifi, and Stephenson 2008).

Irrational (Illogical) Beliefs

The term irrational (or illogical) beliefs is used in consumer psychology to refer to a variety of belief systems that are not verifiable. The concept usually reduces to specific instances of these beliefs which are categorized under peculiar beliefs, magical thinking, and superstition (Kramer and Block 2011). A summary of these beliefs is given in what follows.

Peculiar Beliefs. Berenbaum, Kems, and Raghavan (2000) define peculiar beliefs as beliefs that "are presumed (by scientist, at least) to not be veridical". Therefore, these beliefs cannot be verified using logical or empirical investigations. It is important to note that at their extreme, these beliefs considered as a psychological disorder that requires treatment (Berenbaum, Boden, and Baker 2009).

The very definition of peculiar beliefs makes it a rather inclusive term. In fact, magical thinking and superstitious beliefs are subsets of peculiar beliefs. These two types of belief have received the highest amount of attention in consumer psychology (Kramer and Block 2011).

Magical Thinking. Meehl (1964) defined magical thinking as "belief, quasi-belief, or semiserious entertainment of the possibility that events which, according to the causal concepts of this culture, cannot have a causal relation with each other, might somehow nevertheless do so" (as cited by Kramer and Block 2011). For instance, the belief that evil thoughts about an individual could somehow harm her/him later is a form of magical thinking. Nemeroff and Rozin (2000) offered a more precise definition which is used more frequently. According to this definition magical thinking is "an intuitive, and possibly universal, aspect of human thinking that follows the principles of similarity and contagion". The law of similarity posits that objects that share one characteristic might somehow share other characteristics as well. For instance, Rozin, Millman, and Nemeroff (1986) showed that subjects were reluctant to put a piece of rubber

vomit in their mouth. Rozin, Markwith, and Ross (1990) shoed that subject who had labeled a container with the name of a poison were less likely to consume food out of it.

The law of contagion, as explained by Rozin and Nemeroff (2002), posits that physical contact between objects leads to a transfer of other intrinsic and indispensable qualities. This transfer could be direct or through a third object. It could also happen immediately or subsequently. For instance, it was shown that a sweater that was worn (but not owned) by a disliked figure is more worrisome than one which was owned (but not worn). Morales and Fitzsimons (2007) show that when a product which is associated with the feeling of disgust is in touch with another product directly, subjects have a lower evaluation of the touched product than when the source of disgust is just present and not in direct contact with the other object.

Superstitious Beliefs. Following Kramer and Block (2011), the definition of superstition is limited to peculiar beliefs that are about good vs. bad luck. In other words, believing that objects or actions could somehow control good and bad luck is considered superstitious. Some familiar instances of superstitious beliefs include believing that number 13 is unlucky, believing that knocking on wood precludes evil eye, and believing that crossing one's fingers brings about good luck. Superstitious behaviors have a long history in sports where people refrain from watching the final moments of a game to avoid jinxing the result or when athletes wear the same of pair of socks to different games to keep the good luck.

One important predictor of engaging in superstitious behavior is uncertainty. Keinan (2002), for example, shows that Israeli citizens who lived in areas that were more likely to be hit by missiles were more superstitious than those who lived in more secure locations. Jiang, Cho, and Ataval (2009) showed that risky investment is more likely when subjects are primed with lucky numbers as opposed to unlucky numbers. Situations that are characterized by a lack of

control have been also associated with the belief in miracles (Vyse 1997). It was also proposed that in such circumstances, one might think that fate controls the outcomes (Vyse 1997; Mowen and Carlson 2003).

It should also be noted that superstitious behavior occurs frequently despite the fact that people engaging this sort of behavior are aware of the superstitious nature of their deeds (Mowen and Carlson 2003). Quite a few antecedents for superstition have been identified and tested in various studies with varying results regarding the effect of gender, education, etc. (see e.g., Vyse 1997; Mowen and Carlson 2003).

