Leveraging Wedge Issues Among Populations Susceptible to the Influence or Control of the Islamic State

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ISIS has been arguably the world's most dynamic countercultural force, with the largest extraterritorial volunteer fighting force since WWII, involving people from nearly 90 nations (Atran 2015a,b; Atran & Hamid, 2015). Despite its defeat in 2019, it aims to expand its influence across the world and destroy ours. As with any revolutionary vanguard, lack of mass popular initial support is not, in itself, a hindrance to its growth (Atran, 2015c). For obvious reasons, military responses alone are not enough to defeat ISIS completely and facilitate the emergence of a less noxious successor. In fact, ISIS explicitly (e.g., in the manifesto that is required reading for every ISIS amir, "The Management of Chaos / Savagery," Idarat at-Tawahoush, Naji, 2004) planned terrorist attacks to drive America and its allies into direct warfare to produce the confrontation and propaganda that they need: to force host populations that do not support ISIS but cannot arm themselves or move to seek ISIS' s protection; to increase the rush of refugees in order to help destabilize NATO and our European allies; and to light up the Internet so as to incite greater violence with images of the West attacking Muslim lands. The goal of Artis is to help our country and allies defeat ISIS by harnessing knowledge and use of non-kinetic means that could bolster willingness to resist and fight among ISIS' s target and host populations, rival militant groups, and our battlefield allies.

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Validate the reliability of the static/dynamic measures of: a) wedge issues, b) sacred values, c) devoted actor(s), d) variations of spiritual and physical formidability, e) and other developed measures across the different susceptible and supporting ISIS Populations.

Contents

INTRODUCTION

ISIS has been arguably the world's most dynamic countercultural force, with the largest extraterritorial volunteer fighting force since WWII, involving people from nearly 90 nations (Atran 2015a,b; Atran & Hamid, 2015). Despite its defeat in 2019, it aims to expand its influence across the world and destroy ours. As with any revolutionary vanguard, lack of mass popular initial support is not, in itself, a hindrance to its growth (Atran, 2015c). For obvious reasons, military responses alone are not enough to defeat ISIS completely and facilitate the emergence of a less noxious successor. In fact, ISIS explicitly (e.g., in the manifesto that is required reading for every ISIS amir, "The Management of Chaos / Savagery," Idarat at-Tawahoush, Naji, 2004) planned terrorist attacks to drive America and its allies into direct warfare to produce the confrontation and propaganda that they need: to force host populations that do not support ISIS but cannot arm themselves or move to seek ISIS's protection; to increase the rush of refugees in order to help destabilize NATO and our European allies; and to light up the Internet so as to incite greater violence with images of the West attacking Muslim lands. The goal of Artis is to help our country and allies defeat ISIS by harnessing knowledge and use of non-kinetic means that could bolster willingness to resist and fight among ISIS's target and host populations, rival militant groups, and our battlefield allies.

In the 8 years since ISIS declared itself a Caliphate, the group and it's affiliates have mounted 11,126 attacks globally (Global Terrorism Database, 2020). Shortly after its inception, ISIS's reach into susceptible populations across the globe became evident in attacks in Paris, London, Ankara, Istanbul, Beirut, Sinai, Aden, Lake Chad, Tunis, Dhaka, Jakarta and San Bernardino, Brussels and Manchester. According to French authorities, with which our team was in contact (as advisors to French inter-ministerial committees reporting to the Prime Minister, National Assembly and Senate), the November 2015 attacks in Paris were perpetrated through a network involving: first and second generation immigrants from Europe; friends, family, and fellow travelers from North Africa; and the MENA refugee pipelines that extend through Turkey, Greece, the Balkans, Germany, Italy, Spain and into the Molenbeek borough of Brussels. This network and others related to successful and thwarted ISIS attacks in France, Spain, Morocco and Tunisia presented an opportunity to understand the wedge issues between Western European and North African populations and ISIS. Artis's objective regarding susceptible populations was to understand pathways of resistance to ISIS's alluring call to glory, salvation and world change, to hinder members of these communities from: 1) being tolerant or sympathetic towards ISIS, 2) turning a blind eye or providing it material support, and 3) directly acting against local populations in the name of ISIS.

Our proposed research aimed to develop methods of identifying issues and messaging that would assist in combating groups like ISIS, denying their potential recruits as well as the support of constituent populations. To-date in the "War on Terror" development and exploitation of issues that can create a "wedge" between populations and extremist movements have tended to be ad hoc, following anecdotal evidence and utility models of human action. Apart from CBRN programs, arguably most of our efforts at enhancing global security have failed, including our social, cultural and political initiatives. Consider that the 9/11 attacks cost between $400,000 and $500,000 (9/11 Commission), whereas the response by the US alone is on the order of 10 million times that figure (Brown University War Costs Project), including related security arrangements and military actions that make up the vast bulk of that spending. On a strictly cost-benefit basis, the violent movement of which Al

Qaeda and now ISIS are the spearheads has been wildly successful, at least on a global scale, and increasingly so. This suggested a need to explore very different theoretical and policy frameworks for action.

In our discussions with the HMG Daesh Task Force in the UK (formerly HMG ISIS Task Force) and with USG diplomatic and military personnel, the potential wedge issues mentioned were overwhelmingly material problems framed in negative terms. For example:

- Between ISIS and "moderate" Islamists: imposition of religious rule without consensus, squandering the momentum of Islamist progress.
- Between ISIS and other Islamist groups: leadership bickering.
- Between ISIS and Syrian Opposition: ISIS squandering momentum of the revolution; bolstering Assad, Iran.
- Between ISIS foreign and local recruits: preferential treatment of European recruits; perceived use of foreign volunteers with no specialized education or skills as "cannon fodder," former Baathists monopolizing leadership in Iraq and Syria.
- Between ISIS and the local populations it rules: low or erratic electricity; lack of private communications; closing of markets, public spaces; luxuries of European recruits; forced marriages; general deprivation, re-appropriation of local assets (taxes, stolen bank funds) outside the province, denial of existing tribal authorities, arbitrary law enforcement

Nevertheless, **in our own discussion with captured ISIS fighters in Iraq, with Nusra fighters from Syria, and with those who have left ISIS, the wedge issues they highlight are overwhelmingly spiritual rather than material**, such as:

- *Fitnah*, causing dissension within Muslim ranks.
- *Takfir*, excommunication of fellow Muslims.
- Killing *kuffar*, or non-believers, because they are not "People of the Book" (*Ahl al-Kitab,* Christians or Jews)*,* or just because they are foreigners or non-believers, including: *al-dhuyuf,* or guests; *musta'min,* that is, non-Muslim foreigners who only intend to reside temporarily in Muslim lands; and *dhimmi,* non-Muslim subjects who have paid the *jizya*, or poll tax, signifying submission to Muslim rule but who try to leave Muslims lands or seek to return after they have left.
- *Ista'bad al-nisa'*, or enslavement of women and girls of any of the above groups.
- Rejection and condemnation of *al-jihad al-akbar,* or the inner spiritual struggle of "greater jihad," and acceptance and commitment only to offensive jihad, or holy war to expand the boundaries of Islam.

Moreover, Muslims in Europe, North Africa and the Middle East who we have interviewed and are actively engaged in trying to prevent youth from joining ISIS, or to persuade youth to leave ISIS, stress that **wedge issues framed in positive rather than negative terms are most likely to succeed**. As one Imam who formerly recruited for ISIS told us in Amman in late stages of Isis rule in Syria:

"The young who came to us were not to be lectured at like witless children; they are for the most part understanding and compassionate but misguided. We have to give them a better message, but a positive one to compete, in our religious terms. Otherwise, they will be lost to Daesh."

Accordingly, a principal focus of this project was to systematically distinguish and evaluate wedge issues that are: Material (positive vs. negative) versus Spiritual (positive vs. negative).

Our complementary studies also systematically developed our pilot work in Western Europe, based on measures of spiritual versus physical formidability for in-group versus outgroup.

These measures were independently suggested to us in Iraq and Syria by fighters from ISIS, Nusra, PKK and Peshmerga, and demonstrate the importance of insights from the field to inform and ground truth experimental and survey designs. Prior to this research, in one online pilot study with 839 participants we found that perceived spiritual strength of the outgroup (ISIS) -- which is linked to perception of commitment to *sacred values* and *identity fusion* (see below) -- is much more threatening than perceived physical strength, leading to significantly lower willingness to make costly sacrifices on the part of the ingroup (e.g., majority-culture Spanish or French). *The implications of a perceived "spiritual force" leading to a "paralysis effect" are potentially gravely important for mobilizing populations against ISIS and its ilk.* However, we also have some preliminary indication that bolstering perceptions of existential threat can heighten commitment to in-group sacred values and identity fusion as a bulwark against such apparent paralysis.

We believe that reliable knowledge of whether or not these patterns hold, and perhaps generalize, may be critical to resisting, stopping and defeating ISIS and any other malevolent insurgent or revolutionary force that is spiritually driven to a significant degree. Of course, wars are won in the material world, but a spiritual commitment to cause and comrades conveys great advantage, all things being equal. As 14th century Arab historian Ibn Khaldūn first revealed, comparing Muslim dynasties in North Africa with similar military might, long-term differences in success "have their origin in religion… group feeling (*asabiyah*) [wherein] individual desires come together in agreement [and] mutual cooperation and support flourish." Behavioral research in conflict zones indicates that actors motivated by sincere devotion to cause and comrade empowers outsize commitment in initially low-power groups (Ginges, Atran, Medin & Shikaki, 2007; Dehghani et al., 2010; Ginges, Atran, Sachdeva & Medin, 2011; Atran & Ginges, 2012). They are able to resist and often prevail against materially more powerful armies that rely on standard incentives such as pay, promotion and punishment. Just since the Second World War, ideologically-motivated insurgent and revolutionary movements have emerged victorious with as little as 10 times less firepower and manpower than state forces against them (Arreguín-Toft, 2001).

If overwhelming military force is neither the main driver of, nor the only or best way to defeat, the most malicious of such movements, then inquiry into the "soft power" of spiritual force seems imperative. To address these concerns, our interdisciplinary team (anthropology, psychology, decision science, political science, national security policy) had set out to:

A1. Identify populations susceptible to, or supporting, ISIS (for previous research on Al Qaeda and allied networks, see Atran, 2010; for preliminary research on ISIS in Europe and North Africa, see Atran, Sheikh & Gómez, 2014; Atran & Hamid, 2015), focusing on flows of people, money and materials through Western Europe and North Africa networks.

A2. Establish new measures to test susceptible populations for: levels of support regarding a given group and its values, gaps/wedge issues with different groups, and ways to prioritize and exploit different wedge issues so that influence campaigns can undermine support for a given group and its values (particularly in regard to ISIS).

B1. Theoretically integrate the largely independent but interacting factors involved in the willingness to make costly sacrifices, including fighting and dying, which we had begun to identify (Atran & Ginges, 2015; Atran & Sheikh, 2015; Atran, Sheikh & Gómez, 2014; Atran, Wilson, Davis & Sheikh, 2014; Sheikh, et al., 2014; Sheikh, Gómez & Atran, in press).

B2. Develop and validate online and offline dynamic measures for making costly sacrifices with supporting populations in Spain, Morocco, Palestine, Lebanon, UK and

Turkey, including outcome measures of perceived physical and spiritual formidability that we had begun to elaborate (e.g., Gómez, López-Rodriguez, Vázquez, Atran, Ginges & Sheikh, 2017).

C. Systematically explore the effects of spiritual (positive vs. negative) and material (positive vs. negative) wedge issues on ingroup versus outgroup: sacred values, identity fusion, willingness to make costly sacrifices (including will to fight), and perceptions of physical and spiritual formidability.

In brief, we wanted to conduct theory-driven field research to identify different wedge issues, research that builds on our prior work into understanding how people reason about political conflict and violence, and what makes people vulnerable to recruitment into violent organizations (ARTIS, 2009; Atran, 2010; Ginges et al., 2011; Atran & Sheikh, 2015; Davis, 2016). This included comparing the effectiveness of messaging based on different forms of such issues (value-based vs. material-interests; positive vs. negative messaging) using targeted lab and field experiments, large-scale surveys and social media campaigns.

More generally, we sought to leverage our work in understanding judgment and decision-making in political and resource conflicts so as to build theory that will allow the development of effective messaging that can be applied across different contexts with respect to both current and future challenges. Theory is necessary to guide decisions about what types of wedge issues might be more effective under different contexts. Often, of course, ordinary people will have ideas about wedge issues. Our field experience in conflict zones and information from field operatives suggests a number of potential wedge issues between ISIS and susceptible or supporting populations, but we also wanted to systematically elicit potential wedge issues from those populations. However, the gap between such beliefs and their actual effectiveness can be large (Nisbett & Wilson 1977). Thus, while we proposed to do work asking participants to identify and evaluate wedge issues, we also carried out theory-based research to: (a) identify novel messages that can create wedges between a group like ISIS and its potential support, and (b) understand how and when such issues can be used to persuade. We needed to understand not just which current issues decrease support for ISIS but in general, but how different material and value concerns lead to violent escalation and de-escalation of conflict.

This report provides a summary of prior deliverables and explanations for validation of the reliability of the static/dynamic measures of: a) wedge issues, b) sacred values, c) devoted actor(s), d) variations of spiritual and physical formidability, e) and other developed measures across the different susceptible and supporting ISIS Populations. To this end, we will first explicate the validation of the above mentioned measures. Then we will list our key take-aways from the studies we conducted in 1) Mosul and the surrounding region (Preliminary Research); 2) Spain and Iraq (Lab experiments-7 studies); Spain (Study #1); Morocco (Two studies-Study #2); Palestine (Three studies-Study #3); Lebanon (Study #4); the UK (Study #5); and Turkey (Study #6). Finally, we will provide a summary of each deliverable that highlights our most important findings.

VALIDATION OF DYNAMIC MEASURES

The validation of the dynamic measures we developed and used in our studies is effected through replication in several different countries and contexts (Iraq, Palestine, Lebanon, Morocco, Spain, Turkey, UK) as follows:

1. Validation of dynamic measures of fusion with group and fusion with value as significant partial predictors of willingness to make costly sacrifices (our composite outcome measure involving various types of sacrifice, from losing jobs and housing to fighting and dying, whose combination into a single measure is justified by a high Cronbach's alpha score). We use fusion with value as an indicator of sacred values insofar as it is highly correlated with measures of sacred values but much quicker and easier to use in surveys and experiments. The interactions of fusion with value and fusion with group in predicting costly sacrifices is itself a validation of the devoted actor framework.

2. Validation of dynamic measures of physical and spiritual formidability as significant partial predictors of willingness to make costly sacrifices, with spiritual formidability being predominant.

3. Validation of measures of dehumanization, group cohesion, and resilience as significant partial predictors of willingness to make costly sacrifices. However, these 3 measures are partially and substantially redundant with fusion and formidability measures.

