

**Political Economic Consequences of Pakistan's  
Linguistically/Religiously and Economically Fractured Educational System**

by

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**Abstract**

The paper adopts *identity* as a central concept, and demonstrates how the institutional and the economic environment in which we exist forge our identities, and, in turn, our preferences. I argue that preferences are shaped by context, and decisions are influenced not only by economic incentives, but our institutional environment.

Identity formation is a dialectical relationship between the individual and society. In order to understand the group identities that have segmented the Pakistani society I first trace the country's colonial history, and consider how both language and religion were used to unite a multilingual and multiethnic population, initially, in the struggle for independence, and post-independence, by weak governments to develop a sense of nationhood.

The historical perspective will help explain the present fissures in the society along the lines of class, ethnicity, language, religion, and even gender. These differences have manifested in an equally segmented and hierarchical education system, which is the subject of my survey.

Exploiting the design of a public goods game, this survey paper investigates how Pakistani university students from distinct education streams interact, *within* the same identity group, and how they interact *between* groups, where it is the college/university that forms the identity group under investigation. The experiment aims to capture both the tendency to cooperate, among different identity groups, and also the tendency to punish. While the existing experimental literature in the Pakistani context has focused on measuring trust, the tendency to punish has not been captured. Moreover, our student sample includes not only male, but also female madrassa students.

We consider three types of universities which form our three identity groups in the specific context of the Pakistani educational landscape: Elite English-medium universities with a liberal Arts curriculum, Public and Private sector universities which cater to middle and lower middle income students, and Madrassas. Students from each of these three groups differ not only in terms of their socio-economic background, but also in terms of the language of instruction, the religious content of their curriculum, and even their exposure to print and electronic media. In order to better understand these differences the experiment is accompanied by a detailed questionnaire that asks the students about their educational, social, and religious experience.

Experimental results help us break existing stereotypes demonstrating that both male and female madrassa students are not only the most generous, female madrassa students also punish the least (in both inter and intra-university interactions). However, overall male students emerge as relatively more cooperative and generous than female students. While the elite also display altruism (albeit, they contribute less than their madrassa counterparts), in the second stage of the game, elite boys display spite by punishing high-contributions. In contrast, middle-class students contribute only minimally to the public good, but also punish the least.

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**Problem Statement**

This paper adopts identity as a central concept. We explore how our respective identities impact our behavior. The following questions are explored: (1) Does cooperative behaviour differ across classes, (2) Does the propensity to punish vary along class lines, and (3) Does the behaviour vary within and between classes.

Following Akerlof and Kranton (2010), this paper demonstrates how our identities, and not just economic incentives, influence our decisions. The paper argues that preferences are context-dependent and investigates if people in the same identity group are more likely to trust and cooperate with each other.

Defining a social group as “two or more persons engaged in social interaction who have some stable, structured relationship to one another, are interdependent, share common goals, and perceive that they are, in fact, part of a group” (Baron and Byrne, 1987, pg 378), the paper explores the role of group identity in shaping human behaviour. Exploiting the design of a public goods game, the study explores the interaction among three pre-existing groups of college/university students in the specific context of the Pakistani educational landscape: we argue that students from different strata of universities (middle-income universities, elite universities, and madrassas) have distinct identities, and it is the effects of this group identity that is explored in a public goods game. We compare the behavior of participants as they interact with members within their own group to how they interact when they are randomly assigned to play the game with students from other respective pre-existing groups \_ i.e. inter-group and intra-group interaction and behavior will be compared.

Identity formation is a dialectical relationship between the individual and society. In order to understand the group identities that have segmented the Pakistani society we need to remind ourselves of the country’s colonial history: how both language and religion were used to unite a multilingual and multiethnic population, first, in the struggle for independence, and post-independence, by weak governments to develop a sense of nationhood.

**State Formation as distinct from National Identity Formation**

Pakistan, for much of its history, has been a state searching for a national identity. Post-colonial theorists argue that post-colonial states such as Pakistan that arrived at independence without a prolonged struggle emerged as divided states.

**The colonial experience**

Pakistan inherited a divided society segmented along the lines of social and economic class and ethnic background. The British colonial policy had discouraged national identity formation, but encouraged subnational identity consciousness, through its policy of indirect rule, bolstering the power of the landed elite (the feudals) and the tribal chiefs ((Nasr, 2001). Jinnah had used these very structures of feudal and oligarchic power to garner support for Pakistan, and this further ensured their continuation post-independence.

Moreover, these divisions were further compounded, as Pakistan inherited an equally patriarchal bureaucratic and military elite who had been in the service of the British Raj, in alliance with the intermediaries mentioned above. The state did not replace the colonial state so much as it took over its operations. HamzaAlavi, aptly dubbed Pakistan a “vice-regal” state \_ a state that continued to be ruled by the “salariat” in power: the military, bureaucratic and landed elite that continued its pre-colonial administrative practices. Jinnah in using these very intermediaries in his struggle for the Muslim national movement, uniting them under the umbrella of Islamic universalism, made these social structures even more strongly

embedded in what emerged as the state of Pakistan.

### **The continued use of Religion**

Given the role of religion in its very genesis, this state, divided along multi-lingual and multi-ethnic lines, with a weak centre, continued its tendency to appeal to religion to overcome its own limitations. The authoritarian state attempted national integration through the use of religion as early as 1962, when Ayub Khan, in an attempt to weaken language-based ethnic nationalism, declared that “it is immaterial whether you are a Bengali or a Sindhi, a Balochi or a Pathan or a Punjabi – we are all knit together by the bond of Islam.” But, it was in the 1970s, under Bhutto, and then Zia, that religion took its place in the public sphere, and the colonial state was repackaged as the Islamic Republic of Pakistan.

Bhutto’s focus was mainly on Islamic symbolism, measures mainly designed to placate the Islamic ulema and gain state legitimacy.<sup>1</sup> But it was under Zia’s martial law, that the role of religion in state affairs came into its own, and the nexus between state, religion, and the military was forged. But, the use of religion, rather than uniting a pluralistic society opened the door to new conflicting identities.

### **A Linguistically Fractured Society**

During the struggle for independence, besides religion, language had also become an identity marker with Perianized Urdu being associated with Muslim identity and Sanskritized Hindi with Hindu identity. While language has often been associated with national and regional/ethnic identity formation, but in the case of the Indian Subcontinent, language also became associated with *religious* identity.

Thus, it is not surprising that at the time of Pakistan’s creation, Urdu acquired the status of *lingua franca*, the national language, with the view to unifying an ethnically heterogeneous multi-lingual population.<sup>2</sup>

However, note that while the ruling party has ostensibly supported Urdu because of its integrative value as a symbol of Pakistani national identity, as opposed to ethnic identity, in the formal official domains it continued to support English because it is English that ensures its social distinction from the non-elite; facilitates the entry of members of its own class, including the younger generation, into elitist positions. Urdu is only supported by the elite in order to garner the support of the urban middle class and enables it to consolidate its power in the provinces, and balance the provincial ethno-nationalistic proto-elites who perceive it to be the symbol of Punjabi dominance and counter it through the symbolic appeal of their own local vernacular.<sup>3</sup>

### **Post Independence Pakistan remains a Segmented Society**

Today’s Pakistan is still segmented along provincial, linguistic and ethnic divides: with growing income

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<sup>1</sup> It was under Bhutto’s regime that Arabic became a component of the educational curricula and focus on the Islamic theology and history component of the curriculum also increased. Bhutto also banned the serving of alcohol, ordered the closure of casinos and nightclubs, thereby surrendering the right to interpret Islam to the Islamic groups and paving the way for the entrance of religion from the private and personal to the public sphere (Nasr, 2001).

<sup>2</sup> However, despite the assumed integrative appeal associated with Urdu, the decision was opposed by the Bengali majority who favored Bangla. See Murshid (1985) for a detailed account of the Bengali movement in the early 1950s which finally led to Bangla also being given the status of national language.

