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On the Norms of Charitable Giving in Islam: A Field Experiment*

Fatima Lambarraa† and Gerhard Riener‡

June 2012

Abstract

Charitable giving is one of the major obligations Islam and a strong Muslim norm endorses giving to the needy, but discourages public displays of giving. This norm is puzzling in light of previous evidence, suggesting that making donations public often increases giving. We report the results two field experiments with 534 and 186 participants at Moroccan educational institutions (among them two religious schools) to assess the effects this moral prescription on actual giving levels in anonymous and public settings. Subjects who participated in a paid study were given the option to donate from their payment to a local orphanage, under treatments that varied the publicity of the donation and the salience of Islamic values. In the salient Islamic treatment, anonymity of donations significantly *increased* donation incidence from 59% to 77% percent as well as average donations for religious subjects from 8.90 to 13.00 Dh. This findings stand in stark contrast to most previous findings in the charitable giving literature and suggest to rethink fundraising strategies in Muslim populations.

Keywords: Charitable giving, Islam, Social pressure, Priming, Religion, Norms, Field experiment

JEL code: H40, C93, D01, Z12

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1 Introduction

Charitable giving is one of the major obligations in Islam. Islam constitutes - with more than 1.57 billion believers - one of the major world religions. Two forms of charity in Islam can be distinguished: a mandatory form called *Zakaah*, which works comparable to a redistributive tax system, and a voluntary form called *Sadaqah*, which is closer to charitable giving as understood in the economics literature. While there are several economic studies on *Zakaah* and its redistributive effects (see for example Jehle, 1994, for a study on Pakistan.) and its moral and religious dimensions (Kuran, 1995), the voluntary system remains nearly unstudied in the economics literature, despite the increasing interest in the determinants of charitable giving, and has only recently got into the focus of other social science disciplines such as history (see Singer, 2008). *Sadaqah* is governed by a set of codified rules where the religious value of the donation varies with publicity: *Sadaqah* must be done sincerely to please Allah only and not out of gaining praise or recognition from others (which is known as *riya')*. The Qur'an, makes this point in 2:264, which reads in English as follows:

> "O you who believe! Do not render vain your charity by reminders of your generosity or by injury, like him who spends his wealth to be seen of men and he does not believe in Allah nor in the last Day."[1]

Although a similar prescription exists in the Christian Bible[2], this prescription recent literature on charitable giving in the Americas and Europe does not provide evidence that this rule has behavioral consequences. Recent research on giving in public environments suggest that subjects donate more when donations can be observed by others and the charitable organization is asking for funds for a – according to the peer group – good cause. In a laboratory experiment Rege and Telle (2004) show that revealing

[1] Other religious writing make this rule even more precisestating that the reward for alms giving in afterlife in secret is *seventy times* that of giving publicly (Al-Baydawi, 1899).

[2] In Mathew 6, 3-4 in the New Testament it says: "But when thou doest alms, let not thy left hand know what thy right hand doeth: that thine alms may be in secret: and thy Father who seeth in secret shall recompense thee." (Bible, American Standard Version)

names in a public good context increases giving. In a field experimental setup Soetevent (2005) showed an increase of 10% in giving in churches when open baskets were used however the increase faded over time, Alpizar et al. (2008) show that open donations increase donation incidence by 25% in a field study on voluntary contributions to a National Park. Using field data Meer (2011), shows that charitable solicitations done via friends and acquaintances increases the probability of giving and the overall amount of the gift. Savikhina and Shermeta (2010, p. 2) even claim that "[...] there is agreement among researchers and practitioners that recognizing contributors has a positive effect [...]".

These results leave the impression that social recognition through charitable donations (or doing well) is a universal human phenomenon, independent of culture. An argument which also in manifested in earlier theoretical arguments for observed higher giving: *reputation seeking* by signaling wealth (Glazer and Konrad, 1996). We present an explicit religious prescription of giving that is opposed to the reputation seeking motive. To assess the effectiveness of this religious prescription on actual giving levels and donation incidence we conducted two field experiments that varied the visibility of individual donations and the salience of the social norm. We see this study as a step in better understanding the nature of charitable giving and the role of reputation in non Western societies.

We organized two field experiments[3] around a paid survey on entrepreneurial activities and attitudes towards entrepreneurship in several educational institutions in the region of Fez and Meknes in Morocco in October 2010 and November 2011. In the first experiment 534 subjects participated in 6 treatment conditions. Subjects received their payment in an envelope attached to their survey upfront. After filling out the survey, they could donate from their payment to a local, known orphanage under the different between-subject treatment conditions. The survey was administered in class rooms

[3]In the terminology of Harrison and List (2004) participants were not aware that they were part of an experiment.

with the experimental treatments randomized within each session and subjects seated far from each other. The second experimenter had two treatment conditions where in both of them subjects could choose whether they want to be recognized or not. In both experiments subjects were not told that they participated in an experiment.

To identify the causal effect of religion on donation behavior and whether people want their donations to be publicized or not we use a technique known as priming. This technique was developed by social psychologists that recently found entry in the economics literature (see for example Matthey, 2010 or Benjamin et al., 2010) in a field context. As a reminder of Islamic identity we use Arabic as opposed to French in the questionnaire. Arabic is an ideal transport of especially Islamic values through its intimate connection with Islam as religion as described in Sadiqi (2003).

For religious subjects in the French condition, we observe only a slight increase in the donation incidence from 66% in public to 71%, when donating anonymously, while in the Arabic condition the share of donations significantly increases from around 59% in the public to around 77% in the anonymous condition. Furthermore we find that religious subjects give around 25% less when their donations are made public in the Arabic condition.

Welfare implications are an increasing concern when assessing behavior under social pressure. Malmendier et al. (2011) show – using data from a door-to-door fundraising experiment data and an underlying structural model – that social pressure can have negative welfare consequences on the donors side. In our case the – qualitative – welfare implications can be determined straightforward as in the case of giving we do not find a trade-off of increased giving vs psychological costs: Publicity of donations is welfare reducing as it reduces the amount transferred compared to the amount transferred under anonymity. Furthermore, when religious promises are seen as extrinsic or intrinsic (in the sense of Deci, 1975) rewards in afterlife, public donations increase the negative welfare effects.

Beside the contribution of this study on charitable giving and reputation seeking, it extends the discussion on economic motivations where altruism may be driven by a general uncertainty about life after death. Secular societies, where the belief of a life after death are reduced therefore consumption and reputation concerns will end with death. The advantage of faith based extrinsic rewards and its conditional nature that the rewards are only given when anonymous effectively help to overcome the potential crowding out effects as described in Janssen and Mendys-Kamphorst (2004) or Ariely et al. (2009).

However, there are other theoretical contributions that point out that anonymity can be important to sustain cooperation in public good games with applications to (religious) organizations: Hugh-Jones and Reinstein (2010) argue that anonymous contributions in a public good game resolve the information problem over the type of subjects. In non-anonymous public good games, the inference over the type is not easily possible as other motivations, as reputations seeking or doing *well*, reduce the information content of the signal. This problem is overcome and therefore higher cooperation can be sustained in subsequent periods.

