

## **The Devoted Actor as Parochial Altruist: Sectarian Morality, Identity Fusion, and Support for Costly Sacrifices**

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We explore how Darwinian notions of moral virtue and parochial altruism may relate to the emerging cognitive framework of the devoted actor who undertakes extreme actions in defense of group values. After a brief discussion of the theoretical framework, we present exploratory data resulting from interviews of 62 Lebanese individuals of varying religious backgrounds (Sunni, Shia and Christian) in Beirut and Byblos (Jbeil) in a time of heightened tension owing to spillover from the Syrian civil war. Analytic measures focused on willingness to make costly sacrifices for confessional (religious) groups and sectarian values, as a function of the degree to which people perceived universal and parochial values to be morally important, and considered their personal selves “fused” with their group. Sectarian moralists who fused with their religion expressed strong willingness to support costly sacrifices for the group, whereas people who fused with their religion but moralized universal values over sectarian ones were least likely to support costly sacrifices. In addition, when people believed that they had control over their future, fusion increased support for costly sacrifice and desired social distance to outgroups. These results have implications for notions of religion as both a booster and buffer to costly sacrifices, and the impact of identity fusion for and against extreme actions.

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## Introduction

In this paper, we explore aspects of a theoretical framework we have been developing, that of “The Devoted Actor,” to better understand the psychological mechanisms underlying the willingness of humans to make costly sacrifices for a cause. This framework integrates two hitherto independent research programs in cognitive theory, “sacred values” and “identity fusion.” These two programs account for different aspects of intractable intergroup conflicts, but can interact to produce costly commitments for a primary reference group, including fighting and dying (Atran, Sheikh, & Gómez 2014a, 2014b).

There is also a more general background concern that this paper addresses, namely, the association between Parochial Altruism (Choi & Bowles, 2007; Ginges & Atran, 2009) and the Devoted Actor (Atran, Axelrod, & Davis, 2007; Atran & Ginges, in press). “Parochial Altruism,” as we use the term, refers to an evolutionary rationale to make costly sacrifices for the group to which one belongs in an effort to beat rival out-groups in the competition for survival and dominance. The “Devoted Actor” refers to a cognitive framework for extreme actions in defense of group values that are intimately bound to personal and collective identity, even unto death and against all odds. The theoretical work on parochial altruism establishes the competitive conditions under which behaviors of in-group assistance and out-group aggression can evolve; the Devoted Actor hypothesis suggests proximate psychological mechanisms that instantiate these behaviors:

People will become willing to protect morally important or sacred values through costly sacrifice and extreme actions, even being willing to kill and die, particularly when such values are embedded in or fused with group identity, becoming intrinsic to “Who I am” and “Who We are” (Atran & Ginges, in press).

There is *a priori* complementarity between the evolutionary rationale of parochial altruism and the cognitive framework of the devoted actor; however, much work remains to understand the psychological and group dynamics of their association in generating sacrifice and violence.

The data and arguments here are mainly concerned with the moral engagement and group commitment of the Devoted Actor rather than the selection processes involved in parochial altruism. Nevertheless, a descriptively adequate psychological account of the Devoted Actor should set abstract conditions on what an evolutionary theory of parochial altruism aims to explain.

Here, we discuss our theoretical framework, and then present exploratory data collected in Lebanon to flesh out key points. In the future, a much more robust data set will be needed to pinpoint explanations and predictions. It is a project that we are pursuing in various conflict zones and to which we hope others will contribute after seeing our case.

## Theoretical Background

In our view, parochial altruism is not simply an ultimate hypothesis about evolutionary function, and neither is the Devoted Actor merely one about proximate psychological motivations. In fact, for Darwin, the former appears to entail some version of the latter.

**Parochial Altruism.** In *The Descent of Man*, Darwin outlined an evolutionary rationale for moral virtue different from the current focus of much work in the philosophy, psychology, and neuroscience of morality, which includes intuitions and beliefs about fairness and reciprocity, and rules such as “do no harm to others if you can help it,” which are tied to emotions like empathy and consolation (Gazzaniga, 2009; Baumard, André, & Sperber, 2013). Instead, Darwin (1871:163–165) described the virtue of “morality... patriotism, fidelity, obedience, courage, and sympathy” as what we nowadays call “parochial altruism” (Choi & Bowles, 2007; Ginges & Atran, 2009), which is especially evident in intense forms of human conflict when prospects for individual and even group survival may be very low (Ginges & Atran, 2011; Berns & Atran, 2012). In intense intergroup conflict, extreme forms of self-sacrifice for glory and group, such as martyrdom, may trump mutualistic principles of cooperation and distributive justice.

**Devoted Actors.** Our prior research indicates that when people act as “Devoted Actors” (Atran, Axelrod, & Davis, 2007) they are deontic actors (i.e., duty-based) who mobilize for collective action to protect cherished values. Devoted actors add a dimension to thought and behavior distinct from instrumental rationality in resisting material compromises over such values (Ginges et al., 2007; Atran & Axelrod, 2008; Dehghani et al., 2010). This can generate oversized commitment in low-power groups to resist and often prevail against materially stronger forces (Atran and Ginges 2012). Devoted actors are most likely to commit themselves to extreme actions of parochial altruism if they perceive themselves to be under existential threat from outside groups (Sheikh et al., 2012).