The types of dynamic measures and a sample survey measures table from the study in Turkey are provided below.

DYNAMIC MEASURES
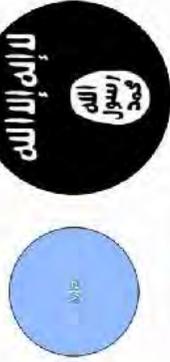
Astroblasters

SCORE: 0

Dehumanization

Group Consensus
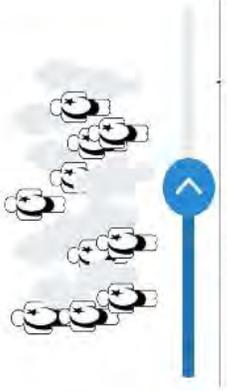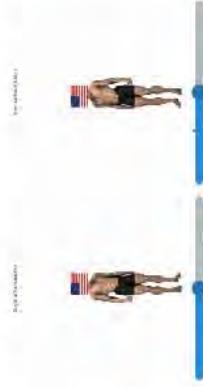
Suffering, vs. Guilty

Personal and Collective Resilience

Physical and Spiritual Formidability

Cohesion

Identity Fusion
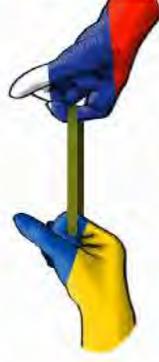
Value versus Group
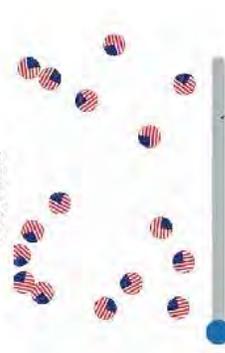
DYNAMIC MEASURES
SLIDES.pptx

For animated version of this image, click on this icon:

SURVEY MEASURES TABLE FOR TURKEY

FUSION — 19 QUESTIONS
1. DEMOCRACY
2. TURKISH GOVERNMENT
3. MILITARY
4. MIT (National Intel Agency)
5. ULTRANATIONALISM
6. NATO
7. The USA
8. RUSSIA
9. EU
10. FIGHT AGAINST CORRUPTION AND MAFIA
11. RELIGIOUS GROUP, YOU MOST IDENTIFY WITH
12. THE POLITICAL GROUP YOU MOST IDENTIFY WITH
13. ISIS
14. UYGHURS
15. THE DIYANET (Directorate of Religious Affairs)
16. KURDISH IDENTITY/POLITICAL MOVEMENT
17. PALESTINIAN CAUSE
18. ISRAEL
19. MUSLIM UMMAH

RUSYA

ABD

TURK HÜKÜMETI

SACRIFICE — 30 QUESTIONS
1. DEMOCRACY
2. TURKISH GOVERNMENT
3. MILITARY
4. MIT
5. ULTRANATIONALISM
6. NATO
7. FIGHT AGAINST CORRUPTION AND MAFIA
8. RELIGIOUS GROUP, YOU MOST IDENTIFY WITH
9. THE POLITICAL GROUP YOU MOST IDENTIFY WITH
10. UYGHURS
11. THE DIYANET
12. KURDISH IDENTITY/POLITICAL MOVEMENT
13. PALESTINIAN CAUSE
14. ISRAEL
15. MUSLIM UMMAH

TRUST — 18 QUESTIONS
1. DEMOCRACY
2. TURKISH GOVERNMENT
3. MILITARY
4. MIT
5. RELIGIOUS GROUP, YOU MOST IDENTIFY WITH
6. THE POLITICAL GROUP YOU MOST IDENTIFY WITH
7. ULTRANATIONALISTS
8. NATO
9. The USA
10. RUSSIA
11. EU
12. CHINA
13. ISIS
14. THE DIYANET
15. KURDISH IDENTITY/POLITICAL MOVEMENT
16. PALESTINIAN CAUSE
17. ISRAEL
18. MUSLIM UMMAH

No Trust — Trust

FORMIDIBILITY — 19 QUESTIONS
1. DEMOCRACY
2. TURKISH GOVERNMENT
3. MILITARY
4. MIT
5. RELIGIOUS GROUP, YOU MOST IDENTIFY WITH
6. THE POLITICAL GROUP YOU MOST IDENTIFY WITH
7. ULTRANATIONALISTS
8. NATO
9. The USA
10. RUSSIA
11. EU
12. CHINA
13. ISIS
14. THE DIYANET
15. KURDISH IDENTITY/POLITICAL MOVEMENT
16. PALESTINIAN CAUSE
17. ISRAEL
18. MUSLIM UMMAH
19. YOUR OWN

MADDI GUÇ — MANEVI GUÇ — ABD

RESILIENCE — 29 QUESTIONS
1. DEMOCRACY
2. TURKISH GOVERNMENT
3. MILITARY
4. MIT
5. RELIGIOUS GROUP, YOU MOST IDENTIFY WITH
6. THE POLITICAL GROUP YOU MOST IDENTIFY WITH
7. ULTRANATIONALISTS
8. NATO
9. The USA
10. RUSSIA
11. EU
12. CHINA
13. ISIS
14. THE DIYANET
15. KURDISH IDENTITY/POLITICAL MOVEMENT
16. PALESTINIAN CAUSE
17. ISRAEL
18. MUSLIM UMMAH
19. YOUR OWN

ABD

What is the extent of the threat to TURKEY's future?
(Please select the appropriate number between 0=Not at all to 6 = very much) (We can consider using slider The threat to TURKEY's future comes from

A. Religious sects
B. Corruption of the political class
C. Terrorism
D. Military interference
E. USA
F. Russia
G. China
H. Greece
I. ISIS and the likes
J. Refugees from other countries

MISCELLANEOUS — 16 QUESTIONS
TO WHAT EXTENT DO YOU SUPPORT
1. EU accession process?
2. The government's EU accession? Policies
3. The parliamentary system?
4. The conversion of Hagia Sophia from a museum into a mosque?
5. Granting citizenship to Syrian refugees?
6. The integration of some aspects of the sharia law into the Turkish legal system?
7. Management of the covid pandemic by the Turkish government
8. If you are considering joining a religious group or sect which one, would you prefer?
9. To what extent do you actively practice the religion that you are most familiar with?
10. Which political group do you most identify with?
11. To what extent do you actively support the political group that you most identify with?
12. Fighting between Israel and Palestinian worsened over time
13. Hamas is the best representative of Palestinian cause
14. Israel practices state terrorism
15. Continued fighting between Palestinian and Israel increases likelihood of support ISIS or Al Qaeda-like jihadist groups?
16. UK people support Palestinian cause

Preliminary Research - Mosul and the surrounding region:
- ISIS might have lost its state, the Caliphate, but it hasn't necessarily lost the allegiance of supporters of Sunni*Sharia to its core values, especially faith in strict Sharia law. Neither have the underlying conditions of political and confessional conflict that caused people to initially embrace ISIS appreciably changed. Unless those conditions do change in the direction of mutual tolerance, and those core values can be reconfigured to accommodate that change, the specter of ISIS will likely endure.
- Without the laborious development of institutions that underpin democratic governance of the kind that took Europe and America more than two centuries to foster (tolerance of minorities and their ideas, equal justice before the law, free press, right to peacefully assemble and oppose, and so on), democracy may not be very good at dealing with tribal and confessional conflicts (any more than in family matters). The focus on wedge issues, at least for local populations in Iraq and the wider Levant, might better target the promotion of tolerant interpretations of Sharia consistent with tribal, confessional, and national allegiances.

Lab Experiments (Seven Studies) - Spain and Iraq:
- Our results offer theoretical and practical contributions. On the one hand, they reveal for the first time that identity fusion and its correlates can emerge, or increase, as a kind of contamination effect by being witness of intense self-sacrifice that other ingroup members display for the group. On the other hand, this investigation shows how an emotional component, such as feelings of admiration for an ingroup member, can increase the visceral connection toward the group of other individuals and their pro-group behaviors.

Study 1 – Spain:
- Devoted actors attributed more formidability to the ingroup than to enemies and, in turn, engaged in more aggressive behavior.
- The family is the group with which more participants are fused.
- Europe is perceived as weaker on spiritual than physical formidability, whereas ISIS is perceived as stronger on spiritual than physical spiritual formidability.
- Spiritual, but not physical, formidability of the ingroup (refugees) is positively correlated with costly sacrifices for the group.
- The study confirms the relatively low percentage of Western European (here, Spaniards) fused with the group (e.g., the country), committed to sacred values (e.g., democracy), and devoted actors (fused and committed to sacred values, and so willing to make costly sacrifices). However, results replicate the findings of previous studies that fused individuals and those with sacred values differ in their responses (and predicted behavior) in comparison to non-fused individuals and those who do not have sacred values: Those who are fused and those with sacred values score significantly higher on their perception of who is more guilty of an intergroup conflict and who has suffered more, as well and on their perception of the dehumanizing the outgroup.
- We have preliminary information showing that defensive and offensive behavior may be predicted by different variables. Whereas spiritual formidability predicts defensive behavior (costly sacrifices for the group), dehumanizing the outgroup predicts

offensive behavior (the voodoo task). Perception of who is more guilty for the conflict together with perception of who suffered more in the conflict predicts both defensive and offensive willingness to act.

Study 2 (Two studies) – Morocco:
- Spiritual formidability of Arabs, and physical and spiritual formidability of the Ummah, is positively and significantly correlated with fight and die and costly sacrifices for the group.
- In Casablanca, personal spiritual formidability is positively related to fight and die and costly sacrifices for the group; in Tetouan it is physical formidability that correlates with fight and die and costly sacrifices.
- In Tetouan, but not in Casablanca, physical formidability correlates with fight and die and costly sacrifices.
- In Tetouan, physical and spiritual formidability of Westerners correlates negatively with costly sacrifices and fight and die for the group.
- Participants from Casablanca display higher levels of trust in Moroccans than participants from Tetouan.
- Participants from Casablanca show less personal physical and spiritual formidability, less spiritual formidability of Moroccans and Ummah, and less physical formidability of Westerners.
- Participants from Tetouan perceive Moroccans in general, and versus ISIS, as more collectively resilient than participants from Casablanca.
- Participants from Tetouan express more willingness for costly sacrifices for the group than participants from Casablanca.

Study 3 (Three studies) – Palestine:
- The level of Trust in the ingroup is similar in the three versions of the Study.
- Participants in all the studies perceive themselves as stronger on spiritual than on physical formidability.
- Participants in all the studies perceive Palestine as stronger on spiritual than on physical formidability.
- Participants in all the studies perceive Israel as stronger on physical than on spiritual formidability.
- Participants in all the studies consider that a high percentage of Palestinians (higher than the mid-point of the scale), consider moral support of violence to defend Palestine and the right of return.
- The levels of personal and collective resilience are similar in the three studies, and participants perceive the group as slightly more resilient than themselves.
- Participants in the three studies consider that Israelis are more guilty of the conflict between Palestine and Israel, and also that Palestinians have suffered more than Israelis.
- Participants in the three studies de-humanize Israelis.
- Participants in the three studies show high levels of costly sacrifices for the country.
- The results of the three studies conducted in Palestine confirm that the results are similar when the data are collected through face-to-face interviews via paper and pencil including traditional scales and vignette, through face-to-face interviews with a

tablet using dynamic measures in an offline version of a platform for data collection, or online via Facebook using the same platform of dynamic measures.

Study 4 – Lebanon:
- Lebanese are fully fused with family, confessional community, Lebanon, democracy, religion, and sovereignty and independence.
- Lebanese people are more willing to make costly sacrifices for family, Lebanon, and sovereignty and independence.
- Physical formidability of the Self, Lebanese Army, and Israel are the highest, while it is lowest of Lebanese Government, confessional community, and the leaders of armed militia. For spiritual formidability, the Self, Lebanese Army, and confessional community are the highest, but the lowest for Lebanon Government, Israel, and the leaders of armed militia.
- Participants perceive corruption of the political class and foreign political/military intervention as the top risk factors for their country. These are followed by religious sectarianism, refugees, and globalization.
- Sacred value predicts sacrifices in all cases (marginally for sacrifices for the family), whereas fusion predicts sacrifices for the country and for democracy.
- Trust in the country is significantly correlated with fusion with the country, the country as a sacred value, and costly sacrifices for the country.
- Fusion with Lebanon predicts costly sacrifices for Lebanon through trust for Lebanon. In other words, increased trust for Lebanon increases fusion with Lebanon, which then may result in costly sacrifices for Lebanon.

Study 5 – UK:
- For the Protestants, fusion with democracy, the fight against supremacy, the UK, and the Monarchy are the highest, while fusion with Muslim Ummah is the lowest. For the Catholics, fusion with the UK, democracy, and NATO are the highest, while fusion with Muslim Ummah and the fight against Sharia are the lowest. For the Muslims, fusion with the fight against supremacy, religion, and democracy are the highest, whereas fusion with Israel, NATO, and the fight against Sharia are the lowest.
- For the Protestants, costly sacrifices for the UK, the fight against Sharia, and democracy are the highest, while it is lowest for NATO, political group, and Palestine. For the Catholics, costly sacrifices for Palestine, fight against supremacy, and the fight against Sharia are the highest, while costly sacrifices for NATO, religion, and the fight against Immigration are the lowest. For the Muslims, costly sacrifices for Palestine, religion, and Muslim Ummah are the highest, while costly sacrifices for Israel, and the fight against Sharia are the lowest.
- The Protestants trust in the UK, the Monarchy, and religious groups the most while they trust in Palestine, Russia, and China the least. The Catholics trust in the UK, Muslim Ummah, and the Monarchy the most, while they trust in political group, the USA, and religious groups the least.. The Muslims trust in religious groups, Muslim Ummah, and the UK the most, while they trust in Israel, China, and Russia the least.
- Muslims see the spiritual formidability of their religious institutions, political party, NATO, Palestine, Muslim Ummah, and the Self stronger than physical formidability. Muslims see the physical formidability of Russia, China, the Monarchy, and Israel

stronger than spiritual formidability. Among Sunnis and Shias, there is no difference in formidability of religious institutions, Palestine, Muslim Ummah, and the Self.
- For Muslims, the top threats to the Ummah's future come from corrupt Muslim leaders, ISIS-like groups, and Terrorism, respectively. They also see China as a greater threat than the USA or Russia.
- Increased spiritual and physical formidability of the Ummah may increase fusion with the Ummah, which may in turn increase costly sacrifices for the Ummah. Increased spiritual formidability may increase fusion with Palestine, which may in turn increase costly sacrifices for Palestine.
- Fusion with democracy significantly predicts costly sacrifices for democracy, and fusion with religion significantly predicts costly sacrifices for religion.

