

Can Religious Institutions Promote Sustainable Behavior?

Field Experimental Evidence on Donations towards a Carbon-Offsetting Fund

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Abstract

We conduct a field experiment with the visitors of the German Catholic Convention in Münster, Germany. We aim at investigating the effect of the announced attitude of a Catholic institution concerning climate protection efforts, of people's experimentally induced religiosity (using a priming intervention) and of the corresponding interaction on people's willingness to donate to a carbon-offsetting fund. Our results suggest that the supporting signal by the Catholic institution substantially increases donations by about 56 %. We observe neither a direct effect of the induced religiosity nor an interaction with the institution's signal. Our results thus indicate that religious authorities can promote sustainable behavior. As we observe no evidence that the signal mainly influences particularly religious people, we further conclude that religious institutions may serve as more general authorities when it comes to sustainable behavior rather than solely as leaders of those aiming to follow religious prescripts.

Keywords: Sustainable behavior, Field experiment, Religiosity, Priming, Carbon offsets

JEL codes: C93, D64, D91, Q56, Z12

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1. Introduction

Climate change is a major threat to humankind. One route to mitigate this threat is to reduce the amount of CO₂ emitted to the atmosphere. There are many ways to contribute to this target, one is to foster people's motivation to change their ways towards more sustainable behavior. In the present paper, we aim at studying the effect of the support of a religious institution regarding climate protection efforts on people's willingness to behave sustainably.

Religious institutions are important societal actors in shaping and maintaining social and moral values (see for example Weber 1930, Benjamin et al. 2016) and their representatives often comment on current issues (see for example Pope Francis 2015, Zeit 2018). If people in general and believing members in particular used such comments as reference for their own behavior, religious institutions may be able to strongly shape behavior in a society.

We set up an experimental study framed as a survey conducted with the visitors of a Catholic convention and provide interviewees with an opportunity to donate to a carbon-offsetting fund. We study whether a supporting signal by a Catholic institution affects people's sustainable behavior (their willingness to donate) and whether it particularly convinces religious people to do so. While we actually observe a strong effect of the institution's supporting signal on the donations towards the fund, this is not related to the interviewee's induced religiosity. We interpret our findings as evidence that religious institutions serve as general leaders rather than institutions clarifying the religious prescript when it comes to sustainable behavior.

Prior social psychological literature regarding the role of religious norms suggests that individuals often react to religious prescripts, e.g. in lying less when being reminded of the Ten Commandments (Mazar et al. 2008).¹ In addition, field experimental literature in economics suggests that role models can shape others' behavior. For example, Jack and Recalde (2015) show that a local authority as an initial decision maker can increase others' public good contributions. Similarly, Ebeling et al. (2017) show that a lead-donor with high social status induces more subsequent donations towards a panhandler than a low-status lead-donor. Karlan and List (2018) find higher donations to a charity when the donation is matched by an expert regarding charitable giving.² These findings indicate that both religious prescripts as well as the opinions of experts can shape people's behavior. We expect that also the supporting signal of a religious institution influences others' sustainable behavior, either in clarifying the

¹ For an extensive literature review of the effects of religious priming on pro-social behavior see Shariff et al. (2016).

² Price rebates and matching grants to enhance the provision of public goods are also analyzed, e.g., in Eckel and Grossman (2008) and Kesternich et al. (2016).

religious prescript or in serving as a general moral expert when it comes to sustainable behavior.

To clarify this, we vary the salience of people's religious identity by making use of an explicit priming intervention.³ Prior literature on the relation of religiosity and sustainable behavior in economics is rather scarce, mostly correlational in nature and the results are ambiguous. Owen and Videras (2007) observe a positive correlation whereas Martin and Bateman (2014) observe no such relation. Cui et al. (2015) even find a negative correlation between environmental practices and regional religiosity.⁴ Given these ambiguous prior results, we have no hypothesis regarding the direct effect of religiosity on sustainable behavior. Instead, we argue that the supporting signal of the religious authority may shape the behavior of more versus less religious people differently. Specifically, if the religious authority clarifies the *religious prescript* regarding sustainable behavior, then in particular religious individuals should be affected by the signal; if, on the other hand, the religious authority serves as a *general moral expert* regarding sustainable behavior, no such interaction would be expected.

The contribution of the present paper is twofold. First, we provide clean field evidence on how people can be motivated to contribute to climate protection by providing a moral leader as role model (in this case a Catholic authority). Second, we find evidence that this effect is not related to subjects' (induced) religiosity which suggests that religious institutions may influence people's sustainable behavior irrespective of their religiosity.

2. Experiment

Setting. We implemented our field experiment during the 101st German Catholic Convention in Münster, Germany. This convention is a biennial festival that lasts five days. It is organized by the Central Committee of the German Catholics and takes place in changing cities. In Münster, more than 80,000 visitors came together to celebrate, inform themselves about and discuss current religious, socio-political, cultural and scientific issues.⁵

We chose this convention for our experiment in order to make sure that many of the interviewees would actually have a religious identity that could be rendered salient to study a

³ Priming techniques got more common in economics recently. For example, Cohn et al. (2014) show that priming bankers with their professional identity induces more lying while Cohn et al. (2015) show that prison inmates are less cooperative when they are reminded of their misdeeds. Cohn and Maréchal (2016) summarize the literature on priming studies in economics.