<sup>3</sup> Khalique (2006), in a provocative paper describes the language struggle in Pakistan, and its class manifestation, by comparing it to the “three bags full” in the nursery rhyme Baa Baa Black Sheep – The first bag is English, to serve the masters, a status symbol and marker of affluence. The second is Urdu – meant for the dame (or the populace) at large. It is the language of sensational journalism, popular entertainment and to send out meta-messages to the populace – the dame – “that has to be kept tamed and used for political gains or acquiring the so-called moral legitimacy for the powers that be, elected or unelected” (Khalique, 2006, pg 99). The third bag is the array of the various mother tongues of Pakistan spoken by the little boy who lives down the lane, and has hardly any say in the political decision-making process.

inequality further reinforcing these differences. As income inequality has continued to increase over the last decade and a half, access to opportunity in terms of education, health services, food and nutrition, and access to housing and proper physical infrastructure has become even more skewed. Jamal (2009) based on a multidimensional poverty index that includes financial and human poverty, poor housing and inadequate access to physical infrastructure, estimate that 54% of Pakistanis live in a state of multiple deprivations, with vast differences between rural (69%) and urban (21%) poverty rates.<sup>4</sup>

### **A hierarchical education system**

As we retrace Pakistan's historical journey above, it reveals how language and religion was used by a weak centre to unite an ethnically diverse society. This journey has manifested into a polarized society where the distributional outcome has manifested in the form of four distinct schooling streams: These separate streams of education represent a fractured educational culture, separated along class lines, with the higher income classes occupying the elite English medium schools, the middle and lower middle class students attend public schools or the non-elite private schools, while the poorest of the poor end up in the madrassas. These distinct schooling streams have manifested in an equally hierarchical college/university system, which we narrow down into three groups: Elite English-medium universities, Middle-income public and private sector universities, and Madrassas; And it is the students at these universities that comprise our target population.

### **Sample of Students and their Group Identity**

As mentioned above, our objective is to investigate how college/university students from distinct education streams interact, within the same group, and how they interact with students from different universities, where it is the college/university that forms the identity "group" under investigation.

We consider three types of universities which form our three "groups": Elite English-medium universities with a liberal Arts curriculum, Public and Private sector universities which cater to middle and low income students, and Madrassas. Students from each of these three "groups" differ not only in terms of their socio-economic background, but also in terms of the language of instruction they were exposed to in school, the religious content of their schooling curriculum, and even their exposure to print and electronic media in terms of English vs Urdu media.

We focus on students 18 years and above enrolled in graduate/postgraduate institutions, including both male and female madrasa students. This is a narrow cross-section of a largely uneducated population.

### **Limitation**

Note that the groups we consider are endogenous because families and individuals self-select into schools, with higher income families choosing elite English medium schools and colleges for their children. While, the humblest and poorest end up in madrassas, with public sector universities lying in the middle of this spectrum catering to low and middle-income families. Note that this suggests being careful when interpreting results. We use demographic and other background information as control in our estimation methodology to overcome possible self-selection bias, and to separate the effect due to the teachings at a particular institute and how much due to family background.

### **Our Three "Groups"**

We consider three main groups: Elite Universities, Public/Private sector Universities catering to Middle/Lower-Middle income students, and Madrassas:

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<sup>4</sup> At the regional level Punjab (the most populace province) dominates economically, a direct consequence of its agricultural productivity and large share of remittances from the Middle East. However, despite these advantages, according to Jamal's multidimensional index 52% of the Punjab population is classified poor. In comparison, 74% of Baloch population is classified as poor, leading to increasing resentment among the Balochis against the Punjabi dominated centre.

Elite universities may be compared to American Liberal Arts colleges. As mentioned above, these universities mostly cater to the higher income English-medium “elite” with tuition along the lines of Rs 300,000 per semester (almost US\$ 3,000/semester). Classes at these universities are taught in English and campuses are mixed (i.e. co-ed.).

In contrast, as described by Rahman (2008), madrassas teach a dated curriculum with a focus on reading and memorizing the Quran in the early years, and move on to the *Dars-e-Nizami* in later years – this curriculum draws on texts dating back to the 14<sup>th</sup> century. The *Dars-e-Nizami* is taught for eight years following the completion of elementary school and covers religious sciences (e.g. jurisprudence, the Quran and its commentaries) and rational sciences such as Arabic grammar and literature, logic, and rhetoric (Rahman, 2008). The majority of Madrassas do not impart any secular or vocational training, students typically come from modest origins, have limited exposure to Western ideas in school, study in Urdu and base their studies on religious texts. Advanced study within the Madrassas produces an Alim (Islamic scholar and/or teacher). Most students who graduate from a Madrassa go on to work in the religious sector (Delevande and Zafar, 2011). Moreover, these campuses are strictly segregated by gender.

Public sector universities and middle-income private universities lie in the middle of this spectrum, catering to low-middle income students which enter these universities mostly after receiving schooling at non-elite low/middle income English-medium private schools, or Urdu-medium public sector schools. These universities, catering to the “proto-elite”, also teach a Liberal Arts curriculum, and the medium of instruction is officially English. However, teachers may also recourse to Urdu during class to explain/elaborate on concepts. Some of the universities in this group are segregated, while some are mixed. Tuition fee at these universities is much less than their elite counterparts: ranging from Rs 50,000 per semester at public sector universities, to Rs 100,000 per semester at middle-income private universities.

To consolidate, these three groups clearly represent three different identities within the Pakistani society. At one end of the spectrum we have young males from poorer backgrounds who attend religious Urdu-medium schools and, at the other end of the spectrum, we have wealthy students exposed to Western-type education (Delevande and Zafar, 2011). Thus our three target “groups” reflect not only distinct linguistic and religious identity (as described above), but are also segregated along the lines of economic and social class.

### **Literature on Group Identity**

Since Akerlof and Kranton’s seminal work on identity and its introduction in economic analysis, empiricism with respect to investigating the impact of group membership has taken the following two approaches: the first approach focuses on exogenously induced group membership, while the second approach focuses on pre-existing group membership, such as membership to different ethnic or religious communities, or economic or social class. It is the latter approach that we will be employing in this paper. Examples include Gächter and Herrmann (2007): The authors conducted public goods experiments with and without punishment using young and old participants from urban and rural Russia, and concluded that rural residents and mature participants were more cooperative than urban residents and young people, respectively. The authors also observed substantial punishment not only of free riders, but also of people who contributed the same or more than the punishing subject. This suggests that informal punishment can have detrimental consequences, and even crowd out cooperation.

Similarly, employing pre-existing group membership, Bowles et al. conducted ultimatum, public good and dictator games with subjects from fifteen hunter-gatherer, nomadic herding, and other small-scale societies exhibiting a wide variety of economic and cultural conditions. The experiments led the authors to conclude that societies with higher degrees of market integration and higher payoffs to cooperation in the production of their livelihood demonstrated a greater level of cooperation in the games. Note that the rationale for payoffs to cooperation as an explanatory variable is that it is perceived that those societies that earn their livelihood through cooperative endeavors (e.g. whale hunting) they are more likely to cooperate in games.

The rationale for market integration is that the more frequently people experience market transactions; the more they are likely to experience abstract sharing principles concerning behavior towards strangers.

Along similar lines, Yamagishi distinguishes between specific trust and generalized trust, and using cross-societal surveys of US and American groups, argue that Japanese social networks and norms produce a greater level of trust, but one that is less portable than American trust. In analogous situations, Japanese trust an individual more than Americans do when they see some indications that the individual is part of a linked network; Americans, however, are more likely to trust a totally unknown individual (the third party “other”) than the Japanese.

Finally, in the specific context of Pakistan, the Social Policy Development Centre (SPDC) in 2003, conducted a survey of students and teachers from the four main schooling strata (1) Urdu-medium school, (2) elitist English-medium schools (3) Cadet Colleges/Public Schools and (4) madrassas. Institutions were used as clusters and only students of class 10 and equivalent were questioned (in Urdu or English) about their views regarding the “Other whether it might be religious minorities, India, or women. According to the survey, the most intolerant views are held by the madrasa students: these students belong to the lowest income quintile and “express their sense of being cheated by society in the idiom of religion. This gives them the self-righteousness to fight against the oppressive and unjust system in the name of Islam”. (Rehman, 2005, pg 18). In contrast, the private elite English medium students were more tolerant of religious minorities and advocated equal rights for women, while responses by Urdu medium students fall between these two extremes: these students were less tolerant of minorities, but believed in equal rights for women.

In contrast, Delavande and Zafar (2011) focus on trust and dictator games. Their survey was limited to 4 universities in Pakistan: As the dictator game comprises a single move, it only measures empathy, but the trust game also comprises a second move and thus incorporates both reciprocity and trust. While Rahman (2005) asserted that the curriculum/textbooks in madarassas make the students narrow-minded and they may turn to violence, in contrast, Delavande and Zafar (2011) find that madarassa students are actually more trusting and generous. Thus, experiments/games are important here to break stereotypes and get at dense information.

Taking the work of Delavande and Zafar (2011) forward, the present study will focus on the public goods game, which will allow analysis of cooperative behaviour and the capacity to punish. Adding a punishment element to the public goods game will allow us to observe if students from different universities are more inclined to punish (even at a cost to themselves), and also to investigate if punishment may actually “crowd out” cooperative behavior. Moreover, our sample comprises both male and female madrassas and allows us to confirm if the generosity displayed by madrasa students can be confirmed across the gender divide.

