Religiosity and Fairness Perceptions

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Abstract

We measure the impact of religiosity on preferences over distribution of resources, using two surveys conducted among undergraduate students in Turkey. The subjects were asked to assess the fairness of three hypothetical distributions of resources between two agents. These agents differed in their ability to convert resources into goods that provide utility, and we manipulated the information about the source of these differences across different problems. Even though relative popularity of alternative distributions is similar among religious or non-religious people, some significant differences emerge between these two groups. With minimal information, less religious people are significantly more likely to prefer the Egalitarian distribution and significantly less likely to prefer the Rawlsian distribution. When differences are explained to be due to external factors, higher religiosity implies a higher likelihood of ranking both the Rawlsian and Utilitarian distributions above the Egalitarian distribution. However, when differences are due to voluntary choices of agents, differences between religious and non-religious people disappear inducing subjects to think efficiency as the most fair alternative. These results are robust when we control for other relevant factors. Religious and non-religious people also disagree on the issues around working towards making everyone equal, and insuring people who make unlucky economic choices.

Keywords: religion; distribution; inequality; fairness.

JEL Classification Numbers: D30, D63, Z12.

Introduction

The idea that moral values embedded in religion can have economic consequences dates back to Weber. His assertion was that Protestant ethics encourage working hard and achieving worldly success and consequently have a role on the development of capitalism in Europe. Benabou and Tirole (2006) reformulated this idea using a modern approach where religious individuals get positive utility from effort provision due to a prospect of rewards in afterlife for hard working people. These people choose higher effort levels and demand less redistribution in equilibrium. As a result, the prevalence of religious beliefs implies a lower likelihood of a welfare state.

Empirical evidence seems to support this conjecture both at the aggregate and the individual level. In Palani (2008) and in Rees (2009), it is demonstrated that income inequalities are more pronounced in countries with higher levels of religiosity. On the other hand, Gill and Lundsgaarde (2004) and Scheve and Stasavage (2006) document a negative correlation between religiosity and state welfare spending. Guiso et al. (2003) show that people with certain religious affiliations are more likely to accept inequality to provide better incentives for individual effort. Finally, in line with these findings Alesina et al. (2001) find that more religious Americans are less likely to favor welfare spending.

Motivated with the observations we cite above, in this study, our aim is to measure the impact of religiosity on preferences over distribution of resources. To this end, we employ several hypothetical distribution problems based on the paradigm developed by Faravelli (2007)[1]. Along with Faravelli (2007), several other studies employ hypothetical scenarios through which subjects evaluate or rank distributive justice principles (some examples are Yaari and Bar-Hillel 1984, Schokkaert and Overlaet, 1989; Scott et al., 2001 and Schwettmann, 2012) We chose the paradigm in Faravelli (2007), mainly becuase (i) it is based on a short and easily understood story and (ii) it involves contrasting choices representing three major outcomes (efficient, egalitarian and Rawlsian) as well as providing flexbility for adding context (ability differences, differences in luck) to the story.

The current research is conducted as two separate surveys among undergraduate students at Boğaziçi University, Turkey. The subjects, acting as impartial spectators, were asked to assess the fairness of three hypothetical distributions of resources between two agents who differ in their ability to convert these resources into final goods that provide utility. We also gathered information about the subjects' religious and ideological attitudes as well as their demographic characteristics. In Survey 1, there was a single distribution problem (A) and the information about the source of initial inequalities was minimal. In Survey 2, we used two distribution problems (B and C) and presented more information about the source

[1]The cited study aims to assess the effect of context on the fairness perceptions of senior and freshman level economics and sociology undergraduates.

of initial inequalities and the payoffs resulting from consumption of goods. The alternative resource distributions that the subjects could choose among were the same in both surveys and resulted either in an Egalitarian, or a Utilitarian distribution of the final goods or a compromise between these two. Since the compromise maximized the amount that the worse-off agent can obtain, the term Rawlsian is used to identify this distribution. Compared to the Egalitarian distribution, which results in an equal number of goods for both agents, the Rawlsian distribution introduces some inequality and increases the amount of goods for both agents. In contrast, the Utilitarian distribution maximizes the amount of goods that the better-off agent can obtain as well as the total amount of goods produced, while introducing the highest inequality. To summarize, the paradigm used in this study employs three important concepts that represent quite distinct fairness ideals.

With minimal information (Problem A), we find that both believers and non-believers are most likely to prefer the Rawlsian distribution followed (in order) by the Egalitarian and the Utilitarian distributions. While the relative ranking of distributions are similar across both groups, non-believers are significantly more likely to prefer the Egalitarian distribution and significantly less likely to prefer the Rawlsian distribution. In a regression model, using subjects' self assessments to measure religiosity, we obtain similar results. Moreover, when we control for subjects' ideology and other relevant characteristics, the results do not change. In addition, we find that both gender and university major have an effect on subject preferences. When more information about the sources of differences in abilities are provided (Problems B and C), believers and non-believers again have similar rankings over distributions. In particular, when the differences in abilities are due to external factors (Problem B), subjects are most likely to rank the Rawlsian distribution as the most preferred one and this is followed (in order) by the Egalitarian and the Utilitarian distributions. When the differences in abilities are due to voluntary choices of agents (Problem C), Utilitarian distribution is most frequently ranked on top and this is followed (in order) by the Rawlsian and the Egalitarian distributions. However, in Problem B, we observe that higher religiosity implies a higher tolerance to inequalities since believers turn out to be more likely to rank both the Rawlsian and Utilitarian distributions above the Egalitarian distribution. Finally, religious and non-religious people also differ in their standing on issues regarding welfare policies of the government.

A similar result is also reported in Pepinsky and Welborne (2011) which uses survey data from a diverse set of countries including Turkey and find that the support for government efforts to minimize income inequality is lower among more religious Muslims. They also mention that previous literature offers two different potential theoretical explanations. First explanation points to the role of social insurance aspect of religious participation (Chen, 2010) and the second points to the role of psychic insurance brought by religious belief (Scheve and Stasavage, 2006).