Furthermore, we add to the debate whether religious and cultural motives influence behavior with early exploration by Iannaccone (1998) and Stark et al. (1996). In recent years experienced an increasing interest in the economic relevance of religion and culture on economic behavior and preferences as a discussion by Fehr and Hoff (2011). Becker and Woessmann (2009) for example assess the effect of protestantism on economic growth and find that increased positive attitudes towards education rather than a direct effect on work attitudes can explain growth in protestant German counties. Experimentally, Benjamin et al. (2010) activated religious identities for Christian Catholics and Protestants and for Jews and tested whether they behave according to religious/ethical prescriptions in a series of standard games. The importance of the case of charitable giving in Islam is its unique standing in explicit self-concept of the religion as one of the major pillars. The *Qur'an* promises very explicit extrinsic rewards in the

life after death.

Islam is is a very diverse religion, so we do not claim that our results hold for all different traditions of Islam. Our aim is to highlight cultural differences in donation practices and so to foster a better understanding of philanthropy across cultures where steps towards this goal have already been taken in the extensive literature survey by Bekkers and Wiepking (2007). Furthermore, this paper adds and expands the literature of cultural influences on economic activities and sheds light on an important, large and still understudied religion. The advantage of our special field experimental approach is an increased level of control that rivals the control in laboratory experiment, but reduces experimenter demand effects of environmental cues, as language. This helps us derive results with some greater degree of external validity as pure laboratory experiments could do and our results have implications for the design of fundraising campaigns in Islamic societies.

One potential problem of priming in conventional laboratory experiments are demand effects (see Zizzo, 2009) – so that subjects can guess what the experimenter wants them to do – which we hope to overcome and test effects of strong primes versus weak primes in our experiment. The field context makes it easier to reduce demand effects as subjects do not know that they are taking part in an experiment. We are well aware that our results although stemming from a field experiment might not be a good measure of the *quantity* of the effect but they give a good *qualitative* result, taking the arguments by Levitt and List (2007). Further large scale field studies would be necessary to evaluate the quantitative effect of anonymity on donations over the whole society.

The remainder of the paper is organized as follows: In the next section we discuss in greater detail the nature of giving in Islam. Section 3 explains the experimental design and implementation and discusses the role of language in Morocco and its usefulness as priming instrument. Section 4 gives behavioral predictions. Section 5 reports the results and section 6 concludes and discusses the relevance of the results.

2 On the nature of giving in Islam

We describe briefly the two forms of charitable giving – *Zakaah* and *Sadaqah* – in Islam and then focus on the relevance of *Sadaqah* for our experiment. *Zakaah* means purification and blessing of wealth and soul (Ibn Manzur, 1956, pp. 14/358; 2/399). Following the definition of Islamic codified law - the *sharee'ah*, *Zakaah* means worshiping God by giving which he has enjoined to those who are entitled to them. *Zakaah* is an obligatory form of charity expected from every Muslim individual and it is an act of worship and a form of redistributive wealth tax of an annual contribution of two and a half percent of one's idle wealth. Jehle (1994) shows for Pakistan at the end of the 1980's that *Zakaah* effectively redistributes wealth. What makes it different to a tax system in Western world is its religious significance, including punishment threats for non-compliance in afterlife.

Sadaqah comes from the word *sidq* (sincerity), which is truthfulness in realizing declared belief by action (see Al Qardawi, 1999). It serves as a sign of sincerity of faith (Ash-Shawkani, 1788, 2/399). With regard to the *sharee'ah* definition, *Sadaqah* means worshiping Allah by *voluntary* giving. Thus, *Sadaqah* implies giving away goods and funds for the sake of God in expression of faithfulness and in realization of the belief in resurrection and afterlife. It is for that reason that *Qur'an* associates giving with affirmation of faith and withholding with rejection of faith. The *Qur'an* affirms: "Those who believe, and do deeds of righteousness, and establish regular prayers and *regular charity*, will have their reward with their Lord: On them shall be no fear, nor shall they grieve" (2:277). Thus charity, on a generic level, plays a major role in Muslim society. Next to the prescription on anonymous giving there are three basic rules involved with donating, emphasizing the religious function of charity: Firstly, a Muslim must always donate in the name of God alone. Secondly, all money donated must be from a legitimate source. Money that has been stolen or earned unethically is

annulled by the norm.[4] Thirdly, all excess wealth is seen as Allah's ownership in Islam. Therefore it is left up to the individual as to how much they are willing to give back to Him, in the form of charity.[5]

3 Experimental Design

Experiment: Donations

We applied a 2×3 design, where we varied the level of anonymity (completely anonymous and disclosed with name) and the cultural prime (French vs. Arabic) and inclusion of the relevant religious prescription passage within the questionnaire. Table 1 gives an overview and the labeling of the treatments that will be used in the paper.

Table 1: Experiment Donations: Treatments

	French (baseline)	**Arabic** (weak cue)	**Rule** (strong cue)	**Obs**
Public (Obs)	*PubFr (87)*	*PubAr (87)*	*PubSad (91)*	265
Anonymous (Obs)	*AnoFr (86)*	*AnoAr (97)*	*AnoSad (86)*	269
Observations	173	184	177	534

The treatments were randomized within each session in order to obtain a balanced sample over all subject groups (see the discussion of randomization in development economics by Bruhn and McKenzie, 2009).

All subjects were asked to fill out a questionnaire and sign a receipt that they received the money for participation in the study. Those receipts were collected independently from the questionnaire.[6]

[4] Using a paid survey rather than own money guarantees that subjects have earned the money ethically.

[5] For further points on the differences between *Zakaah* and *Sadaqah* see appendix E

[6] A protocol of the experiment can be found in appendix D

Observability conditions

Anonymity In the anonymous conditions, subjects answered the questionnaire anonymously, removing the receipt for the money with their name on it from the questionnaire and not copying the name to the questionnaire itself. Subjects were also told at the end of the questionnaire in the introduction on donations that their donations will remain completely anonymous.

Publicity In the observability conditions the procedure was similar but, subjects had to put their names on the receipt of the money *and* on the questionnaire itself. Furthermore, they were told that their donations will be publicly announced at the announcement board of the charity (*including* zero donations). So subjects were aware that there was no possibility to avoid publication by donating nothing.

Language Priming

Priming has a long tradition in the literature of social psychology and has recently be used in economics (see for example Matthey, 2010) to evoke cultural concepts and identities. The main idea is that a person – who belongs to several different identity groups – is reminded of one specific identity concept determined by the research question. We will make use of this technique to induce exogenously the awareness of religious traits. In a seminal paper Shariff and Norenzayan (2007) used culturally loaded word puzzles. This technique does not accommodate well in the context of a field experiment as it potentially makes subjects suspicious about the aim of the study. Furthermore Wheeler and Petty (2001) – in a review article – showed that more subtle primes are more robust in evoking stereotypes. So our choice of the priming instrument for religiosity fell on language. Language priming has been used previously by Bond (1983) and Bond and Yang (1982) on students from Hong Kong.[7] Luna et al. (2008) examined of lan-

[7]Following those studies on Hong Kong Chinese, language priming has been used with this population frequently in cross-cultural psychology (see Ralston et al., 1995, Trafimow et al., 1997 or Oyserman et al., 2002).

guage on bi-culturally (American and either Mexican or Puerto Rican) raised women. These studies based on questionnaires to elicit attitudes show that language evokes different mindsets in the subjects, depending on the cultural identity associated with the language. In an economic study Li (2010) shows that addressing Hong Kong Chinese students in English reduces trust and trustworthiness in laboratory experiments compared to Chinese.