The above experimental approach is complemented with a detailed questionnaire (see annexure), which will allow the study to go beyond the experimental data and try to answer more process-oriented qualitative questions of “how” and “why” of the difference in attitude of the respective students. Mixed methods research with a qualitative element can play an important role here and will allow the study to document psychological, cultural and contextual factors that play an important role in the nurturing of students.

### **Experimental design**

We have a total of 821 subjects, 466 madrasa students ( 178 female students, 288 male students), 135 public university students, 148 private middle-income, and 72 private elite students.

Respective random sample of students from the three university groups (madrasa, private and public middle income, and elite) participated in the two stage public goods game (see annexure 1 for the instructions provided to the students regarding the experiment, and annexure 2 for the accompanying questionnaire): the summary statistics further suggested that the groups (especially the madrassas) be sliced across gender. We

also consider descriptive statistics separately for public and private middle income universities as there may be nuanced differences between the two groups (see table 1).

We realized that the best way for students of different identity groups to interact without any bias and without their identity being revealed was to let the students play the game in their own university environment, and use the cell phone to update the forms, after the first stage of the experiment was complete. While the students filled out the questionnaire the forms were prepared for the second stage.

Each experimental session lasted around 2 hours, a total of 24 experiments were conducted in Islamabad and Lahore. The first group of 8 sessions were conducted during the months March to May 2013, while the second group of 16 experiments occurred during September to December 2013.

### *The experimental setting*

Two experiments:

The experimental setting involves a standard public goods experiment, with and without punishment opportunities similar to that of Andreoni (1995).

The instructions informed the subjects that they would be interacting with three other students and that the composition of their group would remain the same for the entire session, but were assured that at no point in the experiment would the identities of the other members of the group be made known to them, nor would their identity be made known to the others (see annexure 1 for the instructions). They were however informed of the gender and the type of university their group members belong to. In the first stage, each subject received an endowment of Rs 100 to be divided between two investment opportunities, labeled the 'individual account' and the 'group account', representing the private and public goods, respectively.

The individual account earned no reward to the subject investing in it, while each Rupee invested in the group account was matched by a Rupee as reward, and the total 'group account' contribution was divided equally among the four members of the group, regardless of who invested it. Thus, the Nash equilibrium is for each participant to invest his or her entire endowment in the individual account.

In the second stage, the subjects interacted with each other, as they were informed of their respective group members' contribution to the public account, but even in the second stage no subject was aware of the identities of the rest of their group, they did however know their respective university and gender. The instructions for the second stage not only informed the students of the investment decisions of the other group members, but also provided the subjects the opportunity to punish their respective group members if they were not satisfied with their contribution. The subjects were provided a further Rs 100 for the second round. They could punish their respective group members by decreasing their earnings from the first round, but punishment was at a cost to themselves. Therefore, if a subject decreased a group member's earnings by Rs 10, his/her own endowment will be reduced by Rs 6 (see annexure 1 for detailed instructions).

Note that in the first stage, i.e. the treatment without punishment opportunities *complete* free riding is a dominant strategy. In the treatment with punishment opportunities punishing is costly for the punisher. Therefore, purely selfish subjects will always free ride, and never punish in a one-shot context. In sharp contrast to this prediction empirical research has found vastly different contributions under both conditions: e.g. Fehr and Gächter (2000).

## **Experimental Results**

### **Descriptive Statistics**

Tables 1 and 2 compare the characteristics of five types of universities: male madrasa, female madrasa, public and private middle-income universities, and elite universities. Students' across the spectrum ranked

from the conservative madrassas to the liberal private middle income universities differ such that across this spectrum the income, assets, and education of the parents increases as the institutes become more liberal while religiosity (self-proclaimed) diminishes. But, despite this decline in self-proclaimed religiosity it is not that the middle-income and elite university students are not religious: they all fast in the month of Ramadan and pray on average 2 to 3 times a day (as opposed to the complete 5 daily prayers offered by the madrassa girls and boys).

### **Exposure to Media**

In terms of exposure to media, the language divide is apparent, with madrassa students focusing almost exclusively on Urdu newspapers, while middle-income students focus on both Urdu print and electronic media (demonstrating access to tv and internet), and read English newspapers (see table 1, annexure 1). The elite, in contrast, mostly focus on English print and electronic media. While these English-medium elite students may be watching Urdu news, less than 30 percent read the local Urdu newspaper.

### **Medium of Instruction**

This leads us to the question of medium of instruction: When directly questioned about their preference with regard to what should be the medium of instruction at the school level (see table 2, annexure 1), while more than 80 percent madrassa students had a preference for Urdu, 97 percent of the elite students support English medium instruction, with 45% - 65% middle-income students recommending English-medium instruction at the school level.

### **Income Inequality**

This language divide is closely linked to the income divide: almost 83 percent of madrassa students belong to the Rs 10,000 – Rs 30,000 income bracket, while 53 percent of elite students come from households with income exceeding Rs 100,000 (and 21 percent have a household income between Rs 70,000 and Rs 100,000). The middle income students, as expected, lie in the middle of this spectrum, with private middle income students belonging to relatively higher income households, than their public sector counterparts (see table 2, annexure 1).

### **Income Inequality**

The income divide also mirrors the education divide. With respect to parents education, around 87 percent of the sample of male/female madrassa students considered had father's who were Matric (passed 10<sup>th</sup> grade) or below. Similarly, 96 percent of madrassa students' sampled, have mothers with 10 or less than 10 years of education. In contrast, public-private middle-income students fare better, especially in terms of fathers' education. 44 percent of public university fathers have a Bachelors degree, and out of these 22 percent have a Masters. Similarly, 40 percent of private middle income university fathers have a Bachelors degree, and 15 percent, Masters. In contrast, in the case of elite universities, the majority of parents have Bachelors degrees, and we even find some PhDs.

Moving on to their own educational experience, we find madrassa students (especially male madrassa students) relatively more satisfied with their education, and quality of teaching, than their middle-income counterparts (see table3, annexure 1). However, it seems physical punishment is still prevalent in middle-income schools and madrassas (even in female madrassas) \_ a disturbing finding.

### The Political Divide

Finally, with respect to the political divide, over 97 percent of madrassa students feel that they are first a Muslim, and then Pakistani, while 67 percent of elite feel that they are first Muslim and then Pakistani.

Moreover, with respect to giving equal rights to minorities, we find madrassa students much more tight-fisted than their middle-income and elite counterparts; especially wrt Ahmedis, we find that only 9.15 percent female and 27 percent male madrassa students feel that they should be given equal preference when seeking a job. Moreover, even for elite students this percentage is only 86 percent, much less than the 97 percent posted when questioned about giving equal rights to Hindus and Christians. This suggests how politicized the Ahmedis issue is in Pakistan.

With respect to giving equal rights to men and women, while we find support for equality among the elite, only 45 percent male madrassa students and 60 percent female madrassa students support equality among the two sexes. It is interesting that female madrassa students themselves attach less value to their rights, demonstrating evidence for Sen's work on perceptions, or in this case self-perception (Sen 2000).

**Table 1: Summary Characteristics**

	male madrassa	female madrassa	public sector universities	private middle income	private elite
Number of Observations	288	178	135	148	72
Number of siblings	7.1	6.3	5.1	4.3	3.26
% Parents own:					
home	90.5	77.0	92.6	90.4	97.1
tv	21.0	47.0	85.0	87.0	97.5
cellphone	84.0	91.8	89.0	84.5	98.6
motorbike	48.2	65.8	63.0	65.4	44.6
car	9.7	13.0	43.0	50.0	91.2
computer	27.6	31.6	78.5	76.8	98.6
Internet access	8.4	12.8	63.0	70.2	98.6
Religiosity	8.3	8.0	5.7	5.9	5.6
No of times pray daily	4.99	4.95	2.85	3.28	2.57

### Contributing to the Public Good

With respect to the first stage of the public goods game table 2 presents the unconditional mean contribution and respective standard deviations: these initial summary statistics suggest that on average madrassa students contribute the most to the public good as compared to the public/private university students. And among the madrassa students it is the male student that is more generous and contributes on average 58.9 percent to the public good, while the female madrassa student on average contributed 54.5 percent. This gendered behavior is reversed for private/public middle-income university students: while male madrassa students are more

generous than their female counterparts, female students from middle income universities were more generous than male middle income public/private students. For elite private universities, however, we see a similar gendered trend as the madrassas, with boys contributing more than girls toward the public good.