There has also been a recent interest in the study of religious correlates of social preferences in experimental settings. Shariff and Norenzayan (2007) show that when primed with religious cues, subjects send a higher fraction of their endowment in the dictator game. Ahmed and Salas (2011) use a similar priming instrument and demonstrate that subject primed with religious cues act ore pro-socially in dictator game and prisoner's dilemma game. Tan (2006) shows that while some dimensions of religiosity can be associated with more prosocial behavior, other dimensions might have effects that cancel out so that general religiosity is not a predictor of social preferences. Players in the trust game reported in Tan and Vogel (2005) are informed about other player's religiosity. They observe that more religious people are trusted more and the reciprocation rate is higher among more religious trustees. However Andersen et al. (2010) show that religiosity is not a good predictor of behavior in public good and trust games. Using the results from a nationwide representative survey, Fehr et al. (2002) show that ritual (measured a church attendance) had no effect on the behavior in trust game. Anderson and Mellor (2008) find that frequency of attendance at religious services isn't related to the average contributions in a repeated public good experiment but the decline in contributions over additional rounds is less pronounced for religious subjects. In a recent study, Chuah et al. (2016) demonstrate the trust-enhancing effects of sharing similar religious beliefs.[2]

Our study mainly demonstrates that the differences between religious and non-religious people are only prevalent under certain decision contexts. In particular, we show the tendency for acceptance of income inequality is similar across both groups when people are seen to be personally responsible for these inequalities. In other contexts religious people appear to be more concerned with maximizing the payoff of the least well-off person. Our results contribute to the recently developing literature on the religious correlates of social preferences by documenting differences between the fairness perceptions of religious and non-religious people in a predominantly Muslim country. We argue that, besides the one proposed by Weber, another economic impact of religion might be shaping people's fairness perceptions and their political preferences for the issues regarding redistribution and taxation. This, in turn, is likely to effect the overall structure of the economy.

The procedures we used in conducting the surveys are described in section 2. We present the analysis of our data in section 3 and finally we conclude with a discussion in section 4.

Procedures

Survey 1 is conducted among 554 students from freshman and senior years, whereas Survey 2 is conducted among 651 students only from freshman year. We made sure that

[2]See Hoffmann (2013) and Tan (2014) for a survey of studies dealing with the relation of religiosity and social preferences, along with other economic outcomes.

no student participated in both surveys. We went to either the final 20 minutes or the first 20 minutes of a lecture and announced that a survey concerning distribution of resources will be conducted, with no further explanation in order not to influence the subjects. We mentioned that the participation is voluntary and there is no payment for participating in the study. Then, we asked those who are willing to participate to stay in the classroom and told that others can leave. The survey consisted of two parts, one part with the questions about subject characteristics and another one with the distribution problem(s). All parts were in Turkish.[3]

On the page with questions about subject characteristics, subjects were asked their major, gender, whether they have siblings or not, parents' education, approximate family income, accommodation arrangement and their assessments of income inequalities in Turkey, their religious beliefs and their political ideology.

Before describing the distribution problems that we used in the surveys, we explain relevant distribution rules, or social choice functions, which have different approaches to fairness and equality. We consider three distribution rules: Egalitarian, Rawlsian and Utilitarian. The Egalitarian rule requires that each individual receives the same level of utility. The Rawlsian rule requires that the least-well-off individual's utility is maximized. The Utilitarian rule, on the hand, maximizes the total utility of all individuals.

More formally, consider a group of n individuals, who face a set of possible alternatives X. Each individual has a utility from each alternative in X, say individual i's utility function is given by u_i, where $u_i : X \mapsto \mathbb{R}$. Then, a social choice function f chooses an alternative from set X, for any given profile of utility functions, $U = (u_1, u_2, ..., u_n)$, that is, a social choice function f assigns $f(U) \in X$ to the profile of utility functions, U. If a social choice function, f, is **Egalitarian**, then $u_i(f(U)) = u_j(f(U))$ for each $i, j \in \{1, 2, ..., n\}$ for each U. If a social function f is **Rawlsian**, then for any given profile of utility functions, U, $f(U)$ solves the problem $max_{x \in X}[min_i\{u_i(x))\}]$, that is, f chooses an alternative which maximizes the utility of the least-well-off individual. This is also referred to as the Maximin rule. If a social function f is **Utilitarian**, then for any given profile of utility functions, U, $f(U)$ solves the problem $max_{x \in X} \sum_{i=1}^{n} u_i(x)$, that is, such a social choice function maximizes the total utility.

The distribution problems used in the surveys were adapted from different treatments of Faravelli (2007). Below we give the English translation of the problems separately for both surveys. Note that we refer to the distribution problem in Survey 1 as Problem A, and the distribution problems in Survey 2 as Problems B and C.

Problem A:

[3]The appendix includes an English translation of both surveys.

After a shipwreck Robinson and Friday have landed on two different islands. These islands are separated with a short swimming distance.
There are 12 fruit plants on each island. All fruit plants are the same. Fruit is the main food for both agents. Because of this, the higher amount of fruit they obtain, the more their welfare would be.
Friday obtains 120 fruits per year from every plant on island A, but he cannot obtain any fruit from island B's plants. On both islands Robinson obtains 20 fruits per plant. Both can only eat the fruits they themselves produce. It is not possible to share the fruits after production.
Below are given 3 different situations that show how 12 plants in island A and 12 plants in island B are divided. From your point of view, which one of the distributions would be just?

	Trees on Island A	Trees on Island B	Fruits
Robinson	0	12	240
Friday	12	0	1440
Total Production			1680

(1)

	Trees on Island A	Trees on Island B	Fruits
Robinson	8	12	400
Friday	4	0	480
Total Production			880

(2)

	Trees on Island A	Trees on Island B	Fruits
Robinson	9	9	360
Friday	3	3	360
Total Production			720

(3)

In Survey 1, subjects were asked to make a single choice by indicating "the most fair" distribution among the three possible distributions. Among these three distributions, the first distribution, (1), corresponds to the Utilitarian distribution, which has the highest total utility among the three distributions, but it is also the most unequal distribution in terms of utility levels. The second distribution, (2), corresponds to the Rawlsian distribution. Note that, Robinson is the least-well-off and his utility is maximized by allocating all the plants in his island and 8 of the plants on the other island to him. If we increase the plants in island A allocated to Robinson from 8 to 9, then he would end up with a utility 420, whereas, Friday would end up with a utility 360, in which case the least-well-off person would be Friday. This distribution produces a more equal distribution of utilities than the Utilitarian distribution. Finally, the third distribution (3) is the Egalitarian distribution

where the utilities of both Robinson and Friday are the same. However, the total utility under this distribution is less than that of the Rawlsian distribution, and far less than that of the Utilitarian distribution.

