



AFRL-AFOSR-UK-TR-2018-0037

---

Ritual Participation, Sacred Values, Violence and Intergroup  
Conflict

Paulo Sousa  
QUEEN'S UNIVERSITY BELFAST  
UNIVERSITY RD  
BELFAST, BT7 1NN  
GB

---

08/15/2018  
Final Report

DISTRIBUTION A: Distribution approved for public release.

Air Force Research Laboratory  
Air Force Office of Scientific Research  
European Office of Aerospace Research and Development

Unit 4515 Box 14, APO AE 09421

<b>REPORT DOCUMENTATION PAGE</b>				Form Approved OMB No. 0704-0188	
<p>The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Executive Services, Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> <p>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ORGANIZATION.</p>					
1. REPORT DATE (DD-MM-YYYY) 15-08-2018		2. REPORT TYPE Final		3. DATES COVERED (From - To) 01 Jan 2015 to 31 Dec 2017	
4. TITLE AND SUBTITLE Ritual Participation, Sacred Values, Violence and Intergroup Conflict				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER FA9550-15-1-0057	
				5c. PROGRAM ELEMENT NUMBER 61102F	
6. AUTHOR(S) Paulo Sousa				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) QUEEN'S UNIVERSITY BELFAST UNIVERSITY RD BELFAST, BT7 1NN GB				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) EOARD Unit 4515 APO AE 09421-4515				10. SPONSOR/MONITOR'S ACRONYM(S) AFRL/AFOSR IOE	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) AFRL-AFOSR-UK-TR-2018-0037	
12. DISTRIBUTION/AVAILABILITY STATEMENT A DISTRIBUTION UNLIMITED: PB Public Release					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <p>he research was in the context of the Northern Ireland conflict (i.e., the conflict between Loyalists/Unionists/Protestants and Republicans/Nationalists/Catholics), but focusing on the more sectarian sections of these two communities. Our aim was to probe the exact nature of radicalization in a situation where intergroup violence has diminished substantially but there are still strong sectarian attitudes. For this, we adopt, as a theoretical framework, the Devoted Actor Model developed by anthropologist Scott Atran and colleagues, which focuses on factors such as sacred values, fusion with the group and threat perception. Our results so far show that, although sectarians in Northern Ireland have sacred values related to group identity that influence dispositions to intergroup violence, they do not evince the backfire pattern of reaction to sacred values evidenced by sectarians in areas of high, violent intergroup conflict. Our results also demonstrate a more nuanced picture of the role of sacred values in context of intergroup conflict. It is not simply sacred values directly related to group identity that influence dispositions to intergroup violence. It is rather, more broadly, sacred values that sustain polarisation in the conflict, whether they are central to characterise group identity (e.g., Northern Ireland being part of the UK for Loyalists/Unionists) or not (e.g., the opposition to same sex marriage by Loyalists/Unionists). Finally, our</p>					
15. SUBJECT TERMS EOARD, Socio-Digital Influence, Ritual Behavior, Group violence					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON IYER, NANDINI
a. REPORT  Unclassified	b. ABSTRACT  Unclassified	c. THIS PAGE  Unclassified			19b. TELEPHONE NUMBER (Include area code) 44 1895 616161

**AFOSR/EOARD  
Final Report**

**Grant Number:** FA9550-15-1-0057

**Research Title:** Ritual Participation, Sacred Values, Violence and Intergroup Conflict

**PI Name:** Dr. Paulo Sousa

**Institution:** Queen's University Belfast, UK

**Period of Performance:** 01 JAN 2015 through 31 December 2017 (31 MARCH 2018)

**ABSTRACT**

The research was in the context of the Northern Ireland conflict (i.e., the conflict between Loyalists/Unionists/Protestants and Republicans/Nationalists/Catholics), but focusing on the more sectarian sections of these two communities. Our aim was to probe the exact nature of radicalization in a situation where intergroup violence has diminished substantially but there are still strong sectarian attitudes. For this, we adopt, as a theoretical framework, the Devoted Actor Model developed by anthropologist Scott Atran and colleagues, which focuses on factors such as sacred values, fusion with the group and threat perception. Our results so far show that, although sectarians in Northern Ireland have sacred values related to group identity that influence dispositions to intergroup violence, they do not evince the backfire pattern of reaction to sacred values evidenced by sectarians in areas of high, violent intergroup conflict. Our results also demonstrate a more nuanced picture of the role of sacred values in context of intergroup conflict. It is not simply sacred values directly related to group identity that influence dispositions to intergroup violence. It is rather, more broadly, sacred values that sustain polarization in the conflict, whether they are central to characterize group identity (e.g., Northern Ireland being part of the UK for Loyalists/Unionists) or not (e.g., the opposition to same sex marriage by Loyalists/Unionists). Finally, our results show that, overall, sacred values are a stronger predictor of violent radicalization than having one's identity totally fused with the group.

I divide this final report into three sections. *First*, I provide background information concerning the topic/objectives of the grant and some special circumstances that influenced the progress of the work related to the grant. *Second*, I delineate what has been accomplished so far in terms of the PhD position attached to the grant, which constituted a major component of the grant. *Third*, I report the progress, in terms of research design, ethical approval, data collection, data analysis and write-up, of each of the four studies that have been pursued in the context of the grant (named, throughout the document, as “Study 1”, “Study 2”, “Study3” and “Study 4”).

## I. BACKGROUND

### **Research Topic**

We are working under the theoretical framework of the Devoted Actor Model of radicalization developed by anthropologist Scott Atran and colleagues, which focuses on the roles of ritual participation, sacred and moral values, fusion with the group, threat perception in promoting radicalization in the context of inter-group conflict (see **references 1**). Our research site is the context of the Northern Ireland conflict (NI conflict), that is, the conflict between Loyalists/Unionists/Protestants and Republicans/Nationalists/Catholics, but focusing on the more sectarian sections of these communities.<sup>1</sup>

### **General Objectives**

- (i) To probe in detail how the variables presence/absence of sacred values, fusion with group, threat perception and ritual participation contribute to radicalization in the context of the sectarian population in NI.
- (ii) To probe the exact nature of radicalization existent in a situation where inter-group violence has diminished substantially, though there are still strong sectarian attitudes.
- (iii) To draw lessons from the NI conflict that may contribute to advance the peace processes in other areas of inter-group conflict.

### **PhD Student**

A major component of the grant was a PhD position, therefore another important objective of the grant was to deliver a successfully completed PhD thesis on the topic delineated above.

### **Some special circumstances**

*Grant confirmation.* The PI applied for this grant by the end of 2013 but received confirmation that he had been awarded the grant only by November of 2014 (and was asked to start the grant as soon as possible). This delay in confirmation had important consequences in terms of the development of the grant. Given the uncertainty caused by the delay in confirmation, Nora Parren, the student who was previously totally engaged in the research (she was, for 2 years, a full-time research assistant in the context of the PI's previous AFOSR/EOARD grant on the topic) and was initially supposed to take the PhD position of the current grant, decided to pursue her PhD elsewhere, starting earlier in 2014. Moreover,

---

<sup>1</sup> Although in Northern Ireland people clearly perceive a group divide between these two communities, the labels “Protestant”, “Unionist” and “Loyalist” (or “Catholic”, “Nationalist” and “Republican”) have different connotations and may not be used or accepted by all the members of each of these communities.

the PI had very little time to select a new PhD student and the selected PhD student, Conall Smyth, although reasonably competent, did not have the ideal experience with research on the topic and with the methodology to be pursued that Nora Parren had. In other words, the aforementioned delay changed substantially the dynamics of the grant because Conall Smyth had much less background than Nora Parren on the topic and methodology of the research to be pursued. In particular, most of the first year was devoted to get Conall acquainted with the project and to support him in the development of a related PhD proposal (see also section 2 below, year 2015).

*HPRO approval.* Although we saw a huge improvement in terms of the process of HPRO approval during the second half of the period of our grant, there was substantial delay in first half of the period. In particular, we sent the material of our Study 1 for HPRO early in January 2016 and received HPRO approval only by the middle of July (18/07/2016). Since the design of subsequent studies depended on the analysis of the results of the first study, this inevitably caused an overall delay in the research of the grant.

*Personal problems.* Conall Smyth, the PhD student attached to the grant, had the birth of his daughter in March of 2017, and his daughter was not well during her first four months. She had hip dysplasia, a problem that took some time to diagnose and treat appropriately. This life change and problem added some additional challenges to Conall that caused delays in terms of his work during 2017.

*Recruitment of participants.* We intended to target the most sectarian populations within Northern Ireland. This is a difficult task to accomplish as many of those previously involved in the conflict are eager to remain anonymous – a consequence of previous research conducted within Northern Ireland in which participant identities had been leaked, known as 'the Boston tapes' scandal. To elaborate, the Boston tapes intended to provide an oral history of The Troubles by interviewing some key players from paramilitary organizations belonging to both sides of the conflict. The agreement was that the former paramilitary members would share their stories in secret and the tapes would not be publically released until they had passed away. However, following a legal battle in 2011 the PSNI (Police Service of Northern Ireland) were given transcripts of some of the interviews. These interviews contained sensitive information, including participant identity, and, as a result of this, some potential participants are now much more unwilling to participate in research in general. Therefore, in order to recruit participants (around 2,500 participants in our studies), we had to spend some good amount of time deciding which potential groups to approach, and in building a trustful relationship with those groups we approached.

## II. CONALL SMYTH'S PHD ACTIVITIES AND PROGRESS

Throughout the period of the grant, Conall Smyth participated in the PI's lab meetings, which occurred normally on a weekly basis, and where the recent literature related to the topic and all aspects related to the research to be carried out in the context of the grant were discussed. These meetings were attended not only by Conall Smyth but also by other MA and PhD students who are part of my research team and are doing research in the context of the NI conflict. These meetings allowed the research to refine and/or modify aspects of the research design, to train research assistants to help with the research, to monitor the progress of the research, and to incorporate new elements when desirable. Besides lab meetings, Conall Smyth had individual meetings with Paulo Sousa concerning the progress of his PhD. These meetings occurred in ad hoc basis, depending on whether the issues related to his PhD were already covered during the lab meetings or not (normally, fortnightly). Below, I focus on Conall's other main activities and progress per each year.

### **Year 2015**

Conall started his PhD in February of 2015. During the first year, the PI had to work closely with him to bring him fully into the topic and general methodology of the research, as well as to give supervisory support for him to become a PhD Candidate, that is, to pass the UK candidacy test (called "differentiation" in the UK). Conall produced a 12,000-word document in which he delineated the import of the current research, a literature review of the relevant literature, and the initial methodology and design of his PhD research. This document was submitted to a panel of researchers and experts within Queen's University Belfast who evaluated and approved the proposed research in December 2015.

### **Year 2016**

*Courses.* "Religion & Conflict" (Duration: 6 weeks; 4 hours per week); "Identity, Conflict, and Public Space" (Duration: 6 weeks; 4 hours per week); "Poster Design" (One-day course; 6 hours); "Protecting Human Research Participants (NIH)"

*Seminar/workshop participation.* "Who caused The Troubles", "The Flag Issue", "Ritual and in-group co-operation", "Dysphoric behaviour and in-group co-operation", "The putative relationship between CREDs/CRUDs and declines in Irish Catholic religiosity", "What affects the moral importance people attribute to humans/animals", "When perceiving the supernatural changes the natural: Religion and agency detection."

*Research Design, Data Collection and Data Analysis.* During 2016, Conall Smyth ran Study 1 and started the analysis of its results. Moreover, he progressed in finalising the details of the design of Study 2.

*Thesis writing.* Conall also started to work in the initial chapters of his PhD dissertation (related to literature review, etc.), by developing the 12,000-word document presented for differentiation (see year 2015).

### **Year 2017 (including the initial 4 months of 2018)**

*Courses.* "Advanced SPSS".