There are antecedents, on the other hand, that seem to have stronger roots. Vyse (1997), for instance, proposed that emotional instability could lead to superstitious beliefs. A number of studies (Bleak and Frederick 1998; Mowen and Carlson 2003; Vyse, 1997; Watson & Tharpe, 1990) suggest that superstitions are common among those involved in sport activities. For example, athletes might wear the same shirts, shorts, and socks to every single game believing that doing so will bring them good luck. It has been theorized that such behavior might serve as a source of motivation and a means for coping with the stress of the sporting event (Watson and Tharpe 1990). Similarly, the same activities could be assumed to bring good luck for those who are considered as fans of these sports. Therefore, the following hypotheses are suggested:

Research by Mowen and Carlson (2003) identifies the need for learning as a relevant construct to superstition. Defined as "an enduring predisposition to seek and obtain information resources," it was found to correlate negatively with the need for cognition which measures "the extent to which individuals avoid thinking and processing information." However, it was also found that for younger respondents (mean age of 22 years), the need for learning does not predict superstition while for older respondents (mean age of 46 years), the need for learning has a

significant effect on superstition. In other words, age seems to be moderating the relationship between the need for learning and superstition.

Obviously, sometimes these peculiar beliefs can be culture-specific. For instance, Japanese family member share their bath water while Western cultures find it disgusting. Numbers 7 and 13 are associated with luck in Western cultures while numbers 8 and 4 are associated with good and bad luck in Chinese cultures (Kramer and Block 2011).

Karma

Central to the idea of karma is the fact that actions could / would have consequences (Kopalle, Lehmann, and Farley 2010). However, what distinguishes karma from Newton's third law (i.e., "for every action, there is an equal and opposite reaction") is that in the case of karma, a particular behavior done in present could have future consequences, in this life, the next life or those after that. Kopalle et al. (2010) mention three essential characteristics for karma: (1) the concept of "rebirth": actions in one life might have consequences later in this life or the next lives (2) actions could be categorized into good and bad, and (3) good (bad) actions in the present lead to good (bad) consequences in the future. In other words, believing in karma makes an individual feel more accountable for her/his actions since the nature of those actions might haunt the individual in this or the next future life (lives) (Kopalle, Lehmann, and Farley 2010). Dubbed as more oriental concept, long-term orientation (LTO) was put forth by Hofstede (2001) and Hofstede and Hofstede (2005) as a dimension distinguishing different culture. It is no surprise that karma's birthplace is in the East.

The similarity between the notion of karma and other peculiar beliefs (e.g., magical thinking and superstitious beliefs) is, perhaps, obvious. These are all based on ideas about the world around us that are not verifiable. Their power is in offering plausible theories for

occurrences that are otherwise unexplainable (Boden and Berenbaum 2004). Despite the fact that peculiar beliefs are relatively well-studied within the marketing literature, little attention has been paid to the concept of karma in marketing and psychology (Kulow and Kramer 2016). For example, in marketing, building upon the literature on disconfirmation sensitivity and consumer expectations, Kopalle, Lehmann, and Farley (2010) show that belief in karma moderates the impact of disconfirmation sensitivity on the expectations of the consumers. In psychology, Converse, Risen, and Carter (2012) show that, when facing uncertainty, people are more likely to do "good deeds" so as to improve "fate's favor". They also elaborate on the concept of "karmic investments" where in the face of uncertain circumstances, people might connect the potential positive outcome with a "cognitively available" prior good deed and connect the potential negative outcome with a prior bad deed. It is important to note that this inclination is not predicated on a rigorous belief in the notion of karma, rather, having belief in the notion of a just world is enough to get people to engage in karmic investments (Converse, Risen, and Carter 2012).

In the light of the aforementioned results, one could argue that one way for people to increase their future supply of rewards is to engage in doing good. Prosocial behavior and donations are accepted instances of good deeds, according to Kulow and Kramer (2016). Therefore, the belief in karma could lead to a higher willingness to donate one's organs posthumously.

PROPOSED MODEL

As noted earlier, studies in the realm of cadaveric organ donation indicate that the majority of people support the idea of donating their organs after death. Further, the majority of people also express an intention to volunteer to donate their organs after death. Regrettably, however, many people do not engage in the corresponding behavior (i.e., granting consent to donate their organs posthumously). Lack of explanatory and predictability power of models based on a rational decision-making framework motivated this research to try to find an answer using the concept of irrational (illogical) thoughts and beliefs. This became increasingly a more promising approach as the presence of non-veridical beliefs in those who choose to not donate their organs is documented (see, e.g., Morgan, Harrison, Long, Afifi, and Stephenson 2008).