Problems B and C:

Participants in survey 2 were asked to state their preferences for two separate distribution problems, which we term as Problem B and Problem C here. The basic nature of the story in study might generate two potential criticisms (i) it is not clear what the meaning of getting more fruit is and how much of it is needed for survival and (ii) subjects might sympathize with Friday based on their memories regarding the original story. Consequently, when we decided to explain the usage of fruits more clearly and to use neutral names for Problems B and C which were run after Problem A. The names of Robinson and Friday were changed to Ahmet and Mehmet, two widely used and neutral male names in Turkish. Similar to "needs" treatment of Yaari and Bar-Hillel (1993), the utilities of agents were based on consumption of Vitamin F. In particular, the second paragraph in both problems B and C were changed as follows:

There are 12 fruit plants on each island. All fruit plants are the same and all the fruit include the same amount of vitamin F. Both persons aim to have as much vitamin F as possible and do not care about the other aspects of the fruit.

In Problem B, the source of differences in initial abilities were described by the following paragraph:

Both Ahmet and Mehmet put the same amount of effort in fruit production and the only possible way of traveling between islands is to swim.

Mehmet obtains 120 fruits per year from every plant on island A, but since he is unable to swim, he can't obtain any fruit from island B's plants. Ahmet is a perfect swimmer but due to a wound caused by the shipwreck, he can not obtain more than 20 fruits per plant on both islands.

In Problem C, this part was changed to:

Both Ahmet and Mehmet can produce fruit in both islands and both are able to travel between islands.

Mehmet obtains 120 fruits per year from every plant on island A, but he doesn't want swim to island B so he can't obtain any fruit there. Ahmet is indifferent to moving between islands, but since he doesn't spend as much effort as Mehmet in tilling the plants, he can

obtain 20 fruits per plant on both islands.

Rather than making a single choice, In Problems B and C subjects were asked to rank three possible distributions in terms of fairness.

The school where we conducted our study, Bogazici University, is a public institution and admits students on a merit-based system. In Turkey, students are ranked in a nation-wide university entrance examination that is conducted once a year and placed to different schools and departments according to their rankings in this examination and their submitted preferences. Admitted students come from all parts of Turkey and represent a variety of cultural, economic and ethnic backgrounds. Nearly 80% of the students who participated in Survey 1 and all of the students who participated in Survey 2 completed the procedures in introductory level economics courses. In Bogazici University, these courses are compulsory on the curricula of many diverse programs such as Economics, Business Administration, Engineering (Industrial, Electronics, Mechanical, Civil, Chemical), and Social Sciences (Polital Science, Philosophy, Psychology, Sociology). During the surveys, upon announcing our study, we observed that less than 0.5% of the students left the classroom and consequently we believe that those who stayed constitute a representative sample of the students in Bogazici University.

Senior subjects who are majoring in Economics have already been exposed to concepts like efficiency and equality, and the trade-off between the two. Seniors are expected to be more aware of this trade-off than the freshmen students, because they have taken a number of advanced economics courses in which they have dealt with those concepts in various contexts. Freshman economics students are not fully exposed to these concepts since they participated in the surveys in the beginning of their first semester at the university. Students at Boğaziçi University who aren't majoring in Economics are generally required to take two mandatory introductory economics courses which they usually take in their freshman year. So by the end of their first year they are also exposed to those concepts but at an introductory level and they are not expected to have a clear understanding of the trade-off between efficiency and equality. But again, the freshman non-economics majors we have surveyed do not differ from the freshman economics majors in terms of exposure to economic concepts. However, this is not true for senior students.

Results

The descriptive statistics of the subject characteristics in both surveys are presented in tables 1 and 2, respectively.

Our descriptive variables are constructed as follows: *Econ* is 1 if the subject is majoring

in economics or management and *Social* is 1 if she is majoring in a field of Social Sciences (Political Science and International Relations, Sociology, Psychology or Philosophy). *Female* is 1 for female subjects, and 0, otherwise.[4] Similarly, the variable *Siblings* takes the value of 1 if the subject has siblings and 0 otherwise.[5] *Parents' Education* measures the educational attainment of both parents and is calculated as follows: we assign the number 0 if the father/mother did not complete the elementary education, 1 if elementary education, 2 if secondary education, 3 if high-school, 4 if a vocational 2-year degree, 5 if a university degree, 6 if a graduate degree and 7 if a doctoral degree is completed.[6] However, in our regression analysis below, we only use dummy variables for different categories of fathers' and mothers' education levels to provide cardinal measures of parental education. Moreover, the value of *Ideology* is calculated as follows: subjects were asked to indicate their relative standing on a one-dimensional political spectrum by crossing one out of seven boxes with number 1 representing far left, number 7 representing far right and number 4 representing political center. We also included subjects' perceptions of income inequality in Turkish economy as an explanatory variable on a scale from 1 to 7. The variable *Perceived Inequality* takes this value. Subjects were also asked about their living arrangements. As seen from tables 1 and 2, 40%-45% of the subjects live in a dormitory and actually yet another 40% with his/her family. Therefore, we included a single dummy variable, *Dorm* so as to account for living arrangements of subjects. We also asked the subject to give an estimate of their monthly family income. Accordingly, incomes range from 0 (probably an unemployed family) to 25000 TL per month. Given the GDP per-capita of the Turkish economy in 2011 (about 1200 TL per month), an average of 3800 TL for family income indicates that our sample is representative of Turkish population, at least in terms of income.[7]

Finally, the main variables of interest are those related to religiosity. To this end, we use two variables separately in our empirical analyses. First one is *Belief in God*, which is equal to 1 if the subject indicated that she believes in God, and 0, otherwise. The second one is self-assessed *Religiosity* given by a number between 0 and 10 and representing the subjects' assessments about the degree of their own religiosity. Obviously, these two

[4]In Survey 1 we surveyed both freshman and senior students whereas in Survey two only freshman students were the subjects. Therefore, in Survey 1, *Senior* is a dummy variable which is 1 if subject is a freshman student and 0 if she is a senior. We also collected information about subjects' ages. Alternatively, when we construct another variable *Age* and use this instead of *Freshman*, the results don't change. We also include an interaction variable, *Econ-senior* indicating whether subject is a senior economics student or not.

[5]In the reported regressions of Survey 1 we use a slightly different variable using the number of siblings that the subject has instead of the dummy variable. However, in both cases, the siblings variable will not yield to a significant estimate.