⁴ Also, the more general experimental literature on the effects of self-stated religiosity suggests quite ambiguous effects of religiosity (see Hoffmann 2013 for a survey, and for example Eckel and Grossman 2004, Tan 2006, Grossman and Parrett 2011, and Anderson and Mellor 2009).

⁵ For details on the convention, see <https://www.katholikentag.de/>.

potential interaction of the religious signal and the (current) degree of religiosity. In order to conduct our study, we set up a stand on one of the main venues of the convention called “Kirchenmeile” (church mile), right on Münster’s palace square. On the “Kirchenmeile” about 350 different stands presented (religious) institutions, sold food or served as social meeting points.

Experimental Design. Our experiment was framed as a survey conducted with the visitors of the convention. The stand consisted of several bar tables, chairs, sunshades and a counter. The counter was placed somewhat apart from the rest of the stand. Participants were asked to hand in their questionnaire at this counter after filling it out and to also pay their donation there (see details below). All donations were paid from subjects’ personal budget.

The survey was announced to be a joint study of the organizers of the German Catholic Convention and the University of Münster investigating “the personalities and habits of the visitors of the German Catholic Convention”.⁶ Besides answering some personal questions in the survey (e.g. about demographics, nutrition habits, happiness etc.), subjects were also briefly informed about the negative effects that CO₂-emissions have on human and natural systems and about the opportunity to donate to a carbon-offsetting fund directly on the site.⁷ Importantly, they also learned that all donations would be matched 1:1 by a third party, so that giving at our stand was very effective.

We experimentally varied two dimensions in the questionnaire: first, we either provided a clear signal that a Catholic institution supports sustainable efforts or not and second, we varied the salience of participants’ religious identities using a priming method adapted from social psychology (however, see the literature review and footnote 2 for successful implementations of priming methods also in experimental economics studies).

The former dimension was varied using two measures. First, we implemented a costly signal by a Catholic institution to make clear that it supports sustainable behavior, i.e. interviewees learned that their donation would be matched by the *Environmental Advisory Board of the Catholics Day*. In the alternative treatment the matching institution was not further specified but it was clear that donations would be matched (given the context interviewees likely thought that this would be paid from our research budget). In addition, interviewees in the former treatment were reminded of the encyclical “*Laudato Si*” of Pope Francis which discusses

⁶ The original German questionnaire and an English translation can be found in Appendix III.

⁷ A carbon-offsetting fund offers the opportunity to compensate one’s CO₂-emissions and directs the payments towards climate protection projects that result in lower CO₂ emissions. We decided to donate to the clerical fund “Klima-Kollekte”. For further information see www.klima-kollekte.de.

issues “on care for our common home” and strongly supports climate protection efforts (Pope Francis 2015). In the alternative treatment, participants were not reminded of the encyclical. Using these two measures, we expect to influence participants’ beliefs regarding the attitudes of Catholic institutions concerning the importance of sustainable behavior.⁸ In the following, we call these two treatment conditions **Religious signal (RS)** and **No religious signal (NRS)**. We further aimed at varying the salience of interviewees’ religious identities. In order to make their religious identity more or less salient, prior to the donation-decision, the questionnaire either included several questions about interviewees’ religious habits and beliefs or instead several questions regarding their professional and private life.⁹ The religious identity treatment included questions such as “How often do you practice religious habits?” or “Please describe briefly what constitutes a religious community for you.”, whereas subjects in the alternative treatment had to answer questions that were not related to religion such as “How much time do you spend on social media per day?” or “What is your favorite leisure activity and what do you like most about it?”. In total, this part consisted of six questions that were either all religious in nature or all not. Making subjects in the priming condition think about religious concepts should render their religious identity more salient and thus make religious notions in the current moment more relevant (see for example Benjamin et al. 2016 for similar reasoning). In order to test whether we were actually able to induce people’s religious identity, we made use of a word stem completion task right after the donation decision. The results of this manipulation check strongly indicate that we were indeed able to increase the salience of religious concepts in our priming group.¹⁰ We call these two treatment conditions **Religious priming (RP)** and **No religious priming (NRP)**.

Our design constitutes a fully crossed 2x2-design varying the presence of the signal regarding the religion’s support of climate-protection efforts and the salience of interviewees’ religious identity. Table 1 provides an overview of the design.

Table 1. Treatment summary.

	Religious priming	No religious priming
Religious signal	RS/RP	RS/NRP
No religious signal	NRS/RP	NRS/NRP

⁸ The presence/absence of the text in bold font in the questionnaire in Appendix III shows the exact differences between the two conditions.

⁹ Cohn et al. 2014 and Cohn et al. 2015 make use of similar priming interventions.

¹⁰ See also Cohn et al. 2014 who use a word completion task to test whether their professional identity priming turns out successful and Appendix I for a description of our word stem completion task and the corresponding results.