Study 6 – Turkey:
- The highest level of fusion among Turks is democracy. But equally interesting, and rather contradictory, is that the next three institutions/values that participants fused with are the Turkish Military, Turkish Intelligence (MIT) and Ultranationalism. Fusion with ISIS is the lowest among participants. Turks also report low fusion with the Diyanet (Turkish State Religious Authority), Kurdish population, and religious groups.
- Turkish Military, democracy and MIT are the groups and values participants are most willing to sacrifice for, whereas they are less willing to make costly sacrifices for the Diyanet, Kurdish Identity or Israel.
- Turkish Military, democracy and MIT (Intelligence) are the groups/value that participants trust most while Israel, Kurdish identity, and ISIS are the groups participants trust the least.
- Participants perceive the Turkish government stronger on physical formidability than on spiritual formidability; and Turkish military and ultranationalism as equal in terms of its physical and spiritual formidability. It is interesting that participants scored significantly higher on ISIS's physical formidability than spiritual, which is consistent with their lack of fusion with the group. They perceive the spiritual formidability of outer group countries (USA, Israel, Russia, China) to be weaker than their physical formidability.
- Turks are more willing to make sacrifices for the Turkish Army and ultranationalism when spiritual formidability and trust are increased.
- Participants see terrorism, corruption, and refugees as the highest risk factors in Turkey, whereas the UK, globalization and Greece are seen the lowest risk factors.

Summary and Key Findings of Progress Report 1.

Deliverable 1.1
- **Develop theoretical understanding of the difference between material and spiritual wedge issues, particularly related to messaging, in susceptible and supporting ISIS populations.**

The objective to testing the Wedge Theory on Armed Groups begins with understanding the pathways of resistance to ISIS's alluring call to glory, salvation and world change, to hinder members of potentially supporting populations from: 1) being tolerant or sympathetic towards ISIS, 2) turning a blind eye or providing it material support, and 3) directly acting against local populations in the name of ISIS.

The theoretical framework was established from AFOSR-supported studies. This framework was extended at ARTIS's own initiative and expense to the frontlines in Iraq with ISIS combatants and Coalition fighters and to young men in displaced persons camps who had lived in and around Mosul while it was under ISIS's control. A set of wedge issues was also established to explore from former recruiters of ISIS, fighters from Al-Nusra and from discussions with US and UK policy and military leaders. The results of these studies were then integrated into further development of the WEDGE project.

Data and Methods
Preliminary Data on which the following summary is based (research in Mosul and the surrounding region) was funded and carried out by ARTIS. The research tools were developed together with ARTIS researchers from the USA and Universidad Nacional de Educación a Distancia in Madrid.

- Our multidisciplinary and multinational team of researchers has been working on the frontlines of the fight with ISIS since the beginning of 2015. In our research with frontline combatants In Iraq, we developed an initial set of psychological measures to measure willingness to make costly sacrifices for causes and comrades, including fighting and dying.
- During the summer and fall of 2017 we conducted research with young men coming out from under ISIS rule using these and other new measures developed with our colleagues in Spain (e.g., to test perceptions of group resilience and group cohesiveness).
- To prepare for this research and to ensure scholarly as well as policy relevance we elicited empirical questions from the following policymaking groups in order to help provide responses grounded in scientifically validated empirical research with both practical implications and theoretical generalizability: US military (active and recently retired), Members of US Congress, the White House, HMG's Office of the Prime Minister, French President's Office, German Ministry of Defense, EU leadership in Brussels, United Nations Security Council Counter Terrorism Unit, The Arab Barometer.

In-depth interviews & experiments from Northern Iraq, July-October 2017, Debaga camps 1 & 2, Stadium Camp & 2 Khazer camps (measures and methods independently checked with thousands of other respondents in different cultural contexts, e.g., Western Europe) (N = 78, all men, Age 18 - 40; M = 23.37; SD = 3.63)

Research and Policy Questions
The following general research and policy questions were formulated:
- What do people think of ISIS?
- What do they think of a Unified Iraq?
- What political future do they want?
- What would they tolerate?

Major Findings
Major Findings from Qualitative Data
Many who had lived under ISIS rule in the region told us that most people among the Sunni Arab population initially welcomed the Islamic State as a glorious "Revolution" (al-Thawra) devoted to implementing Allah's rule in the form of Sharia law to protect the Sunni people.

Others were more inclined to excuse ISIS, putting its increasingly brutal behavior down to pressure on them from coalition attacks and airstrikes. But nearly all our interviewees saw a clear difference between the foreign fighters' dedication to the Caliphate and the locals' lack of commitment.

Overall, despite an end-state perception of ISIS as brutal, corrupt, and somewhat hypocritical, we find lingering support and respect for what people thought ISIS stood for at the beginning.

Major Findings from Quantitative Data
Identity Fusion
Fusion with family is most prevalent, and with Tribe the least; however, Fusion with Sunni community was positively correlated with Fusion with Tribe, $r = .367$, $p < .001$.
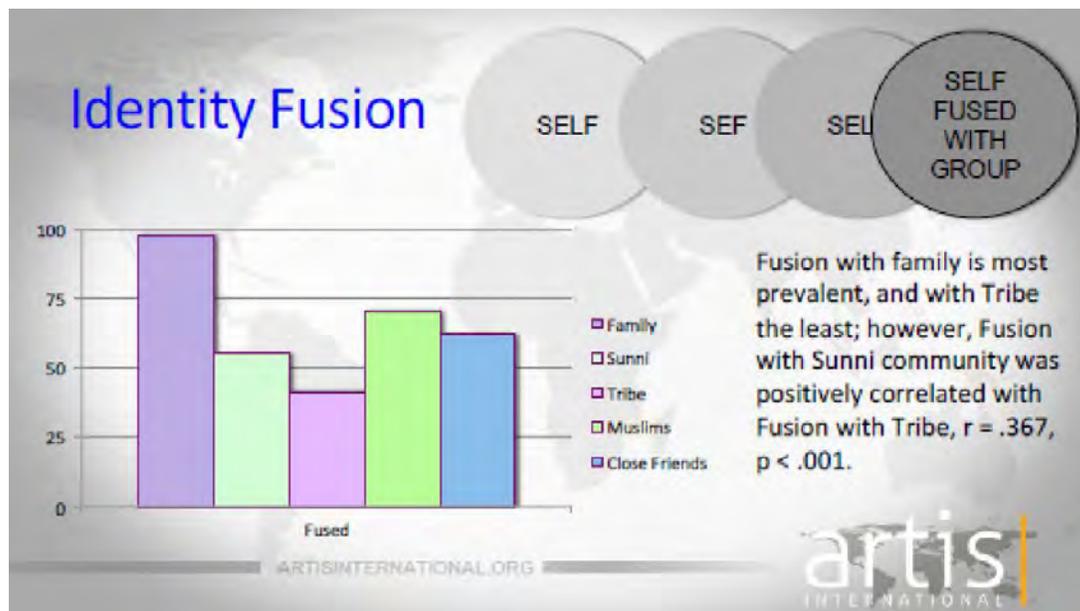
Costly Sacrifices

The difference between costly sacrifices for Iraq and costly sacrifices for Sunni is significant at the p<.05 level, as is the difference between costly sacrifices for Iraq and costly sacrifices for Sharia.
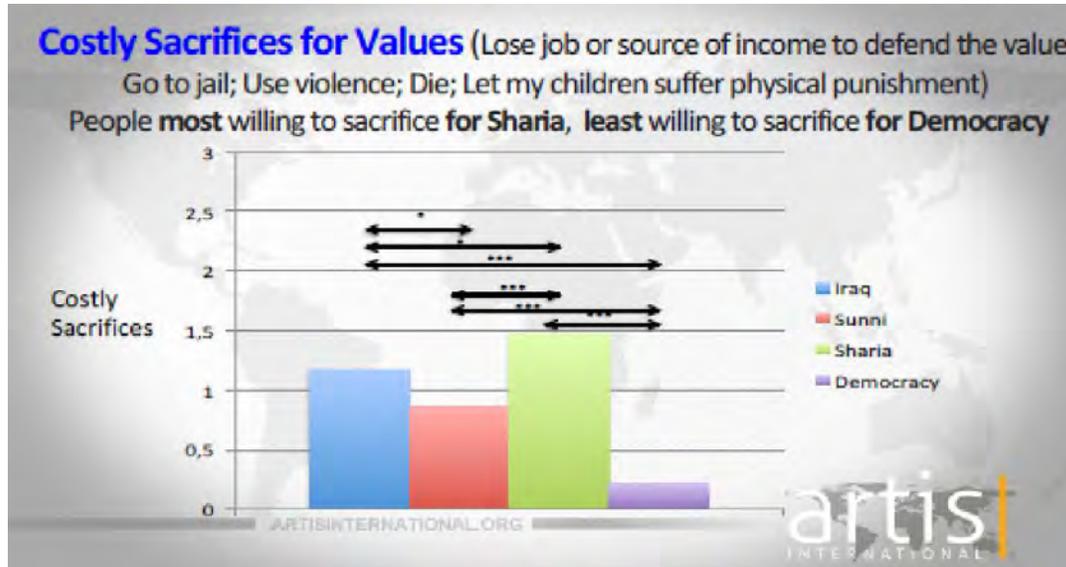
By contrast, the difference between costly sacrifices for Iraq and costly sacrifices for Democracy is significant at the p<.0001 level, so to the difference between costly sacrifices for Sunni vs costly sacrifices for Sharia, costly sacrifices for Sunni vs costly sacrifices for democracy, and costly sacrifices for Sharia vs costly sacrifices for democracy. Participants were asked if they would accept different trade-offs (money for their own houses/jobs, jobs, and homes for community, prevent a civil war, obey their leader) to renounce an Independent Iraq, Sharia, or an Independent Sunni region (Yes/No). Almost no participants would accept money. People are most concerned about avoiding a Civil War. Obeying the Leader Is as important as providing jobs and homes for the community.
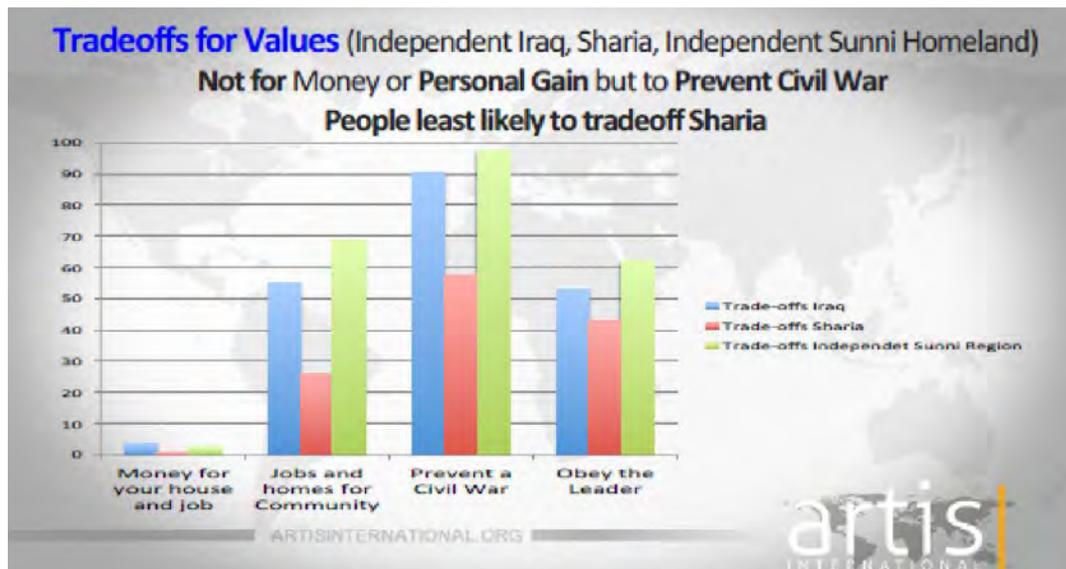
Participants were asked to choose between sacred values and fused groups using a dynamic measure for choosing between Value and Group. Most people choose commitment to group over value. Only those who choose Sharia over group are more willing to make greater sacrifices to defend that value than their group.

Spiritual Formidability versus Physical Formidability. Perception of physical size and strength are vital to outcomes of hand-to-hand combat, and humans rely on representations of relative physical strength, including assessments of manpower and weapons, when deciding whether to fight. When people perceive their own group members as physically formidable, and outgroups as not so formidable, then ingroup members perceive outgroups as vanquishable through force, which favors aggressive solutions to intergroup conflict. Using techniques to judge physical formidability that assessed the perceived strength of various combatant groups in Iraq, we found that both ISIS and PKK fighters (the only force that held fast against the ISIS onslaught in summer 2014) disregarded consideration of ingroup and outgroup physical formidability. They argued that the most important was spiritual formidability (*ruhi bi ghiyrat,*). Yet, there is little scientific understanding of the motivating effect of the spiritual, expressly non-utilitarian dimension in human conflict generally. Thus, we adapted measures of physical formidability to spiritual formidability, comparing the relative impact of physical and spiritual formidability in willingness to fight. Although the term "spiritual formidability" may have religious connotations to some, it more properly refers to non-material strength. In our post-ISIS Mosul sample, the gap between physical and spiritual formidability remains highest for the U.S. versus ISIS.
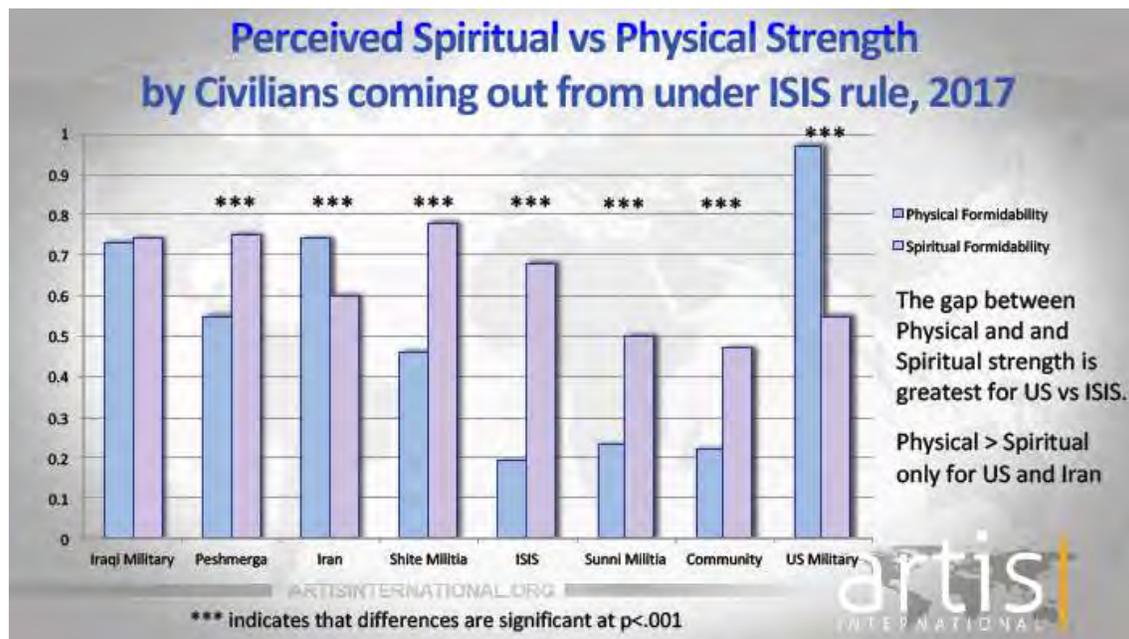
Participants Fall into Two Opposing Frames: Unified Iraq vs Sunni Homeland*Sharia
● Support for an Independent Sunni Region negatively predicts sacrifices for Unified Iraq, $t= -3.46$, $p=.001$
● Sharia is positively correlated with Independent Sunni Region, $r=.23$, $p=.050$, but not with Unified Iraq.