[6]As our subjects are university students, we abstract from the consideration that different professions or perceptions of upward/downward mobility play a role here in determining preferences for redistribution. See Guillaud (2013) for an example where these perceptions and professions matter.

[7]As expected, parental education and family income are highly correlated with each other; this is why we will only include them in separate regressions.

variables are highly correlated with each other and therefore need to be included separately in the regressions. Moreover, we observe from tables 1 and 2 that the number of students who indicate that he/she does not have a belief in god is about 19 percent in survey 1 and 15 percent in survey two. The fact that a very large fraction of our sample has a belief in God has the potential to limit our results. However, we also notice that *Belief in God* is not the only variable measuring religiosity in our empirical analysis. The self-assessed *Religiosity* variable, which might take a value from 0 to 10, exhibits a significant variation with a mean of 4.19 in survey 1 and 4.59 in survey 2. (with standard deviations of 2.80 and 2.79, respectively.) Actually, this variation persists even if we limit ourselves to students who believe in God. For example, in survey 1 out of 413 students believing in God, the average of the self-reported religiosity variable is 5.09 with a standard deviation of 2.34. Similarly, in survey 2, out of 488 students believing in God, the mean of religiosity is 5.41 with a standard deviation of 2.29.

Religiosity is most commonly assessed using a multi-dimensional approach (Tan, 2006). A typical such measurement involves asking a set of questions related to three main dimensions: belief, ritual and experience. Belief dimension aims to capture the subject's faith and ideological standing. Ritual dimension captures the extent that the subject participates in religious activities, and Experience dimension refers to subject's emotional experiences that falls onto religious domain (as feeling close to Divine). In our study, we chose to use simpler, though arguably less fine instruments, for measuring religiosity: Self-reported religiosity and Belief in God. There are two main reasons for using these two items. First, the ritual dimension is likely to yield different results for different genders and people affiliated with different sects of Islam, mainly because mosque attendance is much higher among Sunni males in Turkey, since Friday prayers are not obligatory for women and members of the Alevi sect do not attend the mosques for prayer, instead they gather at cemevi (house of gathering) for religious ceremonies. Similarly, wearing head-scarf, a commonly observed ritual, can only be used for women when measuring religiosity. Two other simple measurement instruments which have been previously used by other studies and are similar to the ones we used in this study are church attendance and self reported rating of religions importance in ones life (Miller and Hoffmann, 1995)

Survey 1:

In Problem A, subjects were asked to choose the most fair distribution among three alternatives. An overall examination of subject choices in this problem shows that both believers and non-believers are most likely to prefer the Rawlsian distribution followed (in order) by the Egalitarian and the Utilitarian distributions. Even though the relative ranking of the three distributions are similar across two groups, a closer-examination reveals that, compared to believers, non-believers are more likely to prefer the Egalitarian distribution and less likely to prefer the Rawlsian distribution (see Table 3). Using this frequency data,

we reject the hypothesis that the choice of a particular distribution is unrelated to the belief in God ($\chi^2 = 11.3629$, p-value=0.003). When compared with the observations reported in Faravelli (2007), the choices of believers in our sample resemble to the choices of economics seniors in Faravelli's sample. The choices of non-believers on the other hand, resemble to the sociology majors in Faravelli's sample indicating an ideological similarity between two groups.

In order to better understand the impact of different subject characteristics on the likelihood of choosing a particular distribution, we use a multinomial logit model on the pooled data from all subjects. In our analysis, the dependent variable corresponds to subject's choice among alternative resource distributions, $j \in \{1, 2, 3\}$ where $j = 1$ corresponds to the Egalitarian distribution, $j = 2$ to the Rawlsian distribution and $j = 3$ to the Utilitarian distribution. Then, the probability that individual i chooses allocation j is given by:

$$p_{ij} = P(x_i, \beta, \epsilon_i)$$

where $j = 1, 2, 3$.

In the equation specified above, x_i corresponds to the individual characteristics we use as independent variables, β is the vector of coefficients to be estimated, ϵ_i is vector of error terms and $P(.)$ is the multivariate normal distribution function. The main independent variable of interest is *Religiosity* which is given by a number between 0 and 10 and representing the subjects' self assessments about the degree of their own religiosity. The details about construction of other independent variables used in the regressions throughout this paper and descriptive statistics are given in Appendix.

In Table 4, we report marginal effects of our explanatory variables on choosing different allocations. We observed that more religious subjects have a higher probability of choosing the Rawlsian distribution and a lower probability of choosing the Egalitarian one. However, we cannot establish a firm conclusion between being religious and choosing the Utilitarian distribution. As we observe from Table 5, the results do not change if we use the dummy variable *Belief in God* instead of *Religiosity*. Interestingly, *Ideology* has no significant effect on the choice of a particular distribution. [8] The results also show that females are in general

[8]One might tend to think that the religiosity (or belief in God) is endogenous with respect to ideology. Actually, the correlation between religiosity (belief in God) and ideology is simply 0.31 and 0.22 in both surveys, respectively, which are not extremely high. To further address this issue, we have made several further checks, including systems estimations, calculating the variance inflation factors and running additional regressions with and without ideology, religiosity and belief in god variables to detect the sensitivity of magnitude and significance of the all the estimated coefficients to the inclusion and exclusion of these variables. Our results are qualitatively robust to these different checks and these unreported results are available upon request from the corresponding author. Moreover, even in the subsample of believers in God, more religious students tended to be less egalitarian and more Rawlsian in survey 1 and for the problem 1 of survey 2.

more egalitarian and senior economics students are less egalitarian compared to students from other years and majors.

Survey 2:

In Survey 2, subjects were asked to rank three distributions from the most fair to the least fair one for both problems B and C. Here, we start with a rank-ordered logistic regression to see the effects of different variables on the likelihood of ranking the Utilitarian and Rawlsian distributions above the Egalitarian distributions. Due to the nature of the rank-ordered model, we need to include the subject characteristics as interaction terms constructed by multiplying the dummy variable specifying a particular distribution and the variable denoting the particular subject characteristic. The results of these regressions are summarized in Table 6.[9] For problem B, where the differences in initial abilities are due to external factors, higher religiosity implies a significantly higher likelihood of ranking Utilitarian and Rawlsian distributions above the Egalitarian distribution. Moreover, based on the estimated coefficients in Table 6 for problem 1, we can interpret the estimates in terms of exponentiated coefficients, which provide us an odds ratio interpretation. For example, a standard deviation increase in self-assessed religiosity increases the odds of ranking the Utilitarian distribution ahead of the Egalitarian distribution by 12.6 % and ranking the Rawlsian distribution ahead of the Egalitarian one about 6 %. Similarly, females rank both the Utilitarian and Rawlsian distribution below the Egalitarian one by about 49.5%.[10]

However, there's no significant difference between religious and non-religious people for problem C in terms of the relative ranking of Utilitarian and Rawlsian distributions versus the Egalitarian distribution. Remember that the differences in initial abilities are due to voluntary choices of agents in problem 2.