Procedure. With the assistance of 4–5 student workers, we asked passing visitors on 3 of the 4 convention days whether they would like to take part in a survey. The student workers, who were neither informed about the details of our treatment variations nor of the corresponding hypotheses, handed out the questionnaires randomly. Visitors who agreed to take part filled out the questionnaire alone, mostly at our standing tables, and received a small thank-you gift after completion. After filling it out, they handed in the questionnaire and paid their donation at the nearby counter. The donation had to be noted in the questionnaire while filling it out so that people would only pay the donation decided upon beforehand. In turn, they received their thank-you gift (e.g., a small chocolate bar).

Hypotheses. We aim at testing two hypotheses. First, we expect that the signal of the Catholic institution induces more donations towards the fund (*Hypothesis 1*). Second, we expect that in particular subjects in the priming condition react to the signal (*Hypothesis 2*).

3. Results

Data set. In total, we collected 845 questionnaires, seven of which were aborted right at the beginning, which leaves us with 838 observations. Our experimental subjects were mid-aged (47 years), 58 % were female and, not surprisingly, visitors of the convention were mostly Catholic (85 %). Across all observations, a share of about 21 % donated to the carbon-offsetting fund. The average donation was 1.22 € per subject and the average positive donation was about 5.87 €¹¹

Table 2. Descriptive statistics.

	N	mean	sd
female	837	0.58	0.49
age	834	46.7	18.0
catholic	838	0.85	0.36
donations	838	1.22	3.30
donators	838	0.21	0.41
<i>N</i>	838		

Non-parametric analyses. Mean donations in the four treatment groups are shown in Figure 1. The results suggest that the inclusion of a religious signal increases donations irrespective of whether subjects have been primed with their religious identity (Mann-Whitney-U-test [MWU]; $p = 0.12$) or not (MWU, $p = 0.01$). Priming on the contrary does not seem to influence

¹¹ In total, we collected more than 1000 € which were matched 1:1, so that more than 2000 € were collected for the carbon-offsetting fund through this survey.

donations, neither with (MWU, $p = 0.63$) nor without the signal of the Catholic institution (MWU, $p = 0.53$) even though our manipulation check strongly indicates that the priming was very effective (see Appendix I).

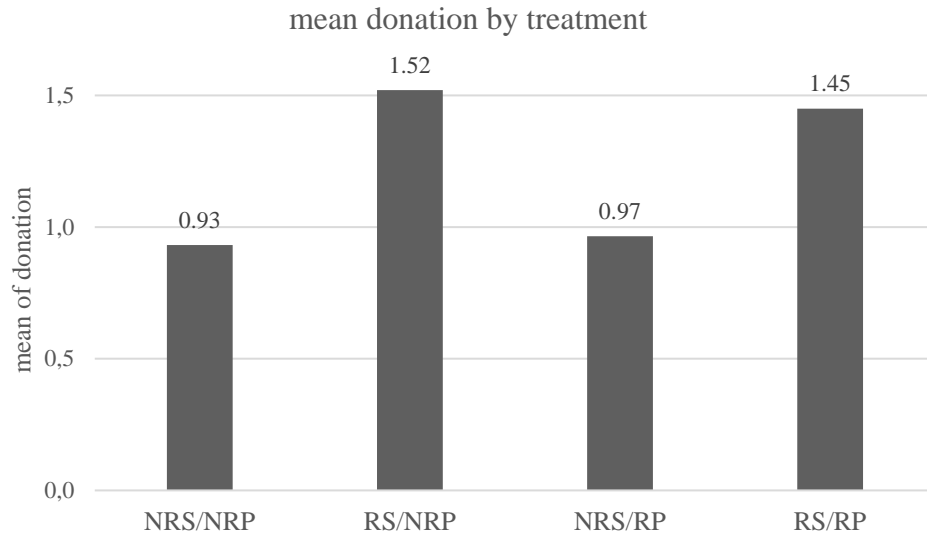


Figure 1: Mean donations by treatment. Significance level based on Mann-Whitney U tests. RS = Religious Signal; NRS = No Religious Signal, RP = Religious Priming, NRP = No Religious Priming.

This picture is supported when we analyze the pooled samples. Pooling treatments with primed and non-primed subjects, the signal substantially increases average donations by 56 % (0.95 € without signal versus 1.48 € with signal; MWU, $p < 0.01$). The priming on the other hand does not seem to have any effect on people's propensity to donate when pooling the two signal conditions (1.23 € without priming versus 1.21 € with priming; MWU, $p = 0.99$).

Parametric analyses. In our parametric analysis, we make use of Tobit models to explain donations of subjects and to estimate the effects of the treatment variations. Model 1 regresses donations on the two treatment variations only. In Model 2, we further control for subjects' age, gender and religious affiliation. Model 3 tests whether there is evidence for an interaction of the signal and the priming. Each regression further controls for fixed effects of the day of data collection and of the respective student worker approaching the interviewee.

Also, the parametric analyses show a clear effect of the institution signalling its attitude while the religious priming does not have a significant effect in any specification.¹² This result strongly supports *Hypothesis 1*, stating that people donate more in case the attitude of the Catholic institution is signalled. The null-effect of the priming is in line with the previous literature indicating ambiguous and often no effects of religiosity on (sustainable) behavior. In

¹² These main results are also applicable for the *probability to donate at all* instead of *average donations* (see Appendix II).

addition, we observe that older participants tend to donate higher amounts whereas gender and being Catholic does not seem have an effect on donations.