*Seminar/workshop participation.* “Radicalisation in Northern Ireland” (a workshop that occurred twice—once with Lt Col Christopher McClernon (EOARD), and once with Dr. Hammad Sheikh from ARTIS).

*Research Design, Data Collection and Data Analysis.* Conall Smyth finalized the analysis of the results of Study 1. Moreover, in relation to Study 2, Conall finalized the details of its design, collected its data, and is finalizing the analysis of its results.

*Thesis writing and defense.* Conall has continued to work on the writing of his PhD dissertation. To date this includes an introduction, a literature review, as well as draft chapters related to study 1 and study 2. To put this into perspective, Conall is tasked with producing an 80,000-word thesis, and he has now drafted approximately 30,000 words, which is around one-third of the dissertation. He should be finalizing his dissertation by September and defending it by the end of the year. Given that he has just completed 3 years in this PhD, and that it is quite normal for PhD students in the UK to take 4 years to finish their PhD, his progress is satisfactory.

### III. STUDY REPORTS

#### **Study 1**

*Progress summary.* Research design (Completed); HRPO approval (18/07/2016); Data collection (Completed); Data analysis (Completed); Write-up (we are finalizing an article to be submitted in the next two months or so).

*Background.* The sacred-values literature has shown a certain pattern in people’s reasoning about hypothetical peace deals involving sacred values in areas of ongoing intractable conflict all over the world (including Israel, Palestine, Indonesia, India and Iran), called “the backfire effect” (see **references 2**). The pattern is that people involved in strong inter-group conflict do not reason in terms of instrumental rationality when they are offered deals that would exchange their sacred values (i.e., what they consider to be “taboo”) for financial benefits; instead they become even more prone to radicalization, in terms of violent opposition, to defend their sacred values, hence the “backfire effect.” On the other hand, people are more willing to become less radical when they are offered symbolic benefits like apologies. The *main aim* of this study was to probe the backfire effect in the context of Northern Ireland conflict.

A *secondary aim* was to test the relation between sacralisation of values and fusion. The traditional literature on the relation between individual identity and group identity claims that this relation exists exclusively in opposition: increases in the salience of one identity decreases the salience of the other (in one extreme the person feels totally as an individual while in the other the person feels as a deindividuated member of the group) (see **references 3**). Following another more recent tradition, the accept that both identities can be simultaneously active entailing a visceral feeling of “oneness” between the individual and the group (i.e., the personal self can be *fused* with the social self), and that this fusion has important consequences for self-sacrifices for the group or radicalization (see **references 4**).

*Design.* Two surveys were designed for Loyalist/Unionists, with hypothetical peace deals related to territory/identity and national flag. One survey was designed for Republicans/Nationalists, with just the territory deal. Each survey contained 3 conditions (Taboo, Taboo + financial reward, or Taboo + symbolic), giving a total of 9 between-subjects conditions. Republicans/Nationalists were randomly assigned to one of 3 conditions, while



Loyalists/Unionists were randomly assigned to one of 6 conditions. In each condition, participants were presented first with a probe measuring fusion with the group, then with a probe measuring sacredness of an issue, then with the hypothetical peace deal (in one of the 9 conditions), and finally with probes related to (violent or non-violent) reactions to the peace deal (for the complete design see **Appendix 1**).

*Participants.* The total number of participants recruited for the survey was 972 (83.7% of participants were male, 38% within the 26-35 age range, 55.9% were educated to a secondary level, 41.8% earning between £10-£20,000 a year, and 43.7% were single). 351 were Nationalists/Republicans, and while 621 were Unionists/Loyalists (around 100 participants per condition). The survey was administered using an iPad to access Qualtrics. The groups from which we recruited were the following:

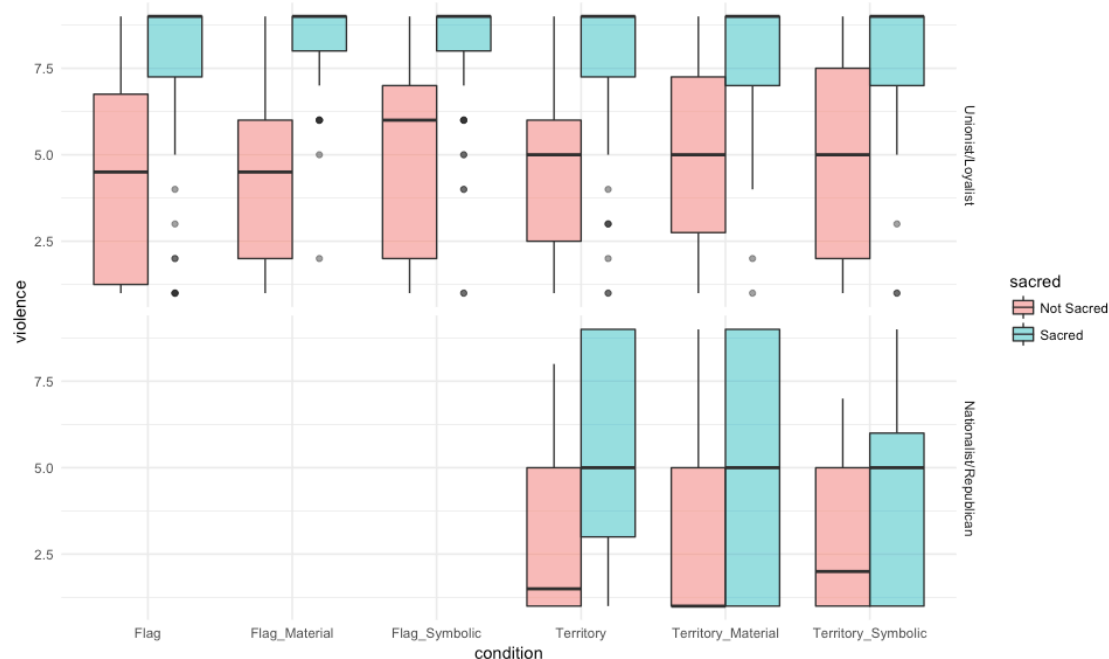
1. *The Falls Road Residents:* The Falls Road is the main road through West Belfast, Northern Ireland, running from Divis Street in Belfast city centre to Andersonstown in the suburbs. Its name is synonymous with the Republican community in the city. This group was made up of residents of The Falls Road.
2. *Sinn Féin party members:* Sinn Féin is the largest Republican political organisation in all of Ireland and the second largest political party in the North, in opposition to the DUP. Leadership of Sinn Féin is historically tied to the Provisional IRA (A paramilitary organisation). Sinn Féin was reborn during the troubles having previously been the original party of the 1916 republican movement. This group was made up of members from Sinn Féin.
3. *Republican Youth Cumann:* A Sinn Féin youth group that has the ability to vote to raise issues as part of Sinn Féin and act as community republican activists in West Belfast.
4. *Tar Anall:* Tar Anall provides a range of support to Republican ex-prisoners and their families. This group was made up of those Republican ex-prisoners that seek the support of Tar Anall.
5. *SDLP:* The SDLP are a left leaning Nationalist party in the north influenced heavily by Catholicism
6. *The Shankill Road Residents:* The Shankill Road is one of the main roads leading through northwest Belfast, Northern Ireland. It runs through the predominantly loyalist working class area known as the Shankill. This group was made up of residents of The Shankill Road.
7. *Loyalist Sandy Row Group:* This group contains many current Loyalist paramilitaries who belong to either the UDA or the UVF. The Sandy Row area of Belfast is predominantly working class, and is staunchly Loyalist.
8. *Shankill Community Association & Suffolk Group:* These groups, also, contain many current paramilitaries belonging to the UVF or the UDA. Their aim is to protect the wellbeing of those from a Unionist/Loyalist working class background. They are, in the main, staunch Loyalists.

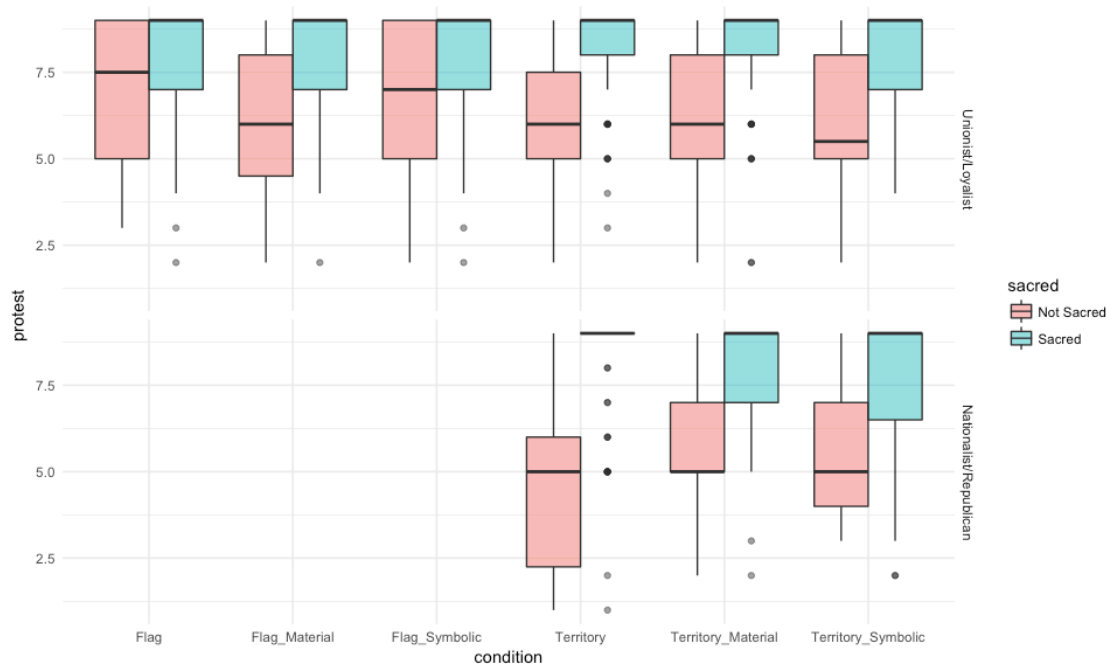
*Measures (Sacredness and Fusion).* Below were the distributions of participants in terms of sacralization of issue and fusion with the group.

<b>Table 1</b>	Not Sacred	Sacred	Total
Loyalist/Unionist: Territory	91	218	309
Loyalist/Unionist: Flags	86	226	312
Republican/Nationalist: Territory	131	220	351
<b>Totals</b>	<b>308</b>	<b>664</b>	<b>972</b>

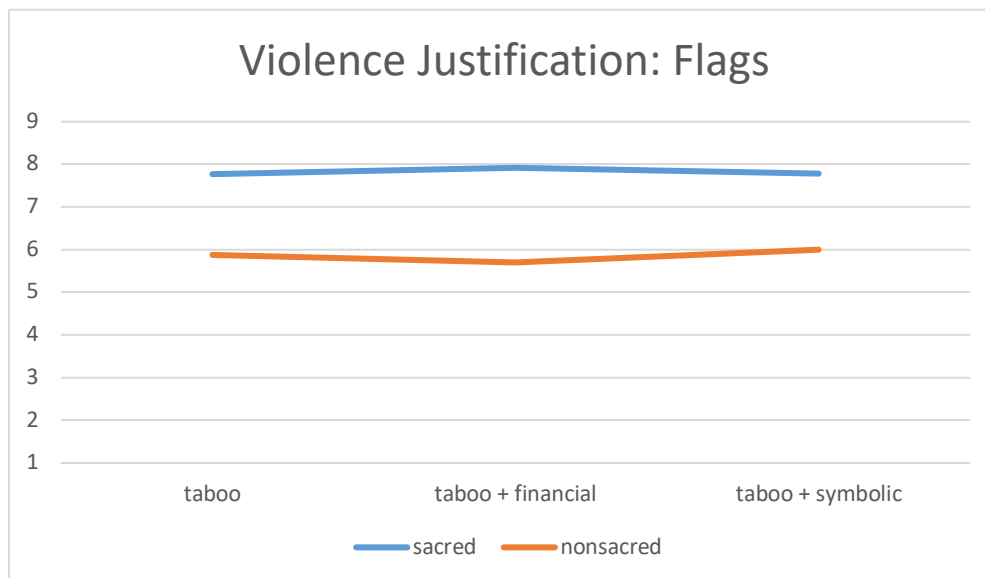
<b>Table 2</b>	Not Fused	Fused	Total
Loyalist/Unionist: Territory	209	100	309
Loyalist/Unionist: Flags	202	110	312
Republican/Nationalist: Territory	210	141	351
<b>Totals</b>	<b>621</b>	<b>351</b>	<b>972</b>

*Results (Backfire effect).* Below are the distributions of responses to the peace deals in each of the nine conditions of the survey, concerning, respectively, the justifiability of a violent reaction (from 1 – completely unjustified, to 9 – completely justified) and the willingness to participate in peaceful protests (from 1 – not willing at all, to 9 – completely willing).