**Table 2: Mean Contribution toward the Public Good out of Rs 100 provided in the game**

	male madrassa	female madrassa	public sector universities		private middle income		Elite	
mean contribution	58.9	54.5	44.1		41.0		50.9	
<i>Standard deviation</i>	<i>27.7</i>	<i>27.7</i>	<i>24.1</i>		<i>19.8</i>		<i>28.9</i>	
			male	female	male	female	male	female
mean contribution by sex			41.2	49.5	36.8	49.9	48.5	45
			23.3	24.9	18.4	19.8	31.6	23.7

### Disaggregating the data

Further disaggregating the experimental data suggests that madrassas are not a homogenous whole, and therefore, it is important to distinguish between progressive, well-equipped madrassas, which follow both the public-school curriculum and their own religious teachings, and more old-fashioned, cash-strapped, smaller madrassas (such as JMU and ABB). Table 3 presents the disaggregated results of the first stage of the experiment for each individual educational institute considered.

We find that the more progressive, larger, better-equipped madrassas, with better facilities, and dual curriculum (madrassas like IUI for boys, and JUBB for girls) are less generous than their less progressive, more congested, counterparts (like JMU, JUSI, JRSL for boys, and ABB for girls), infact, they behave more like their private/public counterparts (look at annexure 3 for abbreviations).

Overall, on average, public-private middle-income and elite university students are less generous than their madrassa counterparts: Infact, within the two middle-income groups (public vs private) the private school students are the least generous.

Now, in order to resolve our initial question re whether student behavior when playing the public goods game within their own identity group differs from their behavior when interacting with another group is considered by delisting the respective inter/intra university experiments and the respective mean contribution by each university group:

**Table 3: Disaggregated experimental data: Mean Contribution to the Public Good**

	Inter-intra university	Institute type	mean contribution of first group	mean contribution of second group
1	QAU-QAU	public	47.35	
2	IUI-IUI	male madrassa	46.75	
3	IUI-QAU	madrassa-public	43.44	40.00
4	PIDE-QAU	public	53.83	51.667
5	RIU-RIU	private	37.50	
6	JMU-JMU	male madrassa	70	
7	ARID-ARID	private	32.8	
8	JUSI- JUSI	male madrassa	68.3	
9	ARID-JUSI	private-male madrassa	36.50	71.45
10	SZABIST-JASH	private- male madrassa	49.25	66.6
11	JRSL-JRSL	male madrassa	67.5	
12	ABB-ABB	female madrassa	78	
13	ABB-JRSL	female madrassa-male madrassa	72.33	66.66
14	JMUL-JMUL	male madrassa	60	
15	JUBB-JUBB	female madrassa	47.95	
16	JUBB-JMUL	female madrassa-male madrassa	47.74	40.36
17	PU-PU	public	42.5	
18	PCC-PCC	private-private	45.9	
19	JRSL-PCC	male madrassa- private	67	46.56
20	JRSL-PU	male madrassa- public	67	37.7
21	LUMS	elite	44.75	
22	LUMS-ABB	elite-female madrassa	47	100
23	LUMS	elite	57.81	
24	LUMS-ABB	elite-female madrassa	50.5	49.38

**Table 4: Disaggregated experimental data: Mean Penalty**

Inter-intra university	Institute type	mean penalty of first group	mean penalty of second group
IUI-IUI	male madrassa-male madrassa	27.13	
IUI-QAU	madrassa-public	14.8	21.68
PIDE-QAU	semigovernment-public	34.16	21.33
RIU-RIU	private-private	14.625	
JMU-JMU	male madrassa-male madrassa	20.28	
ARID-ARID	private-private	25.28	
JUSI- JUSI	male madrassa-male madrassa	24.7	
ARID-JUSI	private-male madrassa	3.25	26.25
SZABIST-JASH	private- male madrassa	7.8	14.13
JRSL-JRSL	male madrassa-male madrassa	27.3	
ABB-ABB	female madrassa-female madrassa	2.5	
ABB-JRSL	female madrassa-male madrassa	18.38	16.39
JMUL-JMUL	male madrassa-male madrassa	17.8	
JUBB-JUBB	female madrassa-female madrassa	9.38	
JUBB-JMUL	female madrassa-male madrassa	5.86	33.76
PU-PU	public-public	18.75	
PU-JRSL	public- male madrassa	17.5	22.63
PCC-PCC	private-private	22.6	
JRSL-PCC	male madrassa- private	22.63	38.21
LUMS	Elite	50.15	
LUMS-ABB	Elite	58.25	n/a
LUMS	elite	30.94	
LUMS-ABB	elite	47.38	0

### **Madrassa / Public University Interaction**

Focusing on the first four experiments (see table 3, first 4 rows), as we make the comparison between respective intra and inter-university experiments and consider the inter-university contribution, we find that both madrassa students (consider IUI students, a progressive madrassa) and public university students (QAU) contribute less when they play the public goods game with each other than when they were playing within their own respective group.

Similarly, looking at experiments 11, 17, and 20 (see table 3), again we find a similar decline in contribution in the inter-university experiment, as compared to the intra-university experiments, albeit in the case of the boys madrassa, JRSL, the decline is minimal.

Moreover, overall, public university students from both QAU and Punjab university (PU), contribute less to the public good than the male madrassa (JRSL) students. Note that JRSL is a middle tier madrassa, located in Lahore, in a congested three-storey building, but equipped with a computer lab, and teach both national and Shahrīa curriculum. Its students contribute significantly more than their public university counterparts. In contrast, boys from the larger, better equipped, more progressive IUI madrassa, located in Islamabad, are relatively less generous. IUI is a larger, better-endowed madrassa with a focus on both curriculum and sports, with a large football field. The IUI boys are less generous than their JRSL counterparts; infact, their behavior in more in sink with the their public university counterparts.

### **Madrassa / Private Middle-Income University Interaction**

We consider four private universities, RIU, ARID, SZABIST, and PCC. Students from all four contribute much less to the public good than their madrassa counterparts. (see experiments 5 to 10, and 18 and 19).

With respect to inter-university experiments, we find that male madrassa students contribute slightly less to the public good (consider JASH and JRSL) than when playing the game within their own group (consider JMU). Here, we are mainly focusing on more conservative, less equipped, male madrassas. However, note that even though male madrassa students contribute relatively less in the inter-university game, as compared to the intra-university experiment, it is still very generous, and much more than the contributions made by both the public and private middle-income university students even when they play within their own identity group.

Although private middle-income university students do not decrease their contribution to the public good; infact, contribution even rises a little when playing with madrassa students, they contribute only a minimal amount to begin with \_ the least among all identity groups.

### **Madrassa / Elite University Interaction**

With respect to elite university students we considered students from LUMS. The contribution to the public good was comparable to middle-income public university students, and slightly higher than the contribution made by middle income private university students. Infact, in the inter-university public goods game, elite students contribute slightly more when playing with low-income female madrassa students. However, it is with respect to penalizing behavior that elite universities differ from the other identity groups, as they penalize students who make large contributions. This indicates that elite students may resent the generous behavior of their madrassa counterparts.

In contrast, we do not find high penalties from other identity groups. In the exit questionnaire, most students respond they do not penalize low contributors, not because there is a cost attached to it, but

because they understand other students constraints, and respect their choice. In contrast, in the case of elite universities, we see heavy punishment of high contributors, thus ‘crowding out’ cooperative behavior.

### **Male Madrassa / Female Madrassa Interaction**

When considering the behavior within madrassas the gender divide becomes apparent. The contribution of madrassa students overall is higher than their non-madrassa counterparts. But, here let us first distinguish between low-income, more conservative, smaller madrassas such as ABB for girls, as compared to the better equipped, more progressive JUBB madrassa for girls. As they interact with the boys, the madrassa girls decline their contribution, especially the old-fashioned ABB.

Similarly, male madrassa students also decrease their contribution in the case of inter-university experiments. Especially, in the case of the middle tier male madrassa students, the decline in the contribution to the public good is significant; and comparable to the decline witnessed for the old-fashioned female madrassas mentioned above.

### **Empirical Approach**

A Tobit model is used to further investigate the determinants of contribution to the public good. Since our data is censored, the tobit model, also called a censored regression model, is an inherently better model to use than the Ordinary Least Square model. However, for comparison and completion, OLS results will also be provided.

We also run regressions with Penalty as the determinant behavior, and finally, our last model considers the determinants of Net Contribution (Contribution – Penalty).

We run separate models for male and female students. The chow test confirms that the two distributions are structurally distinct, hence the separate models.

The structural equation is:

$$y_i^* = X_i\beta + \varepsilon_i \quad \text{where } \varepsilon_i \sim N(0, \sigma^2)$$

and  $X_i$  is our vector of explanatory variables.

The first model examines the relationship between contribution to the group account (our dependent variable as defined above) and institutes students belong to. Our respective regression models control for sex of the respondent, income, mother’s education, number of times the respondent prays in a day, and whether the student prefers a secular or theocratic Pakistan. Thus, again,  $X_j$  is a vector of the determinants of contribution to the public good (it includes respective university groups, and all the control variables).