Table 3. Tobit Regressions. Dependent variable: Mean donations for carbon-offsetting fund. Null-censored Tobit model.

	(1) donation	(2) donation	(3) donation
signal	2.732** (2.85)	2.728** (2.85)	3.463* (2.54)
priming	0.0122 (0.01)	0.210 (0.22)	1.019 (0.72)
age		0.100*** (3.49)	0.102*** (3.53)
female		1.045 (1.07)	1.052 (1.08)
catholic		-1.383 (-1.06)	-1.345 (-1.03)
signal*priming			-1.448 (-0.76)
_cons	0.169*** (6.91)	0.0177 (0.25)	0.969*** (4.88)
N	838	834	834
Day Dummies	Yes	Yes	Yes
Interviewer Dummies	Yes	Yes	Yes

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Hypothesis 2 implies a stronger effect of the signal by a religious authority for those who are primed with religious concepts (i.e., a positive interaction term). However, this is not supported by our data: the signal of the institution seems to affect donations independently of subjects' religiosity (p-value of the interaction term yields $p = 0.42$); the difference between the subjects observing a religious signal and those who do not is comparable regardless of being primed with religious concepts (0.48 €) or not (0.59 €). A similar observation is found when we replace the induced religiosity by subjects' *self-stated religiosity* that was asked for in the questionnaire: the signal of the Catholic institution seems to increase donations to the carbon-offsetting fund irrespective of the degree of a subjects' religiosity.¹³

¹³ See Appendix II for a detailed analysis of the correlation of self-stated religiosity with people's inclination to donate.

4. Conclusion

In the present study, we investigate whether Catholic institutions can motivate people to act sustainably. To do so, we set up an experiment framed as a survey with the visitors of the German Catholic Convention and provide interviewees with the opportunity to give a 1:1-matched donation to a carbon-offsetting fund. We vary first the presence of a supportive signal by a Catholic institution regarding sustainable behavior and second the salience of people's religious identity. We find that the announced attitude of the Catholic institution strongly affects people's willingness to donate. We do not observe that this is related to the induced religiosity of the interviewee, even though we find that the priming manipulation was successful. This seems to indicate that religious institutions may indeed be able to promote sustainable behavior, irrespective of people's current degree of religiosity.

Our experiment comes with some limitations that might inspire further research. First, we cannot identify whether the change in behavior is induced by the reference to Pope Francis' encyclical or by including the Catholic matching institution. However, separately, both ventures do not seem to be able to provide a convincing signal: The Advisory Board of the Catholics Day might not be seen as an institution relevant enough to demonstrate the religion's attitude toward sustainable behavior while only referring to the Pope's encyclical does not achieve the same credibility as investing money. Therefore, including both channels meets our purpose of clearly signalling the Catholic ambition best. Second, we use the example of Catholic institutions, while future research could also investigate the potential of other religions and of further non-state actors on people's willingness to act sustainably. Third, the visitors of the German Catholic Convention are likely rather religious on average. Hence, we can conclude that we do not find an interaction between our successful priming and the institution's signal in our likely rather religious sample which suggests that the signal affects these people's behavior regardless of their current extent of religiosity. However, we cannot conclude that this effect is also transmitted to fully atheistic people or people with very different religious backgrounds.

Our study emphasizes the potential role of religious institutions in motivating people to do their part in climate protection and thus has important implications for policy-making. In times in which doubts repeatedly arise as to whether sustainable action is worth its price, moral leaders might be of crucial importance. Religious communities are an example of institutions that may be able to lead the way.

Reference list

- Anderson, L. R., and J. M. Mellor (2009). Religion and cooperation in a public goods experiment. *Economics Letters*, 105(1), 58–60.
- Benjamin, D. J., J. J. Choi, and G. Fisher (2016). Religious Identity and Economic Behavior. *Review of Economics and Statistics*, 98(4), 617–637.
- Cohn, A., E. Fehr, and M. André Maréchal (2014). Business culture and dishonesty in the banking industry. *Nature*, 516(7529), 86.
- Cohn, A., M. A. Maréchal, and T. Noll (2015). Bad boys: How criminal identity salience affects rule violation. *Review of Economic Studies*, 82(4), 1289–1308.
- Cohn, A., and M. A. Maréchal (2016). Priming in economics. *Current Opinion in Psychology*, 12, 17–21.
- Cui, J., H. Jom and M. G. Velasquez (2015). The influence of Christian religiosity on managerial decisions concerning the environment. *Business Ethics*, 132 (1), 203–231.
- Ebeling, F., C. Feldhaus, and J. Fendrich (2017). A field experiment on the impact of a prior donor's social status on subsequent charitable giving. *Journal of Economic Psychology*, 61, 124–133.
- Eckel, C. C., and P. J. Grossman (2004). Giving to secular causes by the religious and nonreligious: An experimental test of the responsiveness of giving to subsidies. *Nonprofit and Voluntary Sector Quarterly*, 33(2), 271–289.
- Eckel, C.C., and P.J. Grossman (2008). Subsidizing charitable contributions: a natural field experiment comparing matching and rebate subsidies. *Experimental Economics*, 11, 234–252.
- Pope Francis (2015). *Laudato si': On care for our common home*. Vatican City: Libreria Editrice Vaticana.
- Grossman, P. J., and M. B. Parrett (2011). Religion and prosocial behavior: a field test. *Applied Economics Letters*, 18:6, 523–526.
- Hoffmann, R. (2013). The experimental economic of religion. *Journal of Economic Surveys*, 27(5), 813–845.