- Support for an Independent Sunni Region is negatively correlated with Democracy, -.279, p = =.018, and Sharia is also negatively correlated with democracy, r = -.241, and .041.
- *But participants who value BOTH an Independent Sunni Region AND Sharia show least support for democracy, r = -.333, p = .004*
- *People who both support a Sunni Homeland AND Sharia are more willing to make costly sacrifices overall than people who support a Unified Iraq.*
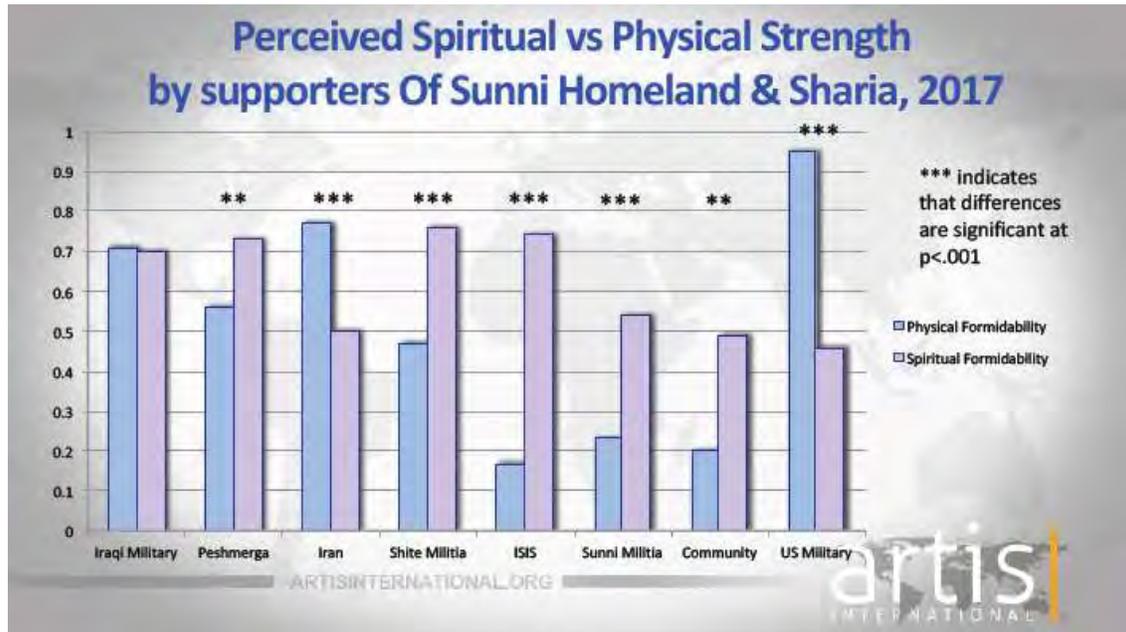
Those who value Sunni*Sharia:
- Are more fused with Sunni (r=.23, p=.047)
- More willing to sacrifice for Sunni, r=.497, p<..01, & Sharia, r=.432, p<.001
- Less willing to sacrifice for Unified Iraq r=-.25, p=.038 & democracy, r=-.30, p=.034
- *Perceive Iran as having low spiritual strength [staying power]* (r= -.28, p=.028)
- *Perceive the USA as having low spiritual strength [staying power]* (r = -.27, p=.033)

Those who value Unified Iraq:
- More willing to sacrifice for Iraq, r=.56, p<.001
- Less willing to sacrifice for Sunni, r=-.26, p=.04

Perceived Spiritual vs Physical Strength by supporters Of Unified Iraq, 2017
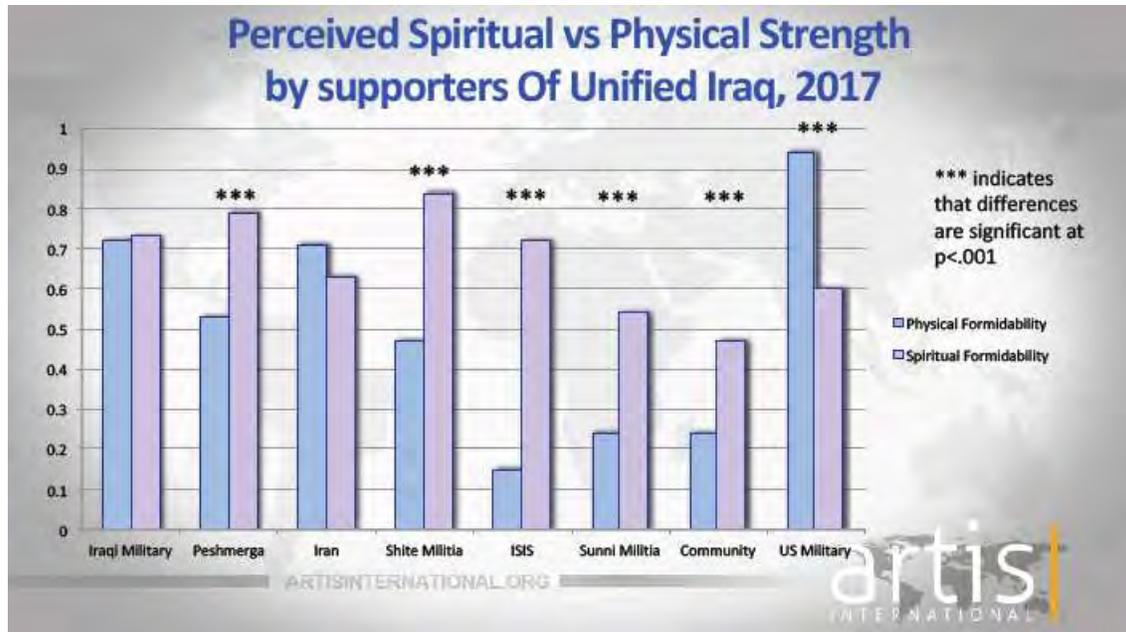
A static measure of perceived group cohesion and a dynamic measure of perceived group resilience to threat from other groups were also tested. Our findings suggest:

- ISIS may have lost its state, the Caliphate, but not necessarily the allegiance of supporters of Sunni*Sharia to its core values.
- Nearly 2/3 of supporters of Sunni*Sharia, vs less than 1/3 of all respondents, indicated that Sharia was ISIS's most cherished value.
- Underlying conditions of political and confessional conflict that caused people to initially embrace ISIS haven't appreciably changed in people's minds.
- Reports from respondents and others of ISIS remnants reorganizing as new force, Jaysh Ahrar al- Sunnah = Army of the Sunni Freemen.

Key Takeaways
ISIS may have lost its state, the Caliphate, but it hasn't necessarily lost the allegiance of supporters of Sunni*Sharia to its core values, especially faith in strict Sharia law. Neither have the underlying conditions of political and confessional conflict that caused people to initially embrace ISIS appreciably changed. Unless those conditions do change in the direction of mutual tolerance, and those core values can be reconfigured to accommodate that change, the specter of ISIS will likely endure.

Without the laborious development of institutions that underpin democratic governance of the kind that took Europe and America more than two centuries to foster (tolerance of minorities and their ideas, equal justice before the law, free press, right to peacefully assemble and oppose, and so on), democracy may not be very good at dealing with tribal and confessional conflicts (any more than in family matters). The focus on wedge issues, at least for local populations in Iraq and the wider Levant, might better target the promotion of tolerant interpretations of Sharia consistent with tribal, confessional, and national allegiances. We are also carrying out parallel work in Western Europe, where the issues of concern relevant to radicalization and returning foreign fighters appear to be somewhat different.

Summary and Key Findings of Progress Report 2.

Deliverable 1.2

- **Develop Part I of the Relational Database of the networks involved in the January and November 2015 Paris and the March 2016 Brussels attacks. Part I will include detailed categorization of basic biographical and socio-economic data on jihadists involved and associated with the attacks.**

Under this deliverable an excel file dataset was submitted; it provided a biographical and socio-economic sketch of participants and affiliates of the Paris and Brussels Attack Networks. The data includes names, aliases, gender, age, education, profession, nationality, family origin, areas of residence, spouse(s), children, siblings, description of attack, attack site, supposed role in attacks, travel to Syria, return from Syria, status, manner of death or arrest and sources.

Summary and Key Findings of Progress Report 3.

Deliverable 1.3
- **Train research staff in data collection methodology (e.g. cultural consensus modeling, surveys and structured interviews).**
- **Submit experimental study protocols to AFOSR for susceptible and supporting ISIS Population #1 (population will be subject to investigative lead).**

Under this deliverable the team **trained research staff** in participant recruitment and data collection methodology and submitted the **experimental study protocols for susceptible and supporting ISIS Population #1 (Spain)** which detailed the purpose, scope, location, population, recruitment and data collection methods proposed.

Summary and Key Findings of Progress Report 4.

Deliverable 2.1.

- **Develop Part II of the Relational Database. Part II includes modeling and graphic representation of the social networks, which includes a comprehensive examination of acquaintance, friendship, family, educational social organization, and training (e.g., Afghanistan, Syria, Iraq, Maghreb).**
- **Conduct lab experiments to design, test and prepare measures for field validation.**

Under this deliverable the team developed Part II of the relational database and conducted lab experiments. These products and results are summarized below.

Part II of the database includes more biographic and socio-economic information as well as modeling and graphic representation of the social networks, as well as comprehensive examination of acquaintances, friendships, family, educational social organizations, and training.

Report highlights include the network graphs demonstrating the social networks of various terror attacks occurred and related terror groups involved in Europe between 1991 and 2017.
The graphs included here are:
- European Networks, attacks, and key individuals from 1994 to 2001
- European Networks, attacks, and key individuals from 2001 to 2011
- Family radicalization network
- August 2017 Barcelona attacks and Ripoll Cell extended network
- European Networks, attacks, and key individuals from 2012 to 2017
- November 105 Paris and March 2016 Brussels attacks, and Extended recruitment networks and EMNI hierarchical organization
- Meliani Cell

RELATIONAL **DIAGRAMS**

EUROPEAN NETWORKS, ATTACKS,
AND KEY INDIVIDUALS FROM 1994 TO 2001

Legend:
- GROUP / CELL / NETWORK
- PERSON
- ATTACK
- THWARTED ATTACK

Rachid El Ouaer
Dehmane Abd El Sattar
Assasination of Ahmad Shah Massoud
9/11 Attacks
Naima Aberkan
Belgian AQ Cell
Malika El Aroud
Bassam Ayachi
(Centre Islamique Belgique)
Tarek Maaroufi
French GIA Networks
Tunisian Combat Group
Djamel Beghal
Abu Qatada
(Finsbury Park Mosque)
Nizar Trabelsi
Paris Metro Bombings
(1995 & 1996)
Frankfurt Group

EUROPEAN NETWORKS, ATTACKS,
AND KEY INDIVIDUALS FROM 2002 TO 2011

GROUP / CELL / NETWORK

PERSON

ATTACK

THWARTED ATTACK

Forsane Alizza

Sharia4UK

Sharia4Belgium

Multiple Thwarted Attacks
by returning French / Belgian Nationals

Toulouse & Montauban
shootings

First Western Female
Suicide Bombing
(Iraq 2005)

Al Shabaab
Attacks in Somalia

Jund Al Khalifah
(Afgan - Pak border region)

Mohamed Merah

Muriel Degauque

Rachid Benorami

Soughir Network

Moez Garsallaoui

Malika El Aroud

Fatima Aberkan

Khalid Zerkani

Naima Aberkan

ABERKAN FAMILY RADICALIZATION NETWORK

Legend:
- INFLUENCED
- LOGISTICAL SUPPORT
- MOTHER
- SIBLINGS

Nodes: Abdelmouneim Aberkan, Abdelmouneim Lachiri, Bassam Ayachi, Abdelhouaid Aberkan, Yassine Lachiri, Mohamed Abrini, Malika el Aroud, Soufiane Alilo, Abdelhamid Abaaoud, Salah Abdeslam, Fatima Aberkan, Chakib Akrouh, Brahim Abdeslam, Khalid Zerkani, Tariq Alilo

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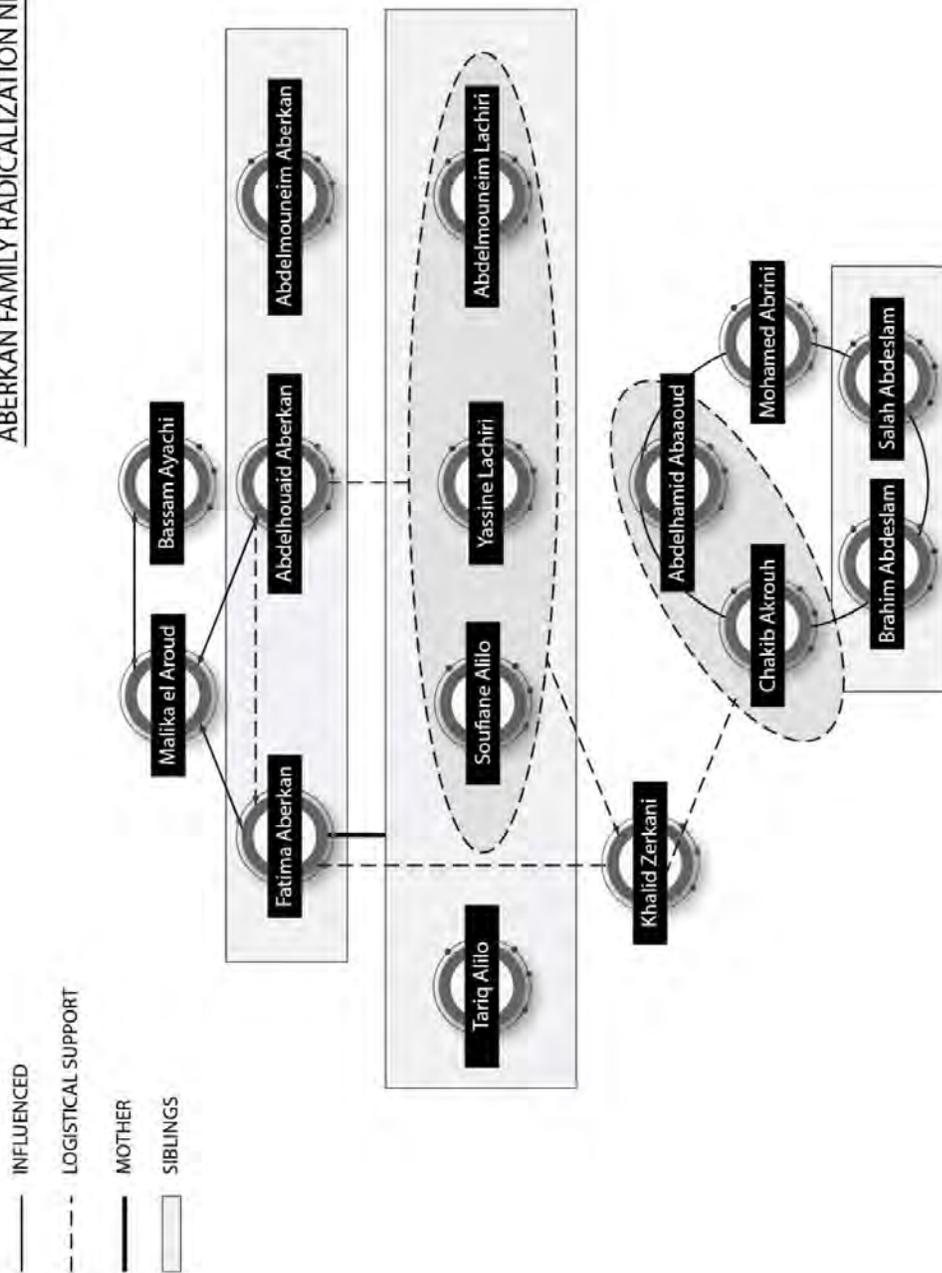
AUGUST 2017 BARCELONA ATTACKS: RIPOLL CELL EXTENDED NETWORK