Standard Arabic and Islam

Standard Arabic is the official language of Morocco. It is strongly related to Arab-Islamic identity as it is perceived as the 'voice' of Islam and the symbol of a glorious past (Sadiqi, 2003). Since the arrival of Arabs in 680 AD who established the first Moroccan state and brought Islam, this religion dominated all Moroccan life aspects. The introduction of Islam in Morocco, means that the memorization of *Qur'an* was necessary where the learning of Classical (Standard) Arabic was fundamental. Standard Arabic is the first language of instruction in Moroccan public schools. Some children are exposed to it for the first time when they attend Qur'anic pre-schools at ages four to six. Therefore, standard Arabic has always been a language of prestige in Morocco, used for religion, education and all official, written functions (Marley, 2005). After the independence from France in 1956, Morocco opted for a policy of Arabization[8], replacing French as the language of the colonizer with Arabic to affirm the country's Islamic identity and to link Moroccans with the Muslim and Arabic community (Marley, 2005). Thus, the Standard Arabic in Morocco symbolizes self-affirmation against foreigners, the language of Divine Revelation(see Chejne, 1969; Ziri, 2000), and the only appropriate language for a Muslim state since it is used widely in the practice of the Islamic

[8]Arabic was used to build a national Islamic identity (see Ziri, 2000) which resulted in a 40 years of effort of Arabization as cultural counterpart to political independence in Morocco. Which has been changed at the beginning of the new Millennium by reforms trying to incorporate the multitude of languages present in the country (Marley, 2004). French, however, is – although no official language – the language of the elites, business, finance, the media and education. This resulted in that a larger proportion of the Moroccans learned French after independence than before (Marley, 2004).

religion.[9]

French as symbol of modernity

Despite the Moroccan policy of Arabization, having knowledge in French language is necessary for social and professional success (Boukous, 1999). French continued to be used in many important domains and allow the openness to the outside world, particularly Western Europe. The 44 year French occupation left an education system dominated by French. Thus, despite of the ending of the francophone dominance and the starting of process of Arabization, French retained its status as Morocco's second language and kept a privileged position within state education and even more in the private sector. Middle and upper class families continue to educate their children French because of the advantages for academic and professional life (Berdouzi, 2000). However, there are also beliefs that the continued use of French is a reminder of past colonialism and a denial of Morocco's identity as a non-European Muslim nation (Daniel and Ball, 2009).

Concluding we can say that two main ideological and cultural orientations are connected to languages in Morocco; the Islamic and secularized culture. The first one refers to Arabic as a Koranic language and symbol of Islam and National Identity. The second is linked to Western introduced to Morocco through the colonization and the imposition of French language (Kerrou, 1996) making language our preferred prime.

Rule Priming

In two treatments of our experiments we introduces strong cues, using the two actual *ayaht* (verses) of the Qur'an that state the prescription directly. We included them in the questionnaire within the section about religious attitudes.

[9]Following this development, it is hard to disentangle a national Moroccan from an Islamic identity as those overlap, but we firmly believe that charitable norms are norms mainly guided by religion.

Table 2: Experiment Donations: Choice of Anonymity

	French (baseline)	**Arabic** (treatment)	**Obs**
Observations	91	95	186

Ayah with rules about Sadaqah The first *ayah* states that "If ye publish your alms giving, it is well, but if ye hide it and give it to the poor, it will be better for you, and will atone for some of your ill deeds. Allah is Informed of what ye do." (2:271) and the second "O ye who believe! Spend of the good things which ye have earned, and of that which we bring forth from the earth for you" (2:267). So there is a strong demand for giving, while the second demand effect is that giving in public is worth less.

Ayah *without* rules about Sadaqah We used neutral *ayaht* that had no relation to charitable giving. An English translation of the *ayaht* can be found in Appendix F.

Experiment: Choice of Anonymity

The second experiment was designed similarly to the donations experiment. Subjects were asked to fill a questionnaire and had the possibility to donate at the end of the questionnaire. The treatments were reduced to just two: whether the questionnaire was in French or in Arabic and only the Ayah without rules were used. but made the condition, whether the donation is publicized or not endogenous.

Subject pool

In the *Donations experiment,* subjects were recruited from various educational institutions in the region of Fes/Morocco and filled out a questionnaire on attitudes towards entrepreneurship. In total 534 subjects in ten different schools and universities participated in the survey, we do not observe sample selection over the chosen population, as all subjects participated except of 2 and those were due to time constraints. The

subject pool is particular because out of these ten schools, two were faculties for religious studies. These so called *letter* faculties that are especially focused on Qur'an and Arabic studies.

Implementation of the Experiment

Each subjects received 30 Dirham (*Dh*) for the completion of the survey (equivalent to US$5 or half a day wage of a university student) *beforehand*.[10] The average age of the subjects was 21. The study was conducted after Ramadan, the Islamic month for fasting, in October and November 2010. The schools and universities were chosen in order to reach a broad spectrum of social backgrounds.[11] Treatments were randomized within each session and are balanced over relevant observables as shown in Table 3. The only exception is the number of correctly assigned *ayaht.* These were significantly higher in the Arabic conditions, indicating that the *Qur'an* in better known in Arabic, which underlines the importance of the Arabic language in evoking feelings of cultural identity.

As *Sadaqah* shall be given only if the recipient is needy relative to the donor and some of our subjects in the study especially in the Letters Faculties are of very low social origin, we could gain a local known orphanage to collaborate with us which gave a motivation for all of our subjects to donate. A representative of the orphanage was present after each session of the experiment and signed that they received the money.

[10] We did this in order to avoid that subjects donate their money too easily when they just get it promised, maybe because of the lack of trust or the nontangible nature of promised money.

[11] A detailed descriptions of the schools can be found in the appendix.

Table 3: Balance of Treatments

French	(1) Female	(2) Age	(3) Visit mosque	(4) Know *Ayah*
Public	-0.0309	-0.175	0.0902	-0.0410
	(0.0482)	(0.267)	(0.0483)	(0.0478)
	0.563***	21.35***	0.859***	0.155
	(0.0425)	(0.395)	(0.0404)	(0.0928)
N	148	150	150	150
Arabic	(5)	(6)	(7)	(8)
	Female	Age	Visit mosque	Know *Ayah*
Public	-0.0760	0.279	-0.0540	-0.0479
	(0.0751)	(0.295)	(0.0570)	(0.110)
	0.512***	21.25***	0.916***	0.410**
	(0.0662)	(0.513)	(0.0238)	(0.0947)
N	176	177	177	177
Rule	(9)	(10)	(11)	(12)
	Female	Age	Visit mosque	Know ayah
Public	-0.0301	-0.0980	0.103	0.0971
	(0.0982)	(0.248)	(0.0481)	(0.0659)
	0.530***	20.89***	0.845***	0.0952
	(0.101)	(0.629)	(0.0366)	(0.0610)
N	161	162	162	162

Note: Visit mosque indicates that the subjects visits the mosque at least once per months. *Know ayah* shows the number of correctly numbered *ayah*t. Cluster robust standard errors in parenthesis, clustered for school. * ($p<0.05$), ** $p<0.01$), *** ($p<0.001$).