Jack, B. K., and M. P. Recalde (2015). Leadership and voluntary provision of public goods: Field evidence from Bolivia. *Journal of Public Economics*, 122, 80–93.

Karlan, D., and J. A. List (2018). How Can Bill and Melinda Gates Increase Other People's Donations to Fund Public Goods? Working Paper.

Kesternich, M., A. Löschel, and D. Römer (2016). The long-term impact of matching and rebate subsidies when public goods are impure: Field experimental evidence from the carbon offsetting market, *Journal of Public Economics*, 137, 70–78.

Martin, W. C., and C. R. Bateman (2014). Consumer religious commitment's influence on ecocentric attitudes and behavior. *Business Research*, 67 (2), 5–11.

Mazar, N., O. Amir, and D. Ariely (2008). The Dishonesty of Honest People: A Theory of Self-Concept Maintenance. *Journal of Marketing Research*, 45(6), 633–644.

Owen, A. L., and J. R. Videras (2007). Culture and public goods: The case of religion and the voluntary provision of environmental quality. *Journal of Environmental Economics and Management*, 54(2), 162–180.

Shariff, A. F., A. K. Willard, T. Andersen, and A. Norenzayan (2016). Religious Priming: A Meta-Analysis With a Focus on Prosociality. *Personality and Social Psychology Review*, 20(1), 27–48.

Tan, J. H. W. (2006). Religion and social preferences: An experimental study. *Economics Letters*, 90, 60–67.

Weber, M. (1930). *The Protestant Ethic and the Spirit of Capitalism* (London: Allen and Unwin, 1930).

Zeit (2018). Heinrich Bedford-Strohm beklagt Mangel an Empathie. <https://www.zeit.de/politik/deutschland/2018-07/asyldebatte-heinrich-bedford-strohm-ekd>.

Appendix

I. Manipulation check

To test whether the priming actually made religious concepts more salient, we included a manipulation check in our questionnaire. This check is inspired by Cohn et al. (2014). Right after the donation decision, subjects had to do a word stem completion task. In this task, the first letters of a word were provided and subjects had to complete the word by any letters of their choice. The presented word stems were arranged in a way that they could be either filled out with religious words or with words that are unrelated to religious topics. Subjects were confronted with six words in total.

If we succeeded to make religious concepts more salient through our questions, subjects in the priming group should complete the word stems with religious words more frequently than those in the control group. The results of the manipulation check are shown in Figure 2. Indeed, word stems are completed with words related to religiosity much more often in the priming groups compared to control (MWU, $p < 0.01$, each pairwise comparison). We take this finding as evidence that the questions actually made religious concepts more salient.

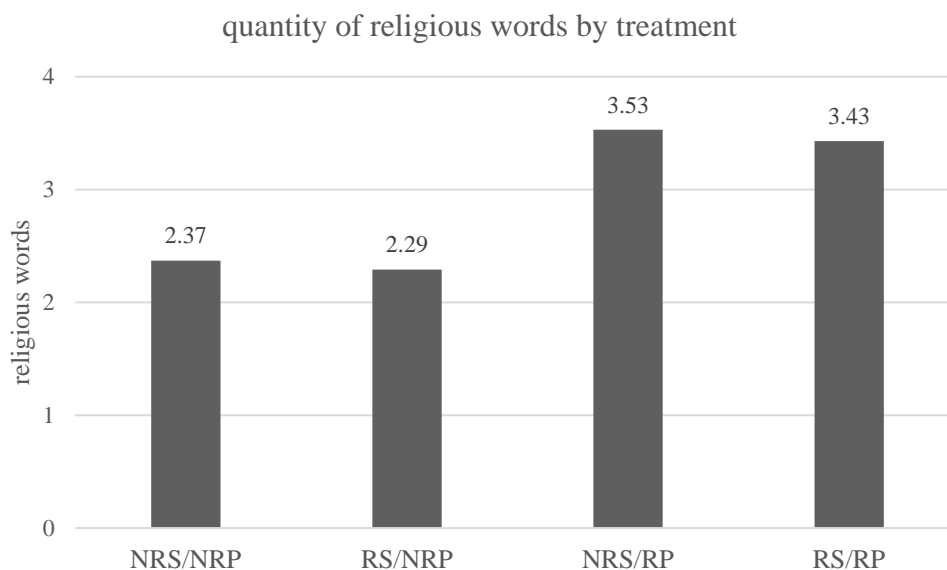


Figure 2. *Quantity of religious words used in the word stem completion task.*
RS = Religious Signal; NRS = No Religious Signal, RP = Religious Priming, NRP = No Religious Priming.

II. Further results

Probit models. In the following, as a robustness check, we use visitor's probability to donate rather than the height of their donation as dependent variable. We again observe a strong effect

of the religious institution signalling its attitude. The results are similar to those obtained using the Tobit models (see Table 4).