A closer look at the highest ranked distribution by believers and non-believers shows that the relative ranking of three distributions are very similar across two groups both in Problem B and Problem C (see Table 7). In particular, when the differences in initial abilities are due to external factors (Problem B), the likelihood of a distribution being ranked as highest resembles to the choice pattern observed in the minimal information case (Problem A). However, believers are more likely than non-believers in ranking Utilitarian distribution as the most fair alternative in problem B which is consonant with the results of the regression presented above. On the other hand when the differences are due to voluntary choices of agents (Problem C), the alternative that is most often ranked on top is the Utilitarian distribution, and this is followed by the Rawlsian and the Egalitarian distributions.

Besides the distribution problems, survey 2 also consisted of 7 different policy related

[9]Due to space constraints, Table 6 does not report estimated coefficients of all the variables reported in Table 2 as not all the variables provide significant estimates.

[10]Results are similar when we use belief in God dummy instead of the religiosity variable.

statements and subjects were asked to state how much they disagreed with each particular statement. In particular, we used a 5-point scale with 1 representing *totally correct* to 5 representing *totally wrong*. Below we give a list of these statements:

1- Through taxes and similar instruments, Government should spend effort to achieve income equality.
2- People should bear the economic consequences of choices they make in life.
3- The way that total output is divided is more important than the amount of total output produced.
4- It is more meaningful to improve the conditions of the least well-off person in the society than to make everyone equal.
5- If everyone works toward achieving personal benefit, the society, as a whole, will be better-off.
6- Government has to solve people's economic difficulties that arise due to bad luck.
7- Working towards achieving income equality will cause a decline in economic productivity.

For each of these statements a higher score indicates a higher degree of disagreement, and the strength of disagreement among believers and non-believers as well as the results of t-tests for differences between these two groups are provided in Table 8. We observe that significant differences between believers and non-believers emerge for statements 2, 3 and 4. In particular believers are more likely to think people should bear the consequences of their choices (statement 2), less likely to think that division of total output is more important than the total amount produced (statement 3) and more likely to think that making poor members of the society better off is more meaningful than making everyone equal (statement 4).

Discussion and Concluding Remarks

Previous studies documented that the moral judgements of religious and non-religious people might be different for issues like stem cell research, abortion, capital punishment etc. (Nisbet (2005), Wilcox (1992), Young(1992)). Using data from two surveys conducted among university students in Turkey, we found that these differences extend to the domain of preferences over resource distributions.

In our surveys, we used several hypothetical distribution problems where agents differed in their abilities to convert resources into final goods. When minimal information was provided about the source of differences in abilities, we see that both believers and non-believers have similar rankings over distributions with the Rawlsian distribution being the most preferred

alternative. However, we also observe that increased religiosity implies a lower likelihood of preferring the Egalitarian distribution and a higher likelihood of preferring the Rawlsian distribution (which stands as a compromise between the Egalitarian and the Utilitarian distributions). When the ability differences are explained to be due to external factors, we observe that relative ranking of the distributions across believers and non-believers are still similar to each other and to the pattern observed in the case of minimal information. Yet, significant differences in the choices of these groups emerge in this problem as well. In particular, more religious people are more likely to rank the Utilitarian distribution and the Rawlsian distribution above the Egalitarian one in terms of fairness. Contrary to this, when the ability differences are explained to be due to voluntary choices, the differences between religious and non-religious subjects completely disappears. In all of these cases, results are mostly similar when we use "Belief in God" instead of self assessed religiosity.

These findings indicate that rather than permanently affecting the innate preferences of individuals, religion provides a reference point of fairness and puts an emphasis on the role of external factors (i.e. fate) in explaining the observed income differences. These effects are likely to be more salient when there is insufficient information about the environment. Consequently we observe differences between religious and non-religious people in terms of the preferences for redistribution in minimal information environments. However, these differences are mitigated when contextual cues are provided and sources of inequalities are presented in greater detail, and impartial spectators are better informed about the role of skill vs. luck in determining these inequalities.In an influential study, Cusack et al. (2006) use a dataset that combines micro-level data (on preferences and income risks) and macro-level data and they show that preferences for redistribution are closely related to people's economic conditions. They claim that these findings challenge the common argument about these preferences being shaped by factors such as race and religion. Similarly, Rehm (2009) show that risks that individuals are exposed to in the labor market are influential in shaping their preferences for redistribution. Stark (1996) offers a related finding and argues that, contrary to the expectations, the negative correlation between religiosity and delinquent behavior is valid only in contexts where extent of religiosity is high among the members of the community.

We believe several factors might be important in determining the fairness preferences of religious people. First, religious people are not necessarily opposed to improving the living standards of less well-off members of the society, as evidenced by the abundance of charitable organizations whose major supporters are religious people. But the tendency to believe in a just world might be higher among religious people as several previous studies point out (see Furnham (2003) for a survey and Rubin and Peplau (1973) for a relatively early example). In addition, religious people are more likely to be concerned with afterlife investments (Azzi and Ehrenberg (1975) and therefore attach a higher value to making voluntary donations. As

a result, religious people might prefer making voluntary donations to the poor rather than governmental attempts and macro interventions (through taxes and transfers) to eradicate income inequalities. On the other hand, non-religious people are more sensitive to external factors that are sources of initial differences and appear to be more willing to eradicate these differences by imposing an Egalitarian outcome. Unlike religious people, they are more likely to agree with working towards making everyone equal, and are less concerned with efficiency. However, when initial differences are deliberately created by agents themselves, the extent that religious and non-religious people tolerate inequalities are very similar and Egalitarian options become no longer popular.