EUROPEAN NETWORKS, ATTACKS,
AND KEY INDIVIDUALS FROM 2012 TO 2017

GROUP / CELL / NETWORK

PERSON

ATTACK

THWARTED ATTACK

>20 Thwarted Attacks
Mostly in France / Belgium

Paris and Brussels
Attacks (2015 - 2016)

Souse and Bardo
Museum Attacks
(Tunisia)

Berlin Christmas
Market Attack

Manchester Attack

EMNI
(ISIS External OPS)

ISIS in Libya

Anis Amri

Salman Abedi

Abaaoud Network

Katibat al-Battar al-Libi

Jean Luis Denis affiliated

Zerkani affiliated

Sharia4Belgium

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artisinternational.org
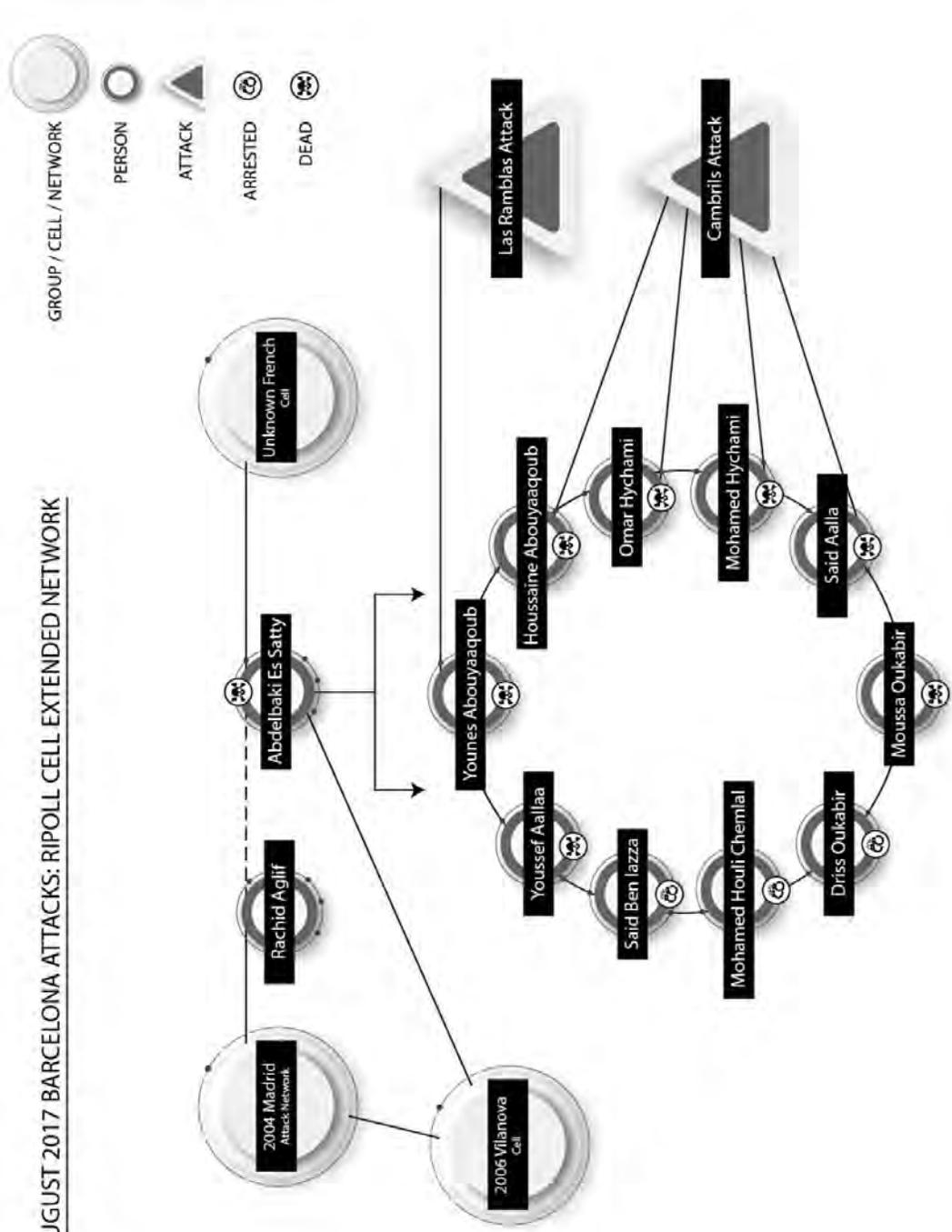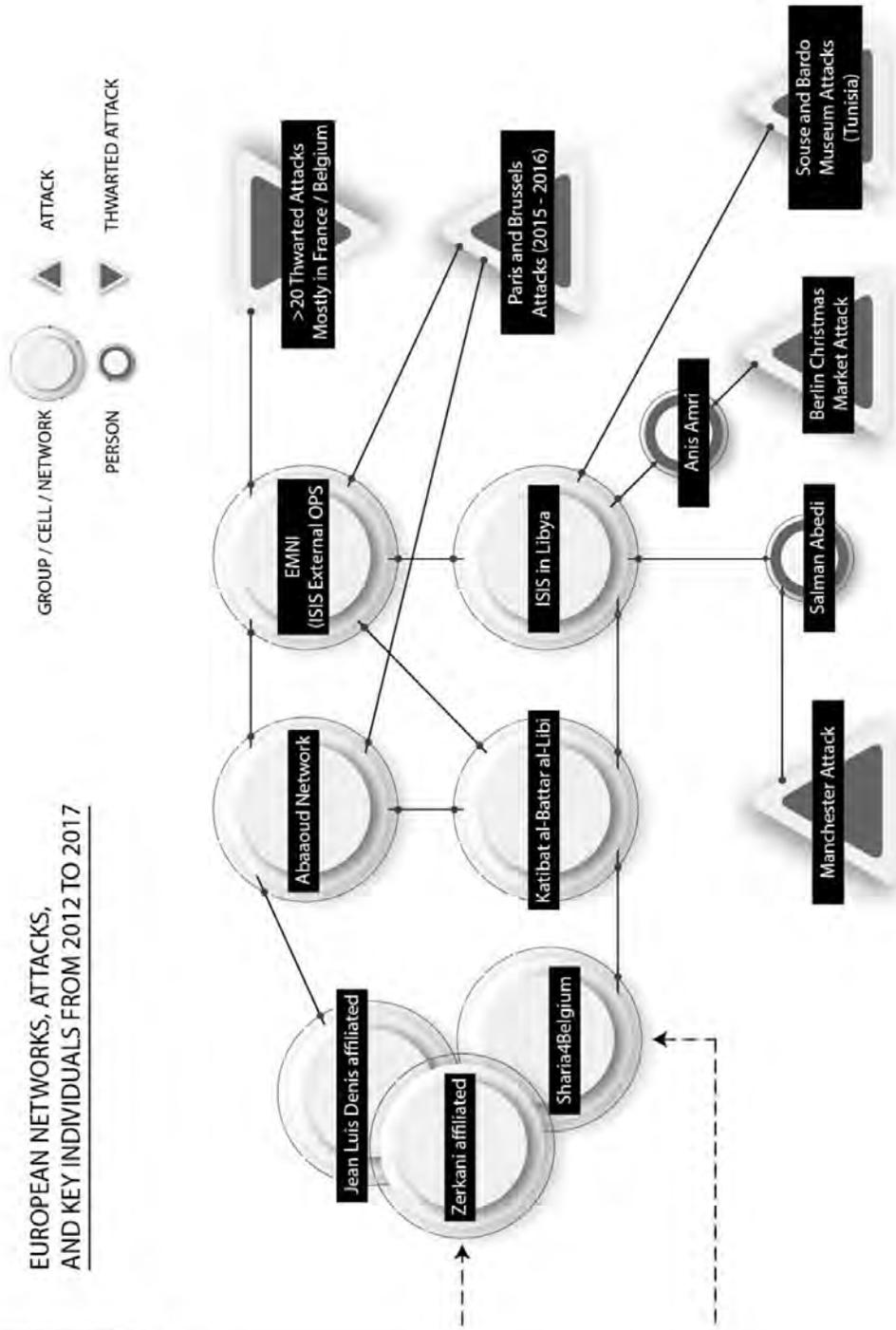
NOVEMBER 2015 PARIS & MARCH 2016 BRUSSELS ATTACKS. EXTENDED RECRUITMENT NETWORKS AND EMNI HIERARCHICAL ORGANIZATION

Legend:

- ● NETWORK MEMBER
- ◆ MULTIPLE ATTACKS
- ▶ ISIS LEADER
- ◀ PARIS / BRUSSELS ATTACKER
- ---→ SAME PERSON
- – – WEAK REALATIONSHIP
- ⋯⋯ INSPIRED BY ISIS

- ㊟ IN PRISON
- ㊛ DEAD
- Ⓕ FOILED
- VERVIERS PLOT
- LONE ATTACKER
- WENT TO SYRIA
- CLOSE RELATIONSHIP

Labels / Nodes:

- Abu Bakr al Baghdadi
- ISIS Leadership
- Abu Muhhammad al-Adnani
- Oussama Atar
- Abdelilah Himich
- EMNI External Operations
- Rachid Kassim
- 17 Foiled Attacks 3 Succesful
- Abid Tabaouni
- Muhammad Usman
- M. al-Mahmod
- Adel Haddadi
- Ahmad al-Mohammed
- Sammy Amimour
- Omar Ismail Mostefai
- Foued Mohamed-Aggad
- Mohamed Belkaid
- Khalid el-Bakraoui
- Bilal Hadfi
- Osama Krayem
- Ibrahim el-Bakraoui
- Chakib Akrouh
- Saleh Abdeslam
- Abdelhamid Abaaoud
- Brahim Abdeslam
- Mohamed Abrini
- Najim Laachraoui
- Fabian Clain
- Verviers Plot
- >20 Foiled Attacks 1 Successful
- Sid Ahmed Ghlam
- Reda Hame
- Ayoub El Khazzzani
- Lunel Network
- Artigat Network
- Zerkani Network
- Drancy Network
- Scrasbourg Network
- Sharia4Belgium/Luce Network

2015 — 2016

MELIANI CELL

Lab experiments were conducted in Spain to test the dynamic relationship between physical and spiritual formidability, trust, and resistance to difficult situations in individuals' views toward groups. Our aim was to explore methods that could be tested and validated in the field to identify wedges that decrease trust and support in armed groups within host populations. Three measures were deployed in our lab studies with the following effects.

Major Findings

The experimental results indicate that trust in one's group (in this case, Spaniards trust in Spain) country predicts costly sacrifices (including willingness to fight), mediated by the perceived spiritual formidability of the group (in a previous study, participants tended to refer to spiritual formidability in terms of convictions- strength of values and beliefs, 59% of participants) and internal strength ("heart," "energy" and "willpower in pursuit of goals and facing adversities", 58% of participants). The implication, to be further tested and refined, is that wedge issues should focus on diminishing trust in one's groups, which can be affected by diminishing conviction in the spiritual formidability of one's group (relative to adversaries).

ONLINE EXPERIMENT IN SPAIN RESILIENCE VS. CONTROL
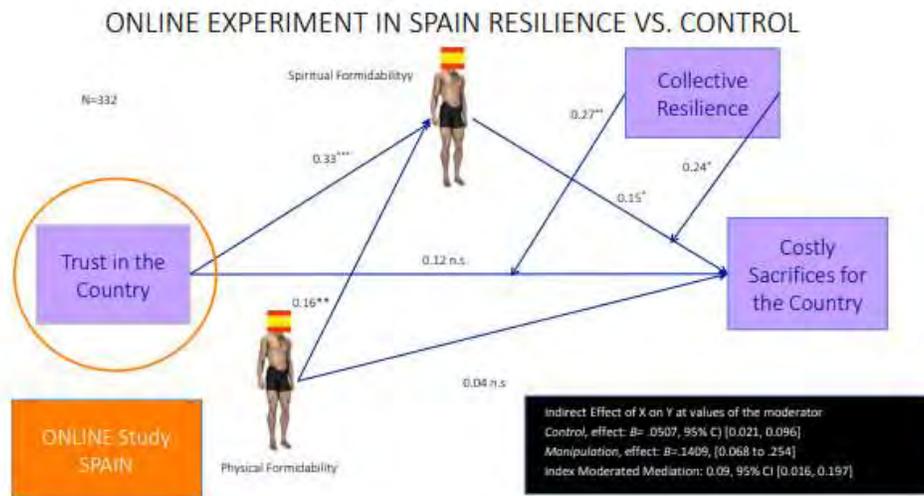
Key Takeaways

With regard to ISIS, showing weakening commitment to values and beliefs associated with the group (e.g., diminished faith in the Caliphate), and less enthusiasm in facing adversaries (e.g., diminished willingness to engage the enemy directly) could well undermine trust in the group, faith in the collective resistance of the group, and willingness to fight and die.

Deliverable 2.2.