4 Behavioral Predictions

As described in above the *Qur'an* offers a conditional reward scheme that promises explicit external rewards only in case of anonymous donations. We offer a formal framework for this rule based on the ideas of economic identity by Akerlof and Kranton

(2000) and Benjamin et al. (2010), who define levels of desired and the level of choice prescribed by belonging to a social category – and develops it further for a charitable giving context and different states of the world, that prescribe different social categories for different values. We denote the salience of a social norm with $r \in \{0, 1\}$ where 1 indicates that religiosity is salient and the state of the world with $s \in \{0, 1\}$, where 1 indicates that donations are public. However, the price of charitable giving changes depending on individual identity considerations and the state of the world. An individual then maximizes her utility by deciding on the donation, d and individual consumption, $x = W - d$.

$$U(g; r) = u(W - d) + a(r)v(d, G_{-i}) - sp(r)d \tag{1}$$

The first term captures the utility for private consumption which is wealth - W - minus the donation - d. The second term adds the positive utility effect of donating to the charity, depending on the state of the world $p \in \{0, 1\}(s(p)$. The marginal positive effect depends on $a(r)$ which can be seen as altruism parameter that depends on the salience of religiosity: We assume that if religion is salient you receive more altruism utility: $a(1) > a(0) \geq 0$. The last term introduces the psychological punishment for positive payments if they are not done anonymously. This effect is also assumed to be stronger, when religion is salient $p(1) > \text{p}(0) > 0$. This is in line with the arguments in Benjamin et al. (2010). We can derive following conjecture.

Conjecture. ***Anonymity*** *Subjects donate more under anonymity. This effect is stronger when religion is salient.*

5 Results

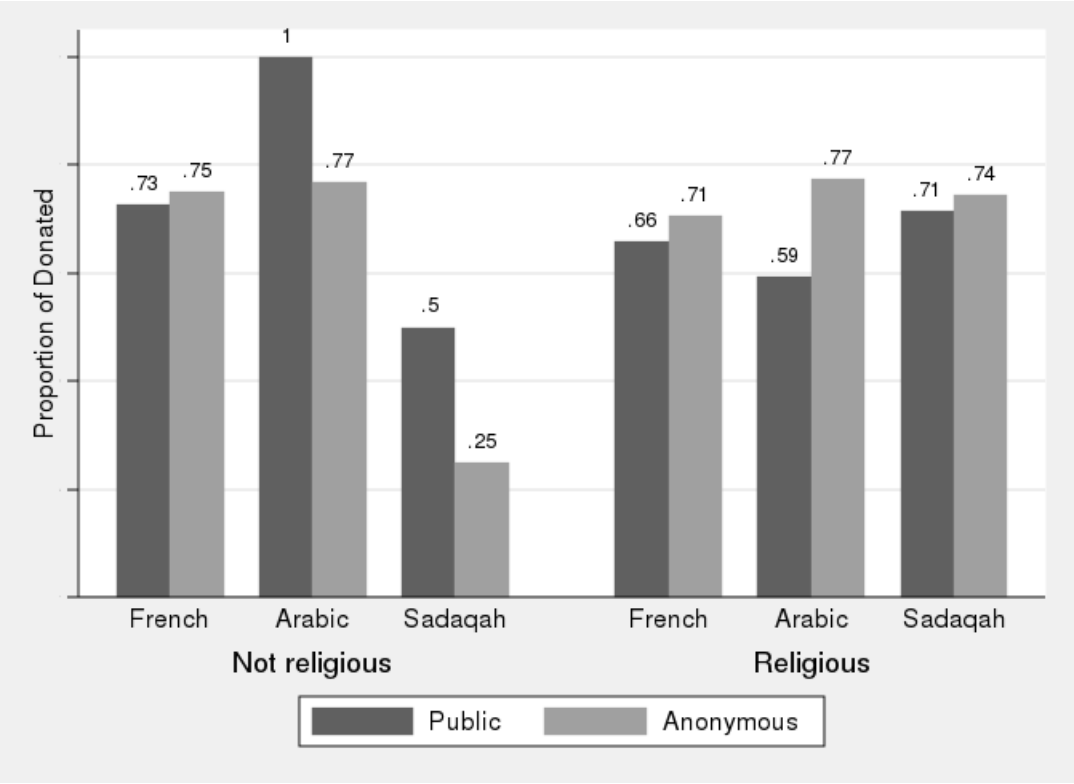
5.1 Experiment: Donations

As our sample includes around 10% of the subjects who say that they never go to the mosque. *Salah* (prayer) is the second and most important pillar of Islam and a practical sign of obedience to Muslim codified law that a religious Muslim cannot leave. Moreover this question serves as a good indicator of obedience to and the likelihood of being affected by religious norms.[12] We therefore label subjects who indicate of going regularly to the mosque as *religious* and those of claim to never go to the mosque as *non religious*.[13] We report summary statistics for *religious* subjects separately. Figures 1 and 2 present bar graphs of donation incidence and average donations by treatment and religiosity and clearly show that positive donations increase under anonymity for the religious treatment. Table 4 reports tests on donation incidence by treatment. For the French condition, we see only a slight increase from 66.67% to 70.93%, when donating anonymously, while in the Arabic condition the share of donations significantly increases from 63.22% to 77.32%, supporting Conjecture 4. In the rule condition we see an increase comparable to French. Furthermore, we find that less subjects donate in the Arabic condition than in the French condition, when donations are public. Those findings are in stark contrast to findings in previous studies: List et al. (2004) finds that voting to approve to the contributions for a public good are by 18% higher when observed by the solicitor (20% when anonymous, 38% when public). Similarly, Alpizar et al. (2008) find that donation incidence is 19% higher in contributions to a national park in Costa Rica. Furthermore, the donation incidence in all our treatments is higher

[12]The Muslim has to pray five times a day and cannot miss it for any reason and excuse. There is a very severe social penalty – being seen as faithless – for missing prayer compared to the other Muslim laws. For not fasting, *Zakaah* or *Hajj* – the pilgrimage to Mecca – there are no sanctions involved under some conditions. Their importance is considered on the Judgment Day, the account for the prayers will have to be rendered first. The performance of prayer at the mosque with the congregation is of special importance.

[13]These measures were taken *before* subjects made a donation decision and they were taken in the context of the questionnaire, to detach them from the actual donation decision.

Figure 1: Donation incidence by treatments



Note: This graph shows the donation incidence under the treatment conditions by religiosity. Religiosity is defined as going to the mosque at least once a month. Summary and test statistics are reported in table 4.

than in the aforementioned studies and is in the range of the results by Eckel and Grossman (1996) reporting a 72.9% donation incidence for the American Red Cross in a laboratory study.