The proposed model in this research focuses on three forms of irrational beliefs, which are more extensively studied in the marketing literature, i.e., peculiar beliefs, magical thinking, and superstitious beliefs. The narratives from studies which have done interviews with non-donors show that their concerns can be categorized into each one of the three irrational beliefs. Therefore, we propose that individuals high in each of these beliefs have a higher tendency to be reluctant about cadaveric organ donation. However, the existence of the aforementioned beliefs will lead to lack of willingness to donate the organs only if the individual does not believe in karmic investments. In other words, for individuals who believe in karma and karmic investments, the effect of irrational beliefs on donation behavior fades.

----------Insert Figure 3 here----------

MEASURES

Superstitions. For the initial studies, this research will employ the Revised Paranormal Belief Scale (Tobacyk 1988; Tobacyk and Milford 1983). This will insure that the initial operationalization will include a broad definition of superstitious beliefs. To ensure that this operationalization includes a variety of superstitious beliefs, the following questions, specific to this particular context, will be added to the above scale:

- I believe I will jinx my future by agreeing to be an organ donor.
- Donating one's organ could bring about the bad luck.

Magical Thinking. As explained before, it is more pervasive in consumer research to use the procedure developed by Rozin and Nemeroff (2002). However, given that the initial studies are supposed to do the measurement through surveys, The Magical Ideation Scale (Eckblad & Chapman, 1983) will be appropriate. As before, the following questions will be added to ensure thoroughness.

- The idea of body parts being transplanted from one person to another is disgusting.
- Positive (negative) qualities could be communicable through organ transplants

Peculiar Beliefs. In psychology and medicine, The Personality Disorder Interview (The Personality Disorder Examination) is administered to assess the existence and severity of peculiar beliefs (Loranger et al. 1994). This test, however, is intended for medical use and is broader than the scope of this study. Therefore, the following items will be used to measure peculiar beliefs.

- Medical practitioners sometimes engage people in experiments without their knowledge / consent.

- Medical practitioners might prematurely declare somebody dead to harvest their organs.

Reluctance / Refusal to Volunteer for Cadaveric Organ Donation. The dependent variable is measured through the following items.

- I am not sure I would like to grant consent to remove my organs after death.
- I do not grant consent to remove my organs after death.

Belief in Karma. Following Kopalle, Lehmann, and Farley (2010), the following items will measure belief in karma.

- "The universe is a continuous cycle."
- "I believe in reincarnation where one becomes better (worse) due to good (bad) actions."
- "I believe in karma."
- "The world was not formed by a once-for-all act of creation."

DISCUSSION

Cadaveric organ donations are the most important source of acquiring organ transplants. Despite people's awareness about the importance of volunteering for cadaveric organ donation, there is a big gap between the demand and supply of cadaveric organs. The aim of this study was to provide a conceptual framework to guide future studies in a better direction in terms of explanatory and predictive powers. One way to achieve this is to realize that many narrative accounts on organ donations point to thoughts, beliefs, and concerns that are not veridical. Lack of trust in the integrity of medical practitioners and peculiar beliefs about death, burial, and life after death are among some examples of such beliefs. Given these narratives and, also, the fact

that studies based on a rational decision-making approach did not possess spectacular explanatory power, we propose that the reluctance/refusal to donate organs posthumously be studied using the irrational (illogical) beliefs framework. Among the most widely studied irrational beliefs in marketing are magical thinking and superstitious beliefs (which are subsets of peculiar beliefs). These concepts have been shown to have significant power in explaining various aspects of consumer behavior. Of these peculiar beliefs, the notion of karma has not received the attention it deserves. Recent studies have shown that regardless of culture, believing in a world with karmic justice could explain behavior very well.

LIMITATIONS AND FUTURE RESEARCH

The current research obviously suffers from lack of empirical evidence. While the evidence from other similar lines of research points strongly in the direction of the conceptualization put forth here, empirical evidence is absolutely essential to provide stronger evidence for or against the hypotheses.

The next stage of this research will address this limitation. The authors are designing different studies to corroborate the hypotheses. These studies include both measurement and manipulation techniques to ensure high rigor. Nevertheless, since these studies are still being designed and performed, their details have been taken out of this manuscript.