### **Results**

Table 5 reports the results from the basic OLS and Tobit models used to investigate the determinants of contribution to the public good by boys. The effect of the kind of institution (our main identity group) is as expected: Madrassa students contribute significantly more to the group account than their middle income public and private university counterparts.

Looking at model (2), table 5, we observe that the predicted contribution by madrassa students is Rs 23 higher than their middle income counterparts, holding all else constant; even as more control variables are added to the model (as we move across the columns in table 5), madrassa students remain significantly more cooperative than all other university groups. Moreover, elite university boys, do contribute, on average, Rs 10 more than their middle income private counterparts, holding all else constant.

As we move across table 5, and add control variables to our basic model, we observe the lack of statistical significance for both income and parents' education. However, notice the negative sign for the middle and higher middle income coefficients (n2, n3 and n4), while higher than Rs 100,000 (i.e. n5) carries a positive effect confirming the tendency towards *noblesse oblige*. Moreover, we do find statistical significance for number of prayers offered in a day, suggesting that, holding all else constant, being more inclined to offer daily prayers increases the predicted contribution to the public good by Rs 2.6 (see model 7). Also students who feel that Pakistan should be a Pakistani state tend to contribute Rs 7.2 more to the public good (see model 7), holding all else constant. Finally, we also find that students who have attended English-medium schools contribute significantly more to the public good.

As we move on to consider the behavior of female students (table 6), while we do find female madrasa students contributing almost Rs 10.65 more than their middle income counterparts, the magnitude of the effect is less than the effect observed for madrasa boys. Elite female students, however, are not significantly more cooperative than their middle income counterparts.

Thus, overall the gendered result is as follows: male madrasa students are more cooperative than their female madrasa counterparts; while, male elite students are more cooperative than their respective female middle income counterparts.

With respect to punishing behavior (table 7), elite boys punish the most: Rs 26.75 more than their middle income counterparts (see model 8), keeping all else constant. However, madrasa boys do not punish significantly differently than their middle income counterparts.

In contrast, madrasa girls do punish significantly less than their middle income counterparts: holding all else constant, female madrasa students punish Rs 11.94 less than their middle income counterparts (table 8, model 5). However, elite female students do not punish significantly differently from their middle income counterparts.

Consolidating the above findings, we can conclude that while madrasa boys are the most cooperative (contributing more than, both, their female counterparts, and elite and middle income students), with respect to punishing behavior, it is the female madrasa students who punish the least. Moreover, with respect to punishing behavior, we observe that elite boys punish the most, all else constant.

Thus, looking at male students, net contribution (i.e. contribution after accounting for the punishing behavior), is the highest for madrasa boys, Rs 14.67 higher than their middle income counterparts (table 9). And, net contribution is the lowest for elite boys, Rs 22.31 less than their middle income counterparts, all else constant.

Similarly, among the females students, madrasa girls make the most net contribution (table 10), in fact, Rs 23.86 more than their middle income counterparts. But, elite female student do not make a net contribution significantly different from their middle income counterparts (holding all else constant).

**Table 5: Estimating the Determinants of Contribution to the Public Good for Boys**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
madrassa	20.23*** (0.000)	23.04*** (0.000)	24.32*** (0.000)	23.89*** (0.000)	17.98*** (0.000)	17.89*** (0.000)	19.13*** (0.000)
elite	14.65*** (0.000)	10.95** (0.012)	9.649** (0.035)	9.265* (0.050)	10.86** (0.025)	14.03*** (0.007)	16.02*** (0.005)
medium_instruct		7.485** (0.013)	7.056** (0.021)	7.093** (0.022)	6.926** (0.027)	6.863** (0.028)	8.114** (0.019)
ma_educ			0.0318 (0.899)	0.0291 (0.910)	-0.0240 (0.928)	-0.0226 (0.932)	-0.102 (0.726)
fath_educ			0.269 (0.212)	0.304 (0.175)	0.317 (0.169)	0.321 (0.163)	0.409 (0.107)
inc_2				-2.886 (0.435)	-1.366 (0.716)	-1.707 (0.649)	-2.522 (0.541)
inc_3				-0.901 (0.845)	-0.368 (0.937)	-0.581 (0.900)	-1.112 (0.827)
inc_4				-1.800 (0.701)	-0.625 (0.897)	0.211 (0.965)	-0.0274 (0.996)
inc_5				0.0890 (0.986)	2.838 (0.587)	2.867 (0.583)	1.909 (0.739)
daily_prayer					2.852*** (0.008)	2.424** (0.028)	2.637** (0.029)
islamic_state						6.659* (0.083)	7.207* (0.088)
_se							27.91*** (0.000)
_cons	38.85*** (0.000)	35.36*** (0.000)	32.78*** (0.000)	33.38*** (0.000)	24.49*** (0.000)	20.30*** (0.000)	19.05*** (0.001)
N	527	527	527	527	507	507	507
adj. R-sq	0.116	0.125	0.125	0.119	0.127	0.131	
p-values in parentheses		=** p<0.10	** p<0.05	*** p<0.01"			

**Table 6: Estimating the Determinants of Contribution to the Public Good for Girls**

	(14)	(15)	(16)	(17)	(18)
madrassa	4.445 (0.185)	10.59** (0.029)	11.41** (0.032)	8.309 (0.139)	10.65* (0.086)
elite	-4.790 (0.432)	-7.635 (0.225)	-9.416 (0.150)	-9.335 (0.192)	-10.48 (0.181)
medium_instruct		9.220* (0.079)	8.328 (0.117)	9.591* (0.076)	10.68* (0.074)
ma_educ			0.526 (0.146)	0.530 (0.148)	0.574 (0.156)
fath_educ			-0.321 (0.336)	-0.286 (0.395)	-0.262 (0.480)
inc_2				-7.139 (0.178)	-7.356 (0.208)
inc_3				-6.846 (0.249)	-7.363 (0.260)
inc_4				-8.075 (0.175)	-8.444 (0.197)
inc_5				-5.618 (0.423)	-6.126 (0.427)
_se					27.99*** (0.000)
_cons	49.74*** (0.000)	43.37*** (0.000)	43.31*** (0.000)	47.42*** (0.000)	46.90*** (0.000)
N	274	274	274	274	274
adj. R-sq	0.006	0.013	0.015	0.011	
p-values in parentheses	=** p<0.10	** p<0.05	*** p<0.01"		

**Table 7: Estimating the Determinants of Punishing Behavior for Boys**

	(1)	(2)	(3)	(4)	(5)
madrassa	2.151 (0.534)	0.793 (0.837)	-0.790 (0.849)	4.918 (0.353)	2.586 (0.543)
elite	37.87*** (0.000)	39.17*** (0.000)	39.24*** (0.000)	38.77*** (0.000)	26.75*** (0.000)
ma_educ		0.0141 (0.969)	0.0515 (0.889)	0.0136 (0.971)	0.0657 (0.830)
fath_educ		-0.294 (0.345)	-0.207 (0.522)	-0.261 (0.433)	-0.254 (0.341)
inc_2			-2.890 (0.587)	-2.426 (0.655)	-0.751 (0.863)
inc_3			-1.578 (0.812)	-2.753 (0.682)	-2.334 (0.665)
inc_4			-10.70 (0.114)	-10.79 (0.122)	-8.242 (0.143)
inc_5			-1.701 (0.817)	0.594 (0.937)	2.280 (0.706)
daily_prayer				-2.598* (0.095)	-1.541 (0.230)
islamic_state					-3.407 (0.446)
_se					29.62*** (0.000)
_cons	21.69*** (0.000)	24.44*** (0.000)	26.05*** (0.000)	33.96*** (0.000)	32.26*** (0.000)
N	527	527	527	507	507
adj. R-sq	0.075	0.073	0.071	0.074	
p-values in parentheses		=* p<0.10	** p<0.05	*** p<0.01"	

**Table 8: Estimating the Determinants of Punishing Behavior for Girls**

	(1)	(2)	(3)	(4)	(5)
	sum_penalty	sum_penalty	sum_penalty	sum_penalty	sum_penalty
madrassa	-17.91*** (0.000)	-16.31*** (0.001)	-18.18*** (0.001)	-13.95** (0.013)	-11.94** (0.014)
elite	-5.417 (0.426)	-7.633 (0.287)	-1.461 (0.853)	-8.792 (0.249)	-7.709 (0.243)
ma_educ		0.553 (0.168)	0.665 (0.102)	0.646* (0.086)	0.592* (0.069)
fath_educ		-0.322 (0.389)	-0.238 (0.527)	-0.243 (0.483)	-0.146 (0.627)
inc_2			2.719 (0.646)	3.149 (0.563)	3.415 (0.468)
inc_3			-3.545 (0.590)	-1.265 (0.838)	-1.885 (0.724)
inc_4			-7.517 (0.253)	-6.822 (0.263)	-4.468 (0.396)
inc_5			-13.57* (0.082)	-18.81*** (0.010)	-16.53*** (0.009)
daily_prayer				-3.276* (0.099)	-2.551 (0.138)
_se					22.75*** (0.000)
_cons	25.55*** (0.000)	24.65*** (0.000)	26.24*** (0.000)	38.27*** (0.000)	32.12*** (0.000)
N	274	274	274	270	270
adj. R-sq	0.074	0.074	0.076	0.103	
p-values in parentheses		=** p<0.10	** p<0.05	*** p<0.01"	