Table 4: Probit-Model: Dependent variable: Probability to donate. Robust SE are used.

	(1) donators	(2) donators	(3) donators
signal	0.281** (2.81)	0.288** (2.85)	0.385** (2.68)
priming	0.007 (0.07)	0.0277 (0.28)	0.132 0.88
age		0.010*** (3.43)	0.010*** (3.48)
female		0.155 (1.49)	0.156 (1.49)
catholic		-0.200 (-1.45)	-0.197 (-1.42)
signal*priming			-0.190 (-0.93)
_cons	-0.747*** (-4.54)	-1.068*** (-4.38)	-1.134*** (-4.53)
N	838	834	834
Day Dummies	Yes	Yes	Yes
Interviewer Dummies	Yes	Yes	Yes

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Self-stated religiosity. As an alternative specification investigating the interaction of the signal by the religious institution and people's religiosity, we make use of interviewees' self-stated rather than the induced religiosity. We use the self-stated religiosity (which was asked for in the survey)¹⁴ of our subjects to split the sample as even as possible between rather religious and less religious subjects ("How religious would you consider yourself?" 1–5 scale; we denote 4–5 as "more religious" [385 observations] and 1–3 as "less religious" [441 observations]). Similar to our previous results, we observe that subjects with a higher self-stated religiosity increase their donations in presence of the signal (1.73 €versus 0.97 € MWU, $p < 0.01$) while we again observe a similar effect for the less religious subjects (1.27 €versus 0.93 €, $p = 0.12$). Even though the descriptive difference between the effects seems considerable, the interaction

¹⁴ Note that this question had to be asked at different positions in the questionnaire due to the treatments variations, before and after the donation-decision. Therefore, these analyses should be treated with caution.

between the religious signal and less versus more religious people (self-stated) is far from significant making use of Tobit models similar to those shown in Table 3 (p-value of the interaction term yields $p = 0.69$, see Table 5 for details).

Table 5. *Tobit Regressions. Dependent variable: Mean donations for carbon-offsetting fund. Null-censored Tobit model.*

	(1) donators	(2) donators	(3) donators
signal	2.858** (2.95)	2.834** (2.93)	2.393 (1.63)
religious	1.182 (1.86)	1.460 (1.49)	1.027 0.70
age		0.097*** (3.43)	0.097*** (3.48)
female		0.913 (0.93)	0.929 (0.94)
catholic		-1.539 (-1.14)	-1.522 (-1.13)
signal*religious			-0.772 (-0.40)
_cons	-8.446*** (-4.84)	-11.29*** (-4.64)	-11.07*** (-4.46)
<i>N</i>	826	822	822
Day Dummies	Yes	Yes	Yes
Interviewer Dummies	Yes	Yes	Yes

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

III. Survey (English version)

Thank you for your interest in our survey! We are researchers at the University of Münster and we are conducting a study on visitors of the Catholic Day. We are interested in who you are, how you feel and what moves you. We would be delighted if you could take a few minutes to answer a few questions. Please note that you cannot participate in the survey more than once.

Thank you very much for your time!

1. First, some information about you:

	Female	Male
Gender:	<input type="checkbox"/>	<input type="checkbox"/>
Age:	<hr/>	
Residence:	<hr/>	

2. How did you get here to the Catholics Day?

Car	<input type="checkbox"/>
Train	<input type="checkbox"/>
Bus	<input type="checkbox"/>
Plane	<input type="checkbox"/>
Bicycle	<input type="checkbox"/>
By foot	<input type="checkbox"/>
Other	<input type="checkbox"/> <hr/>

3. Which ticket do you use for the Catholics Day?

Permanent ticket	<input type="checkbox"/>
Permanent ticket discounted	<input type="checkbox"/>
Münster student card	<input type="checkbox"/>
Family ticket	<input type="checkbox"/>
Day ticket	<input type="checkbox"/>
Late ticket	<input type="checkbox"/>
Attendance card	<input type="checkbox"/>
None	<input type="checkbox"/>

4. Which church or religious community do you belong to?

Catholic Church	<input type="checkbox"/>
Protestant Church	<input type="checkbox"/>
Other Christian Church	<input type="checkbox"/>
Islamic Community	<input type="checkbox"/>
Jewish Community	<input type="checkbox"/>
Other religious community	<input type="checkbox"/> <hr/>
None	<input type="checkbox"/>

5. How religious would you consider yourself at the following scale?

Not religious	somewhat	Medium	Rather	Very religious
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. How often do you practice religious acts? (e.g. taking part in church services, pray, confess or similar)

Never	Rarely (< 1x per month)	Sometimes (about monthly)	Often (Every week)	Very often (daily)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Please describe briefly, what constitutes a religious community for you.

8. What would you consider as the most important insight that emerged from your / any religious community?

9. Please describe briefly, what does „faith“ mean to you.

For the next part of the questionnaire, first some information:

Climate change is one of the greatest challenges of the 21st century. In order to limit the negative consequences of climate change, climate protection projects that contribute to a reduction of harmful greenhouse gases in the atmosphere are financed by the CO2 compensation fund *Klima-Kollekte*, for example.