People often make their greatest exertions and sacrifices, including killing or dying for ill or good, not just to preserve their own lives or kin and kith, but for an idea—the abstract conception they form of themselves, of “who we are.” This is the “the privilege of absurdity; to which no living creature is subject, but

man only” of which Hobbes (1651/1901:29) wrote in *Leviathan*. For most of human history, and for most cultures, religion has been the locus of this privilege and power of absurdity (Rappaport, 1999). For Hobbes, as for countless other religious and non-religious thinkers from Augustine to Kierkegaard and Galileo to Wittgenstein, the “incomprehensible” nature of core religious beliefs, such as a sentient but bodiless deity, renders them immune to empirical or logical verification or falsification. Religious consensus over values does not primarily involve fact-checking or reasoned argument, but ensues from ritual communion and emotional bonding (Turner, 1969 Atran & Norenzayan, 2004). In the last decade or so, experimental work in social psychology that goes beyond the morality of fairness and harm suggests that religious and transcendental beliefs consolidate “community” (Rozin, Lowery, Imada, & Haidt, 1999), lead to “binding” (Graham et al., 2011) and “unity motivation” (Ray and Fiske 2011), and mobilize parochial altruists to give their lives for the group (Ginges, Hansen & Norenzayan 2009).

Costly commitment to idiosyncratic and apparently absurd beliefs and associated values can deepen trust by reliably identifying cooperators, while galvanizing group solidarity for common defense (no matter the selection processes are involved, Atran & Henrich, 2010; Norenzayan & Shariff, 2008). Although all religions have a “marked idiosyncrasy” and bias in their moral message (Geertz, 1973:87), the more belligerent a group’s environment, the more proprietary the group’s sacred values and rituals, a phenomenon that increases in-group reliance, but also disbelief, distrust and potential conflict towards other groups (Sosis, Kress, & Boster, 2007; Wilson, 2002). By contrast, fully reasoned social contracts that regulate individual interests to share costs and benefits of cooperation can be less distancing between groups but also more liable to collapse; awareness that more advantageous distributions of risks and rewards may be available in the future makes defection more likely (Atran & Axelrod, 2008). Even ostensibly secular nations and transnational movements usually contain important quasi-religious rituals and beliefs (Anderson, 1983).

**Identity Fusion.** Understanding the way important values influence decision-making, leading to deontic judgments and choices in disregard for material interests, is necessary but not sufficient to explain how they may influence extreme and costly behaviors. Our working hypothesis is that parochially altruistic action occurs, or devoted acts are created, when self-identity becomes fused with a unique collective identity, and when identity itself is fused with sacred values. Thus, important values may influence extreme behavior particularly to the extent that they become embedded or fused with identity and internalized. When internalized, important moral

values lessen societal costs of policing morality through self-monitoring, and blind members to exit strategies (Atran and Henrich 2010).

There is more to group dynamics than just collections of people, their behavior, and ideas. There is also the web of relationships that make the group more than the sum of its individual members (Dunbar, Knight, & Powers, 1999; White & Johansen, 2006). It is networking among members that distributes thoughts and tasks that no one part may completely control or even understand (Sperber, 1985; Atran et al., 2002). Case studies of suicide terrorism and related forms of violent extremism suggest that “people almost never kill and die [just] for the Cause, but for each other: for their group, whose cause makes their imagined family of genetic strangers—their brotherhood, fatherland, motherland, homeland” (Atran, 2010:33).

In line with these observations, a promising theory holds that when people’s collective identities become fused with their personal self-concept, they subsequently display increased willingness to engage in extreme pro-group behavior when the group is threatened (Swann et al., 2012). Swann and colleagues dub this powerful form of personal investment in the group “identity fusion.” Fusion theory markedly differs from various social identity theories in privileging group cohesion through social networking and emotional bonding of people and values rather than through processes of categorization and association, empowering individuals and their groups with sentiments of exceptional destiny and invulnerability. Apart from one recent study published subsequent to submission of this paper (Whitehouse, McQuinn, Buhrmester, & Swann, 2014), and some of our own recent work (Atran, Sheikh & Gómez, 2014a,b), studies on fusion had concerned mostly student populations in hypothetical scenarios rather than populations in actual conflict zones.

Thus, in late winter 2014, we interviewed 62 Lebanese in Beirut and Byblos (Jbeil) in a time of heightened tension owing to spillover from the Syrian civil war. We focused on measuring willingness to make costly sacrifices for confessional (religious) groups and sectarian values, although we also present data investigating willingness to live in close geographical space to members of other sectarian groups. Thus, one dependent variable measures willingness to engage in sectarian conflict whereas the other measures willingness to engage cooperatively with other sectarian groups. Identity fusion was a focal dependent variable. Similarly to existing research into identity fusion, we investigated willingness to sacrifice for the group as a function of the degree to which people considered their personal selves “fused” with their group. In addition, to advance our Devoted Actor framework, we were interested in investigating the way fusion with groups and beliefs regarding the importance of core group values influenced willingness to engage in costly sacrifices. To

measure this, we investigated the relative importance of sectarian and universal values—measures we describe below in some detail. We also measured religiosity, the extent to which people believed their group to be “superior,” and the degree to which they felt their group interest “at risk.”