It should be noted that non-believers constitute a minority among Turkish society and their ideological stand differs significantly from the rest of the population. This group has a more favorable view of traditional egalitarianism and is more supportive of redistributive policies. The similarity between their choices and the choices of sociology undergraduates reported in Fravelli (2007) seems to support this claim. Another similarity between our results and the results of Faravelli (2007) is that any residual difference between religious and non-religious people disappears completely when the differences between agents are explained to be due to their (voluntary) effort choices. In the case of Faravelli (2007), Sociology and Economics majors, who otherwise have divergent fairness perceptions, make almost identical choices when agents differ in the effort they put in the production. Finally, the differences in fairness preferences across three problems are relatively more pronounced for non-believers in our case, showing that this group has a greater sensitivity to the context.[11]

In addition to religiosity, we also find that gender and education have an impact on preferences over distributions. Previous studies find that men favor efficiency more often than women who appear to be more inequality averse (see Croson and Gneezy (2009)). Consistent with these, female subjects in general find Egalitarian distribution more fair than a Utilitarian distribution. Finally, another variable which matters for distributional choice is *Econ-senior*. We find that economic seniors have a lower likelihood of choosing the Egalitarian distribution, suggesting that economics education makes subjects more responsive to efficiency losses. Moreover, choice of the Utilitarian distribution is less likely for the subjects studying social sciences suggesting the existence of a selection effect, which is reminiscent of the behavior observed among Italian undergraduate students by Faravelli (2007).

In his seminal work, "The Protestant Ethic and the Spirit of Capitalism", Weber argues that religious orientation may change peoples' attitudes towards worldly rewards in a positive way and lead them to provide more effort in work and business life. As a result, wealth

[11] One explanation for this might be that the believers, independent of the context of the problem, have a higher tendency to believe in predestination, to attribute economic outcomes (in this case inequality) to factors outside one's control and therefore are more likely to believe in afterlife (Elgin et al. 2013) and predestination (Singer, 2010).

accumulation and investment are greater for certain societies, and this paves the way for the development of capitalism. Recent empirical studies (Gill and Lundsgaarde (2004), Scheve and Stasavage (2006)) that show religiosity is negatively correlated to the level of redistribution in a country point to another potential channel through which religion impacts the economic life. Therefore, it becomes important to understand whether this negative correlation is due to the differences in normative concerns among religious and non-religious people. Our results reveal an important potential difference in these concerns by showing a strong correlation between fairness perceptions of individuals and their religious beliefs. On the other hand these results also support previous findings about the effect of gender and education on the choices involving an equality-efficiency trade-off.

Glaeser and Ward (2005) argue that religious groups provide institutions that can be sent targeted messages and thus have an importance in shaping the political sphere. If groups that differ in their religious beliefs are likely to have opposing views on the issues of redistribution and taxation, then we can expect political parties to consider this when choosing their standing on these issues. Therefore, the prevalence of particular religious beliefs in a society is likely to be an important determinant of policies on income taxation and welfare spending, consequently shaping the path that the overall economic activity will evolve through.

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Appendix: Tables

Table 1. Descriptive Statistics of Survey 1

	Observations	Mean	St. Dev.	Minimum	Maximum
Seniority	554	0.21	0.41	0	1
Econ	553	0.30	0.46	0	1
Social	553	0.19	0.40	0	1
Female	553	0.43	0.50	0	1
Siblings	554	0.86	0.35	0	1
Mother Education	549	3.68	1.60	0	7
Father Education	545	4.30	1.52	1	7
Ideology	485	3.16	1.52	1	7
Belief in God	539	0.81	0.39	0	1
Religiosity	520	4.19	2.80	0	10
Perceived Inequality	554	5.24	1.77	1	7
Living in the Dorm	551	0.40	0.49	0	1
Monthly Family Income (TL)	417	3811.08	3483.19	0	25000

Table 2. Descriptive Statistics of Survey 2

	Observations	Mean	St. Dev.	Minimum	Maximum
Econ	643	0.21	0.40	0	1
Social	643	0.17	0.38	0	1
Female	642	0.43	0.50	0	1
Siblings	644	0.84	0.37	0	1
Mother's Education	638	3.58	1.67	0	7
Father's Education	632	4.20	1.50	1	7
Ideology	575	3.28	1.50	1	7
Belief in God	611	0.85	0.38	0	1
Religiosity	593	4.59	2.79	0	10
Perceived Inequality	629	5.54	1.14	2	7
Living in the Dorm	644	0.46	0.42	0	1

Table 3. Frequency of Overall Choices In Survey 1

	Egalitarian	Rawlsian	Utilitarian
Overall[a]	134	293	109
	25 %	54.7%	20.3%
Believers	94	242	88
	22.2 %	57.1%	20.7%
Non-Believers	38	43	18
	38.4%	43.4%	18.2%

[a]Due to the subjects who didn't specify whether they believe in God or not, Overall is greater than the sum of Believers and Non-believers.

Table 4: Subject Characteristics & Choices in Survey 1

	Eg.			Rawls.			Util.		
Religiosity	-0.02**	-0.02**	-0.02**	0.02**	0.02**	0.01**	-0.001	0.001	0.01
	(0.007)	(0.007)	(0.01)	(0.008)	(0.01)	(0.005)	(0.006)	(0.007)	(0.009)
Female	0.20***	0.17***	0.17***	-0.10**	-0.06	-0.08**	-0.10***	-0.11**	-0.10**
	(0.04)	(0.04)	(0.06)	(0.05)	(0.05)	(0.04)	(0.04)	(0.05)	(0.05)
Senior	0.17**	0.14**	0.12	-0.13*	-0.10	-0.08	-0.04	-0.04	-0.02
	(0.07)	(0.05)	(0.07)	(0.07)	(0.07)	(0.08)	(0.05)	(0.06)	(0.06)
Econ	0.05	0.02	0.01	-0.05	-0.05	-0.04	-0.006	0.04	0.05
	(0.06)	(0.05)	(0.06)	(0.06)	(0.06)	(0.07)	(0.04)	(0.05)	(0.06)
Econ-Sen.	-0.19***	-0.25**	-0.15*	0.19*	0.25**	0.15*	0.003	0.003	-0.03
	(0.04)	(0.10)	(0.05)	(0.10)	(0.12)	(0.10)	(0.09)	(0.10)	(0.09)
Soc. Sci.	0.09	0.06	0.04	0.03	0.11	0.09	-0.12***	-0.16**	-0.11**
	(0.06)	(0.06)	(0.07)	(0.07)	(0.08)	(0.08)	(0.04)	(0.08)	(0.05)
Siblings	-0.01	-0.03	-0.02	0.01	0.03	0.04	0.003	-0.002	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.01)	(0.02)	(0.02)
Ideology			-0.02			0.03			-0.007
			(0.02			(0.02)			(0.02)
Ineq.		0.0006	0.0006		-0.001	-0.001		0.0006	0.0008
		(0.0008)	(0.0009)		(0.001)	(0.001)		(0.0008)	(0.0008
Dorm		-0.02	0.02		-0.03	-0.04		0.06	0.03
		(0.04)	(0.05)		(0.05)	(0.05)		(0.04)	(0.05
Income			-0.001			-0.003			0.004
			(0.01)			(0.01)			(0.01)
Obs.	503	399	306	503	399	306	503	399	306
Pseudo R^2	0.06	0.09	0.08	0.06	0.09	0.08	0.06	0.09	0.08
Wald χ^2	54.68	73.49	38.45	54.68	73.49	38.45	54.68	73.49	38.45
Log pseud.	-468.90	-351.26	-270.97	-468.90	-351.26	-270.97	-468.90	-351.26	-270.97