- **Develop a Value Assessment Analysis that describes how beliefs spread over and contribute to shaping the Paris and Brussels networks.**
- **Analyze lab experiments.**
- **Submit experimental study protocols to AFOSR for susceptible and supporting ISIS Population #2.**

Under this deliverable the team conducted a **Value Assessment Analysis of the Paris Brussels Attack Networks.** The value assessment analysis described how beliefs spread and contributed to shaping the Paris and Brussels attacks. We provided a general overview of the diasporas prone to radicalization in Europe, specifically Belgium, France, and Germany and then detailed current violent networks and key individuals involved in Paris-Brussels attacks. The assessment provided information about the occurrences of both attacks, the aftermath of the attacks, and discoveries.

The team also analyzed the lab experiments (summarized below) and submitted the **experimental study protocol for susceptible and supporting ISIS population in Morocco** for sponsor review and approval. The protocol detailed the purpose, scope, location, population, recruitment and data collection methods proposed.

Summary of Lab Experiment Analysis
There is a long tradition of research into the effects of personal resilience as a protective factor, but little is known about: (A) whether collective resilience could be a mechanism to foster the willingness of individuals and societies to self-sacrifice for the common good, and (B) how collective resilience could be generated or increased. So, the main goal of the present investigation is to examine the effects of collective resilience on willingness to self-sacrifice for the group, and the mechanisms that could explain its potential consequences.

Data and Methods
Seven studies were conducted to examine study objectives. (1) A field study with Syrian refugees in Spain (N = 37); (2) An online study with Spanish citizens (N = 164); (3) a field study in several locations in Iraq (N = 69); (4) a field study in Iraq with refugees (N = 55); (5) an online study with Spanish citizens (N = 155); (6 & 7) two experimental studies conducted online in Spain (N = 120 & N = 332 respectively).

Major Findings
The results of *Study 1* showed that collective resilience (e.g. "If challenges arise for the group as a whole, we are able to actively respond to those challenges"), but not personal resilience (e.g. "I usually come through difficult times with little trouble") was positively related with costly sacrifices for refugees (e.g. "If necessary, I would be willing to go to jail to defend refugees of my country").
In developing measures that could be useful in the field, *Study 2* introduced and validated a new dynamic measure of resilience (see Figure 1). Results indicated that the dynamic measure strongly correlated with the verbal scale of collective resilience from Study 1. In addition, both measures correlated equally with costly sacrifices for the country (i.e., Spain), with participants recognizing the items included in the costly-sacrifice scale as extreme behaviors.

To replicate the positive relation between collective resilience and costly sacrifices for the group -- and as an additional validation of the new dynamic measure – **Study 3** showed that general collective resilience of Sunni Arabs assessed by the verbal scale, and the perception of collective resilience of Sunni Arabs to ISIS or to Iran assessed by the dynamic measure, positively correlated with costly sacrifices to defend Sunni Arab Community.

Study 4 replicated the positive correlation between collective resilience of Sunni Arabs to ISIS and costly sacrifices to defend Unified Iraq. But importantly, when participants were interviewed about their level of trust with regard to different groups, the interviews revealed the relevance of trust in the Iraqi Army as a factor that could motivate self-sacrifice for the group. Analyses indicated that trust predicted both collective resilience and costly sacrifices, and that the effect of trust in the Iraqi Army on expressed willingness to make costly sacrifices for the group was motivated by the increase in collective resilience.

Trust in the ingroup (Iraqi Army in Study 4, in the country in Studies 5-6-7, and in Moroccans in Study 8), predicted self-sacrifice for the group (Studies 4 to 7), (Path 1). The effect of trust on sacrifices was produced because trust increased the perception of collective resilience (Studies 4 to 7), assessed by a 5-items scale or by a dynamic measure (Path 2), what increased self-sacrifice for the group (Path 3).
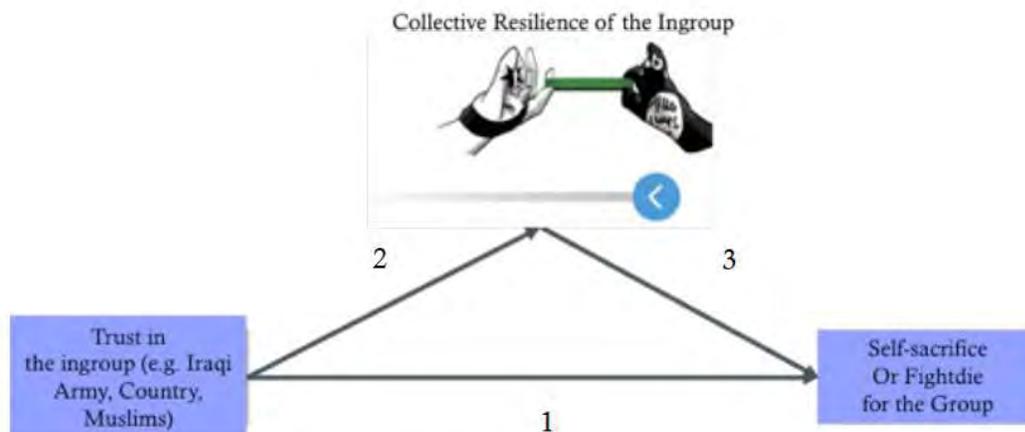
Study 5 confirmed these results. As anticipated, trust in the country was positively correlated with collective resilience (evaluated by the verbal or the dynamic scale), and with costly sacrifices for the country. Significantly, the effect of trust on costly sacrifices was mediated by collective resilience assessed by verbal or the dynamic measure, as with Study 4. Although suggestive, the correlational nature of the previous studies does not establish a causal relationship between the variables. To that end, two experiments manipulating the predictor of self-sacrifice (i.e., trust in the ingroup), and the underlying mechanism explaining the effect of trust on self-sacrifice (i.e., collective resilience of the ingroup) were conducted. In **Study 6** (N = 120), we experimentally manipulated trust in the ingroup. Participants learned via a newspaper article that a study in Spain with a representative sample of the population indicated that the majority of citizens acknowledged a high level of trust in their country, as compared to a control condition. Results showed that trust in the country predicted collective resilience (assessed by the verbal or the dynamic measures) and costly sacrifices for the country, and that the effect of trust on costly sacrifices was mediated by collective resilience.

Study 7 (N = 332) assessed trust in the ingroup, and then experimentally manipulated collective resilience by asking participants to write examples that demonstrate how members of the group (i.e., Spaniards) faced and resisted difficult situations from the last few years (e.g., terrorist attacks, severe economic crisis, unilateral declaration of Catalonian Independence and secession from Spain). Results indicated that trust in the group predicted costly sacrifices, but that this effect was stronger when collective resilience was manipulated as compared to a control condition.

Key Takeaways
These results offer theoretical and practical contributions. On the one hand, reveals for the first time that identity fusion and its correlates can emerge, or increase, as a kind of contamination effect by being witness of intense self-sacrifice that other ingroup members display for the group. On the other hand, this investigation shows how an emotional component, as it is feelings of admiration for an ingroup member, can increase the visceral connection toward the group of other individuals and their pro-group behaviors.

Summary and Key Findings of Progress Report 6.

Deliverable 2.3

- **Make Part I and II of the Relational Database available online to accredited researchers.**
- **Train local research staff in data collection methodology.**
- **Collect Data on susceptible and supporting ISIS Population #1.**

Under this deliverable the **Relational Database** was made available online for researchers in academia and the government so that they may use it for independent research analyses. We set in place a system for credentialed access.

The team **trained local research staff** in participant recruitment and data collection methodology in **Morocco.**

The team collected **data on susceptible and supporting ISIS Population in Spain**.

Deliverable 3.1

- **Analyze data on susceptible and supporting ISIS Population #1.**
- **Train local research staff in data collection methodology.**
- **Collect Data on susceptible and supporting ISIS Population #2.**
- **Submit experimental study protocols to AFOSR for susceptible and supporting ISIS Population #3 (Palestine).**

Under this deliverable, the team **analyzed the data from the studies conducted in Spain** (detailed below). The team also **trained local research staff in the Palestinian territories** in required participant recruitment and data collection methodology, completed **data collection on susceptible and supporting ISIS Population in Morocco,** and **submitted the experimental study protocols** for Palestine which detailed the purpose, scope, recruitment and data collection methods proposed.

Summary of Analysis of Spain Studies
The overall objectives of Spain studies were as follows:

- to discover and probe the most relevant wedge issues concerning intergroup conflicts, in general, and how these may be framed to fit local conditions that target support for ISIS, in particular.
- to provide tools for such framing by developing quantitative measures that can be deployed in the field, where actual conflicts occur, and to test these measures with correlational studies that provide information about the relation between the different relevant variables.
- to elaborate experimental designs to probe causality, as well as which factors explain the effects of some variables on others, and what factors increase or decrease such effects.

Methodology
The experiments performed involved: (1) Developing static and dynamic measures of wedge issues, sacred values, devoted actors, and variations of spiritual and physical formidability, and (2) Analyzing data on susceptible and supporting ISIS population in Spain.
First static measures, then a dynamic version of each such measure for inclusion were developed on our dynamic measures platform. The platform allows us (and other teams) to use the measures online or offline, in virtually any cultural setting. Some of the measures described here have been repeatedly validated, whereas others are still in the process of development and validation. Then, we go on to summarize studies done online in Spain to test and validate these measures, as well as experiments designed to demonstrate causal relationships between relevant variables. Dynamic and static measures tested were identity fusion, physical and spiritual formidability, resilience, group cohesion, minority/majority, weighing scales, humanization/dehumanization, aggression, and Astro blaster.

The lab was used to test and generalize applicability of measures developed from insights in the field, which then can be adapted for use with violent extremists and supporting populations, combatants, and others involved in violent conflict that impacts the national security of the U.S. and its allies. It is crucial to determine factors that violent extremists use to appeal to, and recruit from, susceptible populations (e.g., fusion and sacralization of hitherto important but non-sacred values by heightening perception of threat to those values, which factors facilitate display of extreme behaviors (e.g., because they perceive their group

as strong on spiritual or physical formidability measures), other factors that may motivate willingness to fight and die (e.g., because they trust their leaders or on other group members), and what factors increase or decrease ability to resist opposing forces (e.g., collective resilience). We will conclude this section of our deliverables report with a summary justification of how our static and dynamic measures and experimental studies can be useful in providing information about wedge issues in general, and those that can be used against ISIS, in particular.

Participants in these studies (correlational and experimental) were drawn from the general population of Spain, and from Syrian refugees in Spain. Participants from the general population come from all of Spain's Autonomous Communities, as well as Spain's North African enclaves of Ceuta and Melilla. Mean age for all studies is approximately 35 years-old (Standard Deviation 12-14) with a range from range of 20- to 60-year-old.

Data were collected via a snowball technique: we asked students from UNED (National Open University in Spain, student body appx. 35,000 of almost any adult age, drawn from all over Spain) to send invitations to participate to friends, colleagues, acquaintances, and so on, who then accepted the invitation and agreed to participate voluntarily. All studies and human subjects protocols were reviewed by Artis and by UNED's ethical department participants were thanked and debriefed.

Set 1: Exploring whether devoted actors are willing to employ offensive/aggressive behaviors under threat, and validation of a new measure of aggression
Set 1 Goals: (1) to explore whether devoted actors (individuals fused with a group and sharing a sacred value) are prone to aggressive inclinations (and not only to defensive willingness to make costly sacrifices for the group or willingness to fight and die), and (2) validate and test a videogame that encouraged participants to destroy ingroup and outgroup symbols.

Set 1 Method: We had 204 participants for the preliminary study: 1642 for Experiment 1, and 604 for Experiment 2. In Experiment 1, we checked whether identity fusion and sacred values interactively moderate the impact of threat on relative formidability and aggressive inclinations. To that end, we asked a group of participants to reflect on how an anti-constitutional referendum for independence celebrated in Catalonia (one of the richest regions of Spain) in 2017 affected democracy and their country. In Experiment 2, we sought to replicate the results of Experiment 1 with a different threat to the group and to the value: a strict interpretation of Sharia.

Set-1 Findings: We consistently found that devoted actors express willingness to engage in aggressive behavior against perceived foes even at the expense of personal gains when they feel threatened. Those participants who were fused with their group (Spain), considered their value (democracy) sacred, and were reminded of a collective threat destroyed more outgroup meteorites than ingroup meteorites, although this decision diminished personal gains. Significantly, these effects were apparently mediated by the perception that the ingroup is more formidable than the rival group. Devoted actors attributed more formidability to the ingroup than to enemies and, in turn, engaged in more aggressive behavior.