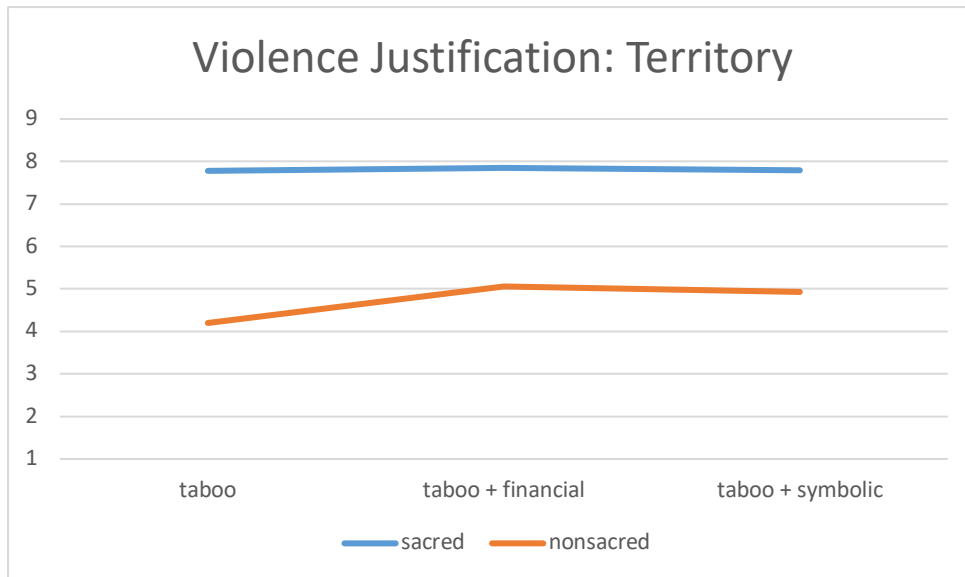




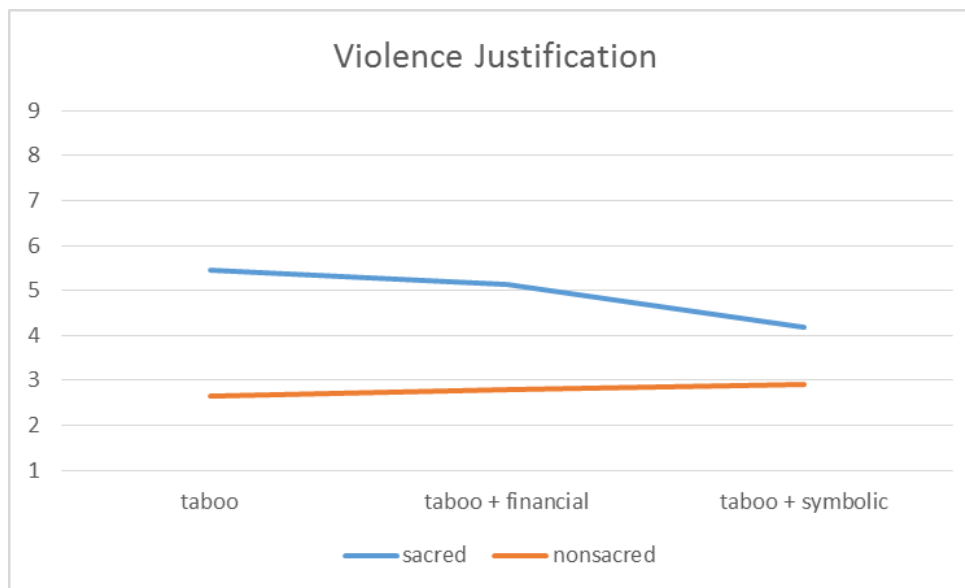
For sacred Unionist/Loyalists who received the flag issue, the mean values for reported justification of violent behaviour dependent on the condition received were as follows: The taboo issue 7.8, the taboo plus financial issue 8, and the symbolic issue 7.8. A one-way ANOVA indicates no effect of condition type on justification of violence –  $F(8,217) = .838$ ,  $p = .57$ . In other words, no backfire effect is evinced.



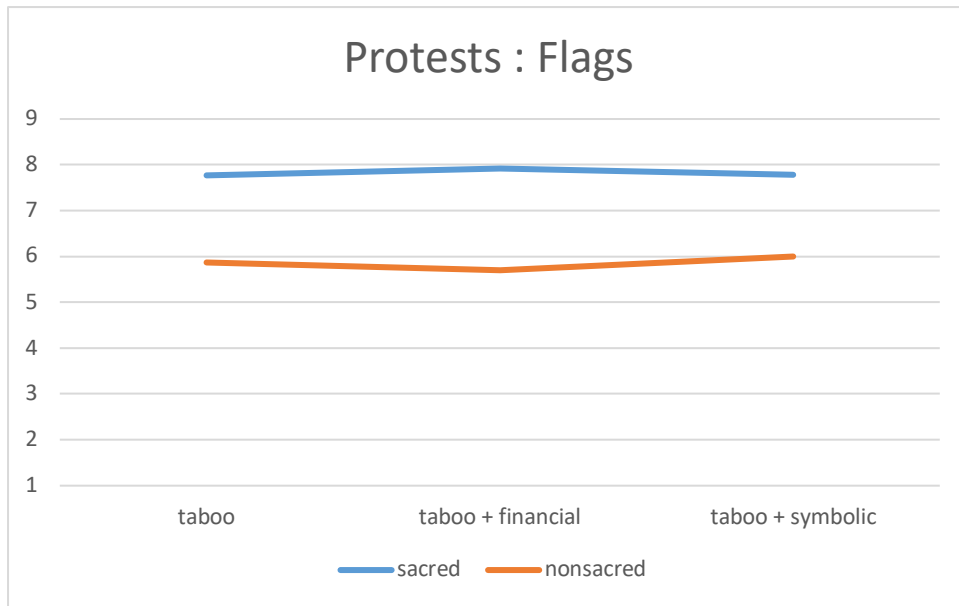
For sacred Unionists/Loyalists who received the territory issue, the mean values for reported justification of violent behaviour dependent on the condition received were as follows: The taboo issue 7.8, the taboo plus financial issue 7.9, and the symbolic issue 7.8. A one-way ANOVA indicates no effect of condition type on justification of violence –  $F(8,209) = 1.10$ ,  $p = .359$ . In other words, no backfire effect is evinced.



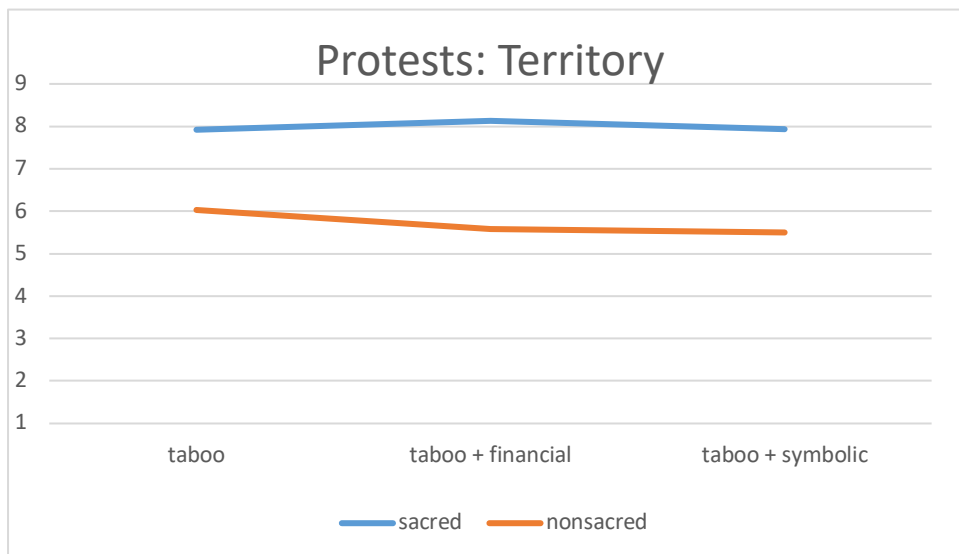
For sacred Nationalists/Republican, the mean values for reported justification of violent behaviour dependent on the condition received were as follows: The taboo issue 5.4, the taboo plus financial issue 5.15, and the symbolic issue 4.2. A one-way ANOVA indicated no effect of condition type on justification of violence –  $F(8,211) = 1.19$ ,  $p = .303$ . In other words, no backfire effect is evinced.



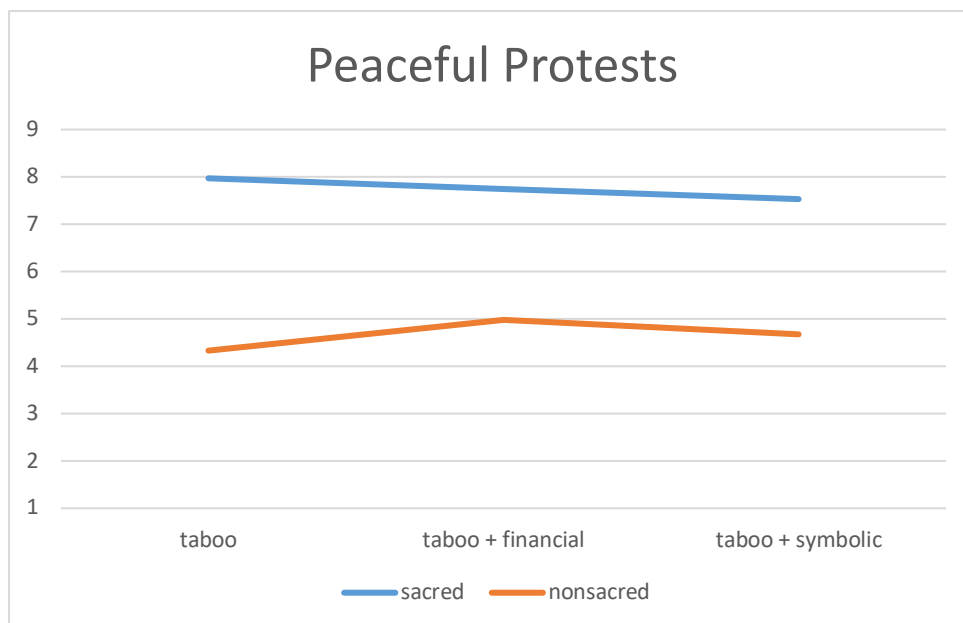
For sacred Unionists/Loyalists who received the flags issue, the mean values for reported willingness to participate in peaceful protests dependent on the condition received were as follows: The taboo issue 7.8, the taboo plus financial issue 7.9, and the symbolic issue 7.8. A one-way ANOVA indicated no effect of condition type on justification of violence –  $F(8,217) = 1.34$ ,  $p = .224$ . In other words, no backfire effect is evinced.