We recognize that discussion of “groups” and their “values” in the Lebanese context—or in most any complex social setting—risks reducing the ever-shifting and dense networks of ideas and peoples to seemingly trivial proportions. Even general reference to “Christian,” “Sunni,” or “Shia” belies the intricate web of cross-cutting connections and refusal by many to be so conveniently classified (Moaddel, Kors, & Gärde, 2012). Yet, as Edward Said (1986) once put the case of Lebanon, “the so-called traditional” group identities are still effectively mobilized for collective violence despite variations in individual commitments and overlap among groups, and ever denser and more complicated political changes.

## Methods and Measures

Our study design aimed to integrate the interdisciplinary approach and personal lessons we have learned from years of anthropological fieldwork and psychological experimentation in the Middle East and North Africa. Survey questions were not simply meant to assess attitudes. Through a theoretically-motivated design, informed by our participant observations and experience in conflict negotiation in the region, we systematically probed beliefs about moral importance, personal and collective identity, costly sacrifice, and conflict. Although the ultimate goal is to better understand extreme actions, what follows are examinations of motivations of reported willingness to engage in costly sacrifices and extreme behaviors. A move from reports of willingness to act to actual actions under appropriate conditions is by no means guaranteed; however, compatibility of our findings with field studies of violent group conflict, and the further insight this may produce may justify this effort.

Sixty-two participants were recruited in public places (e.g., coffee shops) in Beirut and Byblos (Jbeil) for a survey lasting, on average, 30 minutes: 16 self-identified as Shia, 18 as Sunni, 25 as Christians, and 3 refused identification with any group. Average age was 24 years (range 18–57), and 33 were females. Rejection rate was less than 10 percent for young adults (3 rejections, none under age 25), but nearly 50 percent for older adults (refusing questions concerning other groups). All respondents had some university-level education, and all were somewhat conversant with English (although educated Lebanese speak Arabic, many cannot read it well; however, questions were explained in Arabic when people asked). In-depth interviews were conducted in English or Arabic depending on the preference of the interviewee. Despite some university education, several were from lower socio-economic strata: waiters, small business employees, vocational students (agriculture), and

unemployed. Although this was not a student population as such, this sample was not broadly representative of Lebanon's confessional groups. It was chosen to allow a preliminary study to be completed among interviewees from the three main groups within a restricted time frame (less than one month), and sufficiently away from direct violence so as to not endanger interviewees.

Participants were given a short demographic questionnaire, which also included a question on the community in Lebanon they most identified with. If participants selected "Christian" or "Sunni", they were handed a questionnaire that included questions on the Shia community as an outgroup (Shia was chosen as the Christian outgroup because, at the time, public discussion in the Christian community was often about Hezbollah's role in bringing the Syrian war to Lebanon); if they selected "Shia," they were queried on the Sunni community instead. Using Likert items, the questionnaires first assessed moralization of sectarian and universal values (see Measures below). Then, participants responded to the same questions from the perspective of another community (either Shia or Sunni, depending on which questionnaire they were handed). Next, they were given measures of social distance to this other community, and asked about their support of intermarriages. Participants then responded to items assessing fusion with their religion, Arabs, Lebanon, close friends, and family. They then filled out a measure of support for costly sacrifices, threat to their community's interests, sense of control over their community's future, group superiority, and religiosity. The order of questions was chosen so that moralization issues in effect primed social measures. Debriefing was followed by more extensive interviews probing personal and community issues beyond the scope of this report.

Moralization of universal and sectarian values was assessed by presenting a list of 22 statements and asking participants if the statements were moral issues or not (6-point scale from "not at all" to "very much"). The moralization questions were adapted from Graham et al.'s (2011) moral relevance questions. For instance, participants were asked whether or not "someone killed someone else" (universal) or "sacrificed themselves for their group" (sectarian) were moral issues. Sectarian questions were adjusted to the Lebanese case after piloting to reduce floor and ceiling effects. We conducted an exploratory factor analysis with promax rotation and extracted 2 factors (Eigenvalues > 1). The two correlated factors ( $r = 0.175$ ), explained 33 percent of the variance (see Table 1 for factor loading). One item ("doubting the order of society") was dropped due to low loadings (< 0.30). All others were averaged into the respective scores of moralization of universal and sectarian values.

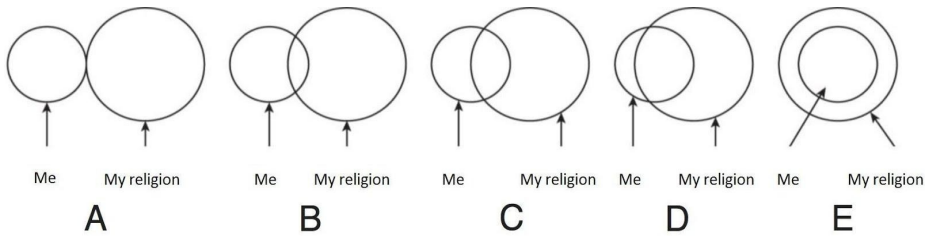
"Social distance" was measured by asking participants how far away from their home they would prefer a family of the other community to live (response scale from 0 meters to 1km+), the proportion of people from the other community in an ideal neighborhood (0-100 percent), how far from their own

home they would prefer a place of worship of the other community to be (from 0 meters to 5km+), and what proportions of out-group places of worship would be in an ideal neighborhood (0 percent–100 percent). Responses to these questions were standardized and averaged into a score of desired social distance.