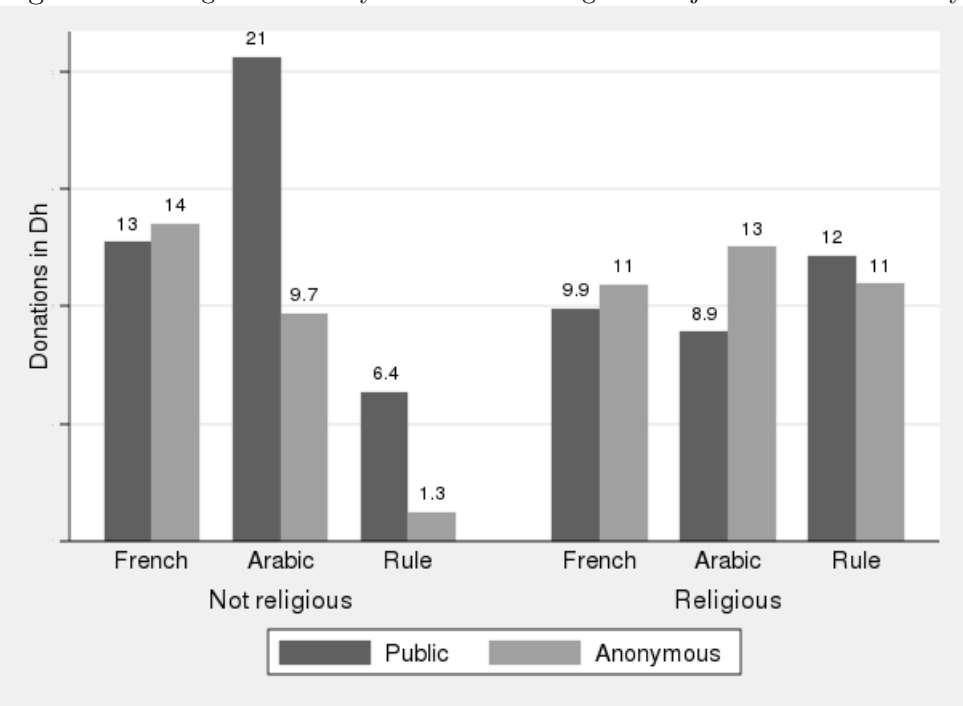
Table 4: Donation Incidence in percent by treatments

	French	**Arabic**		**Rule**		**Total**
	(Baseline)		*Diff. (Se.)*		*Diff. (Se.)*	
Public						
Mean (Sd.)	66.67 (47.41)	63.22 (48.50)	-3.45 (7.23)	68.13 (46.85)	1.47 (7.07)	**66.04 (47.44)**
N	87	87		91		**265**
Anonymous						
Mean (Sd.)	70.93 (45.67)	77.32 (42.09)	6.39 (6.47)	72.09 (45.12)	1.16 (6.92)	**73.61 (44.16)**
N	86	97		86		**269**
Diff. (Se.)	4.26 (7.05)	14.10** (6.69)	9.84 (9.72)	3.96 (6.92)	-0.30 (9.89)	**7.57* (3.97)**
Total						
Mean (Sd.)	**68.79 (46.47)**	**70.65 (45.66)**	**1.87 (4.86)**	**70.06 (45.93)**	**1.27 (4.94)**	**69.85 (45.93)**
N	**173**	**184**		**177**		**534**

Note: This table reports the donation incidence in percent. The differences reported over columns are the differences between the baseline condition French and the *Arabic* and *Rule* condition. The differences over rows are the differences between public and anonymous. Test results come from tests of proportions, p-values: *<0.1 **<0.05 ***<0.01

We find effects that go in a similar direction for average donations, however, these effects are not significant at conventional levels (Mann-Whitney test, p-value: 0.11). Subjects gave less in public and more anonymously when they were in the Arabic condition than in the French condition, indicating that on average the punishment term dominates the altruism term under salient religiosity. We find that religious subjects give around 25% less when their donations are made public in the Arabic condition (Mann-Whitney test, p-value: 0.014), supporting conjecture 4.

Figure 2: Average donation by treatment of Religious subjects and Letter faculty



Note: This graph shows the average donations under the treatment conditions by religiosity. The test statistics are reported in table 5.

Table 5: Average Donations by French and Arabic conditions

	French *(Baseline)*		**Arabic**				**Rule**				**Total**
	All	Religious	All		Religious		All		Religious		
				Diff.		*Diff.*		*Diff.*		*Diff.*	
Public											
Mean	10.25	9.88	9.99	*-0.25*	8.91	*-0.98*	11.24	*0.99*	12.130	2.24	10.12
	(11.33)	(11.16)	(11.61)	*[1.24]*	(11.19)	*[1.80]*	(12.38)	*[1.78]*	(12.550)	[0.96]	[11.44]
N	87	76	87		79		91		77		174
Anonymous											
Mean	11.05	10.93	12.13	*1.09*	12.51	*1.59*	10.51	*-0.53*	10.96	0.03	11.62
	(11.68)	(11.65)	(11.89)	*[1.75]*	(12.17)	*[1.85]*	(11.43)	*[1.76]*	(11.50)	[1.81]	[11.78]
N	86	82	97		84		86		82		183
Diff.	0.80	1.17	2.15		3.60**		-0.73		1.17		*1.51*
	[1.75]	[1.91]	[1.74]		[1.83]		(1.79)		[1.901]		*[1.23]*
Total											
Mean	10.64	11.53	11.12	*0.48*	*10.77*	*0.34*	10.88	*0.24*	11.528		*10.89*
	(11.48)	(12.00)	(11.77)	*(1.23)*	*(11.81)*	*[1.30]*	(11.90)	*[1.25]*	(12.00)		*[11.70]*
N	173	157	184		163		177		159		534

Note: The table reports the averages of donations by treatment. The differences reported are with respect to the baseline treatment. Standard deviations are given in parenthesis (..), standard errors in brackets [..]. Mann-Whitney Test, p-values: *<0.1 **<0.05 ***<0.01

When only considering subjects in the letters faculty, we find similar effects comparing the *Arabic* with the *French* condition. Under anonymity subjects give 5.2 Dh less (p-value: 0.096) in the French condition compared, but donations increase substantially by 12.2 Dh in the Arabic condition.

5.2 Regression Analysis

In the summary statistics in the previous section, we did not control for schools and other socio-economic characteristics. We run a three way interaction ordinary least squares regression outlined in equation 2 where *donations* is the dependent variable and the treatments and religiosity as independent. As controls we add *age* and age^2, *female*, *religiosity* and educational institution dummies indicating where the experiment was conducted. We use an equivalent model using as a dependent variable whether a subject has donated (*donated*) for donation incidence. We define religiosity as going once a month or more often to the mosque.[14]

$$\begin{aligned} donat[ion](ed)_i = \alpha &+ \beta_1 arabic_i + \beta_2 anonymous_i + \beta_3 arab_i \times anon_i + \beta_4 religious_i + \beta_5 arab_i \times religious_i \\ &+ \beta_6 anon_i \times religious_i + \beta_7 arab_i \times anon_i \times religious_i + \beta_8 rule_i + \beta_9 rule_i \times rule_i \\ &+ \beta_{10} rule_i \times religious_i + \beta_{11} rule_i \times religous_i \times anon_i + \mathbf{\Gamma controls_i} + \epsilon_i \quad (2) \end{aligned}$$

Table 6 reports the Marginal effect of anonymity on donation incidence *(donated)* under the different conditions (*French*, *Arabic*, *Rule*) and over religious and non religious subjects. The regression table of which those results are derived is shown in Table 8.