For sacred Unionist/Loyalists who received the territory issue, the mean values for reported willingness to participate in peaceful protests dependent on the condition received were as follows: The taboo issue 8, the taboo plus financial issue 8.1, and the symbolic issue 8. A one-way ANOVA indicated no effect of condition type on justification of violence –  $F(8,209) = .349, p = .946$ . In other words, no backfire effect is evinced.



For sacred Nationalists/Republican, the mean values for reported willingness to participate in peaceful protests dependent on the condition received were as follows: The taboo issue 8, the taboo plus financial issue 7.7, and the symbolic issue 7.5. A one-way ANOVA indicated no effect of condition type on willingness to participate in peaceful protests –  $F(8,211) = 1.20, p = .297$ . In other words, no backfire effect is evinced.



*Results (Sacredness versus fusion as predictors of justifiability of violence and peaceful protests).* Below are the overall correlations (including the whole data set) of the between sacredness, fusion, justifiability of violence and willingness to participate in peaceful protests.

#### Correlations (Loyalists/Unionists)

		Fusion	Sacred	Violence	Protests
Fusion	Pearson Correlation	1	.285**	.287**	.324**
	Sig. (2-tailed)		.000	.000	.000
	N	621	621	621	621
Sacred	Pearson Correlation	.285**	1	.555**	.430**
	Sig. (2-tailed)	.000		.000	.000
	N	621	621	621	621
Violence	Pearson Correlation	.287**	.555**	1	.542**
	Sig. (2-tailed)	.000	.000		.000
	N	621	621	621	621
Protests	Pearson Correlation	.324**	.430**	.542**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	621	621	621	621

\*\*. Correlation is significant at the 0.01 level (2-tailed).

### Correlations Republicans/Nationalists

		Fusion	Sacred	Violence	Protests
Fusion	Pearson Correlation	1	.476**	.416**	.390**
	Sig. (2-tailed)		.000	.000	.000
	N	351	351	351	351
Sacred	Pearson Correlation	.476**	1	.342**	.557**
	Sig. (2-tailed)	.000		.000	.000
	N	351	351	351	351
Violence	Pearson Correlation	.416**	.342**	1	.387**
	Sig. (2-tailed)	.000	.000		.000
	N	351	351	351	351
Protests	Pearson Correlation	.390**	.557**	.387**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	351	351	351	351

\*\* . Correlation is significant at the 0.01 level (2-tailed).

And below are the regressions (for the overall data set, for loyalists/unionists, and for republicans/nationalists) with sacredness and fusion as predictors and justifiability of violence or willingness to participate in peaceful protests as the outcome measure.

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.772	.157		24.000	.000		
	Fusion	.833	.195	.129	4.276	.000	.877	1.140
	Sacred	2.743	.201	.412	13.641	.000	.877	1.140

a. Dependent Variable: **Justifiability of Violence (Overall)**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	4.576	.164		27.845	.000		
Fusion	.775	.191	.140	4.050	.000	.919	1.089
Sacred	3.001	.201	.515	14.957	.000	.919	1.089

a. Dependent Variable: **Justifiability of Violence (Loyalists/Unionists)**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.579	.238		10.829	.000		
Fusion	2.010	.334	.328	6.012	.000	.773	1.293
Sacred	1.156	.339	.186	3.413	.001	.773	1.293

a. Dependent Variable: **Justifiability of Violence (Republicans/Nationalists)**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	5.190	.120		43.332	.000		
Fusion	.957	.148	.189	6.450	.000	.877	1.140
Sacred	2.210	.153	.423	14.424	.000	.877	1.140

a. Dependent Variable: **Peaceful Protests (Overall)**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	5.651	.149		37.804	.000		
Fusion	1.037	.174	.219	5.954	.000	.919	1.089
Sacred	1.822	.183	.368	9.985	.000	.919	1.089

a. Dependent Variable: **Peaceful Protests (Loyalists/Unionists)**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	4.561	.195		23.424	.000		
Fusion	.885	.273	.162	3.239	.001	.773	1.293
Sacred	2.665	.277	.480	9.622	.000	.773	1.293

a. Dependent Variable: **Peaceful Protests (Republicans/Nationalists)**



Finally, two-way ANOVAs to check the interaction between sacredness and fusion showed the following results:

- for *Republicans/Nationalists (territory issue)* on justification of violent behavior,  $F(1, 347) = 3.52, p = .061$ , and on willingness to engage in peaceful protests,  $F(1, 347) = .167, p = .683$ ;
- for *Loyalists/Unionists (territory issue)* on justification of violent behavior,  $F(1, 305) = .434, p = .51$ , and on willingness to engage in peaceful protests,  $F(1, 305) = 3.84, p = .051$ ;
- for *Loyalists/Unionists (flag issue)* on justification of violent behavior,  $F(1, 308) = .007, p = .933$ , and on willingness to engage in peaceful protests,  $F(1, 308) = .011, p = .916$ .

*Discussion.* Although people in Northern Ireland sacralize issues directly related to the conflict, the backfire effect was not evinced. Supposing that our design was appropriate, this indicates that the backfire effect is more prone to occur in situations of intense, violent conflict. Perhaps these situations generate the level threat perception that reinforces sacred values in a way that tends to generate the backfire effect. In relation to the relative power of sacredness and fusion as predictors of sacrifices for a group related value, our results show that, overall, sacredness is a stronger predictor than fusion, and that these predictors may interact only in certain circumstances.

## Study 2

*Progress summary.* Research design (Completed); HRPO approval (22/05/2017); Data collection (Completed); Data analysis (Completed); Write-up (we are finalizing an article that should be submitted in the next two months or so).

*Background.* While Study 1 focused primarily on the backfire effect and self-sacrifice related to a specific group issue, Study 2 focused in more detail on the variables relevant to the Devoted Actor Model (see references 1), dealing not only with values directly related to group identity but also with values that may indirectly sustain conflict via polarization.

*Design.* After identifying themselves as part of one of the two conflicting communities (i.e., as Loyalists/Unionists or as Republicans/Nationalists) participants were probed whether they were fused with the community (for the complete design, see **Appendix 2**).<sup>2</sup> They were then presented with a series of issues, some directly related to the Northern Ireland conflict, some unrelated (or not directly related) to it. The issues were:

Issues not directly related to the conflict in itself

1. I support/oppose Brexit.
2. I support/oppose the United Kingdom accepting an increased number of Syrian refugees.
3. I support/oppose a woman's freedom to decide on matters of abortion.

---

<sup>2</sup> The Devoted Actor Model also emphasizes an additional claim concerning an alignment in terms of what is called "local fusion", that is, in terms of a person having his identity fused with a small kin-like group of friends (a band of brothers) sharing the same sacred values—e.g., a person who, besides being fused with the more abstract social identity *Republican*, is fused with a small kin-like group of Republican friends. We also probed local fusion in this study, but the results are too complicated to include in this report (these results are discussed in the article we are preparing).

4. I support/oppose the increase of legal immigration in Northern Ireland.
5. I support/oppose same sex marriage.

Issues directly related to the conflict

1. I support/oppose strict limitations on the number of days the Union flag may be flown over public buildings.
2. I support/oppose Northern Ireland remaining in the United Kingdom.
3. I support/oppose a referendum on Irish reunification within the next 5 years (i.e., during the term of the current Assembly).
4. I support/oppose introducing legislation to promote and protect the Irish language in Northern Ireland
5. I support/oppose legislation to promote integrated education.

After each of these issues, participants were presented with the following three questions:

1. Is there any amount of money that would convince you to give up this position?  
( ) No ( ) Yes, how much: \_\_\_\_\_
2. Would you give up this position if it led to a great benefit for society or your community (e.g., more jobs or safety)?  
( ) No ( ) Yes
3. Would you give up this position if the vast majority of your community decides to give up this position?  
( ) No ( ) Yes

Answering “no” to the first two questions would evince that the participant had a sacralized position. Finally, participants were asked to imagine that the situation in Northern Ireland gets worse and that their community (Loyalist/Unionist or Republican/Nationalist community) becomes at risk, and to indicate what they would do in this situation. Participants were asked all the following actions that they would be willing to take in order to defend the interests of their community:

- ( ) Nothing at all
- ( ) Campaign on social media
- ( ) Petition the Government
- ( ) Convince people face to face
- ( ) Attend a rally
- ( ) Provide financial support for political causes
- ( ) Go on strike risking lose your job
- ( ) Participate in violent protest
- ( ) Risk jail
- ( ) Support people who are engaged in armed struggle
- ( ) Join the armed struggle

*Participants.* 744 Northern Irish citizens were recruited and asked to complete the study on ‘Qualtrics’ online survey tool ( $M_{age} = 34$ ; 79% were male). The majority (61%) had not completed any college while 38% had at least some college education. The sample comprised 44% who were single and 40% who were married (the remainder were separated, divorced or widowed). The majority of participants reported their household income to be “about average” (55 %) and a third as “below average” (33%). 392 participants represent the

Unionist/Loyalist community, and 352 will the Nationalist/Republican community. Participants were recruited from the following groups:

1. *Ardoyne Residents Collective*. Ardoyne is a working class and mainly Catholic and Irish Republican district in North Belfast, Northern Ireland. It gained notoriety due to the large number of incidents during The Troubles. This is a group within Ardoyne.
2. *Ex-Provisional IRA members*. This group of participants were made up of ex-provisional IRA members. The Provisional Irish Republican Army (IRA or Provisional IRA) was an Irish republican paramilitary organization that sought end of British rule in Northern Ireland, facilitate the reunification of Ireland and to bring about an independent socialist republic encompassing all of Ireland.
3. *Falls Road security men*. This group was made up of ex paramilitaries whom have been offered the opportunity to undertake a course in security, in an attempt to provide support and guidance to ex paramilitaries.
4. *Sandy Row residents*. Sandy Row is a street in south Belfast, Northern Ireland. It lends its name to the surrounding residential community, which is predominantly Protestant working-class and associated with staunch Loyalism.
5. *East Belfast residents*. East Belfast would be considered a mainly Protestant and Unionist/Loyalist area in Belfast.
6. *Ex-UDA members*. The Ulster Defense Association (abbreviated UDA) is the largest Ulster loyalist paramilitary and vigilante group in Northern Ireland.

*Predictor Measures (fusion, positions on issues, conflict-sustaining positions, and sacredness)*. 15% of Republicans/Nationalists were fused with their community, while only 3% of Loyalists/Unionists were fused with theirs. The percentage of participants choosing each of the positions on the 10 issues are indicated in Table 3. It is important to note that there was polarization between the two communities even in relation to issues that are not directly related to the conflict (e.g., the two communities were polarized in relation to Brexit). We classify the positions on each issue that contribute to sustain or exacerbate the conflict between the two communities as a conflict-sustaining position (in Table 3, the percentages in bold indicate the conflict-sustaining positions). For example, in relation to the Union Flag issue, a Republican holding the position that the Union Flag should only be flown on public buildings on designated days and a Loyalist holding the position that The Union Flag should fly on public building every day of the year are classified as conflict-sustaining positions while the remaining positions on this issue are not. Or, in relation to the Brexit issue, a Republican opposing Brexit and a Loyalist defending Brexit are classified as conflict-sustaining positions while the remaining positions on this issue are not. It is important to note that this classification does not necessarily imply Republicans/Nationalists and Loyalists/Unionists having contrasting positions on an issue. For example, in relation to the Integrated Schools issue, given that Integrated Schools promote peace between the two communities, the opposition to Integrated Schools is a conflict-sustaining position for both Republicans/Nationalists and Loyalists/Unionists.