**Table 1.** Factor Loadings of Moralization Items

Statement: Whether or not...	Sectarian	Universal
... someone caused someone else emotional harm	<b>0.165</b>	
... some people were treated differently than others	-0.077	0.757
... someone cared for someone weak or vulnerable	<b>0.312</b>	<b>0.518</b>
... someone was denied his or her rights because of religion or sex	-0.179	0.457
... someone was open to accepting people from other religious groups	<b>0.003</b>	<b>0.582</b>
... the government ensured democracy, based on free and fair elections	<b>0.080</b>	<b>0.559</b>
... someone could express themselves without the fear of prosecution	-0.138	0.579
... someone stole from someone else	-0.100	0.381
... someone killed someone else	<b>0.086</b>	<b>0.552</b>
... someone respected his or her parents	<b>0.474</b>	<b>0.329</b>
... someone's action showed love for his or her country	<b>0.668</b>	<b>0.240</b>
... someone violated standards of purity	<b>0.582</b>	<b>0.307</b>
... someone acted in a way God would approve of	<b>0.649</b>	-0.036
... someone sacrificed himself or herself for one's group*	<b>0.483</b>	<b>0.115</b>
... someone fought for their country*	<b>0.515</b>	<b>0.040</b>
... someone showed devotion for a cause*	<b>0.536</b>	<b>0.202</b>
... someone dressed modestly (e.g., does not expose a lot of skin)	<b>0.569</b>	-0.156
... someone questioned or doubted the existing order in society	<b>0.164</b>	<b>0.145</b>
... someone conformed to the traditions of society	<b>0.594</b>	-0.312
... someone sold land to a person of another religious group	<b>0.453</b>	-0.249
... someone went to places of worship like a church or a mosque	<b>0.717</b>	-0.166
... someone was loyal to his or her leader	<b>0.486</b>	-0.112

Note: Items assigned to a factor indicated by bold loading; \* items excluded from analysis because of potential confound with costly-sacrifice measure



**Figure 1.** Pictorial Measure of Fusion with Group

“Fusion” with various groups was measured using a pictorial measure, such as fusion with the religious group as presented in Figure 1. Participants were asked to pick the pictorial representation that best represents how essential the relationship is between them and the given group.

To assess threat, sense of control, and superiority, participants were told to think of the group they most identified with, and respond to the following three items on a 5-point Likert scale (“strongly disagree” to “strongly agree”): “I believe that the things most important to my community are at risk in this country” (group’s interests at risk), “I believe that my community has very little control over its future,” (fatalism) and “I believe the group is superior to other groups or communities in this country in many ways” (belief in group superiority).

Scores for “support for costly sacrifices” consisted of the average of 5 questions on whether their community would approve of a list of behaviors (see Figure. 2) in the context of conflict (e.g., “a person who risks the safety of their family or children to defend the group”) on a 5-point response scale from “not at all” to “very much.”

The “religiosity” measure consisted of the average of five questions tapping into a general concern for religious beliefs and behaviors (importance of beliefs, frequency of private prayers and public worship, and belief in heaven and hell), in line with prior investigations in the social psychology of religion (Norenzayan & Shariff, 2008; Ginges, Hansen, & Norenzayan, 2009).

## Findings

Table 2 gives descriptions of core measures. Participants were more likely to moralize universal values than sectarian values. On average, they showed moderate support for costly sacrifices (one item, “leaving the country,” was dropped because of low intercorrelations with the other items), felt that their community’s interests were at risk, and did not feel that their community was superior to other groups.

**Table 2.** Core Measures of Interest

Measure	Mean (SD)	Range	Reliability
Religiosity	2.76 (1.01)	1–5	$\alpha = 0.79$
Moralization of Universal Values	4.86 (0.85)	1–6	$\alpha = 0.80$
Moralization of Sectarian Values	3.31 (1.12)	1–6	$\alpha = 0.85$
Social Distance	0.00 (1.00)	–2.0–2.4	$\alpha = 0.69$
Support for Costly Sacrifices	2.89 (1.16)	1–5	$\alpha = 0.85$
Group’s Interests at Risk	3.63 (1.16)	1–5	-
No Control over Group’s Future	3.66 (1.19)	1–5	-
Belief in Group Superiority	2.46 (1.34)	1–5	-

We conducted a series of regressions to test our hypotheses that people who moralized sectarian versus universal values and who were fused with a religious group perceived to be superior to other groups were more likely to support costly sacrifices.

Because of the small sample size, even a few highly influential responses can considerably skew results. Therefore, special care was given to identifying such cases by examining Cook’s (1977) distances. We excluded highly influential cases (maximum two) only when Cook’s distances exceeded a cut-off value of the *F*-distribution’s 10<sup>th</sup> percentile.

To calculate sectarian morality, we quantified bias towards moralization of sectarian versus universal values by subtracting moralization of universal values from moralization of sectarian values. On average, participants moralized sectarian values less than universal values,  $M = -1.51$  ( $SD = 1.24$ ). This measure of sectarian morality was marginally significantly correlated with belief in group superiority,  $r = 0.25$ ,  $P = 0.06$ , and well correlated with support for costly sacrifices,  $r = 0.43$ ,  $P = 0.01$ .