[14] If we define religiosity as knowledge of the *ayah* in the questionnaire the results are similar. We used then different controls for defining religious: if they could number at least one (or two or three, as robustness checks) out of 4 *ayahs* with the correct number.

$$\frac{\partial donat[ion](ed)_i}{\partial anonymous_i} = \beta_2 + \beta_3 arabic + \beta_6 religious + \beta_7 arabic \times religious + \beta_9 rule + \beta_{11} rule \times religious \quad (3)$$

Table 6: Marginal effects of anonymity on *donation incidence*

	No control		***Control*** *age, gender, place*	
	(1)	(2)	(3)	(4)
	Non-religious	**Religious**	**Non-religious**	**Religious**
Panel A: French				
	0.023	0.049	0.100	0.111
	(0.258)	(0.075)	(0.244)	(0.078)
Panel B: Arabic				
	-0.231*	0.179**	-0.105	0.147**
	(0.118)	(0.072)	(0.141)	(0.073)
Panel C: Rule				
	-0.25	0.287	-0.379**	0.261
	(0.257)	(0.267)	(0.179)	(0.242)

Note: This table reports the marginal effects of anonymity on donation incidence within the different treatments and by religiosity. Columns 3 and 4 show the regressions with controlling for age, gender and school and exclude 4 observations of subjects who did not report age. Marginal effects are constructed using linear combinations of linear regression on donations. For columns 1 and 2 in this table we used the regression presented in column 1 of table 8 while for columns 3 and 4 we used column 5 of table 8. Robust standard errors are reported in parenthesis. t-test: p<0.1***, p<0.05 **, p<0.01 ***

The effect of anonymity on religious and non religious subjects is positive in the French condition for the donation incidence, but it is not significant. In the Arabic condition the effect is large (+17.9%) and significant (t-test, p-value<0.05) for religious subjects. This effect is robust to the introduction of the control variables. We find a negative and significant effect (-23.1%) for non religious subjects, which however is not robust to the introduction of controls. In the Rule condition, the effect of anonymity is larger for religious subjects (+28.7%) however not significantly though, as the standard

deviation is large. Also anonymity has a larger negative effect on non-religious subjects, which is significant after the introduction of controls.

Experimenter Demand Effects and Stronger Cues A constant concern in experimental research with human subjects are experimenter demand effects and cues within the environment that influence subjects decisions (see Zizzo, 2009, for an extensve discussion of this problem). In order to test the effect of such cues we make use of our *Rule condition*. The effect we find is in the following direction: subjects give more under this condition, irrespective of the anonymity of the donation (subjects give on average slightly more under anonymity, however this difference is small and not statistically significant).

The cue "giving is good" seems to dominate the effect of when giving is even better, so reducing the value of information of the experimental data on internal motivations of subjects. Concerning external validity of the results, it is hard to say whether mentioning the prescription "giving is good" has this unambiguous positive effect irrespective of the condition under which the donation takes place. This result is in line with Shariff and Norenzayan (2007) who find that giving in a dictator game increases when religion is primed. Benjamin et al. (2010) on the contrary find that priming religion decreases giving, however not significantly. It seems that stronger primes which evoke potential demand effects also increase the variance of the outcomes. So what we find could be interpreted as a magnifying glass effect that increases the average treatment effect but also the variance.

Table 7: Marginal effects of anonymity on *donations*

	No control		***Control*** *age, gender, place*	
	(1)	(2)	(3)	(4)
	Non-religious	**Religious**	**Non-religious**	**Religious**
Panel A: French				
Coef	0.000	2.074	0.201	3.382*
	(7.316)	(1.997)	(5.330)	(1.830)
Panel B: Arabic				
Coef	-10.933**	3.28*	-7.679	2.368
	(4.514)	(1.901)	(5.255)	(1.772)
Panel C: Rule				
Coef	-3.667	8.322	-7.745**	9.227**
	(2.627)	(6.867)	(3.095)	(4.365)
N	489		485	

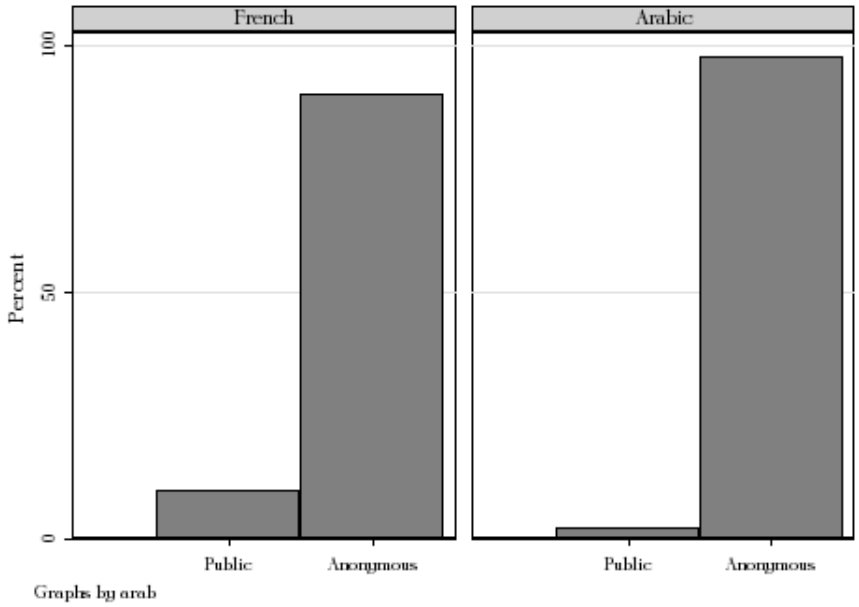
Note: This table reports the marginal effects of anonymity on donations within the different treatments and by religiosity. Columns 3 and 4 show the regressions with controlling for age, gender and school and exclude 4 observations that did not report age. Robust standard errors t-test: p<0.1***, p<0.05 **, p<0.01 ***. The results are robust to the use of robust regressions with Stata's *rreg* command.

5.3 Experiment: Choice of Anonymity

The second experiment performed to get direct evidence of the preferred donation condition, given the salience of culture. Figure 3 gives and overview of subjects choices - either anonymous donation or public donation - given the language treatment. In both treatments, nearly all of the subjects opted for the anonymous condition, however there is a significant difference within the treatments. In the Arabic treatment, 6% more subjects chose the anonymous condition (Fisher exact test, p-value: 0.024). This strengthens or point that the language treatment had an influence in subjects adherence to the norm.

When analyzing average donations we have to take into account that the condition under which the donation was made is not exogenous. We however observe that subjects donate more when they self select into the public situation both in the French (7.78

Figure 3: Choice to Donate Anonymously



Note: Graph of choosing to donate anonymously. The differences between the French and the Arabic treatment are significant (Fisher exact test, p-value: 0.024)

Dh vs 20 Dh, Mann-Whitney test, p-value: 0.004) and in the Arabic treatment (16.67 Dh. vs 6.41 Dh., Mann-Whitney test, p-value: 0.031). This result is not surprising, as subjects seem to have a demand for recognition and want to be recognized as generous.