Treatment: No Religious Signal (NRS)

Right now, you can also do something yourself for climate protection by donating to a carbon-offsetting fund. Your contribution has a double effect, because every amount you donate is topped up by the same amount. For every euro you donate, the fund receives two euros. With your help, climate protection projects can be implemented worldwide that contribute to the preservation of the earth. Please indicate in the following box how much you would like to donate for climate protection.

Treatment: Religious Signal (RS)

Right now, you can also do something yourself for climate protection by donating to a carbon-offsetting fund. Your contribution has a double effect, because every amount you donate is topped up by the same amount by the **Environmental Advisory Board of the Catholics Day**. For every euro you donate, the fund receives two euros. **Following the encyclical Laudato Si' by Pope Francis**, with your help, climate protection projects can be implemented worldwide that contribute to the preservation of the earth. Please indicate in the following box how much you would like to donate for climate protection.

10. Please indicate here how much you would like to donate for climate protection:

(If you do not want to donate, just write "0" here. After completing the questionnaire, please contact one of our team members to hand in the form and pay your donation.)

11. Now, consider a small wording task. Please try to complete the following word stems. You are free in your decision; just take the first word that comes to your mind.

Example:

Schl üssel

Ge_____

Abend_____

Komm_____

Ki_____

Go_____

Ps_____

Finally a few questions about your personal attitude in life:

12. Overall, how satisfied are you with your current life situation?

Very dissatisfied					Very satisfied					
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Overall, do you think people can be trusted? Yes ☐ No ☐

14. How interested are you in issues considering climate change?

not at all	little	medium	rather	very much
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Some questions about your nutrition habits: How often do you eat ...

	Never very often				
... meat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... regional products?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... organic products?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Have you balanced the CO₂ emissions of your journey in the run up of the Catholics Day? Yes ☐ No ☐
17. Did you know that the Catholics Day is climate-neutral? ☐ ☐

18. Last question: How do you feel right now?

very bad					very good					
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

That's it! Thank you very much for answering our questions! Please hand in this questionnaire at the "University of Münster" counter. You can also pay your donation there and receive more information about the carbon-offsetting fund.

We wish you a great time in Münster!

Control group questions 4–9

4. What's your profession?

5. Since when do you practise this profession?

< 1 year	1-2 years	3-5 years	6-10 years	> 10 years
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Is there anything you would change in your profession if you could?

7. How much time do you spend on social media each day? (Whatsapp, Facebook, Instagram etc.)

< 30 minutes	30-60 minutes	1-2 hours	2-4 hours	> 4 hours
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What is your favourite leisure activity?

9. Please describe briefly, what do you like most about it.

IV. Survey (German version)

Vielen Dank für Ihr Interesse an unserer Umfrage! Wir sind Forscher der Universität Münster und führen eine Studie über die Besucher und Besucherinnen des Katholikentages durch. Wir sind daran interessiert, wer Sie sind, wie Sie fühlen und was Sie bewegt. Wir würden uns freuen, wenn Sie sich ein paar Minuten Zeit nehmen, um uns einige Fragen zu beantworten. Bitte beachten Sie, dass Sie nicht mehrfach an der Umfrage teilnehmen können.

Vielen Dank für Ihr Mitwirken!

1. Zunächst einige Angaben über Sie:

	Weiblich	Männlich
Geschlecht:	<input type="checkbox"/>	<input type="checkbox"/>
Jahrgang:	<input type="text"/>	
Wohnort (PLZ):	<input type="text"/>	

2. Wie sind Sie zum Katholikentag angereist?

Auto	<input type="checkbox"/>
Bahn	<input type="checkbox"/>
Bus	<input type="checkbox"/>
Flugzeug	<input type="checkbox"/>
Fahrrad	<input type="checkbox"/>
Zu Fuß	<input type="checkbox"/>
Sonstige	<input type="checkbox"/> <input type="text"/>

3. Welche Karte für den Katholikentag nutzen Sie?

Dauerkarte	<input type="checkbox"/>
Ermäßigte Dauerkarte	<input type="checkbox"/>
Münsteraner Schüler-/Studentenkarte	<input type="checkbox"/>
Familienkarte	<input type="checkbox"/>
Tageskarte	<input type="checkbox"/>
Abendkarte	<input type="checkbox"/>

- Mitwirkendenausweis ☐
- Keine ☐

4. Welcher Kirche bzw. Religionsgemeinschaft gehören Sie an?

- Der katholischen Kirche ☐
- Der evangelischen Kirche ☐
- Einer anderen christlichen Religionsgemeinschaft ☐
- Einer islamischen Religionsgemeinschaft ☐
- Einer jüdischen Religionsgemeinschaft ☐
- Einer anderen Religionsgemeinschaft, nämlich ☐ _____
- Keiner ☐

5. Als wie religiös würden Sie sich auf der folgenden Skala einstufen?

Gar nicht religiös	Wenig religiös	Mittel religiös	Ziemlich religiös	Sehr religiös
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Wie häufig üben Sie religiöse Handlungen aus? (z.B. Gottesdienste besuchen, beten, beichten o.Ä.)

Nie	Selten (< 1x monatlich)	Manchmal (etwa monatlich)	Häufig (etwa wöchentlich)	Sehr häufig (etwa täglich)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Beschreiben Sie bitte kurz, was eine Religions- bzw. Glaubensgemeinschaft für Sie ausmacht.