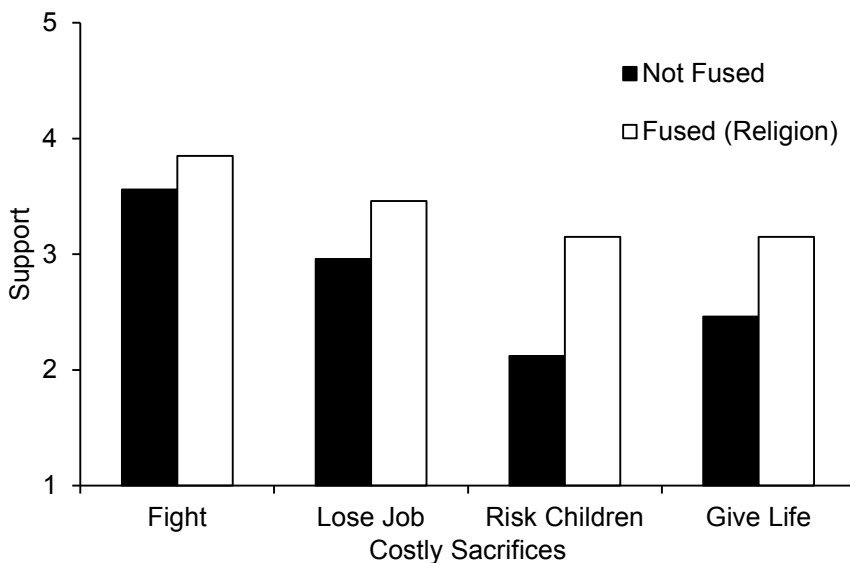
Measures of fusion were dichotomized, distinguishing fully-fused respondents (Figure 1e) from all others. One out of five participants was fused with his or her religion and as many were fused with Arabs (see Table 3, for all fusion measures). Except for fusion with Lebanon and fusion with family, which were associated positively,  $r = 0.38$ ,  $P < 0.01$ , there were no other intercorrelations.

**Table 3.** Fusion with Groups

Religion	Arabs	Lebanon	Close Friends	Family
21%	21%	42%	33%	58%
21%	21%	42%	33%	58%
21%	21%	42%	33%	58%
21%	21%	42%	33%	58%

We were specifically interested in fusion with religious identity groups because conflict in Lebanon is often framed by participants and observers in terms of religious confession (Sunni, Shia, Christian); however, debriefings made clear that “religion” in this context refers also to political and social realities (law, education, charity, etc.), rather than just to devotional beliefs and rituals. Unsurprisingly, though, people who fused with their religion expressed greater religiosity,  $M_{diff} = 1.55$  (SE = 0.25),  $t_{59} = 6.169$ ,  $P < 0.01$ ,  $d = 1.53$ . Fused people had a higher belief in group superiority,  $M_{diff} = 1.03$  (SE = 0.45),  $t_{56} = 2.266$ ,  $P = 0.03$ , and higher sectarian morality than those who were not fused with their religion,  $M_{diff} = 1.12$  (SE = 0.37),  $t_{57} = 3.066$ ,  $P < 0.01$ . Both effects were large, with effect sizes of  $d = 1.34$  and  $d = 1.28$ , respectively.

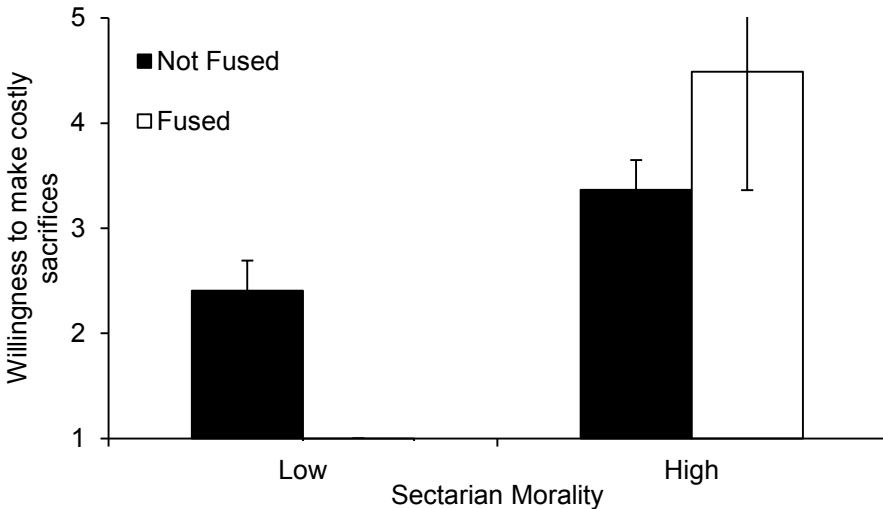
Those fused with their religious group showed a marginally significantly higher support for costly sacrifices in the name of that religious group,  $M_{diff} = 0.63$  (SE = 0.36),  $t_{58} = 1.751$ ,  $P = 0.09$ ,  $d = 0.54$ . Figure 2 shows the effect separately for the specific sacrifices presented.