**Table 9: Net Contribution (Contribution – Penalty) for Boys**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	cont_pen	cont_pen	cont_pen	cont_pen	cont_pen	cont_pen	cont_pen
madrassa	18.08*** (0.000)	22.66*** (0.000)	24.93*** (0.000)	25.87*** (0.000)	14.49** (0.028)	14.33** (0.030)	14.67** (0.030)
elite	-23.21*** (0.001)	-29.25*** (0.000)	-31.30*** (0.000)	-31.41*** (0.000)	-29.83*** (0.001)	-23.54*** (0.010)	-22.31** (0.017)
medium_instruct		12.21** (0.020)	11.57** (0.031)	11.28** (0.037)	12.39** (0.025)	12.27** (0.026)	11.87** (0.035)
ma_educ			-0.0405 (0.926)	-0.0691 (0.878)	-0.102 (0.827)	-0.0991 (0.832)	-0.151 (0.752)
fath_educ			0.557 (0.140)	0.510 (0.193)	0.582 (0.151)	0.590 (0.144)	0.633 (0.128)
inc_2				-0.206 (0.975)	0.779 (0.906)	0.102 (0.988)	0.000873 (1.000)
inc_3				0.760 (0.925)	2.499 (0.760)	2.078 (0.799)	2.312 (0.783)
inc_4				8.437 (0.304)	9.748 (0.251)	11.41 (0.180)	11.74 (0.180)
inc_5				0.968 (0.914)	1.170 (0.899)	1.227 (0.893)	1.157 (0.902)
daily_prayer					5.488*** (0.004)	4.640** (0.017)	4.825** (0.015)
islamic_state						13.19* (0.050)	13.24* (0.056)
_se							46.05*** (0.000)
_cons	17.15*** (0.000)	11.47*** (0.005)	6.651 (0.202)	5.863 (0.287)	-11.49 (0.150)	-19.80** (0.028)	-20.01** (0.031)
N	527	527	527	527	507	507	507
adj. R-sq	0.075	0.083	0.083	0.079	0.088	0.093	
p-values in parentheses		="* p<0.10	** p<0.05	*** p<0.01"			

**Table 10: Net Contribution (Contribution – Penalty) for Girls**

	(1) cont_pen	(2) cont_pen	(3) cont_pen	(4) cont_pen	(5) cont_pen	(6) cont_pen	(7) cont_pen
madrassa	22.35*** (0.000)	29.18*** (0.000)	28.92*** (0.000)	26.66*** (0.001)	20.98** (0.019)	20.70** (0.022)	23.86** (0.013)
elite	0.627 (0.944)	-2.534 (0.783)	-2.286 (0.812)	-7.939 (0.451)	-2.123 (0.844)	-1.154 (0.920)	-2.339 (0.847)
medium_instruct		10.24 (0.183)	10.36 (0.185)	9.918 (0.213)	8.258 (0.298)	8.276 (0.298)	9.136 (0.281)
ma_educ			-0.0467 (0.930)	-0.138 (0.798)	-0.164 (0.757)	-0.162 (0.760)	-0.0939 (0.868)
fath_educ			-0.00170 (0.997)	-0.0483 (0.922)	-0.0669 (0.890)	-0.0714 (0.883)	-0.0757 (0.884)
inc_2				-9.869 (0.206)	-10.15 (0.185)	-10.22 (0.183)	-10.47 (0.200)
inc_3				-3.342 (0.702)	-4.942 (0.572)	-4.933 (0.573)	-5.447 (0.559)
inc_4				-0.612 (0.944)	-0.819 (0.924)	-0.758 (0.930)	-1.131 (0.902)
inc_5				7.902 (0.445)	13.21 (0.199)	13.60 (0.191)	13.74 (0.215)
daily_prayer					3.194 (0.252)	3.201 (0.252)	3.171 (0.284)
islamic_state						2.240 (0.792)	2.234 (0.804)
_se							39.16*** (0.000)
_cons	24.19*** (0.000)	17.11*** (0.010)	17.45** (0.042)	21.00** (0.024)	10.80 (0.432)	8.871 (0.569)	8.400 (0.612)
N	274	274	274	274	270	270	270
adj. R-sq	0.073	0.075	0.068	0.065	0.064	0.061	

p-values in parentheses

="\* p<0.10      \*\* p<0.05      \*\*\* p<0.01"

## Summary and Conclusion

Our empirical findings suggest that, firstly, with respect to cooperative behavior, madrasa students are the most cooperative. Within the madrasa group, boys are more cooperative than girls. This result is in line with Delavande and Zafar (2011), and we confirm their finding for both male and female madrasa students (while Delavande and Zafar only surveyed male madrassas). This result also helps break negative stereotypes about madrassas, and helps contain the concerns raised by Rehman (2005).

Moreover, note that middle-income university students are the least cooperative, and as we further disaggregate the data, we find relatively more progressive male and female madrassas behaving more like their middle-income counterparts, i.e. we find the cooperative behavior (most likely a manifestation of altruism), demonstrated by low-income madrassas, is gradually replaced by rational, selfish behavior, as we move on to middle income students.

Secondly, with respect to penalizing behavior, we find that among the three identity groups considered, male elite university students penalize the most heavily. In contrast, female madrasa students, lying at the opposite end of the income spectrum, penalize the least. With respect to the behavior of the elite students, the exit questionnaire reveals resentment at high level of contribution, and such cooperative is penalized. This result is in line with Fehr and Gächter (2000).

Further, with respect to inter vs intra university experiments, while we find a reduction in the contributions of madrasa and public university students when we compare the intra-university experiments with the inter-university experiments, but surprisingly for private university students, we find an increase in the contribution when playing the public goods game with madrasa students; perhaps it is out of a preference for fairness that they increase their contributions rather than decrease them when they play with another less-privileged identity group. But, what was most surprising was the penalizing behavior of the male elite students, resenting and penalizing cooperative behavior by madrasa students.

Finally, going back to Akerloff and Kranton, our descriptive statistics confirm that madrasa students, middle-income public and private university students, and elite university students, do form three distinct identity groups, and behave more in line with their group identity, than according to simplistic economic reasoning, i.e. their decision to contribute to the public good, and their decision to penalize (despite a cost attached to punishing) is not driven by economic concerns, but by feelings of cooperation (in the first stage of the experiment) and at times resentment when considering punishing behaviour.

To conclude, our results definitely indicate a religiously and economically fractured society, where madrasa students' behavior is completely distinct from that of elite and middle-income university students: the lowest-income madrasa students contribute the most, and private middle income emerging as the least cooperative. With respect to the language divide, again, elite English-medium university students behave in a completely distinct manner than students attending madrassas where the medium of instruction is primarily Urdu. But, we need to more carefully examine the behavior of public/private university students to understand better the language divide, as it is in this middle-income group that we find students from both Urdu and English medium schooling background. And, here, we do find that middle-income students with an English medium background are significantly more generous than their Urdu medium counterparts.

**Annexure 1**

**Table 1: Exposure to Media**

	male madrassa	female madrassa	public sector universities	private middle income	private elite
% Parents :					
watch Urdu news	43.11	57.42	81.95	89.66	98.57
read Urdu newspaper	50	60.38	66.67	72.97	70.83
watch English news	7.83	10.06	21.8	24.32	63.89
read English newspaper	4.23	6.25	31.85	23.65	69.44
% Students:					
watch Urdu news	59.71	32.70	85.82	87.16	65.28
read Urdu newspaper	85.71	57.32	75.19	74.83	28.57
watch English news	17.67	7.55	51.11	47.30	78.87
read English newspaper	17.5	9.49	78.52	62.59	84.10
% students play with ipods/Xbox/PS3	18.18	5.06	33.08	38.78	65.71
% use computer/internet for homework	13.31	3.16	96.2	96.6	98.59
Friend/acquaintance died in recent violence	34.78	15.38	22.73	28.38	42.25