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APPENDIX: FIGURES

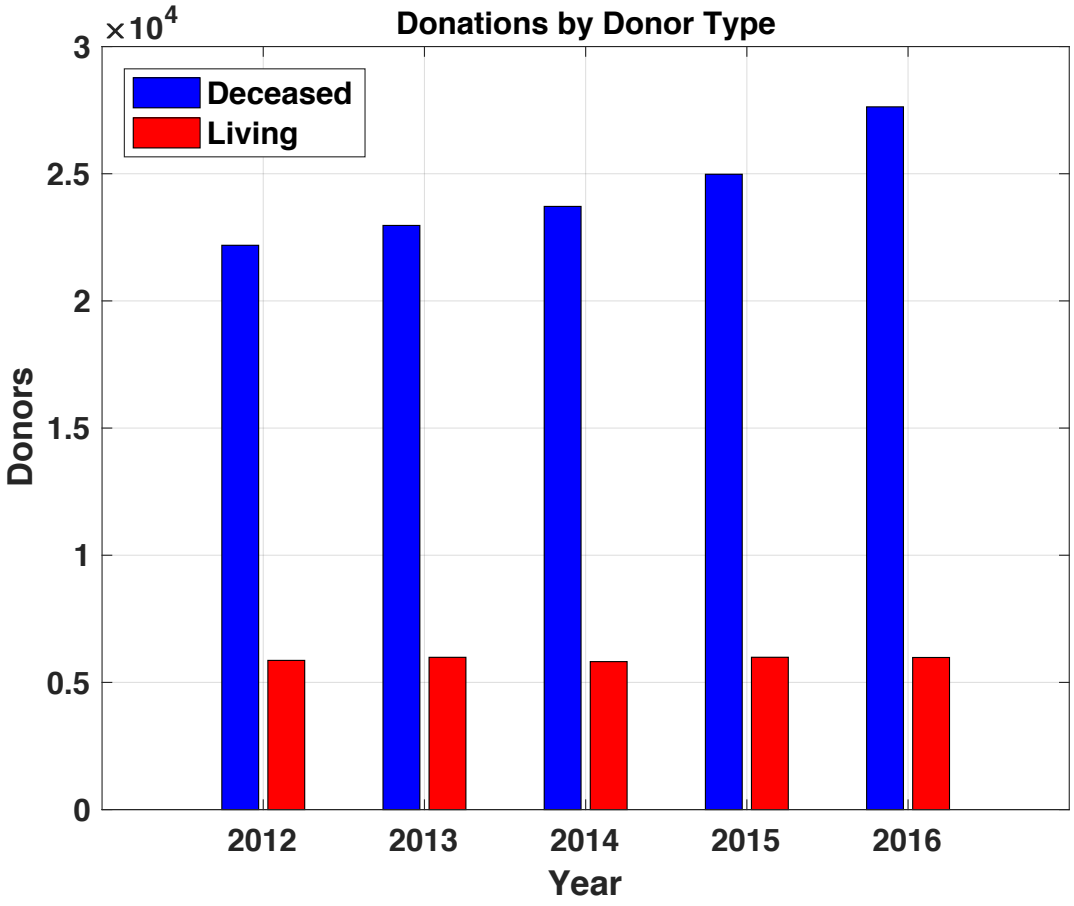

FIGURE 1: DONATIONS BY DONOR TYPE