**Figure 2.** Fused ( $n= 13$ ) and non-fused individuals ( $n=48$ ) and support for different kinds of costly sacrifices

Taken alone, this finding replicated lab experiments linking fusion to costly sacrifice (Atran & Ginges, in press). As expected, however, the effect of fusion

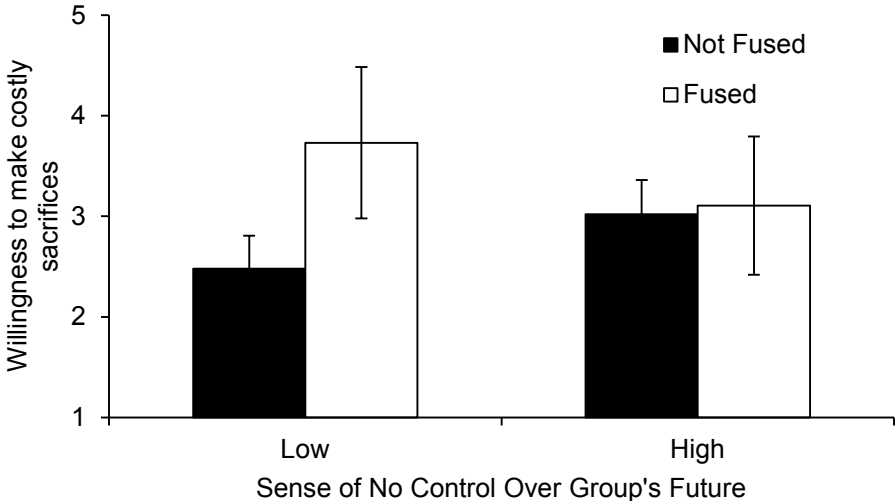
on willingness to make costly sacrifices was strongly influenced by important beliefs about the group and about group values. First, we found that the effect of fusion with groups was strongly moderated by the relative importance participants gave sectarian values compared to universal values. The regression with sectarian morality and fusion as predictors explained 38 percent of the variance in costly sacrifices,  $F_{3,53} = 10.98$ ,  $P < 0.01$ . The interaction term was reliable,  $F_{1,53} = 8.37$ ,  $P < 0.01$ . Looking at Figure 3, we see that fusion affected costly sacrifice as a function of the relative importance participants placed on sectarian or group binding moral values (compared to universal moral values). Fused participants who moralized universal over sectarian values were less likely to condone costly sacrifices than non-fused participants, whereas fused participants who moralized sectarian over universal values were more likely to condone costly sacrifice. There was no three way interaction with religiosity ( $F < 1$ ), and the effect was robust when religiosity was controlled for, suggesting that the effect owes not simply to religiosity per se but to identification with the religious (sectarian) community. The effect was also robust when group identity (Christian, Sunni, Shia) was controlled for.



**Figure 3.** Estimated means for willingness to make costly sacrifices among fused ( $n = 13$ ) and non-fused individuals ( $n = 48$ ) at one SD above and below the mean of sectarian morality. At one SD below the mean of sectarian morality, fused individuals were estimated to be at the bottom of the measure of costly sacrifices.

We found that the effect of fusion on willingness to make costly sacrifice was moderated by other beliefs. For example, we conducted a regression analysis with costly sacrifices as outcome and fusion with religion and group superiority as predictor variables. The predictors explained 10 percent of the variance in support for costly sacrifice,  $F_{3,53} = 3.18, P = 0.031$ . There was a reliable interaction effect,  $F_{1,53} = 5.34, P = 0.025$ , mirroring the effects for sectarian morality. Again, there was no interaction with religiosity,  $F < 1$ , and the effect was robust when religiosity and group identity were controlled for.

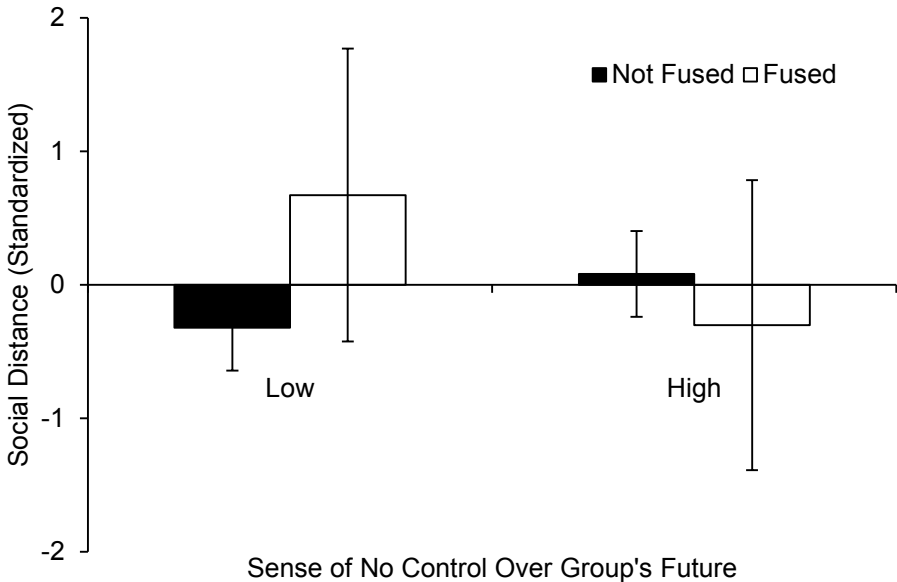
A regression with fusion and sense of control over group's future was only marginally reliable, explaining 12 percent of the variance in costly sacrifices,  $F_{3,56} = 2.602, P = 0.06$ . The interaction term also was only marginally reliable,  $F_{1,56} = 2.865, P = 0.10$ . As indicated in Figure 4, fused individuals were more likely to condone costly sacrifices for the group when they were least fatalistic (i.e., they rejected belief that their group had no control over their future) than non-fused individuals. Fusion did not affect costly sacrifices for fatalistic individuals who believed that their group had little control over their future. There was no interaction with religiosity,  $F < 1$ , and this effect was robust when religiosity and group identity were controlled for.