**Table 2: Educational Attitudes**

	male madrassa	female madrassa	public sector universities	private middle income	private elite
% liked going to school	99.64	100	94.74	91.72	97.22
Focus on comprehension	85.94	54.00	43.37	57.04	78.268
Focus on reading/memorization	13.67	46.00	38.55	37.78	17.39
Focus on both	0.39	0	12.05	5.19	4.35
% interested higher studies	99.3	95.60	96.27	91.89	91.67
% whose parents set aside money for higher studies	64.64	62.66	63.57	72.22	73.53
% who find their teachers:					
V good	83.64	84.28	40.74	25.68	45.83
Good	6.18	6.29	37.78	55.41	43.06
Satisfactory / average	10.18	8.81	18.5	19	11.09
Below average	0	0.63	2.22	0	0
% who find the teaching method:					
V good	72.04	73.42	21.97	16.89	34.29
Good	11.83	12.03	36.36	46.62	50.00
Satisfactory / average	15.24	14.56	27.3	36.40	15.71
Below average	0.72	0	3.03	0	0
% found their studies rigorous	77.29	75.48	55.97	56.64	87.32
% face physical punishment in their institute	39.44	14.65	7.46	5.52	1.39
% feel medium of instruction should be English	20.14	11.46	77.44	77.55	95.65

% have friends in other education streams:					
Urdu medium	82.4	75.17	70.68	76.43	68.57
English medium (middle income)	61.48	43.70	81.2	89.66	100
English medium (elite)	51.85	53.52	53.49	55.8	100
Madrassas	91.57	87.42	46.88	41.22	40.00

**Table 3: Tolerance**

	male madrassa	female madrassa	public sector universities	private middle income	private elite
% feel they are first a Muslim and then Pakistani	97.5	98.11	85.82	92.57	64.29
% feel Pakistan should be a Secular state, not Islamic	1.43	1.26	23.88	10.81	70.59
% feel Pakistan's biggest problem is:					
Illiteracy	28.57	20.28	64.8	77.42	77.27
Terrorism	21.05	17.39	15.45	50.67	17.86
Law & Order	42.36	39.13	27.19	54.67	17.54
US interference	54.77	36.00	21.43	28.81	3.70
% feel:					
Take Kashmir by supporting Jihadis	63.31	74.68	22.22	31.29	7.14
Don't know	10.43	6.96	26.50	31.97	8.57
Support Kashmir by peaceful means	66.54	73.68	60.45	53.79	90.00
Don't know	11.77	6.58	24.62	21.38	1.43
% feel:					
Give Ahmedis equal rights	27.44	8.23	41.04	32.88	83.82

Don't know	11.91	6.33	29.11	29.45	11.76
Give Hindus equal rights	37.91	13.92	71.64	68.97	95.65
Don't know	11.39	2.53	13.19	13.79	2.90
Give Christians equal rights	42.14	24.05	72.59	77.4	95.71
Don't know	10.36	6.33	12.59	7.53	2.86

**Table 4: Equality for Men and Women**

	male madrassa	female madrassa	private middle income		public sector universities		private elite	
			male	female	male	female	male	female
Give Women equal rights								
Yes	45.52	60.13	86.00	97.83	82.95	87.23	95.55	100
No	43.73	36.71	11.00	2.17	14.77	6.38	3.45	0
Don't know	10.75	3.16	3.00	0	2.28	6.39	0	0

**Exit Questionnaire**

	male madrassa	female madrassa	public sector universities	private middle income	private elite
% contributed because of feeling of:					
Trust	22.57	11.85	31.34	32.31	19.61
Reciprocity	34.96	29.10	12.03	19.05	28.30
Community	60	64.03	65.25	61.11	58.82

**Table 5: Income Distribution: Percentage in the Income Distribution**

Monthly Total Income of Parents	Male Madrassa	Female Madrassa	public sector universities	private middle income	private elite
0	2.1	0.62	2.22		
10,000-30,000	83.57	82.5	42.22	22.97	7.04
30,000-50,000	9.44	8.12	16.3	21.62	7.04
50,000-70,000	3.15	4.38	11.85	21.62	11.27
70,000-100,000	1.75	3.12	13.33	22.3	21.13
100,000 and above	100	1.25	14.07	11.49	53.52

**Annexure 2**  
**Instructions for the Public Goods Game with Sanctions**

**The First Stage**

For this decision situation you will be randomly assigned to a group of size four (you plus three other people).

This decision situation consists of **two stages**. When you have completed the first stage, we will collect your decision sheets and prepare them for the second stage. They will then be returned to you so that the second decisions can be completed.

**The First Stage**

In the first stage you are endowed with Rs100 , and the other three participants in your group are also endowed with Rs 100 . You must decide how much from this Rs100 to allocate to the GROUP ACCOUNT, and how much to allocate to your PRIVATE ACCOUNT.

In the first stage you will earn:

The amount you allocated to the PRIVATE ACCOUNT, and 2 times the amount allocated to the GROUP ACCOUNT.

**Instructions for the Public Goods Game with Sanctions**

**The Second Stage**

You will be informed of the total allocation to the group account and your total earnings for the first stage. You will also be informed of the individual group account allocation decisions of the other members of your group. Information about individual choices will be completely anonymous. You will never know the identities of the other members of your group, but only know the type of school they belong to.

In the second stage you will be allocated Rs 100. You can allocate this money to your private account, or it can be used to **decrease** the earnings of the members of your group.

However, if you want to **decrease** the earnings of your group members you will yourself have to bear the cost of decreasing the other member's earnings. The cost will be as illustrated in the table below:

Points	0	10	20	30	40	50	60	70	80	90	100
Cost of these Points (%)	0	1	2	4	6	9	12	16	20	25	30

If you contribute all of Rs 100 to your private account it will increase your total earnings by Rs 100.

However, if you contribute, for example, Rs 50, to decrease another group member's earnings, his/her earnings will decline by Rs 50, and yours will decline by Rs 9. You will now be left with Rs 91 (Rs 100 – Rs 9) to add as earnings to your private account.

If you want to decrease the other group member's earnings by the maximum of Rs 100 it will cost you Rs 30. Her/his earnings from the first stage will decline by Rs 100, and you will now be left with Rs 70 (Rs 100 – Rs 30) to add as earnings to your private account.

You can choose any amount from Rs 0/- to Rs 100/- to allocate to your private account, or any amount from Rs 0/- to Rs 30/- to decrease the earnings of each of the other group members.

The other three members of your group will also be endowed with Rs 100/- in the second stage, and will be able to use them in the same way.

Name	ID	Class/Level	Institute	Gender	
				Male	Female

Other Group Participants		
ID	Gender	Institute

**Decision Sheet**

**First Stage**

In the first stage you have been endowed with Rs. 100

In the box below enter the amount of Rupees you wish to allocate to the Group Account. Any remaining money will automatically be placed in your Private Account.

<p>How much of your <b>Rs. 100</b> do you wish to allocate to the group account?</p> <p>Rs. _____ (Rs. 0 to Rs100)</p>
--

**Second Stage**

Rs \_\_\_\_\_ were allocated to the Group Account by your group in the first stage.

You earned Rs \_\_\_\_\_ in the first stage.

The first column of each row shows how many Rupees each group member allocated to the Group Account in the first stage.

In the column to the right, enter the amount of Rupees by which you want to **decrease** that group member's earnings. You may enter any amount from Rs 0 to Rs 100.

Any remaining Rupees will automatically be placed in your Private Account.

Allocations to Group Account by Other Group Members	Amount of Rupees by which to Decrease this Member's Earnings
_____ Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Institute _____	_____
_____ Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Institute _____	_____
_____ Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Institute _____	_____

**ANNEXURE 3**  
**QUESTIONNAIRE (FACULTY)**

DO NOT WRITE YOUR NAME TO ENSURE SECRECY.

1. Teacher ID: \_\_\_\_\_
2. Address: \_\_\_\_\_
3. Phone Number: \_\_\_\_\_
4. Email ID: \_\_\_\_\_
5. Date of Birth: \_\_\_\_\_
6. Gender \_\_\_\_\_  
(1) Male (2) Female
7. Name of Institute \_\_\_\_\_
8. Medium of Instruction at the Institute where you teach \_\_\_\_\_
9. Education:  
(1) Below B.A (2) B.A/Bsc (3) M.A/MSc (4) M. Phil (5) Ph.D
10. Which subject (s) do you teach?
11. What is the occupation of your spouse:
  1. Give his or her rank, title, occupational status; salary; grade; income from all sources etc?
    - a) (1=Public, 2=Private, 3=NGO's, 4=Others)
    - b) 1=Gazetted, 2=Non – Gazetted, 3= Clerical 4= Others
12. What is your average total monthly income:
  - a. (write income from all sources such as tuition, publications, consultancies, rent etc. in 1,000 Rs)
    - 1=10,000 – 30,000
    - 2=30,000– 50,000
    - 3=50,000– 70,000
    - 4=70,000– 100, 000
    - 5=100,000 and above
13. Do you own:
  - (1) home
  - (2) Television
  - (3) Cell phone
  - (4) Motorbike
  - (5) Car
  - (6) Computer
  - (7) Internet Access
14. On a scale of (0 to 10) how religious are you? (Tick one option)  
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

15. How many number of times do you pray in a day (0 to 5) ? (Tick one option)  
(1) (2) (3) (4) (5)
16. Do you fast during Ramadan?  
(1) Yes  
(2) No
17. If answered yes to the above, how many Rozas did you keep last Ramadan ? \_\_\_\_\_
18. Do you watch Urdu news channels, and talk shows?  
(1) Yes  
(2) No
19. Do you read Urdu newspapers?  
(1) Yes  
(2) No
20. Do you watch English news channels, such as BBC and CNN?  
1. Yes  
2. No
21. Do you read English newspapers?  
1. Yes  
2. No
22. Do you have a friend/acquaintance who died or was injured in the violence in recent years?  
1. Yes  
2. No
23. What is the medium of instruction of the Institute in which your children study (or studied)?  
\_\_\_\_\_
24. What was medium of instruction of the Institute in which you studied most?  
\_\_\_\_\_

**QUESTIONNAIRE (STUDENTS)**

DO NOT WRITE YOUR NAME TO ENSURE SECRECY.