Marginal effects (computed at sample averages for continuous variables, at 0 for dummy variables). In the second column for each outcome variable, dummies for different levels of mother's and father's education are included among independent variables; however none of these variables have significant coefficients. Robust standard errors are reported in parentheses. *,**, and *** denote significance at 10%, 5%, and 1%, respectively.

Table 5: Regressions with Belief in God

	Eg.			Rawls.			Util.		
Belief	-0.20***	-0.13**	-0.14**	0.16***	0.12**	0.11*	0.04	0.02	0.05
	(0.06)	(0.05)	(0.07)	(0.06)	(0.07)	(0.06)	(0.04)	(0.06)	(0.06)
Female	0.22***	0.16***	0.18***	-0.13***	-0.06	-0.07	-0.10***	-0.10*	-0.11**
	(0.04)	(0.04)	(0.06)	(0.05)	(0.06)	(0.07)	(0.04)	(0.05)	(0.05)
Senior	0.15**	0.13**	0.11	-0.10	-0.07	-0.10	-0.05	-0.06	-0.02
	(0.07)	(0.06)	(0.08)	(0.07)	(0.07)	(0.08)	(0.05)	(0.06)	(0.06)
Econ	0.07	0.02	0.01	-0.05	-0.04	-0.06	-0.02	0.02	0.05
	(0.05)	(0.06)	(0.06)	(0.06)	(0.07)	(0.08)	(0.04)	(0.05)	(0.06)
Econ-Sen.	-0.19***	-0.26**	-0.15***	0.18*	0.23*	0.17*	0.02	0.03	-0.02
	(0.04)	(0.11)	(0.05)	(0.11)	(0.12)	(0.11)	(0.10)	(0.10)	(0.10)
Soc. Sci.	0.06	0.04	0.04	0.06	0.13	0.08	-0.12***	-0.16**	-0.11*
	(0.06)	(0.06)	(0.07)	(0.06)	(0.08)	(0.09)	(0.04)	(0.08)	(0.06)
Siblings	-0.02	-0.03	-0.02	0.02	0.03	0.04	-0.001	-0.0001	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.01)	(0.02)	(0.02)
Ideology		-0.02	-0.02		0.03	0.02		-0.004	0.003
		(0.02)	(0.02)		(0.02)	(0.02)		(0.02)	(0.02)
Ineq.		0.0001	0.0008		-0.001	-0.001		0.0008	0.0009
		(0.0008)	(0.008)		(0.001)	(0.001)		(0.008)	(0.0008)
Dorm		0.05	0.02		-0.05	-0.06		0.05	0.04
		(0.04)	(0.04)		(0.05)	(0.06)		(0.04)	(0.05)
Income			-0.002			-0.002			0.004
			(0.01)			(0.01)			(0.01)
Obs.	518	369	305	518	369	305	518	369	305
Pseudo R^2	0.06	0.10	0.08	0.06	0.10	0.08	0.06	0.10	0.08
Wald χ^2	56.39	70.27	39.38	56.39	70.27	39.38	56.39	70.27	39.38
Log pseud.	-485.86	–323.31	-269.35	-485.86	-323.31	-269.35	-485.86	-323.31	-269.35

Marginal effects (computed at sample averages for continuous variables, at 0 for dummy variables). Robust standard errors in parentheses. *,**, and *** denote significance at 10%, 5%, and 1%, respectively.

Table 6. Subject Characteristics and Ranking of Distributions in Survey 2

	Problem B	Problem C
Religiosity × Utilitarian	.118***	.025
	(.032)	(.033)
Religiosity × Rawlsian	.057**	-.009
	(.029)	(.031)
Female × Utilitarian	-.680***	-.449**
	(.181)	(.195)
Female × Rawlsian	-.683***	-.309*
	(.167)	(.219)
Econ × Utilitarian	.439**	.457*
	(.213)	(.237)
Econ × Rawlsian	-.267	.267
	(.200)	(.219)
Utilitarian	-.916***	.529**
	(.200)	(.212)
Rawlsian	.737***	.680***
	(.183)	(.198)
Observations	1653 (3*551 subjects)	1334 (3*445 subjects)
LR χ^2	253.13	69.65
Prob > χ^2	0.000	0.000
Log likelihood	-860.002	-760.713

Standard errors in parentheses. *,**, and *** denote significance at 10%, 5%, and 1%, respectively.

Table 7. Highest Ranked Distribution in Survey 2

	Problem B			Problem C		
	Egalitarian	Rawlsian	Utilitarian	Egalitarian	Rawlsian	Utilitarian
Overall[a]	181	320	120	99	146	242
	30.1%	50%	19.9%	20.3 %	30%	49.7%
Believers	142	234	105	79	116	190
	29.5 %	48.7%	21.8%	20.5 %	30.1%	49.4%
Non-Believers	29	48	10	15	22	34
	33.3 %	55.2%	11.5%	21.1 %	31%	47.9%

[a]Due to the subjects who didn't specify whether they believe in God or not, Overall is greater than the sum of Believers and Non-believers.