Table 3. Percentage of participants adopting positions to the issues (percentages in bold represent conflict-sustaining positions)

Issue	Positions	Rep.	Loyal.
Directly related to Northern Irish Conflict			
Flying the Union Flag	I support strict limitations on the number of days the Union flag may be flown over public buildings.	<b>87%</b>	2%
	I oppose strict limitations on the number of days the Union flag may be flown over public buildings.	13%	<b>98%</b>
NI and UK Relation	I support Northern Ireland remaining in the United Kingdom.	6%	<b>100%</b>
	I oppose Northern Ireland remaining in the United Kingdom.	<b>94%</b>	0%
Reunification Referendum	I support a referendum on Irish reunification within the next 5 years (i.e., during the term of the current Assembly).	<b>97%</b>	3%
	I oppose a referendum on Irish reunification within the next 5 years (i.e., during the term of the current Assembly).	3%	<b>97%</b>
Irish Language Status	I support introducing legislation to promote and protect the Irish language in Northern Ireland	<b>98%</b>	3%
	I oppose introducing legislation to promote and protect the Irish language in Northern Ireland	2%	<b>97%</b>
Integrated Schools	I support legislation to promote integrated education.	91%	6%
	I oppose legislation to promote integrated education.	<b>9%</b>	<b>94%</b>
Unrelated to Northern Irish Conflict in itself			
Refugees	I support the United Kingdom accepting an increased number of Syrian refugees.	<b>47%</b>	6%
	I oppose the United Kingdom accepting an increased number of Syrian refugees.	53%	<b>94%</b>
Abortion	I support a woman's freedom to decide on matters of abortion.	<b>90%</b>	7%
	I oppose a woman's freedom to decide on matters of abortion.	10%	<b>93%</b>
Brexit	I support Brexit.	1%	<b>89%</b>
	I oppose Brexit.	<b>99%</b>	11%
Immigration	I support the increase of legal immigration in Northern Ireland .	<b>45%</b>	4%

	I oppose the increase of legal immigration in Northern Ireland .	55%	<b>96%</b>
Same Sex Marriage	I support same sex marriage.	<b>92%</b>	10%
	I oppose same sex marriage.	8%	<b>90%</b>

Table 4 shows the percentage of participants who hold a conflict-sustaining position (as identified in Table 4) as sacred. We combined the responses into a reliable sum score for conflict-sustaining sacred values,  $M = 3.83$ ,  $SD = 1.33$ ,  $\alpha = .67$ , and one for not conflict-sustaining related sacred values,  $M = 3.24$ ,  $SD = 1.61$ ,  $\alpha = .74$ .

Table 4. Conflict-sustaining Sacred Values.

Issue	Republican	Loyalist
Union Flag	56%	91%
UK and NI Relation	89%	98%
Reunification	79%	93%
Irish Language	81%	91%
Integrated Schools	4%	89%
Brexit	1%	82%
Refugees	26%	90%
Abortion	71%	88%
Immigration	41%	92%
Same Sex Marriage	72%	85%

*Outcome Measures (self-sacrifice for the group).* As indicated above, we assessed 10 actions people would be willing to take to defend their community “if it became at risk.” A factor analyses of all items revealed two underlying factors (see Table 5). *Financial Support* still showed cross-loadings but so did *Going on Strike*, albeit to a lesser degree. Excluding these two items, we summed the remaining items into two reliable composite scores for nonviolent actions,  $\alpha = .94$ ,  $M = 1.96$ ,  $SD = 1.95$ , and violent actions,  $\alpha = .94$ ,  $M = 0.95$ ,  $SD = 1.61$ . Both measures were bimodal, with the majority of people either willing to take no action at all or all of them. For this reason, we dichotomized the measures: 56% of

participants were willing to take a nonviolent action, while only 29% were willing to take a violent action.

Table 5. "Factor Loadings of Sacrifices"

	MR1	MR2
Campaign on social media	-0.08	0.95
Petition the Government	-0.05	0.95
Convince people face to face	-0.09	0.94
Attend a rally	0.11	0.89
Provide financial support	0.42	0.65
Go on strike	0.71	0.29
Participate in violent protest	0.92	0.04
Risk Jail	0.95	-0.07
Support to armed struggle	0.94	-0.02
Join armed struggle	0.92	-0.11

*Results.* We used probit regressions to examine if our main predictors had an effect on the dependent measures (i.e., nonviolent and violent actions), while controlling for community, gender and age effects. *Fusion with community* was a significant predictor of nonviolent action in the expected direction, but did not predict violent actions at all (see Table 6).

Table 6. Regression Models for Fusion with Community (\*p<0.05; \*\*p<0.01).

Dependent variable:		
	NonViolent > 0 probit	Violent > 0 probit
Fusion	0.474** (0.175)	0.222 (0.166)
Age	-0.010 (0.005)	0.014** (0.005)
Gender	0.136 (0.122)	-0.203 (0.129)
Community	-0.395** (0.100)	-0.555** (0.106)
Constant	0.495* (0.249)	-0.494 (0.257)

*Conflict-sustaining sacred values* was a significant predictor for both outcome measures (see Table 7). The more conflict-sustaining positions one considered sacred the more one was willing to defend the group violently. However, with increasing numbers of

conflict-sustaining sacred values, participants were less likely to engage in nonviolent action.<sup>3</sup>

Table 7. Regression Models for Conflict-Sustaining Sacred Values (CSSV) (\*p<0.05; \*\*p<0.01).

Dependent variable:		
	NonViolent > 0 probit	Violent > 0 probit
CSSV	-0.192** (0.050)	0.111* (0.051)
Age	-0.004 (0.005)	0.015** (0.005)
Gender	0.123 (0.123)	-0.158 (0.129)
Community	-0.187 (0.120)	-0.752** (0.129)
Constant	0.995** (0.294)	-0.903** (0.301)

We followed up this analysis with not conflict-sustaining sacred values as predictors (see Table 8). Not conflict-sustaining sacred values negatively predicted non-violent action, but did not predict violent actions. However, when conflict-sustaining sacred values are entered into the model, the effect of not conflict-sustaining sacred values on non-violent actions becomes non-significant,  $p = .69$ .

Table 8. Regression Models for Not Conflict-Sustaining Sacred Values (NCSSV) (\*p<0.05; \*\*p<0.01).

Dependent variable:		
	NonViolent > 0 probit	Violent > 0 probit
NCSSV	-0.100* (0.043)	-0.038 (0.045)
Age	-0.006 (0.005)	0.016** (0.005)
Gender	0.141 (0.122)	-0.191 (0.128)
Community	-0.246 (0.135)	-0.505** (0.141)

<sup>3</sup> We also tested the interaction term of conflict-sustaining sacred values with fusion with the community. The interaction term was only significant for non-violent actions,  $p < .01$ : sacred values negatively predicted nonviolent actions (disengagement) for people who were not fused with their community but positively predicted nonviolent actions when people were fused with their community.

Constant	0.645*	-0.463
	(0.271)	(0.277)

*Discussion.* Our results give a more nuanced picture of the role of sacred values in context of intergroup conflict. It is not only sacred values directly related to group identity that influence radicalization in terms of violence. It is rather, more broadly, sacred values that contribute to sustain or exacerbate the conflict, whether they are central to characterize group identity (e.g., Northern Ireland being part of the UK for Loyalists/Unionists) or not (e.g., the opposition to same sex marriage by Loyalists/Unionists). Moreover, the results show that conflict-sustaining sacred values may have an inverse relation with non-violent actions, suggesting that the more one sacralizes position that sustain a conflict, the less one is willing to entertain this path of opposition. On the other hand, fusion with community was only predictive of non-violent action and interacted with conflict-sustaining actions only in this respect.

### Study 3<sup>4</sup>

*Progress summary.* Research design (Completed); HRPO approval (21/07/2017); Data collection (Finalizing data collection in April 2018).

*Background and overall design.* Many neighborhoods in Belfast are divided along sectarian lines, which are called “interface areas”, and these areas often involve “peace walls” erected to manage the conflict between the two communities. This study is a large survey aiming to investigate whether the proposition to remove the peace walls in Belfast increases the level of perceived intergroup threat among area residents. It also investigates what effects this perceived threat has on individuals living in close proximity to the walls. More specifically, it investigates the correlation between perceived threat (both intergroup threat and threat in relation to the removal of the peace walls) and four other variables: (1) identity fusion, (2) endorsement of radical behavior, (3) sacred values (4) and subjective well-being (see **Appendix 3** for the complete design).

*Participants.* 600 participants will complete the study, with 300 identifying as Nationalists/Republicans, and 300 as Unionists/Loyalists. Of these participants, an equal number will have identified their proximity to a peace wall as either “I live directly next to a peace wall”, or “I live within a few streets of a peace wall”, or “I do not live near a peace wall”. We also strive to ensure that an equal number of men and women participate in the survey. The groups and organizations that we are working with to distribute the survey are as follows:

- Short Strand Community Forum
- 174 Trust
- Forthspring
- Suffolk Lenadoon Interface Group
- Intercomm
- Charter NI
- Linc

---

<sup>4</sup> Studies 3 & 4 are related to the work of another PhD student of mine, Adam Gilreach, whose work I incorporated in the grant, as point out in my previous report.



- Upper Springfield Development Trust
- Duncairn Partnership
- Lower Shankill Community Association
- Belfast Conflict Resolution Consortium
- Ligoniel Improvement Association
- Community Relations Council
- Greater Shankill Action for Community Transformation

## Study 4

*Progress summary.* Research design (Completed); HRPO approval (01/23/2018); Data collection (Finalizing data collection in May, 2018).

*Background.* This lab study aims to investigate whether individuals living in close proximity to peace walls in Belfast have a similar attentional bias towards threat as do patients with anxiety disorders. It will also measure whether people living near peace walls have higher levels of general anxiety and depression compared to other areas of Belfast. Research has shown that individuals with anxiety disorders tend to have an attentional bias towards threat-related stimuli. This could be due to a heightened level of perceived threat, resulting in anxious individuals becoming hyper-vigilant to potential threats. To test this, this research will investigate the correlation between living proximity to peace walls and anxiety disorders, depression, and attentional bias towards threat-related stimuli. Attentional bias will be measured using a attention bias computer task, which measures attentional biases towards specific visual stimuli (in the instance of this study, this will consist of different facial expressions of individuals). See **Appendix 4** for the complete design.

*Participants.* 75 Northern Irish adult citizens will be recruited to complete this study. Participants for this study will be recruited through community organizations and groups located throughout the targeted communities (same organizations of Study 3). The “community contacts” will assist the researchers in connecting them with residents in these target communities so that participants may complete the study in person at a neutral location, such as a community center in their neighborhood. In the first sample, 25 participants will be recruited from communities who live in close proximity to a peace wall in Belfast. The second sample will recruit 25 participants from non-interfaced areas in Belfast. The third sample will recruit 25 participants from interface areas of Belfast that are not located in close proximity to a physical barrier (i.e. peace wall).

## References (see corresponding numbers in the text)

### 1. Devoted Actor Model

Atran, S. (2016). The devoted actor: unconditional commitment and intractable conflict across cultures. *Current Anthropology*, 57(S13), S192-S203.

Atran, S., Sheikh, H., & Gomez, A. (2014). For Cause and Comrade: Devoted Actors and Willingness to Fight. *Cliodynamics: The Journal of Quantitative History and Cultural Evolution*, 5(1).

Atran, S., Sheikh, H., & Gomez, A., (2015). Devoted Actors Sacrifice for Close Comrades and Sacred Cause. *Proceedings of the National Academy of Sciences*, 111(50), 17702-17703.

Gomez, A., Lopez-Rodriguez, L., Sheikh, H., Ginges, J., Wilson, L., Waziri, H., Vazquez, A., Davis, R., & Atran, S., (2017). Will to Fight: Devoted Actors and the Spiritual Dimension of Human Conflict. *Nature Human Behavior*, 1(9), 673-679.