- 25. Student ID \_\_\_\_\_
- 26. Name of Institute \_\_\_\_\_
- 27. Age \_\_\_\_\_
- 28. Class \_\_\_\_\_
- 29. Sex

(1) Male (2) Female

30. Father's Educational Qualification:

- (1) Below Matric (2) Matric (3) FA/FSc (3) BA/ Bsc (4) MA/Msc (4) M. Phil (5) PhD

31. Mother's Educational Qualification:

- (1) Below Matric (2) Matric (3) FA/FSc (3) BA/Bsc (4) MA/Msc (4) M. Phil (5) PhD

32. What is the occupation of your father?

Give his or her rank, title, occupational status; salary; grade; income from all sources etc?

- a) (1=Public, 2=Private, 3=NGO's, 4=Others)
- b) 1=Gazetted, 2=Non – Gazetted, 3= Clerical 4= Others

33. What is the occupation of your mother?

Give rank, title, occupational status; salary; grade; income from all sources etc?

- a) (1=Public, 2=Private, 3=NGO's, 4=Others)
- b) 1=Gazetted, 2=Non – Gazetted, 3= Clerical 4= Others

34. Please specify exact occupation of Father and Mother

Father \_\_\_\_\_  
Mother \_\_\_\_\_

35. Parents' total monthly income (in 1,000 Rs)

- 1=10,000 – 30,000
- 2=30,000– 50,000
- 3=50,000– 70,000
- 4=70,000– 100, 000
- 5=100,000 and above

36. Number of siblings (including self): \_\_\_\_\_

37. Do your parents own:

- (1) home
- (2) Television
- (3) Cell phone
- (4) Motorbike
- (5) Car
- (6) Computer
- (7) Internet Access

38. On a scale of (0 to 10) how religious are you ?  
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
39. How many number of times do you pray in a day (0 to 5) ?  
(1) (2) (3) (4) (5)
40. Do you fast during Ramadan?  
1. Yes  
2. No
41. If answered yes to the above, how many rozas did you keep last Ramadan ? \_\_\_\_\_
42. Do your parents watch Urdu news channels, and talk shows?  
(1) Yes  
(2) No
43. Do your parents read Urdu newspapers?  
(1) Yes  
(2) No
44. Do your parents watch English news channels, such as BBC and CNN?  
1. Yes  
2. No
45. Do your parents read English newspapers?  
1. Yes  
2. No
46. Do you watch Urdu news channels, and talk shows?  
(1) Yes  
(2) No
47. Do you read Urdu newspapers?  
(1) Yes  
(2) No
48. Do you watch English news channels, such as BBC and CNN?  
1. Yes  
2. No
49. Do you read English newspapers?  
1. Yes  
2. No
50. Do you have a friend/acquaintance who died or was injured in the violence in recent years?  
1. Yes  
2. No

#### **Educational Attitudes**

51. What kind of school did you go to?  
1. Public  
2. Private  
3. NGO  
4. Madrassa

52. What was the medium of instruction at your school?
1. English
  2. Urdu
  3. local
53. Did you like going to your Institute?
1. Yes
  2. No
54. Give reasons why you enjoyed going to school or why you did not like school. \_\_\_\_\_
55. Do you find what is being taught in college useful?
- i. Yes
  - ii. No
56. Was the focus more on memorization or comprehension? \_\_\_\_\_
57. Was there a lot of homework?
- i. Yes
  - ii. No
58. Are you interested in pursuing higher education?
- i. Yes
  - ii. No
59. Are your friends interested in pursuing higher studies?
- i. Yes
  - ii. No
60. How supportive are your parents in your studies? Do they help you and support your educational goals? \_\_\_\_\_
61. Have your parents set aside money for your higher education? \_\_\_\_\_
- i. Yes
  - ii. No
62. What are your educational goals? \_\_\_\_\_
63. How would you rate the teachers in your institute in terms of knowledge, behaviour and presentation?
- i. V. Good
  - ii. Good
  - iii. Satisfactory
  - iv. Average
  - v. Below average
64. Do you understand what is being taught in Institute ?
1. Yes
  2. No
65. Do you get a lot of home-work
1. Yes
  2. No
66. Are the studies rigorous/difficult?
1. Yes
  2. No

67. Is there physical punishment in your Institute?
1. Yes
  2. No
68. If yes, what kind of physical punishment, explain: \_\_\_\_\_
69. What problems do you think are affecting our educational system and what changes can be made to improve the condition? \_\_\_\_\_
70. Do you think the medium of instruction in your Institute should be English or Urdu?
- i. English
  - ii. Urdu
71. What role can the government play in spreading education in the country? \_\_\_\_\_
72. Do you have friends from other Institute streams?
- (1) Urdu medium Institutes
    - (1) Yes
    - (2) No
  - (2) English medium Institutes (middle-income)
    - (1) Yes
    - (2) No
  - (3) English medium Institutes (elite)
    - (1) Yes
    - (2) No
  - (4) Madrassas
    - (1) Yes
    - (2) No
73. If yes ,where does this interaction occur:
1. in the sports grounds
  2. mosques
  3. family friends
  4. other (please specify )
74. Do you play with / own electronics such as iPods, Xbox, PS3
- (1) Yes
  - (2) No
75. Do you use the computer / internet for your home-work?
- (1) Yes
  - (2) No
- (6) Are you happy with the teaching method:
- i. V. Good
  - ii. Good
  - iii. Satisfactory
  - iv. Average
  - v. Below average

**PART-II**  
**(For both faculty and students)**

- (1) Are you first a Pakistani or a Muslim?  
(1) Muslim  
(2) Pakistani
- (2) Do you think Pakistan should be a secular or Islamic state?  
(1) Secular  
(2) Islamic
- (3) What do you think is Pakistan's biggest problem  
(1) Illiteracy  
(2) Terrorism  
(3) Law & Order  
(4) US interference
- (4) What should be Pakistan's priorities?
- (5) Take Kashmir away from India by an open war?  
(1) Yes (2) No (3) Don't Know
- (6) Take Kashmir away from India by supporting *Jihadi* groups to fight with the Indian army?  
(1) Yes (2) No (3) Don't Know
- (7) Support Kashmir cause through peaceful means only (i.e. no open war or sending *Jihadi* groups across the line of control?).  
(1) Yes (2) No (3) Don't Know
- (8) Give equal rights to *Ahmedis* in all jobs etc?  
(1) Yes (2) No (3) Don't Know
- (9) Give equal rights to Pakistani Hindus in all jobs etc?  
(1) Yes (2) No (3) Don't Know
- (10) Give equal rights to Pakistani Christians in all jobs etc?  
(1) Yes (2) No (3) Don't Know
- (11) Give equal rights to men and women?  
(1) Yes (2) No (3) Don't Know

**EXIT QUESTIONNAIRE**

(1) What were the top factors that lead you to make this contribution?

(Rank your answer by preference as 1,2,3. 1 for most preferred)

- a. Feeling of trust
- b. Feeling of reciprocity
- c. Feeling of brotherhood/sisterhood/community

(2) What lead you to make these deductions in earnings of your group members?

(Rank your answer by preference as 1,2,3,4,5,6. 1 for most preferred)

- a. Had contributed very little
- b. Had contributed too much
- c. Anger
- d. Lack of fairness
- e. Belong to other group or community
- f. Belong to other gender

(3)What prevent you from making deduction in earnings of your group member?

(Rank your answer by preference as 1,2,3,4,5,6. 1 for most preferred)

- a. Very satisfied from his/her contribution
- b. Contributed more
- c. Belong to same institute
- d. Feeling of reciprocity
- e. Did not like to punish
- f. Other-----

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