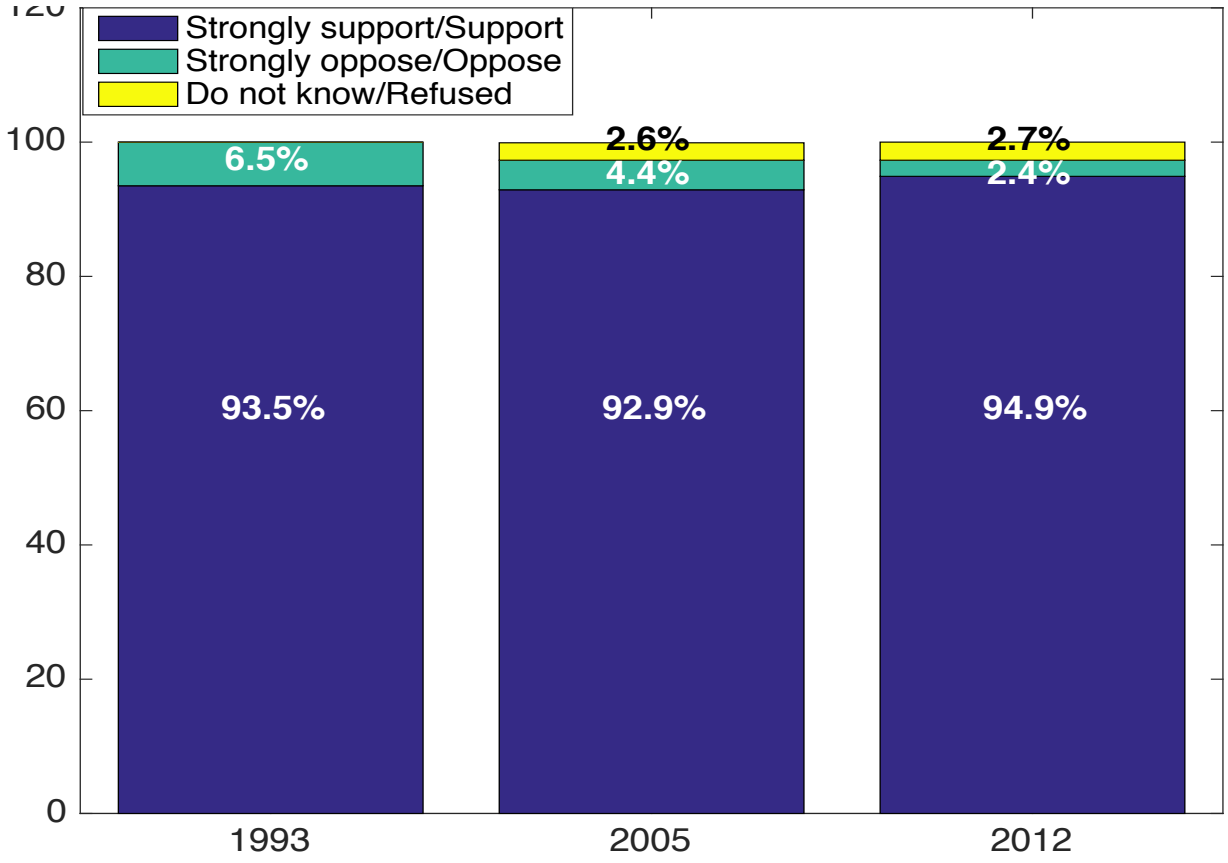

FIGURE 2: PROPORTION OF RESPONDENT BASED ON THE TYPE OF RESPONSE

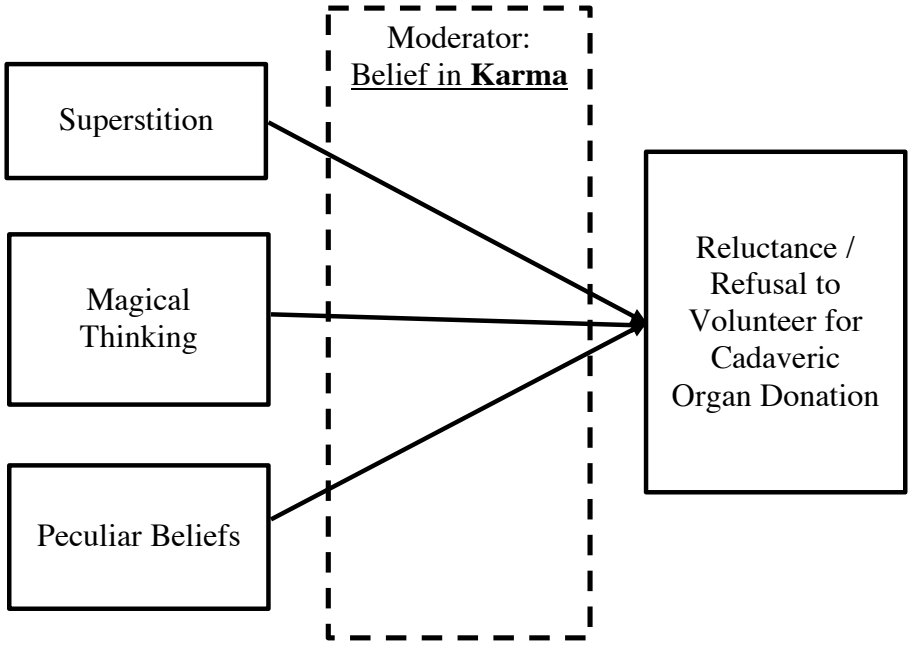

FIGURE 3: SCHEMATIC OF THE PROPOSED MODEL