Table 8. Strength of Disagreement in Policy-Related Statements from Survey 2

Statement	Believers	Non-believers	p-value
1	2.23	2.36	0.30
2	1.99	2.59	<0.01
3	2.46	2.20	0.07
4	2.41	2.77	0.02
5	3.43	3.47	0.77
6	2.29	2.25	0.74
7	2.80	2.95	0.29

Appendix: Instructions

Problem A:

After a shipwreck Robinson and Friday have landed on two different islands. These islands are separated with a short swimming distance.

There are 12 fruit plants on each island. All fruit plants are the same. Fruit is the main food for both agents. Because of this, the higher amount of fruit they obtain, the more their welfare would be.

Friday obtains 120 fruits per year from every plant on island A, but he cannot obtain any fruit from island B's plants. On both islands Robinson obtains 20 fruits per plant. Both can only eat the fruits they themselves produce. It is not possible to share the fruits after production.

Below are given 3 different situations that show how 12 plants in island A and 12 plants in island B are divided. From your point of view, which one of the distributions would be just?

	Trees on Island A	Trees on Island B	Fruits
Robinson	0	12	240
Friday	12	0	1440
Total Production			1680

(4)

	Trees on Island A	Trees on Island B	Fruits
Robinson	8	12	400
Friday	4	0	480
Total Production			880

(5)

	Trees on Island A	Trees on Island B	Fruits
Robinson	9	9	360
Friday	3	3	360
Total Production			720

(6)

Problem B:

After a shipwreck Ahmet and Mehmet have landed on two different islands. Mehmet lives on island A and Ahmet lives on island B. These islands are separated with a short swimming distance.

There are 12 fruit plants on each island. All fruit plants are the same and all the fruit include the same amount of vitamin F. Both persons aim to have as much vitamin F as possible and do not care about the other aspects of the fruit.

Both Ahmet and Mehmet put the same amount of effort in fruit production and the only possible way of traveling between islands is to swim.

Mehmet obtains 120 fruits per year from every plant on island A, but since he is unable to swim, he cant obtain any fruit from island Bs plants. Ahmet is a perfect swimmer but due to a wound caused by the shipwreck, he can not obtain more than 20 fruits per plant on both islands.

Both can only eat the fruits they themselves produce. It is not possible to share the fruits after production.

Below are given 3 different situations that show how 12 plants in island A and 12 plants in island B are divided.

	Trees on Island A	Trees on Island B	Fruits
Ahmet	0	12	240
Mehmet	12	0	1440
Total Production			1680

(7)

	Trees on Island A	Trees on Island B	Fruits
Ahmet	8	12	400
Mehmet	4	0	480
Total Production			880

(8)

	Trees on Island A	Trees on Island B	Fruits
Robinson	9	9	360
Friday	3	3	360
Total Production			720

(9)

According to the information above, please rank these divisions from the most just to the least just. (e.g. 1-2-3)

Your ranking:

Problem C:

After a shipwreck Ahmet and Mehmet have landed on two different islands. Mehmet lives on island A and Ahmet lives on island B. These islands are separated with a short swimming distance.

There are 12 fruit plants on each island. All fruit plants are the same and all the fruit include the same amount of vitamin F. Both persons aim to have as much vitamin F as possible and do not care about the other aspects of the fruit.

Both Ahmet and Mehmet can produce fruit in both islands and both are able to travel between islands. However, the amounts of effort each one puts in fruit production are not the same.

Mehmet obtains 120 fruits per year from every plant on island A, but he doesnt want swim to island B so he cant obtain any fruit there. Ahmet is indifferent to moving between islands, but since he doesnt spend as much effort as Mehmet in tilling the plants, he can obtain 20 fruits per plant on both islands.

Both Ahmet and Mehmet can only eat the fruits they themselves produce. It is not possible to share the fruits after production.

Below are given 3 different situations that show how 12 plants in island A and 12 plants in island B are divided.

	Trees on Island A	Trees on Island B	Fruits
Ahmet	0	12	240
Mehmet	12	0	1440
Total Production			1680

(10)

	Trees on Island A	Trees on Island B	Fruits
Ahmet	8	12	400
Mehmet	4	0	480
Total Production			880

(11)

	Trees on Island A	Trees on Island B	Fruits
Robinson	9	9	360
Friday	3	3	360
Total Production			720

(12)

According to the information above, please rank these divisions from the most just to the least just. (e.g. 1-2-3)

Your ranking:

For each statement below, please indicate the degree you agree/disagree with them.
SA: Strongly agree
A: Agree
N: Neither agree nor disagree
D: Disagree
SD: Strongly disagree

1. The government should exert effort to increase income equality by collecting taxes and using similar methods.

   SA A N D SD

2. People should bear the economic consequences of their choices they make in their lives.

   SA A N D SD

3. How a society distributes its production is more important than the level of total production itself.

   SA A N D SD

4. In a society, it is more important to make the worse off person better off than to make everyone equal, in terms of economic conditions.

   SA A N D SD

5. A society is better off when everyone works in order to maximize own utility.

   SA A N D SD

6. Government should help those individuals, who have economic distress resulting from bad luck, to overcome their economic problems.

   SA A N D SD

1. Your department: .....

2. Your age: .....

3. Man ☐ Woman ☐

4. How many siblings do you have? .....

5. (a) Your mother's education level:
   ☐ Primary school
   ☐ Middle school
   ☐ High school
   ☐ Higher education
   ☐ University
   ☐ Master Degree
   ☐ PhD

   (b) Your father's education level:
   ☐ Primary school
   ☐ Middle school
   ☐ High school
   ☐ Higher education
   ☐ University
   ☐ Master Degree
   ☐ PhD

6. What is your family's monthly income in TL, approximately? .....

7. Where would you place yourself in the political spectrum? Please mark one of the boxes below.

   LEFT CENTER RIGHT

   ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

8. Regarding the income distribution statistics in Turkey, what percentage do you think do the richest %20 and the poorest %20 get from the national income, respectively?
   The richest %20: ..... The poorest %20.....

9. Do you believe in the existence of a God? YES ☐ NO ☐

10. If you see yourself attached to a religion, please indicate which one: .....

11. How religious do you think you are? Please indicate with a number between 0 and 10, where a larger number indicates higher religiosity. .....

12. Please mark the one that suits you best.
    - ☐ I live together with my parents.
    - ☐ I live with my firend(s) in a different house than my parents.
    - ☐ I live on my own in a different house than my parents.
    - ☐ I live in a dormitory.