Sheikh, H., Gomez, A., & Atran, S., (2016). Empirical Evidence for the Devoted Actor Model. *Current Anthropology*, 57(S13).

Sheikh, H., Atran, S., Ginges, J., Wilson, L., Obeid, N., & Davis, R. (2014). The Devoted Actor as Parochial Altruist: Sectarian Morality, Identity Fusion, and Support for Costly Sacrifices. *Cliodynamics: The Journal of Quantitative History and Cultural Evolution*, 5(1).

Sheikh, H., Ginges, J., & Atran, S. (2013). Sacred Values in the Israeli-Palestinian Conflict: Resistance to social influence, temporal discounting, and exit strategies. *Annals of the New York Academy of Sciences*, 1299, 11-24.

Sheikh, H., Ginges, J., Atran, S. & Coman, A. (2012). Religion, group threat and sacred values. *Judgement and Decision Making*, 7(2), 110–118.

## **2. Backfire effect**

Atran, S., Axelrod, R. & Davis, R. (2007). Sacred barriers to conflict resolution. *Science*, 317, 1039–1040.

Dehghani, M., Atran, S., Iliev, R., Sachdeva, S., Medin, D. & Ginges, J. (2010). Sacred values and conflict over Iran's nuclear program. *Judgment and Decision Making*, 5, 540–546

Dehghani, M., Iliev, R., Sachdeva, S., Atran, S., Ginges J. & Medin, D. (2009) Emerging sacred values: The Iranian nuclear program. *Judgment and Decision Making* 4, 990- 993.

Ginges, J., Atran, S., Medin, D., Shikaki, K. (2007). Sacred bounds on rational resolution of violent political conflict. *Proceedings of the National Academy of Sciences* , 104 (18), 7357–7360.

Ginges, J. & Atran, S. (2009). Non-instrumental reasoning over sacred values: an Indonesian field experiment. In D. M. Bartels, C. W. Bauman, L. J. Skitka & D. L. Medin (Eds.), *Psychology of Learning and Motivation, Vol. 50: Moral Judgment and Decision Making* (pp. 194–206). San Diego: Academic Press.

Sachdeva, S & Medin, D. L. (2009). Group Identity Salience in Sacred Value Based Cultural Conflict: An Examination of the Hindu-Muslim Identities in the Kashmir and Babri Mosque Issues. *In the Proceedings of the 31st Annual Conference of the Cognitive Science Society (CogSci), Washington, D.C.*

## **3. Traditional models of social identification**

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. *The social psychology of intergroup relations*, 33(47), 74.

Hornsey, M. J. (2008). Social identity theory and self-categorization theory: A historical review. *Social and Personality Psychology Compass*, 2(1), 204-222.

Ellemers, N., & Haslam, S. A. (2011). Social identity theory. *Handbook of theories of social psychology*, 2, 379-98.

#### 4. Identity fusion

Swann Jr, W. B., Gómez, A., Seyle, D. C., Morales, J., & Huici, C. (2009). Identity fusion: The interplay of personal and social identities in extreme group behavior. *Journal of personality and social psychology*, 96(5), 995.

Swann Jr, W. B., Jetten, J., Gómez, Á., Whitehouse, H., & Bastian, B. (2012). When group membership gets personal: a theory of identity fusion. *Psychological review*, 119(3), 441.

Swann Jr, W. B., & Buhrmester, M. D. (2015). Identity fusion. *Current Directions in Psychological Science*, 24(1), 52-57.

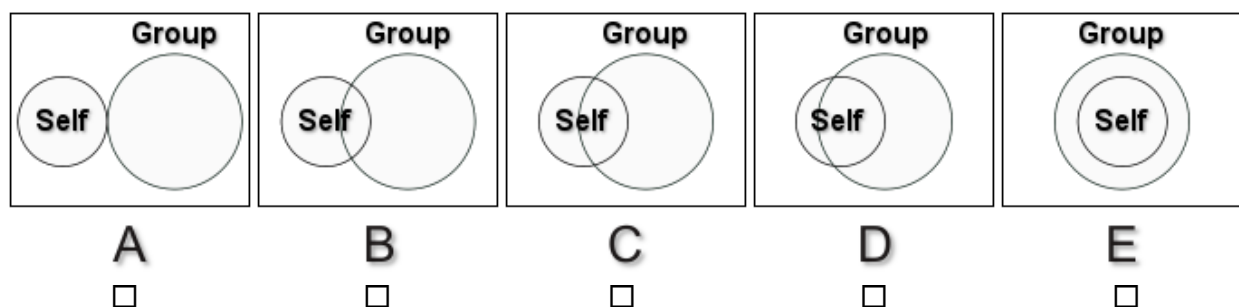
#### Appendix 1 (Study 1)

##### I. Identification and Fusion measures (Common for all participants – all 9 conditions)

Please select which of the following you MOST identify with:

- A. Loyalist/Unionist
- B. Republican/Nationalist
- C. None of the above

Which picture below best represents your relationship with your group (i.e. Loyalist/Unionists, Republicans/Nationalists)?



Participant identity will decide which survey each participant receives. Those participants who identify as Loyalist/Unionist (A) will receive survey 1 *or* 2. Those participants who identify as Republicans/Nationalists (B) will receive survey 3. People who do not identify with A, or B will not be eligible for the study. Each survey will be custom made to suit the appropriate population, with tailor made sacredness and conditional measures. Following the sacredness measure, all participants will be randomly allocated to 1 of 3 conditions, *commensurable*, *commensurable plus financial incentive*, and *commensurable plus symbolic incentive* within their given survey. The design for each population is outlined below.

## II. Survey 1: Loyalists/Unionists and Flags (3 conditions)

How would you feel about the Irish tricolour being flown at the Belfast City Hall?

- A. It would be totally acceptable.
- B. I would not object to this.
- C. It would be acceptable only if the benefits were great enough.
- D. It wouldn't be acceptable no matter how great the benefits.

**\*\* ONE of the following trade-offs will be presented, at random**

*Condition 1: Commensurable*

Suppose that a political agreement was organized between the Loyalist/Unionist and Republican/Nationalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) **Loyalists/Unionists** would allow the Irish tricolour flag to be flown daily at the Belfast City Hall.
- b) On their part, **Republicans/Nationalists** would allow the Union flag to be flown daily at the City Hall as well.

*Condition 2: Commensurable plus financial benefits*

Suppose that a political agreement was organized between the Loyalist/Unionist and Republican/Nationalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) **Loyalists/Unionists** would allow the Irish tricolour flag to be flown daily at the Belfast City Hall.
- b) On their part, **Republicans/Nationalists** would allow the Union Flag to be flown daily at the City Hall. In addition, as an incentive to accept the agreement, each family in a Loyalist/Unionist neighbourhood in Northern Ireland would receive £2,000 a year for 15 years, in terms of economic assistance.

*Condition 3: Commensurable plus symbolic benefits*

Suppose that a political agreement was organized between the Loyalist/Unionist and Republican/Nationalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) **Loyalists/Unionists** would allow the Irish tricolour flag to be flown daily at the Belfast City Hall.
- b) On their part, **Republicans/Nationalists** would allow the Union Flag to be flown daily at the City Hall. In addition, Republicans/Nationalists would publically apologize for all the wrongs done to Loyalists/Unionists in Northern Ireland.

## III. Survey 2: Loyalists/Unionists and Territory (3 conditions)

1. How would you feel if it was ruled that Northern Ireland would unify with the Republic Of Ireland to create a United Ireland?

- A. It would be totally acceptable.
- B. I would not object to this.
- C. It would be acceptable only if the benefits were great enough.

D. It wouldn't be acceptable no matter how great the benefits.

**\*\* ONE of the following trade-offs will be presented, at random**

*Condition 1: Commensurable*

Suppose that a political agreement was organized between the Loyalist/Unionist and Republican/Nationalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) On their part, **Loyalists/Unionists** would agree that Northern Ireland would unify with the Republic Of Ireland to create a United Ireland.
- b) On their part, **Republicans/Nationalists** would agree that there would still be two separate political decision-making bodies in each Ireland, and Loyalists/Unionists would have 55% of places secured in the Northern Irish decision making body.

*Condition 2: Commensurable plus financial benefits*

Suppose that a political agreement was organized between the Loyalist/Unionist and Republican/Nationalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) On their part, **Loyalists/Unionists** would agree that Northern Ireland would unify with the Republic Of Ireland to create a United Ireland.
- b) On their part, **Republicans/Nationalists** would agree that there would still be two separate political decision-making bodies in the United Ireland, and the Loyalists/Unionists would always be guaranteed 55% places in the Northern Irish decision making body. In addition, as an incentive to accept the agreement, each family in a Loyalist/Unionist neighbourhood in Northern Ireland would receive £2,000 a year for 15 years, in terms of economic assistance.

*Condition 3: Commensurable plus symbolic benefit*

Suppose that a political agreement was organized between the Loyalist/Unionist and Republican/Nationalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) On their part, **Loyalists/Unionists** would agree that Northern Ireland would unify with the Republic Of Ireland to create a United Ireland.
- b) On their part, **Republicans/Nationalists** would agree that there would still be two separate political decision-making bodies in each Ireland, and Loyalists/Unionists would have 55% of places secured in the Northern Irish decision making body. In addition, Republicans/Nationalists would apologize for all the wrongs done to Loyalists/Unionists in Northern Ireland.

**IV. Survey 3: Republicans/Nationalist and Territory (3 conditions)**

1. How would you feel if it was ruled that any type of attempt, peaceful or violent, to achieve a United Ireland should be completely abandoned?

A. It would be totally acceptable.

- B. I would not object to this.
- C. It would be acceptable only if the benefits were great enough.
- D. It wouldn't be acceptable no matter how great the benefits.

**\*\* ONE of the following trade-offs will be presented, at random**

*Condition 1: Commensurable*

Suppose that a political agreement was organized between the Nationalist/Republican and Unionist/Loyalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) On their part, **Nationalists/Republicans** would agree that any type of attempt, peaceful or violent, for a United Ireland should be completely abandoned
- b) On their part, **Unionists/Loyalists** would agree that Nationalists/Republicans would always be guaranteed 55% places in the Northern Irish government.

*Condition 2: Commensurable plus financial benefits*

Suppose that a political agreement was organized between the Nationalist/Republican and Unionist/Loyalist communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) On their part, **Nationalists/Republicans** would agree that any type of fight for a United Ireland should be completely abandoned
- b) On their part, **Unionists/Loyalists** would agree that Nationalists/Republicans would always be guaranteed 55% places in the Northern Irish government. In addition, as an incentive to accept the agreement, each family in a Nationalist/Republican neighbourhood in Northern Ireland would receive £2,000 a year for 15 years, in terms of economic assistance.

*Condition 3: Commensurable plus symbolic benefits*

Suppose that a political agreement was organized between the Nationalist/Republicans and Unionists/Loyalists communities in Northern Ireland. This was a difficult process and both sides had to give things up. Under this agreement:

- a) On their part, **Nationalists/Republicans** would agree that any type of fight for a United Ireland should be completely abandoned
- b) On their part, **Unionists/Loyalists** would agree that Nationalists/Republicans would always be guaranteed 55% places in the Northern Irish government. In addition, Unionists/Loyalists would apologize for all the wrongs done to Nationalists/Republicans in Northern Ireland.

**V. Dependent Measures (All participants: All 9 conditions)**

**1** Would you find this political agreement acceptable?

Certainly No (1), No (2), Don't Know (3), Yes (4), Certainly Yes (5)

2. When you think about this political agreement, what feelings/emotions come to your mind? Choose the two options that best describe your feelings (Options: Humiliation, Pride,

Sadness, Happiness, Dissatisfaction, Satisfaction, Disgust, Guilt, Anger, Neutral)

First option ----- Second option -----

3. What is your best guess of the percentage of Loyalists/Unionists (Republicans/Nationalists) who would be in favour of this political agreement?