8. Welche ist Ihrer Meinung nach die wichtigste Erkenntnis, die aus Ihrer / einer Religionsgemeinschaft hervorgegangen ist?

9. Beschreiben Sie bitte kurz, was „Glauben“ für Sie bedeutet.

Für den nächsten Teil des Fragebogens zunächst einige Informationen:

Der Klimawandel ist eine der größten Herausforderungen des 21. Jahrhunderts. Um die negativen Folgen des Klimawandels in Grenzen zu halten, werden beispielsweise durch den CO₂-Kompensationsfonds **Klima-Kollekte** weltweit Klimaschutzprojekte finanziert, die zu einer Reduktion schädlicher Treibhausgase in der Atmosphäre beitragen.

Treatment: No Religious Signal (NRS)

Sie können im Folgenden auch persönlich etwas für den Klimaschutz tun, indem Sie für die Klima-Kollekte spenden. Ihr Beitrag wirkt dabei doppelt, denn jeder Betrag, den Sie spenden, wird zusätzlich um den gleichen Betrag aufgestockt. Für jeden Euro, den Sie spenden, erhält die Klima-Kollekte somit zwei Euro. So können mit Ihrer Hilfe weltweit Klimaschutzprojekte umgesetzt werden, die einen Beitrag zum Erhalt der Erde leisten.

Treatment: Religious Signal (RS)

Sie können im Folgenden auch persönlich etwas für den Klimaschutz tun, indem Sie für die Klima-Kollekte spenden. Ihr Beitrag wirkt dabei doppelt, denn jeder Betrag, den Sie spenden, wird zusätzlich vom **Umweltbeirat des Katholikentages** um den gleichen Betrag aufgestockt. Für jeden Euro, den Sie spenden, erhält die Klima-Kollekte somit zwei Euro. Der Enzyklika „Laudato Si“ von Papst Franziskus folgend, können so mit Ihrer Hilfe weltweit Klimaschutzprojekte umgesetzt werden, die einen Beitrag zum Erhalt der Erde leisten.

10. Tragen Sie hier ein, wie viel Sie für den Klimaschutz spenden möchten: €

(Falls Sie nicht spenden möchten, tragen Sie hier eine „0“ ein.

Bitte wenden Sie sich nach dem Ausfüllen des Fragebogens zur Abgabe des Bogens und zur Zahlung Ihrer Spende an eine Mitarbeiterin oder einen Mitarbeiter unseres Teams.)

11. Nun ein kleines Worträtsel für Sie: Versuchen Sie bitte, die nachfolgenden Wörter zu vervollständigen. Sie sind dabei völlig frei in Ihrer Wortwahl, nehmen Sie ruhig das erste Wort, das Ihnen einfällt.

Beispiel:

Schl üssel

Ge_____

Abend_____

Komm_____

Ki_____

Go_____

Ps_____

Zuletzt noch ein paar Fragen über Ihre persönliche Lebenseinstellung:

12. Alles in allem, wie zufrieden sind Sie momentan mit Ihrem Leben?

Sehr unzufrieden									Sehr zufrieden	
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Denken Sie, dass man Menschen im Grunde vertrauen kann? Ja ☐ Nein ☐

14. Wie interessiert sind Sie an Fragen des Klimaschutzes?

Gar nicht	Wenig	Mittel	Ziemlich	Sehr
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Einige kurze Fragen zu Ihren Ernährungsgewohnheiten: Wie häufig essen Sie ...

	Nie				Sehr häufig
... Fleisch?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... regionale Produkte?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... Produkte aus biologischen Anbau?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- | | Ja | Nein |
|---|--------------------------|--------------------------|
| 16. Haben Sie im Vorfeld des Katholikentages die CO ₂ -Emissionen für Ihre Anreise ausgeglichen? | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Wussten Sie, dass der Katholikentag seit 2008 klimaneutral durchgeführt wird? | <input type="checkbox"/> | <input type="checkbox"/> |

19. Letzte Frage: Wie fühlen Sie sich gerade?

Sehr schlecht										Sehr gut
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Das war's! Vielen Dank für die Beantwortung aller Fragen! Geben Sie diesen Fragebogen bitte an unserem „University of Münster“-Stand ab. Dort können Sie auch Ihre Spende zahlen und weitere Informationen über die Klima-Kollekte erhalten.

Wir wünschen Ihnen weiterhin eine schöne Zeit in Münster!

Control group questions 4–9

4. Was machen Sie beruflich?

5. Seit wann üben Sie diesen Beruf aus?

< 1 Jahr	1-2 Jahre	3-5 Jahre	6-10 Jahre	> 10 Jahre
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Was würden Sie an Ihrem Berufsleben ändern, wenn Sie könnten?

7. Wie viel Zeit verbringen Sie am Tag mit sozialen Medien? (Whatsapp, Facebook, Instagram etc.)

< 30 Minuten	30-60 Minuten	1-2 Stunden	2-4 Stunden	> 4 Stunden
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Was machen Sie am liebsten in Ihrer Freizeit?

9. Beschreiben Sie kurz, was Ihnen daran am meisten Freude bereitet.