**Figure 4.** Estimated Means for willingness to make costly sacrifices among fused ( $n = 13$ ) and non-fused individuals ( $n = 48$ ) at one SD above (high) and below the mean (low) of sense of no control over groups future.

A regression with fusion and threat to group interests was not reliable; neither was the regression with fusion and perceived sense of control over group’s future.

We tested to see if sectarian morality, threat to group’s interests, no control over group’s future, and group superiority moderated the relationship between fusion with confessional group and desired social distance. Using social distance as an outcome, we conducted the same interaction analyses we conducted for costly sacrifice. The regression analysis with fusion and sectarian morality as predictors explained 16 percent of the variance in social distance,  $F_{3,54} = 3.523$ ,  $P = 0.02$ , but the interaction term was not reliable,  $F < 1$ . The regression analysis with fusion and threat to group’s interests as predictors proved not reliable,  $F < 1$ . The regression with fusion and sense of control over group’s future explained 13 percent of the variance in social distance,  $F_{3, 57} = 2.918$ ,  $P = 0.04$ . The interaction term was reliable,  $F_{1, 57} = 6.122$ ,  $P = 0.016$  (Figure 5). People who were fused with their religious group and were not fatalistic desired greater social distance from other groups. This effect was not moderated by religiosity, and it was robust when religiosity and



**Figure 5.** Estimated means for social distance among fused ( $n = 13$ ) and non-fused individuals ( $n = 48$ ) at one SD above (high) and below the mean (low) of sense of no control over groups future.

group identity were controlled for. The regression with fusion and group superiority as predictors was not reliable,  $F < 1$ .

We should note there that although the relationship between fusion and social distance was not qualified by sectarian morality, perceived threat to group interests, and group superiority null results must be interpreted with caution given the moderate size of our sample. The broader point is that, as with of costly sacrifice, the effect of fusion with a group on desired social distance from out-groups was moderated by how people construed group relations.

## Conclusion

In an opportunity sample of mostly young adult Lebanese in a current conflict environment, we found that the most important factors for “parochial altruism,” expressed in approval for costly sacrifices, were fusion with a religious (confessional) group and preference for sectarian over universal morality. Sectarian moralists who were fused with their religion approached the ceiling in expressed willingness to support costly sacrifices for the group (e.g., giving your life to defend the group). By contrast, people who fused with their religion, but moralized universal over sectarian values, were least likely to support costly sacrifices and extreme actions for the group. We also found that when people were not fatalistic, rejecting the belief that their community has little control over its future, fusion increased desired distance to out-groups.

Although our findings are in line with the idea that fusion with groups can lead to the willingness to support costly sacrifices and increase social distance with outgroups (Swann et al., 2012), we also find that this effect is contingent on the relative importance that people give to significant group beliefs (whether measured by the relative weight they give to sectarian values, or their level of religiosity). These findings give some empirical support to the devoted actor hypothesis, and suggest that a more complete account of parochial altruism needs to consider both how people feel about their personal relationship with the group and the content of that relationship.

In this preliminary empirical account, we used various proxies of sacred values to investigate the way fusion with the group interacts with beliefs to produce costly sacrifice. This study suggests such interactions, but much work is needed to specify a clear theoretical account of the way sacred values interact with fusion to produce devoted actors (Atran, Sheikh, & Gómez, 2014a, 2014b). We need to more thoroughly investigate the relationship between values and fusion with different entities. One possibility is that our measure of sectarian-universal morality might capture a sacred value regarding how Lebanese life should be organized. For example, if some Lebanese are fused with their sectarian identity, but sacralize the notion of a

superordinate Lebanese identity, then it is straightforward to see why fusion may not lead to self-sacrificial behaviors to fight for the rights of the sectarian group. A related possibility is that those who prize universalist values in Lebanon may have sacralized the value of “ending sectarian conflict,” or they may have sacralized a certain definition of Lebanese identity that promotes positive sectarian relationships. Of course, these possibilities are only speculative for now, and they can only be reconciled through detailed fieldwork that empirically investigates the relationship between costly sacrifice, fusion with identity groups, and the different meanings associated with such groups.

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### **References**

- Anderson, B. (1983) *Imagined Communities*. London: Verso.
- Atran, S. (2010) *Talking to the enemy: Violent extremism, sacred values, and what it means to be human*. Penguin, London.
- Atran, S., & Axelrod, R. (2008) Reframing Sacred Values. *Negotiation Journal* 24:221–246.
- Atran, S., Axelrod, R., & Davis, R. (2007) Sacred barriers to conflict resolution. *Science* 317:1039–1040.
- Atran, S., & Ginges, J. (2012) Religious and sacred imperatives in human conflict. *Science*, 336, 855–857.
- Atran, S., & Ginges, J. (in press) Devoted actors and the moral foundations of intractable inter-group conflict. In *The moral brain*, J. Decety and T. Wheatley, eds. MIT Press, Cambridge, MA.
- Atran, S., & Henrich, J. (2010) The evolution of religion. *Biological Theory* 5:18–30.
- Atran, S., Medin, D., Ross, N., Lynch, E., Vapnarsky, V., Ucan Ek', E., Coley, J., Timura, C., & Baran, M. (2002) Folkecology, cultural epidemiology, and the spirit of the commons: A garden experiment in the Maya Lowlands, 1991–2001. *Current Anthropology* 43:421–450.
- Atran, S., & Norenzayan, A. (2004) Religion's evolutionary landscape. *Behavioral and Brain Sciences* 27:713–770.
- Atran, S., Sheikh, H. & Gómez, Á. (2014a) Devoted actors sacrifice for close comrades and sacred cause. *Proceedings of the National Academy of Sciences, USA* 111, doi:10.1073/pnas.1420474111.