Set-1 Formidability Bias and Aggressive Inclinations

Formidability bias

Aggressive inclinations
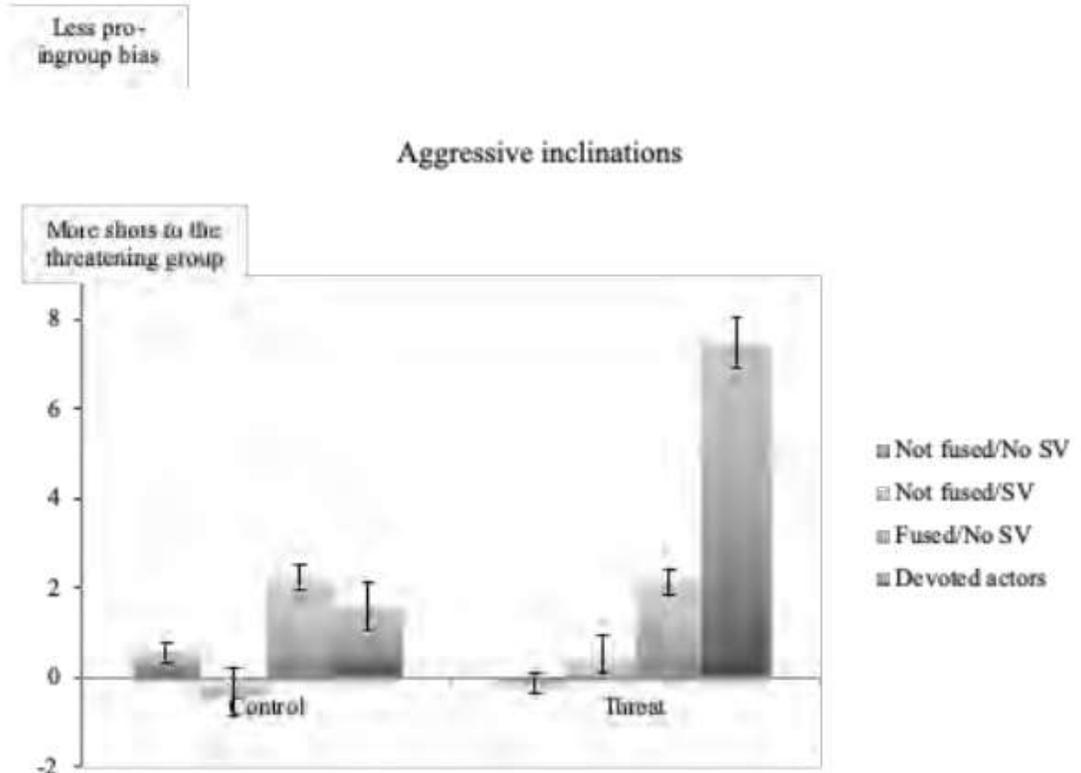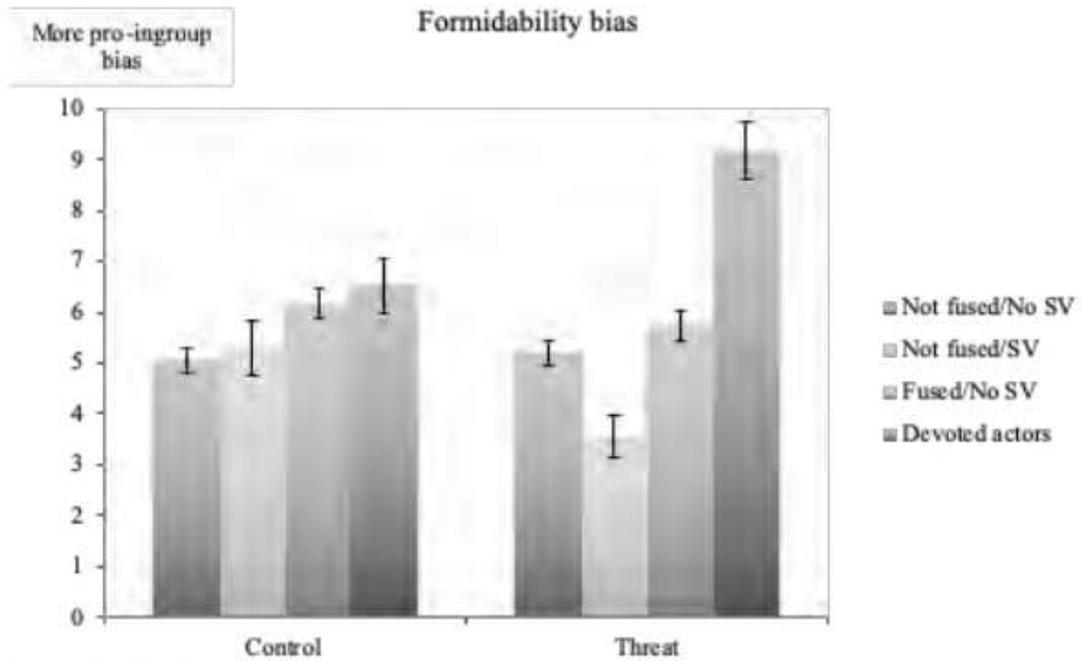
Set 2: Exploring the role of collective resilience, collective resistance, and ingroup trust on costly sacrifices for the group.
This series of studies was conducted to validate some dynamic measures, to establish correlations between these new measures and others already tested online and, in the field, and to establish causal relationships between such variables in order to further guide and support field studies.

Set 2- Study 1: This study was the first in a series that introduces the mechanisms of collective resilience in our line of research.

Set 2 - Study 1 Goals: 1) test the offline version of our dynamic measures platform in a field study in Spain with a population of interest; 2) to replicate the relation between perceived spiritual versus physical formidability and costly sacrifices for the group; and 3) to determine whether previous variables tested in the field (spiritual formidability and costly sacrifices for the group), are positively correlated with collective resilience.

Set 2 - Study 1 Method:
Thirty-seven refugees in Spain (69.7% male, 27.3% female, 3% did not want to report gender; mean age = 31.62, SD = 12.088; 78.4% from Syria; 87.5 Muslims). Participants responded to a questionnaire asking for fusion with different groups, physical and spiritual formidability of refugees, Europe, and ISIS, personal (Brief Resilience scale, BSR, Smith et al, 2008: for example, "I tend to bounce back quickly after hard time"; "I have a hard time making it through stressful events"; alpha = .73), and collective resilience for example, "If challenges arise for the group as a whole, we are able to actively respond to those challenges"; "Our group is able to obtain what it needs to thrive"; alpha =.83).

Set 2 - Study 1 Findings:
A correlational analysis shows that ONLY spiritual formidability of refugees correlates with Costly sacrifices for refugees, r (35) = .384, p =. 019. The other correlations are lower than .26, pa > .12.

Set-2 Fusion with Different Groups
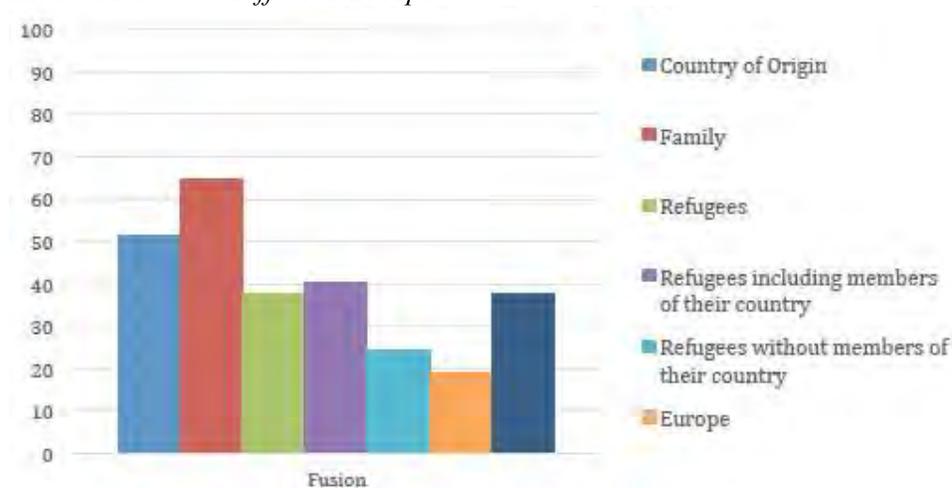
Set-2 Physical and Spiritual Formidability
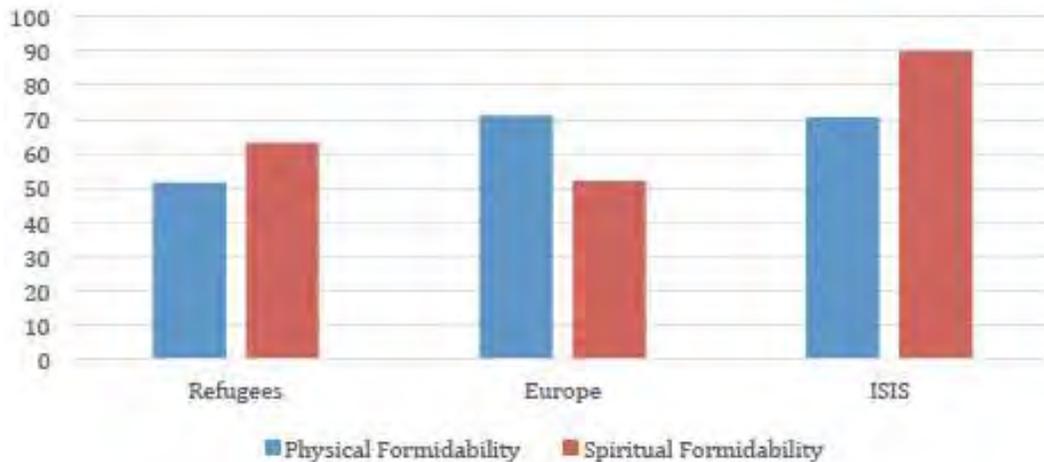
Individual versus collective resilience: Participants displayed a higher mean of collective than individual resilience, Ms = 4.51 vs. 3.86, t(36)= 3.04, p=.004. Collective, but not personal, resilience was positively correlated with costly sacrifices, r (35) = .384, p =.019. Finally, collective resilience, but not personal resilience, was positively correlated with spiritual formidability of the group (refugees), r (35) = .534, p<.001.

Although the main limitation of the current study was the small sample size (owing to the difficulty of obtaining responses from this Syrian refugee population) results replicate previous findings showing that: 1) the family was the group with which more participants were fused ; 2) Europe was perceived as weaker on spiritual than physical formidability, whereas ISIS was perceived as stronger on spiritual than physical spiritual formidability; and 3) spiritual, but not physical, formidability of the ingroup (refugees) is positively correlated with costly sacrifices for the group.

The novelty of this study for further research was that: 1) participants perceived the group as more resilient than the individual; and 2) collective resilience was correlated with spiritual formidability and costly sacrifices. Consequently, these preliminary findings argued for including collective resilience as an additional variable to consider in our field studies.

Set 2- Study 2
Set 2 - Study 2 Goals: Whereas the previous study has showed the convenience of measuring collective resilience because of its relation to costly sacrifices, the current study was conducted to develop and validate a dynamic measure that could be used in the field.

Set 2 - Study 2 Method:
One hundred sixty-four participants responded to their perception of physical and spiritual formidability of the ingroup (country). In addition, we included one dynamic measure of resistance: Participants were asked "There are situations in life that test the resistance of people."

We include resistance because we are particularly interested in this dimension as a survival strategy in the face of adversity (which not all conceptions of resilience address). Some authors refer to resistance as a weapon of the weak.

Set 2 - Study 2 Findings:
Costly sacrifices correlated with Spiritual formidability, $r(162) = .292$, $p<.001$, collective resilience, $r(162) = .465$, $p<.001$, and collective resistance, $r(162) =.464$, $p<.001$. Collective resilience and collective resistance correlated at $r(162) =.837$, $p<.001$. In order to replicate and extend our previous findings, we wanted to check whether spiritual formidability predicted collective resilience (and resistance) and costly sacrifices, and whether the effect of spiritual formidability on sacrifices was mediated by collective resilience (or resistance).

Indirect effect: .53, 95%, CI [0.1857, 0.9257]
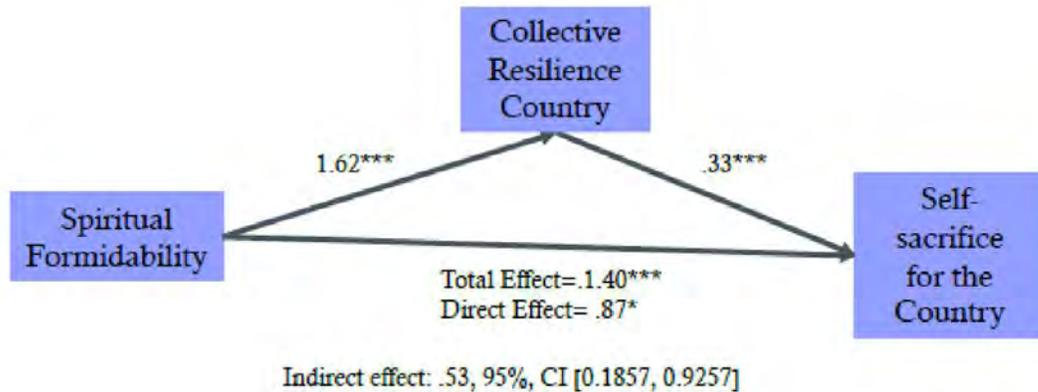
The same analyses including resistance, instead of resilience, showed a similar result (the indirect effect was .55).
This study replicates previous findings by showing that spiritual formidability, not physical formidability, is related to costly sacrifices for the group. In addition, results indicate that collective resilience and resistance (measured by a novel dynamic measure) are also predicted by spiritual formidability, and they mediate the path from spiritual formidability to costly sacrifices for the group.

Set 2- Study 3: This study was conducted after collecting interviews in the field, showing that trust in the ingroup was an important variable for those individuals living in Syria after just emerging from under ISIS rule.

Set 2 - Study 3 Goals: to explore the role of trust in the ingroup in relation to costly sacrifices.

Set 2 - Study 3 Method: One hundred and fifty five participants responded to an online questionnaire including a 4-item scale about ingroup trust (To what extent: "Do you trust in our country"; "Do you trust in your country more than in other countries in general"; "Do you trust in your country more than in other European countries"; and "Do you trust in your country more than in other groups you belong"; alpha = .90), collective resilience (alpha = .88), the dynamic measure of collective resistance, and costly sacrifices for the country (alpha = .89).

Set 2 - Study 3 Findings:
Costly sacrifices correlated with trust, $r(153) = .410$, $p<.001$, collective resilience, $r(153) = .407$, $p<.001$, and collective resistance, $r(153) =.375$, $p<.001$. Collective resilience and collective resistance correlated at $r(153) =.748$, $p<.001$. Trust correlated with collective resilience, $r(153) = .529$, $p<.001$, and collective resistance, $r(153=.509, p<.001)$.
A meditation analysis showed that trust predicted costly sacrifices for the country mediated by collective resilience.
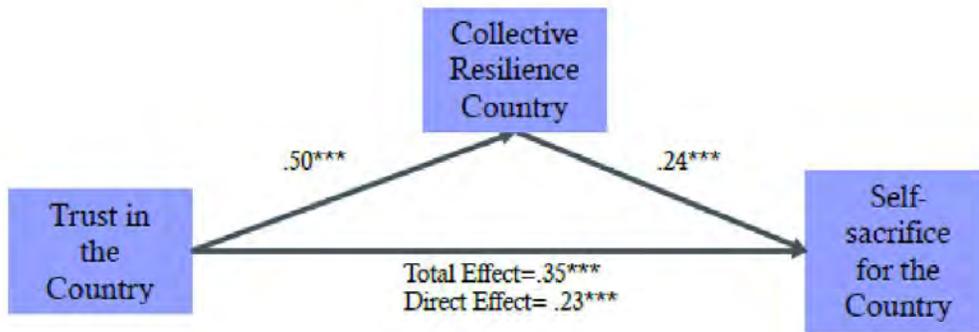
Indirect effect: .12, SE=.035, 95%, CI [0.0556, 0.1946]

Results of this study indicate that trust in the ingroup is positively correlated with costly sacrifices for the group, collective resilience, and resistance. In addition, both collective resilience and collective resistance mediate the effect of trust on costly sacrifices.
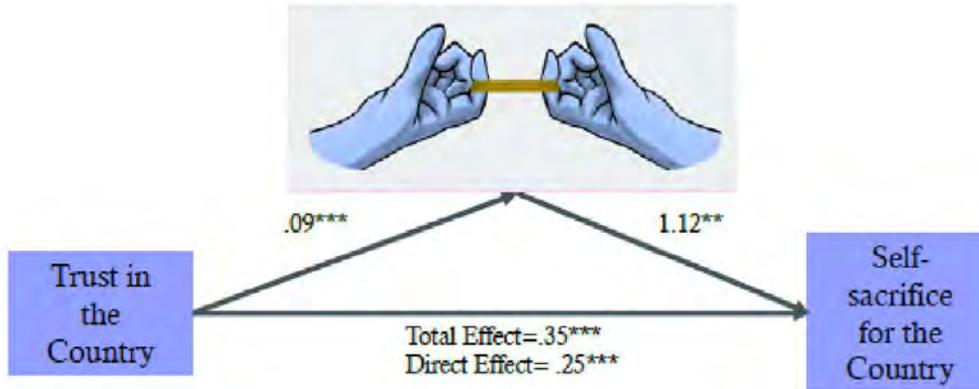
Indirect effect: .10, SE=.037, 95%, CI [0.0274, 0.1731]

Set 2- Study 4:
Set 2 - Study 4 Goals: to experimentally manipulate the different variables implicated in predicting sacrifices for the group in order to establish causality.