6 Conclusion

Do fund raising strategies that involve disclosure of donors names and donations benefit fundraising institutions? In a field experiment on charitable giving in Morocco we find that anonymity and publicity in charitable giving plays a fundamentally different role in Islamic societies than in more secular Western societies. We observe a positive effect of anonymity on donation incidence and a clear effect on the distribution of giving for religious people when religion is salient. Although charitable giving is a crucial pillar of Islam, the explicit social norm of the value of charitable giving depending on anonymity, outweigh that benefit of giving itself. We therefore conclude that in Muslim societies, public charitable giving does not serve as device to gain social esteem, rather

that it has a moral – intrinsic – reward that allows subjects to keep their self image[15]. The results also suggest to expand theory that take reputation as a primal motivation for generosity in the spirit of Harbaugh(1998a,1998b) or Glazer and Konrad (1996) to account for cultural norms that not only command charitable giving, but also the the form of how charitable giving shall be conducted. In a second experiment, we find further support that religious norms govern how people prefer to donate. It also shows the relevance in which language people are addressed might change the perception of the norms that ought to be applied opening a field of research that takes language not only as a means of communication but also as a signal of a social value system that shall govern the relationship of the sender and the receiver.

The relevance of the charitable giving norm in a Muslim society has clear policy implications. Forcing to reveal contributions may decrease contributions by either intrinsic motivations, the desire to obey the norm, or extrinsic motivations, the fear to be seen as faithless by others. Anonymous charity, however, can be of relevance in the construction of a new civil society in many Arab countries and can contribute to the solidarity in the society and its well-being. It can play a chief role in fulfilling the needs of the poor and can be used like an instrument by a policy maker to challenge the poverty in the Muslim countries. Therefore, knowledge over the nature of charitable giving rules and customs is of utmost importance for policy makers and charitable organizations. Furthermore, it has practical implications for the design of fundraising campaigns in Islamic countries and maybe in Islamic communities within the Western world which have been growing in recent years. Fundraising bodies are not well advised to use similar strategies as in the Western countries in order to maximize their success rates.

[15]A similar application in market settings can be found in Gneezy et al. (2012)

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A Regressions

A.1 OLS Regression analysis

This table was used to calculate the marginal effects of anonymity presented in table 7

Table 8: Linear regression of donations on treatments and controls

	(1)	(2)	(3)	(4)	(5)
Arabic	7.898	9.357*	9.230*	9.297*	3.908
	(1.53)	(1.79)	(1.75)	(1.76)	(0.69)
Anonymous	0.773	-1.04e-11	-0.270	-0.290	0.201
	(0.11)	(-0.00)	(-0.04)	(-0.04)	(0.04)
Arabic × anon.	-11.71	-13.16	-12.90	-12.99	-7.881
	(-1.38)	(-1.55)	(-1.55)	(-1.56)	(-1.06)
Religious	-2.839	-3.607	-3.695	-3.670	-6.247
	(-0.72)	(-0.85)	(-0.85)	(-0.85)	(-1.59)
Arabic × religious	-8.874	-9.864*	-9.849*	-9.823*	-4.025
	(-1.62)	(-1.77)	(-1.75)	(-1.75)	(-0.68)
Anon. × religious	0.266	1.915	1.884	2.190	3.180
	(0.04)	(0.25)	(0.25)	(0.30)	(0.57)
Arabic × anon. × religious	14.27	14.53	14.76*	14.43	6.867
	(1.61)	(1.63)	(1.68)	(1.65)	(0.87)
Rule prime	-6.370	-8.583*	-9.039*	-8.700*	-9.977**
	(-1.39)	(-1.85)	(-1.93)	(-1.83)	(-2.57)
Rule × anonymous	-5.880	-3.667	-3.395	-3.659	-7.946
	(-0.76)	(-0.47)	(-0.45)	(-0.48)	(-1.28)
Rule × religious	8.612*	11.41**	11.77**	11.41**	13.49***
	(1.73)	(2.24)	(2.29)	(2.19)	(3.10)
Rule × anonymous × religious	3.675	0.736	0.820	0.777	3.479
	(0.45)	(0.09)	(0.10)	(0.10)	(0.52)
Age			0.243	0.218	2.212*
			(0.19)	(0.16)	(1.69)
Age^2			-0.0113	-0.0111	-0.0383
			(-0.42)	(-0.40)	(-1.40)
Female				-0.331	0.574
				(-0.30)	(0.54)
Schools					
Taibi					-10.79***
					(-4.56)
Info 6					7.919***
					(3.19)
Sup Management					-5.029*
					(-1.76)
Info House					-15.55***
					(-7.41)
Technologia					-9.527***
					(-4.52)
ETIGA					-7.022***
					(-3.09)
Letter 1					-13.54***
					(-5.77)
Letter 2					-19.02***
					(-8.80)
ENA					-9.588***
					(-4.83)
Constant	12.73***	13.50***	13.60	14.22	-4.881
	(3.44)	(3.38)	(0.87)	(0.88)	(-0.31)
N	534	485	489	485	485

Note: This shows regresses uses as dependent variable individual donations and regresses them on the treatments and controls.The schools indicate the educational institution where the experiment was conducted and t-statistics in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

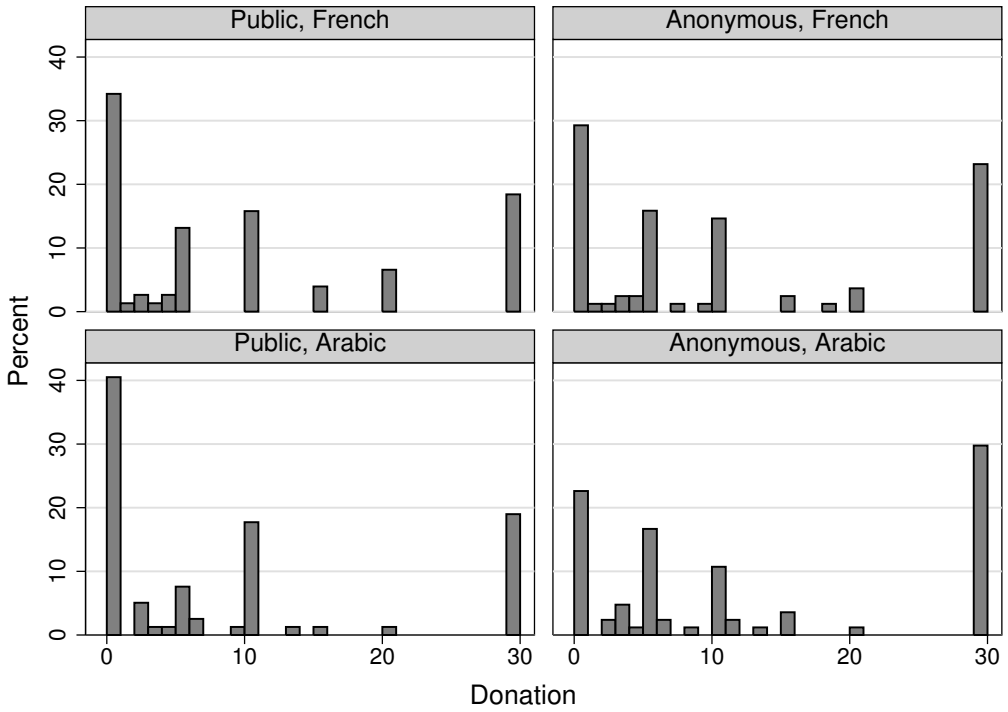
Table 9: Nearest Neighbor matching: Donations and donation incidence

Dependent variable	**Average Treatment effect of *Anonymous***					
	French		*Arabic*		*Rule*	
	Non-religious	Religious	Non-religious	Religious	Non-religious	Religious
Donated	0.143	0.084	-0.206	0.171**	-0.281	0.044
Std. Err.	0.304	0.084	0.142	0.078	0.338	0.075
Donation	5.214	1.538	-11.365**	5.451**	-3.219	-0.883
Std. Err.	8.575	2.098	5.452	1.986	2.734	2.245
N	14	135	21	156	16	147

A.2 Nearest Neighbor matching

As robustness check we performed nearest neighbor matching command in stata *(nnmatch)* by Abadie et al. (2004), using the control variables of column (4) in table 8 adding a dummy for the letters faculties.