----- (note percentage).

4. Do you think this political agreement could be peacefully and successfully implemented?

Certainly No (1), No (2), Don't Know (3), Yes (4), Certainly Yes (5)

5. How justified do you think that Loyalists/Unionists (Republicans/Nationalists) would be in using violence to fight this political agreement?

Completely unjustified (1), (2), (3), (4), (5), (6), (7), (8), (9) Completely justified

6. How willing would you be to participate in non-violent protests against this political agreement?

Completely unwilling (1), (2), (3), (4), (5), (6), (7), (8), (9) Completely willing

**Please indicate how much you agree with the following statements**

7. My family and I are in danger because of the Northern Ireland conflict.  
(ranging from 1 "strongly disagree" to 7 "strongly agree")

8. My family and I have felt that we were in danger in the past because of the Northern Ireland conflict.  
(ranging from 1 "strongly disagree" to 7 "strongly agree")

9. I feel that other members of my community are in danger because of the Northern Ireland conflict. (ranging from 1 "strongly disagree" to 7 "strongly agree")

10. Thank you for answering our questions. Would you like to give us any additional feedback about these issues or about this survey?

.....

## **VI. Demographic, Religiosity & Ritual Participation (All participants: All 9 conditions)**

The following demographic measures will be part of the survey.

Please indicate your:

1. Gender: ( ) Male ( ) Female

2. Please state your age. \_\_\_\_\_

3. Education level: ( ) Primary ( ) Secondary ( ) Some College ( ) Some University ( ) College Degree ( ) University Degree

4. Household Annual income: ( ) £0 to £10,000 ( ) £10,000 to £20,000 ( ) £20,000 to £40,000 ( ) £40,000 to £70,000 ( ) £70,000 or more

5. Marital status: ☐ married ☐ single ☐ divorced ☐ widowed ☐ separated
6. Political affiliation: ☐ DUP ☐ Sinn Fein ☐ SDLP ☐ UUP ☐ PUP ☐ Alliance ☐ None ☐ Other \_\_\_\_\_
7. Religion: ☐ Protestant ☐ Catholic ☐ Other \_\_\_\_\_
8. Do you believe in God or any other supernatural being? ☐ Yes ☐ No ☐ No Opinion
9. How often do you converse with religious figures, including God, asking for help, advice, or giving thanks? ☐ Never ☐ Rarely ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily
10. How often do you recite religious prayers alone? ☐ Never ☐ Rarely ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily
11. How often do you recite religious prayers in group outside the context of a religious service? ☐ Never ☐ Rarely ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily
12. How often do you attend a religious service? ☐ Never ☐ Rarely ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily

**\*\*\* Those who identified with group A (Loyalist/Unionist) will then be presented with the following:**

13. Are you a member of, or support, a loyalist musical band? ☐ Yes ☐ No
14. Are you a member of, or support, a loyalist order? ☐ Yes ☐ No
15. How often do you attend or participate in loyalist parades during the marching season? ☐ Never ☐ Every other month ☐ Monthly ☐ Fortnightly ☐ Weekly

**\*\*\* Those who identified with group B (Republican/Nationalist) will then be presented with the following:**

13. Are you a member of, or support, a GAA club? ☐ Yes ☐ No
14. How often do you attend or participate in events related to a GAA club? ☐ Never ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ More than once a week

## **Appendix 2 (Study 2)**

### **I. Background information measures**

1. Gender: ☐ Male ☐ Female ☐ Other
2. Please state your age: \_\_\_\_\_ years
3. Number of children: \_\_\_\_\_
4. Education level: ☐ Primary ☐ Secondary ☐ College Degree ☐ University Degree ☐ MA ☐ PhD
5. Have you attended an integrated school?
- ☐ Primary integrated school ☐ Secondary integrated school ☐ None
- 6a. How would you describe the student mix of your primary school?
- ☐ All or nearly all Protestants
- ☐ Mostly Protestants
- ☐ About half and half
- ☐ Mostly Catholics



☐ All or Nearly all Catholic

☐ I don't know/remember

6b. How would you describe the student mix of your secondary school?

☐ All or nearly all Protestants

☐ Mostly Protestants

☐ About half and half

☐ Mostly Catholics

☐ All or Nearly all Catholic

☐ I don't know/remember

7. Household Annual income: ☐ £0 to £10,000 ☐ £10,000 to £20,000 ☐ £20,000 to £40,000

☐ £40,000 to £70,000 ☐ £70,000 or more ☐ I prefer not to respond

8. Marital status: ☐ single ☐ married ☐ separated ☐ divorced ☐ widowed

9. Political affiliation: ☐ Alliance ☐ Sinn Fein ☐ SDLP ☐ UUP ☐ PUP ☐ DUP ☐ None

## II. Religiosity measures

1. Religion: ☐ Presbyterian ☐ Church of Ireland ☐ Brethren ☐ Roman Catholic

☐ Reformed Presbyterian ☐ Free Presbyterian ☐ Baptist ☐ Methodist ☐ None of the above

2. How important is religion in your life?

☐ Not at all important ☐ Somewhat Important ☐ Important ☐ Very Important ☐ Most important thing in my life

3. Do you believe in God?

☐ No ☐ Yes ☐ No Opinion

4. Do you believe in any other supernatural being?

☐ No ☐ Yes, please specify: \_\_\_\_\_

5. How often do you intimately address God, asking for help, advice, or giving thanks?

☐ Never ☐ Rarely ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily

6. How often do you attend a religious service?

☐ Never ☐ Rarely/Holidays ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily

7. How often do you pray with others, outside of a religious service?

☐ Never ☐ Rarely/Holidays ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily

8. How often do you pray alone, outside of a religious service?

☐ Never ☐ Rarely ☐ Monthly ☐ Fortnightly ☐ Weekly ☐ Daily

## III. Identification measures

1. How do you identify or label yourself? (Choose all options that you could apply to yourself).

- ☐ Protestant      ☐ Catholic      ☐ Irish      ☐ British      ☐ Northern Irish  
☐ Unionist      ☐ Nationalist      ☐ Loyalist      ☐ Republican  
☐ None of the above

2. We realize that the way you identify or label yourself is complex. But in this survey we are also interested in the general social-political conflict in Ulster (Known as “The Troubles” before the peace agreement). For this purpose, we will to use the broad expressions “Nationalist/Republican community” and “Unionist/Loyalist community” to refer to each of the two sides of the conflict. With this in mind, which of the following options best describes you?

- ☐ Member of the Unionist/Loyalist Community  
☐ Member of the Nationalist/Republican Community  
☐ Member of both communities  
☐ Not a member of either community

#### **IV. Community Involvement measures**

##### **(Unionist/Loyalist ONLY)**

6. Are you a member of, or support, a Unionist/Loyalist musical band (e.g., marching bands, flute bands, etc)? ☐ Yes ☐ No

**\*\*Those who answer ‘Yes’ will be asked Question 7, those who answer ‘No’ will skip to Question 8.**

7. How often do you attend or participate in related events? ☐ Never ☐ Once or twice a year  
☐ Every other month ☐ Monthly ☐ Fortnightly ☐ Weekly

8. Are you a member of, or support, a Unionist/Loyalist order (e.g., Orange order, Royal Black Institution, etc)? ☐ Yes ☐ No

**\*\*Those who answer ‘Yes’ will be asked Question 9, those who answer ‘No’ will skip to Question 10.**

9. How often do you attend or participate in related events? ☐ Never ☐ Once or twice a year  
☐ Every other month ☐ Monthly ☐ Fortnightly ☐ Weekly

10. Are you a member of, or support, a NI supporters or Glasgow Rangers supporters club? ☐ Yes ☐ No

**\*\*Those who answer ‘Yes’ will be asked Question 11, those who answer ‘No’ will skip to Question 12.**

11. How often do you attend or participate in related events? ( ) Never ( ) Rarely ( ) Monthly ( ) Fortnightly ( ) Weekly ( ) More than once a week

12. Do you speak Ulster Scots? ( ) Yes ( ) No

**(Nationalist/Republican ONLY)**

13. Are you a member of, or support, a Nationalist/Republican musical band (e.g. marching bands, Bik McFarlane, Damien Quinn, Gerry Og, etc.)? ( ) Yes ( ) No

**\*\*Those who answer 'Yes' will be asked Question 14, those who answer 'No' will skip to Question 15.**

14. How often do you attend or participate in related events? ( ) Never ( ) Rarely ( ) Monthly ( ) Fortnightly ( ) Weekly ( ) Daily

15. Are you a member of, or support, a Nationalist/Republican social club (e.g., The Felons, The PD, etc.)?

**\*\*Those who answer 'Yes' will be asked Question 16, those who answer 'No' will skip to Question 17.**

16. How often do you attend or participate in related events? ( ) Never ( ) Rarely ( ) Monthly ( ) Fortnightly ( ) Weekly ( ) Daily

17. Are you a member of, or support, a GAA (Gaelic Athletic Association) or Glasgow Celtic supporters club?

**\*\*Those who answer 'Yes' will be asked Question 18, those who answer 'No' will skip to Question 19.**

18. How often do you attend or participate in related events? ( ) Never ( ) Rarely ( ) Monthly ( ) Fortnightly ( ) Weekly ( ) Daily

19. Do you speak Gaelige? ( ) Yes ( ) No

**V. Fusion measures**

How do you feel about your relationship with your family? Below you see two circles with increasing overlap. The small circle represents you; the large circle represents your family. Which one of the following depictions best represents your relationship with your family?

**<fusion pictorial measure related to fusion with your family>**

Now, think about your relationship with this group of friends that you feel so close to that you consider them brothers and sisters, if you have any such friends (if you don't have such friends, skip this question). Which one of the following depictions best represents your relationship with these close friends?

**<fusion pictorial measure related to fusion with your close friends>**

Now think about your relationship with the broader Nationalist/Republican (Unionist/Loyalist) community in Northern Ireland/the North of Ireland? Which one of the following depictions best represents your relationship with the Nationalist/Republican (Unionist/Loyalist) community?

**<fusion pictorial measure related to fusion with your community>**

**VI. Sacred Values Measures**

Please indicate your position in relation to each of the following issues and answer the following questions.

*Non-Conflict-Related Issues:*

3. I support/oppose Brexit.
4. I support/oppose the United Kingdom accepting an increased number of Syrian refugee.
3. I support/oppose a woman's freedom to decide on matters of abortion.
4. I support/oppose the increase of legal immigration in Northern Ireland.
5. I support/oppose same sex marriage.

*N.I Conflict Related Issues*

6. I support/oppose strict limitations on the number of days the Union flag may be flown over public buildings.
7. I support/oppose Northern Ireland remaining in the United Kingdom.
8. I support/oppose a referendum on Irish reunification within the next 5 years (i.e., during the term of the current Assembly).
9. I support/oppose introducing legislation to promote and protect the Irish language in Northern Ireland
10. I support/oppose legislation to promote integrated education.

*Three questions following each of the issues were:*

1. Is there any amount of money that would convince you to give up this position?  
( ) No ( ) Yes, how much: \_\_\_\_\_
2. Would you give up this position if it led to a great benefit for society or your community (e.g., more jobs or safety)?  
( ) Yes ( ) No

3. Would you give up this position if the vast majority of your community decides to give up this position?

☐ Yes ☐ No

## VII. Parochial altruism measures

You and your community

Imagine what would happen if the situation in North of Ireland gets worse and the Nationalist/Unionist community become at risk. In this situation, to what extent do you think people from your community would approve of a person doing the following things.

	Strongly Disapprove	Disapprove	Neither Approve nor Disapprove	Approve	Strongly Approve
1. A person who fights for their community	1	2	3	4	5
2. A person who risks losing their job and undergoing hardship to fight for their community	1	2	3	4	5
3. A person who risks the safety of their family and children to fight for their community	1	2	3	4	5
4. A person who risks dying to fight for their community	1	2	3	4	5

Please select all the actions that you would be willing to take in order to defend the interests of the Nationalist/Republican(Unionist/Loyalist) community in North of Ireland.