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- Atran, S., Sheikh, H. & Gómez, Á. (2014b) Devoted Actors and willingness to fight. *Clidynamics: The Journal of Theoretical and Mathematical History* 5(1).
- Baumard, N., André, J., & Sperber, D. (2013) A mutualistic theory of morality. *Behavioral and Brain Sciences* 36:59–122.
- Berns, G. & Atran, S. (2012) The biology of cultural conflict. *Philosophical Transactions of the Royal Society B* 367:633–639
- Choi, J.-K., & Bowles, S. (2007) The coevolution of parochial altruism and war. *Science* 318:636–640.
- Cook, R. (1977) Detection of influential observation in linear regression. *Technometrics* 19:15–18.
- Darwin, C. (1871) *The descent of man, and selection in relation to sex*. John Murray, London.
- Dehghani, M., Atran, S. Iliev, Sachdeva, R., Ginges J., & Medin, D. (2010) Sacred values and conflict over Iran's nuclear program. *Judgment and Decision Making* 5:540–546.
- Dunbar, R., Knight, C., & Power, C., eds. (1999) *The evolution of culture*. Edinburgh University Press, Edinburgh.
- Gazzaniga, M., ed. (2009) *The cognitive sciences of moral judgment*. Cambridge, MA: MIT Press.
- Geertz, C. (1973) Religion as a cultural system. In *The interpretation of cultures*, C. Geertz, Pp. 87–125. Basic Books, New York.
- Ginges, J., & Atran S. (2009) Why do people participate in violent collective action: Selective incentives or parochial altruism? *Annals of the New York Academy of Sciences* 1167:115–123.
- Ginges, J., & Atran, S. (2011) War as a moral imperative. *Proceedings of the Royal Society B* 27:2930–2938.
- Ginges, J., Atran, S., Medin, D., & Shikaki, K. (2007) Sacred bounds on the rational resolution of violent political conflict. *Proceedings of the National Academy of Sciences, USA* 104:7357–7360.
- Ginges, J., Hansen, I., & Norenzayan, A. (2009) Religion and popular support for suicide attacks. *Psychological Science* 20:224–230.
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011) Mapping the moral domain. *Journal of Personality and Social Psychology* 101:366–385.
- Hobbes, T. (1901/1651) *Leviathan*. E.P. Dutton, New York.
- Moaddel, M. Kors, J., & Gärde, J. (2012) *Sectarianism and counter-sectarianism in Lebanon*. Population Studies Center Research Report 12-757, University of Michigan.
- <http://www.psc.isr.umich.edu/pubs/pdf/rr12-757.pdf>
- Norenzayan, A., & Shariff, A. (2008) The origin and evolution of religious prosociality, *Science*, 322:58–62.

- Obeid, N. (2012) Distancing on moral domains and intergroup attitudes in a Lebanese context, PhD dissertation, New School for Social Research.
- Rappaport, R. (1999) Ritual and religion in the making of humanity. Cambridge University Press, New York.
- Ray, T., & Fiske, A. (2011) Moral psychology and regulating relationships. *Psychological Review* 118:57–75.
- Rozin, P. Lowery, L., Imada, S., & Haidt, J. (1999) The CAD triad hypothesis: A mapping between three moral emotions (contempt, anger, disgust) and their moral codes (community, autonomy, divinity). *Journal of Personality & Social Psychology* 76:574–586.
- Said, E. (1986) *After the last sky*. Random House, Westminister, MD.
- Sheikh, H., Ginges, J., Coman, A., & Atran, S. (2012) Religion, group threat, and sacred values. *Judgment and Decision Making* 7:110–18.
- Sosis, R., Kress, H., & Boster, J. (2007) Scars for war. *Evolution and Human Behavior* 28:234–247.
- Sperber, D. 1985. Anthropology and psychology: Towards an epidemiology of representations. *Man (N.S.)* 20:73–89.
- Swann, W., Jetten, J., Gómez, Á., Whitehouse, H., & Bastian, B. (2012) When group membership gets personal: A theory of identity fusion. *Psychological Review* 119:441–456.
- Turner, V. (1969) *The ritual process*. Aldine, Chicago.
- White, D., & Johansen, U. (2006) *Network analysis and ethnographic problems*. Oxford: Lexington.
- Whitehouse, H., McQuinn, B., Buhrmester, M., & Swann W. (2014) Brothers in arms: Libyan revolutionaries bond like family. *Proceedings of the National Academy of Sciences, USA* 111, doi:10.1073/pnas.1416284111.
- Wilson, D.S. (2002) *Darwin's cathedral*. University of Chicago Press, Chicago.