Figure 4: Donation Histogram



1. Maximum donation drop when donation is public in the Arabic treatment
2. Why is this the case? Probably that non very religious people, but generous people are more effected if the norm is salient

B Distributional Graphs of Donations

C Description of schools

1. Wisdom School: Informatics and languages for university students, private language and informatics school for students of public universities
    - lower and medium class
2. Taibi School: same as Wisdom School
3. Info 6 School: same as Wisdom School
4. Sup ´Management: business school, private university

- upper class

5. Info house: same as Sup Management

6. Technologia: Engineering and business studies: private university

   - Highest class, most expensive university

7. ETIGE: Technical Engineering school: private)

   - medium and upper class

8. Letter Faculty "Dhar mehraz": (mostly Arabic studies), Fes university

   - low class

9. Letter Faculty "Sais": same as Dhar mehraz, takes students with bad college marks

10. ENA: superior Engineering school Public University:

    - all levels of income

D Session Protocol

Before experiment

1. Preparation of the experiment by visiting the University or school and be agree about the way to proceed for the experiment.

2. Organize different version of questionnaire randomly, with treatment numbers

4. Visit the School/university following the schedule with collaborated students and representative of WAFAE

5. Having a free class room at each university and start to prepare the material

6. The contact of students was by deterrents ways: by informing the administration/professors to tell them at the class/ publishing the announcement and contacting the students association.

During the experiment

7. Deal with groups of minimum 10 and maximum 30 people.

8. Make sure that subjects sit in a way that they cannot look at other subjects questionnaire

9. Explain the objective of survey: Economic studies about Entrepreneurship in Morocco, and they get paid (30 Dh for that), and need to sign the receipt at the first page.

10. Ask students to present their ID card/students card at the table.

11. Distribute the questionnaire randomly

12. Present to them the represented of WAFAE organization and tell them about the possibility to give charity from that.

13. Tell them to keep working in silence until the end of survey.

14. Let´s start

15. After few minutes, go through the students and take out the receipt, check that the Public treatment has noted the same name in the first page as receipt as ID.

16. Take the survey for each one leaves the room and put it in the box.

After the experiment

17. At WAFAE organization: under the supervision of the head of organization, take out the money from the envelopes and write the amount on questionnaire.

18. give the money to the representative and let sign a receipt that she received that money

E List of most important differences between Zakaah and Sadaqah:

- Zakaah is enjoined in Islam on specific things, which are: gold, silver, crops, fruits, trade goods and livestock. While Sadaqah, it is not obligatory on any kind of wealth, rather it is what a person can give, without any specific limits or guidelines.

- Zakaah is subject to the conditions that one full Hijri have passed since acquiring the wealth, and that the wealth meets the minimum threshold and it is a specific portion of wealth. Sadaqah is not subject to any conditions, and it may be given at any time, in any amount.

- Zakaah needs to be give to certain types of people, and it is not permissible to give it to anyone else. They are the people mentioned in the verse (al-Tawbah, 9:60). With regard to Sadaqah, it may be given to those mentioned in the verse on Zakaah and to others. For example, it is not permissible to give Zakaah to one who is rich or who is strong and able to earn a living. Sadaqah may be given to those who are rich and those who are strong and able to earn.

- Whoever dies and owes Zakaah, his heirs must pay it from his wealth, and that takes precedence over the will and inheritance. As for Sadaqah, there are no such obligations with regard to it.

- The one who withholds Zakaah is to be punished (Saheeh Muslim, 987). While, with regard to Sadaqah, the one who does not pay it will not be punished.

- In the case of Zakaah, it is better for it to be taken from the rich of a land and given to their poor. Generally, Zakaah is not permissible to send it to another country unless that serves an interest. But charity may be spent on those who are near and those who are far.

F The neutral *Ayaht*

O Prophet! When ye men put away women, put them away for their legal period and reckon the period, and keep your duty to Allah, your Lord. Expel them not from their houses nor let them go forth unless they commit open immorality. Such are the limits imposed by Allah; and whoso transgresseth Allah's limits, he verily wrongeth his soul. Thou knowest not: it may be that Allah will afterward bring some new thing to pass. (1; 65) Aṭ-Ṭalāq (1)

O mankind! if ye are in doubt concerning the Resurrection, then lo! We have created you from dust, then from a drop of seed, then from a clot, then from a little lump of flesh shapely and shapeless, that We may make it clean for you. And We cause what We will to remain in the wombs for an appointed time, and afterward We bring you forth as infants, then give you growth that ye attain your full strength. And among you there is he who dieth young, and among you there is he who is brought back to the most abject time of life, so that, after knowledge, he knoweth naught. And thou Muhammad seest the earth barren, but when We send down water thereon, it doth thrill and swell and Put forth every lovely kind of growth. (5;22) Al-Ĥaj (5)

G The Orphanage WAFAE

The Orphanage "WAFAE HOUSE" is a social welfare institution established in 2007 by A. R. Chraibi, and it had been inaugurated by the King of Morocco in the same year as part of the national initiative for human development. The foundation receives funds from Chraibi's societies, other private companies and private people donations. The goal of this institute is to provide a family atmosphere, education and then facilitate

the future integration for these children, not only at the regional level, but also at national levels. The orphanage offers many services, and organizes many social activities: educations in private as well public schools in Fes, accommodation, restaurants, health cars, sports installations, psychiatric assistance, summer camps, the organization of social activities with other schools. In spite of its young age, the foundation plays a prominent role in helping children in difficult situation. It received approximately 103 children in the period between February 2007 and March 2009.

H Multilingualism in Morocco

Morocco is a multilingual society where language reflects the cultural *and* religious dimensions of society. Morocco has been characterized by bilingualism and diglossia for centuries (Marley, 2004)[16], being located at the crossroads of Africa, Europe and the Middle East. Therefore, the country has been exposed to a variety of cultural and linguistic influences. There are four main languages or dialects in Morocco: Berber, which is the language of the indigenous population, Moroccan Arabic (Darija), Standard Arabic and French. The majority of Moroccan is functionally multilingual and able to effortlessly switch from one language to another according to need (Tomastik, 2010).

[16]Indigenous languages Tashelhit, Tamazight and Tarifit have been present in Morocco for over 5000 years, diglossic relationship between Arabic and these languages exist since the last fourteen centuries, namely since the Arabs brought Islam to Morocco in the seventh century and the Arabic language became the religion language and the Tamazight remains the cultural identity of Berbers(see Boukous, 1995).

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