- ☐ Nothing at all
- ☐ Campaign on social media
- ☐ Petition the Government
- ☐ Convince people face to face
- ☐ Attend a rally
- ☐ Provide financial support for political causes
- ☐ Go on strike risking lose your job

- ( ) Participate in violent protest
- ( ) Risk jail
- ( ) Support people who are engaged in armed struggle
- ( ) Join the armed struggle

### **Appendix 3 (Study 3)**

#### **I. At the start of each survey, participants will be asked the following questions:**

1. I confirm that I am 18 years of age or older.
  - ☐ Yes
  - ☐ No
2. Which of the following options BEST describes you? We realize that the way you identify or label yourself may be more complicated than this, but for the purpose of this survey we are interested only in the general social-political divide between Unionists/Loyalists and Nationalists/Republicans.
  - ☐ Unionist/Loyalist
  - ☐ Nationalist/Republican
  - ☐ None of the above

**Participant identity will decide which survey each participant receives. People who select “none of the above” will not be eligible for the study. Each survey will be custom made to suit the appropriate population, with tailor made sacredness and conditional measures.**

3. I am from the North of Ireland (*if Unionist/Loyalist: Northern Ireland*) and currently live in the North of Ireland (*if Unionist/Loyalist: Northern Ireland*).
  - ☐ Yes
  - ☐ No

#### **II. Perceived Threat/Peace Wall Measures**

*In May 2013, the Northern Ireland Executive committed to the removal of all peace lines by mutual consent by the year 2023. We would like to ask you a few questions to get your opinion about this decision.*

##### **II.a Threat & Peace Wall Measures (Peace Wall Perceived Threat Index)**

*Please indicate how much you agree or disagree with the following statements:*

1. The peace walls keep me and my community safe.
2. Both my personal and my community's well-being would improve with the removal of the peace walls.
3. The violent crime rate would rise if the peace walls were removed.
4. I believe I could be a victim of violent crime if the peace walls were removed.

5. My family and I would feel in danger if the peace walls were removed.
6. I feel that other members of my community would be in danger if the peace walls were removed.
7. When I think about the removal of the peace walls, I feel as though my community's identity is under threat.

*Measured with a 7-point Likert scale from 1 = Strongly Disagree to 7 = Strongly Agree*

## **II.b Emotions toward peace walls**

1. When you think about the removal of the peace walls, what feelings/emotions come to your mind? Choose the two options that best describe your feelings/emotions, among the following:  
*Sadness, Satisfaction, Happiness, Pride, Calm, Fear, Anger, Distress, Neutral, Dissatisfaction*

## **II.c Perceived Intergroup Threat Measures**

*Please indicate how much you agree or disagree with the following statements:*

1. I would feel threatened if the political parties representing [Out-Group] were solely in power in Northern Ireland.
2. If the political parties that [Out-Group] vote for got into power, they would work toward the benefit of all people in Northern Ireland, whether [In-Group] or [Out-Group].
3. In certain areas, I would be afraid of being identified as [Out-Group].
4. When I see a [Out-Group Flag] flown in an area, I feel as though my [In-Group] identity is under threat.
5. I feel threatened when [Out-Group] express their identity and celebrate their cultural traditions.

*Measured with a 7-point Likert scale from 1 = Strongly Disagree to 7 = Strongly Agree*

## **III. Verbal Identity Fusion Scale**

*To what extent do you agree with the following statements concerning your relationship with the group you most identify with (i.e. Unionists/Loyalists and Nationalists/Republicans)?*

1. I am one with my group
2. I feel immersed in my group
3. I have a deep emotional bond with my group
4. My group is me
5. I am strong because of my group
6. I make my group strong

*Measured with a 7-point Likert scale from 1 = strongly disagree to 7 = strongly agree.*

#### **IV. Activism & Radicalization Intention Scale (ARIS)**

*Please indicate how much you agree or disagree with the following statements:*

1. I would join/belong to an organization that fights for my group's political and legal rights.
2. I would donate money to an organization that fights for my group's political and legal rights.
3. I would volunteer my time working (i.e. write petitions, distribute flyers, recruit people, etc.) for an organization that fights for my group's political and legal rights.
4. I would travel for one hour to join in a public rally, protest, or demonstration in support of my group.
5. I would continue to support an organization that fights for my group's political and legal rights even if the organization sometimes breaks the law.
6. I would continue to support an organization that fights for my group's political and legal rights even if the organization sometimes resorts to violence.
7. I would participate in a public protest against oppression of my group even if I thought the protest might turn violent.
8. I would attack police or security forces if I saw them beating members of my group.
9. I would go to war to protect the rights of my group.
10. I would retaliate against members of a group that had attacked my group, even if I couldn't be sure I was retaliating against the guilty parties.

*Measured with a 7-point Likert scale from 1 = completely disagree to 7 = completely agree.*

#### **V. Sacred Values Measures**

##### **General Issues/Values Items**

*Please select whether you support or oppose the following:*

1. I support/oppose compulsory vaccinations.
2. I support/oppose a woman's freedom to decide on matters of abortion.
3. I support/oppose the death penalty.
4. I support/oppose same sex marriage.
5. I support/oppose the use of torture in interrogations.

##### **Northern Ireland Conflict Related Issues**

1. I support/oppose strict limitations on the number of days the Union flag may be flown over public buildings.
2. I support/oppose Northern Ireland remaining in the United Kingdom.
3. I support/oppose a United Ireland.
4. I support/oppose a referendum on Irish reunification within the lifetime of the next Assembly.
5. I support/oppose increasing the budget for shared-future and cross-community relations projects.
6. I support/oppose the removal of the peace walls in Northern Ireland.



*After each of these items is presented, participants will be asked a follow up question:*

Is there any amount of money that you would accept to change your position?

☐ Yes

☐ No

## **VI. Satisfaction with Life Scale**

*Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.*

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

*Measured with a 7-point Likert scale from 1 = strongly disagree to 7 = strongly agree.*

## **VII. Demographic Questions**

1. How far do you live from the nearest Peace Wall?
  - ☐ I live beside or next to a peace wall
  - ☐ I live within a few streets of the nearest peace wall
  - ☐ I live more than a few streets away from a peace wall
  - ☐ I'm not sure how far away the nearest one is
  - ☐ Don't know
2. Gender
  - ☐ Male ☐ Female
3. Please state your age. \_\_\_\_\_
4. Education level:
  - ☐ Primary ☐ Secondary ☐ Some College ☐ Some University ☐ College Degree
  - ☐ University Degree
5. Household Annual income
  - ☐ £0 to £10,000 ☐ £10,000 to £20,000 ☐ £20,000 to £40,000 ☐ £40,000 to £70,000 ☐ £70,000 or more
6. Marital status:
  - ☐ married ☐ single ☐ divorced ☐ widowed ☐ separated
7. Political affiliation:
  - ☐ DUP ☐ Sinn Fein ☐ SDLP ☐ UUP ☐ PUP ☐ Alliance ☐ None ☐ Other \_\_\_\_\_
8. Religion:
  - ☐ Protestant ☐ Catholic ☐ Other \_\_\_\_\_

## Appendix 4 (Study 4)

**I. Computer Task Procedure.** Participants will first complete the visual dot probe task. Outlined below is the participant procedure and details of the equipment and stimuli that will be used during the task.

1. Each participant will be seated at a desk in a quiet room and instructed to sit approximately 50 cm (arm's length) from a touch screen laptop computer.
2. The participant will be instructed to place his/her hands on the handprints outlined on the desk to ensure that the participants' hands are in the same place at the onset of every trial.
3. Before the task begins, a research assistant will provide participants with instructions on how to use the touch screen monitor. Participants will also be given several practice trials so that they may become familiar with the touch screen device and procedure before beginning the test trials.
4. Prior to the start of the test trials, participants will be instructed again to find the targets (angry faces) and touch them on the screen as quickly as possible. They should then return his/her hands to the handprints.
5. Using the Matrix program developed by Rutgers, participants will be presented with 24 test trials which will each consist of 4 squares (2x2 matrix), each containing one target image (angry face) and three distracter images (neutral faces) from the NimStim face set. An equal number of male and female faces will be used of white ethnic background. See image below as an example.



**After completing the computer task, participants will be asked to complete the survey portion of the study, which consists of demographic questions and two anxiety measures:**

## **II. Generalized Anxiety Disorder assessment scale (GAD-7)**

Over the last 2 weeks, how often have you been bothered by the following problems?

1. Feeling nervous, anxious, or on edge
2. Not being able to stop or control worrying
3. Worrying too much about different things
4. Trouble relaxing
5. Being so restless that it's hard to sit still
6. Becoming easily annoyed or irritable
7. Feeling afraid as if something awful might happen

*0 = Not at all sure; 1 = Several days; 2 = Over half the days; 3 = Nearly every day*

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

- ☐ Not difficult at all
- ☐ Somewhat difficult
- ☐ Very difficult
- ☐ Extremely difficult

## **III. Patient Health Questionnaire (PHQ-9)**

Over the last 2 weeks, how often have you been bothered by the following problems?

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead or of hurting yourself in some way

*0 = Not at all sure; 1 = Several days; 2 = Over half the days; 3 = Nearly every day*

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

- ☐ Not difficult at all
- ☐ Somewhat difficult
- ☐ Very difficult

- ☐ Extremely difficult

#### **IV. Demographic questions**

1. How far do you live from the nearest Peace Wall?
  - ☐ I live beside or next to a peace wall
  - ☐ I live within a few streets of the nearest peace wall
  - ☐ I do not live near a peace wall
2. Gender
  - ☐ Male
  - ☐ Female
3. Age
  - ☐ 18-24 years old
  - ☐ 25-34 years old
  - ☐ 35-44 years old
  - ☐ 45-54 years old
  - ☐ 55-64 years old
  - ☐ 65-74 years old
  - ☐ 75 years or older
4. Which of the following options BEST describes you? We realize that the way you identify or label yourself may be more complicated than this, but for the purpose of this study we are interested only in the general social-political divide between Unionists/Loyalists and Nationalists/Republicans.
  - ☐ Unionist/Loyalist
  - ☐ Nationalist/Republican
  - ☐ None of the above
5. Education level:
  - ☐ Primary
  - ☐ Secondary
  - ☐ Some College
  - ☐ Some University
  - ☐ College Degree
  - ☐ University Degree
6. Have you attended an integrated school?
  - ☐ Primary integrated school
  - ☐ Secondary integrated school
  - ☐ No
7. How would you describe the student mix of your primary school?
  - ☐ All or nearly all Protestants
  - ☐ Mostly Protestants

- ☐ About half and half
- ☐ Mostly Catholics
- ☐ All or Nearly all Catholic
- ☐ I don't know/remember

8. How would you describe the student mix of your secondary school?

- ☐ All or nearly all Protestants
- ☐ Mostly Protestants
- ☐ About half and half
- ☐ Mostly Catholics
- ☐ All or Nearly all Catholic
- ☐ I don't know/remember

9. Household Annual income

- ☐ £0 to £10,000
- ☐ £10,000 to £20,000
- ☐ £20,000 to £40,000
- ☐ £40,000 to £70,000
- ☐ £70,000 or more

10. Marital status:

- ☐ married
- ☐ single
- ☐ divorced
- ☐ widowed
- ☐ separated

11. Political affiliation:

- ☐ DUP
- ☐ Sinn Fein
- ☐ SDLP
- ☐ UUP
- ☐ PUP
- ☐ Alliance
- ☐ None
- ☐ Other \_\_\_\_\_

12. Religion:

- ☐ Protestant
- ☐ Catholic
- ☐ Other \_\_\_\_\_