Set 2 - Study 4 Method: One hundred and twenty participants were randomly allocated to a high trust condition. Participants learned that "The Center for Sociological Research (CIS) conducts periodic surveys with representative samples of Spaniards in order to know the state of opinion on several issues related to the progress of the country.

Next, participants responded to the manipulation check of trust (alpha = .91), collective resilience (alpha = .91), the dynamic measure of collective resistance, physical and spiritual formidability of the ingroup, and the 5-items scale of costly sacrifices for the group (alpha = .95).

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Set 2 - Study 4 Findings:
The manipulation check indicated that participants in the trust condition expressed more trust in the ingroup than participants in the control condition, $F (1,118) = 24.29$, $p<.001$, Ms = 2.97 vs. 1.97. Participants in the control condition also showed more physical formidability, Ms = .51 vs. .42, spiritual formidability, Ms =.50 vs. .33, more collective resilience, Ms = 3.96 vs. 3.08, more collective resistance, Ms = .50 vs. .36, and more costly sacrifices for the group, Ms = 1.44 vs. .53.

In light of our previous results, here we wanted to determine whether trust in the country (now that it has been manipulated) predicts costly sacrifices for the country mediated by collective resilience (or collective resistance). In addition, we wanted to test whether spiritual formidability also mediates the effect between trust and costly sacrifices.

The results with respect to costly sacrifices, including the two mediators (collective resilience and spiritual formidability of the ingroup) and controlling for physical formidability of the ingroup.

Indirect effect: resilience .13, CI [0.0425, 0.2353], Spiritual Formidability, .07, CI [0.0042, 0.1610]
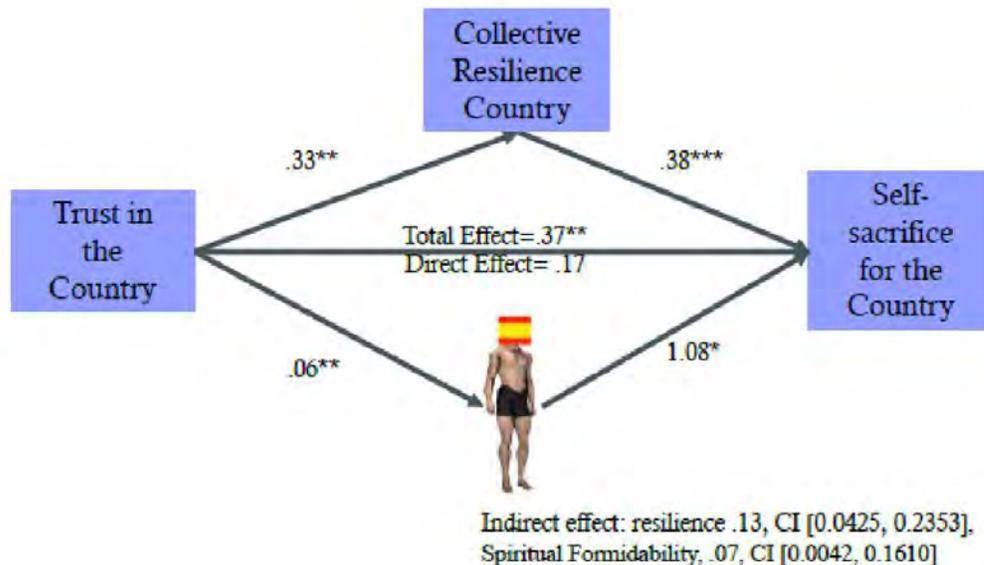
The model was not significant when resilience was first (rather than second, as above) and spiritual formidability was second; this seems to indicate that spiritual formidability is the cause of collective resilience, and not in the other way around. The same results are found when we factor in the model collective resistance instead of collective resilience.

This study offers causal evidence in relation to previous correlational studies. Results replicate our finding that trust in the ingroup, collective resilience, collective resistance, and spiritual formidability are related to (and are now seen to cause) costly sacrifices for the ingroup. This last experiment also shows that trust in the country predicts resilience/resistance, spiritual formidability, and costly sacrifices.

The mediation models suggest at least two possibilities: (1) resilience/resistance and spiritual formidability might be parallel mediators of the effect of trust on costly sacrifices; (2) trust could increase sacrifices by increasing spiritual formidability first, and resilience/resistance

later, but not the other way around. Further experiments are designed to manipulate both resilience/resistance and spiritual formidability to establish the most likely causal path.

Set 2- Study 5:

This study manipulates spiritual formidability to test whether and how it affects collective resilience/resistance and costly sacrifices. Our previous findings suggest that spiritual formidability should increase costly sacrifices mediated by collective resilience/resistance.

Set 2 - Study 5 Goals: to experimentally manipulate the different variables implicated in predicting sacrifices for the group in order to establish causality.

Set 2 - Study 5 Method:

Eighty-five participants were randomly allocated to two experimental conditions: high ingroup spiritual formidability versus control. Participant learned that we conducted research on how people in society perceive their country's spiritual formidability (and we described what spiritual formidability means). Participants in the high spiritual formidability condition were introduced to a series of vignettes.

In contrast, participants in the control condition were presented with the 6 body options but were told that we would provide the results at the end of the questionnaire.

Next, participants responded to a questionnaire including the verbal version of the collective resilience scale (alpha = .905), the dynamic measure of resistance, the costly sacrifices scale (alpha = .877), and their perception of physical and spiritual formidability of the ingroup as a manipulation check.

Set 2 - Study 5 Findings:

The manipulation check indicated that spiritual formidability was higher in the experimental condition than in the control condition (p =.02). However, the perception of physical formidability did not change.

The correlation between resilience and resistance was r (83) = .735, p<.001. Multivariate analyses indicated that resilience (Ms = 3.657 vs. 3.019), resistance (Ms = .478 vs. .365), and costly sacrifices (Ms = 1.186 vs. 0.60) increased in the manipulation as compared to the control condition (ps < .041). A meditational analysis showed that the effect of the experimental manipulation increased costly sacrifices for the country because of increased collective resilience.
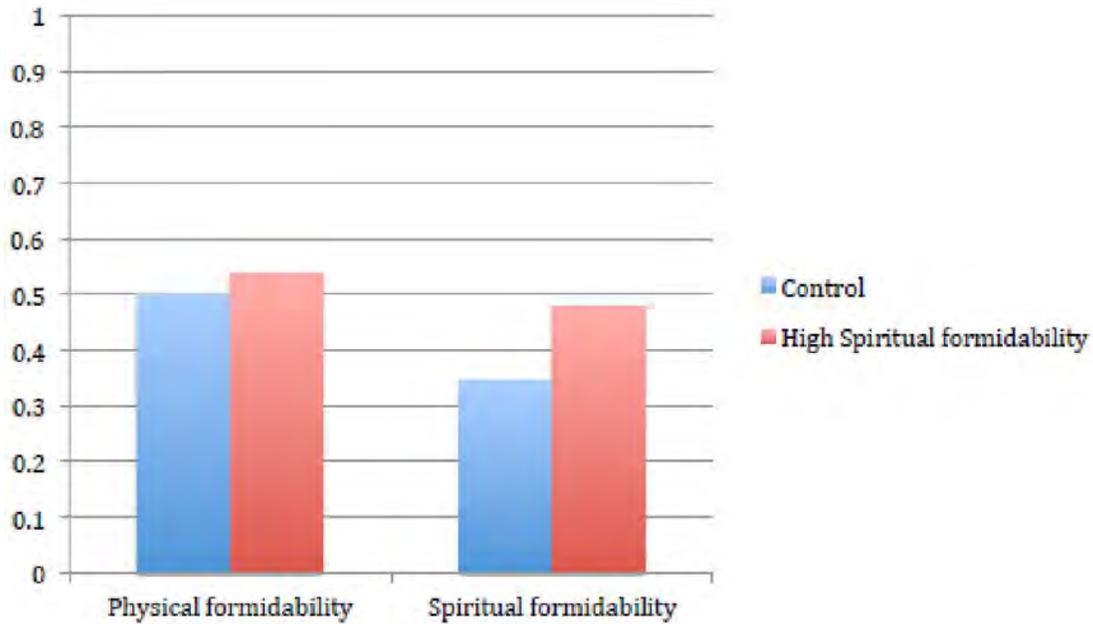
When we include resistance in the mediation analyses, instead of resilience, the result is similar but even stronger: the direct effect is .30, n.s., and the indirect effect is .24 CI [0.0278, 0.6551].
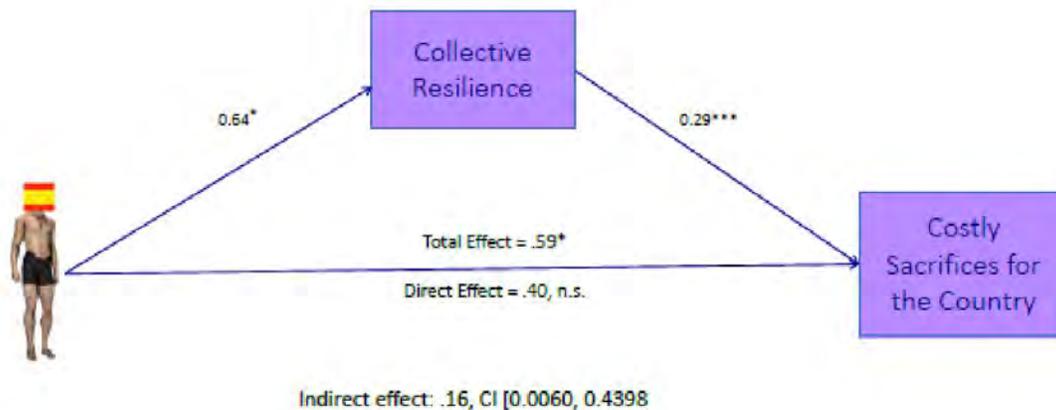
As expected, manipulating spiritual formidability increased collective resilience and resistance, as well as costly sacrifices for the group. Also, the effect of spiritual formidability on sacrifices was mediated by collective resilience (or resistance). It is also important to note that the manipulation check indicates that manipulating spiritual formidability does not affect the perception of physical formidability.

Set 2- Study 6:
Having manipulated trust in the ingroup, and spiritual formidability, the next step is to manipulate collective resilience. We anticipated that trust in the ingroup would be positively related to spiritual formidability and costly sacrifices for the group, and that the effect of trust on sacrifices will be mediated by spiritual formidability. However, we also expected that the effect of the mediating model, wherein collective resilience is manipulated just after measuring spiritual formidability, would be stronger than under control conditions.

Set 2 - Study 6 Goals: to experimentally manipulate the different variables implicated in predicting sacrifices for the group in order to establish causality.

Set 2 - Study 6 Method:
Three hundred and thirty-two participants responded to a questionnaire measuring trust in the ingroup, physical and spiritual formidability of the country. Then, participants were randomly allocated to the control condition or to the high resilience condition. Participants then responded to the measure of costly sacrifices for the country. All the scales included in this study had alphas > .80.

Set 2 - Study 6 Findings:
A univariate analysis showed a significant main effect of the experimental manipulation, and participants showed more costly sacrifices in the experimental condition than in the control condition, $F(1,331) = 20.823$, $p<.001$, Ms = .873 vs. .367.

Most important, a mediation analysis indicated that the effect of trust in the ingroup predicted costly sacrifices for the country mediated by spiritual formidability of the ingroup (controlling for physical formidability); and this model was stronger in the high resilience condition than in the control condition.
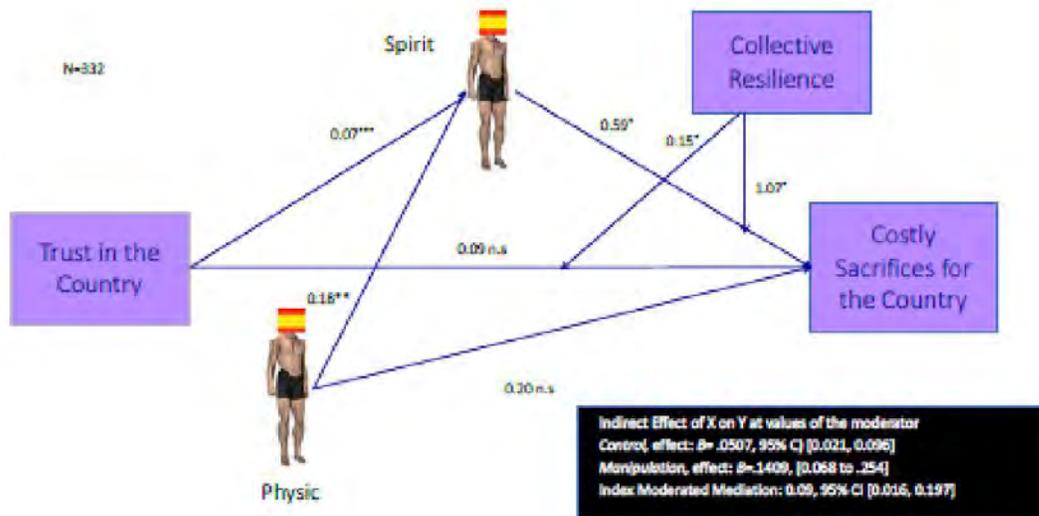
Set 3: Test and validation of measures to be used in the field

Set 3 - Study Goals: to: 1) test new dynamic measures (weighing scales, normative support of violence) and static measures (dehumanization, the voodoo task); 2) determine the relation between these new measures and other measures already used by our team (physical and spiritual formidability, collective resilience; 3) explore the variables that could be more predictive of defensive behavior (e.g. costly sacrifices for the group) and aggressive/offensive behavior (e.g. the voodoo task); and 4) confirm that fused versus non-fused with a group, and participants with sacred values versus nonsacred values, differ in their responses to these measures.

Set 3 - Study Method: We have 507 participants. The design is correlational.

Set 3 - Study Findings:
Percentages (%) of fusion with the country (Spain), the integrity of Spain as a Sacred Value, and devoted actors (fused with Spain sharing this Sacred Value).

In line with previous findings for online studies, the percentage of devoted actors is low (see the figure including the % of participants fused with a group, participants with sacred values, and devoted actors [i.e., both fused *and* committed to sacred value). As in previous studies in Morocco and Spain, fusion with the group and sacred values had a low correlation, r (505) = .195, p<.001, indicating that they are independent factors.
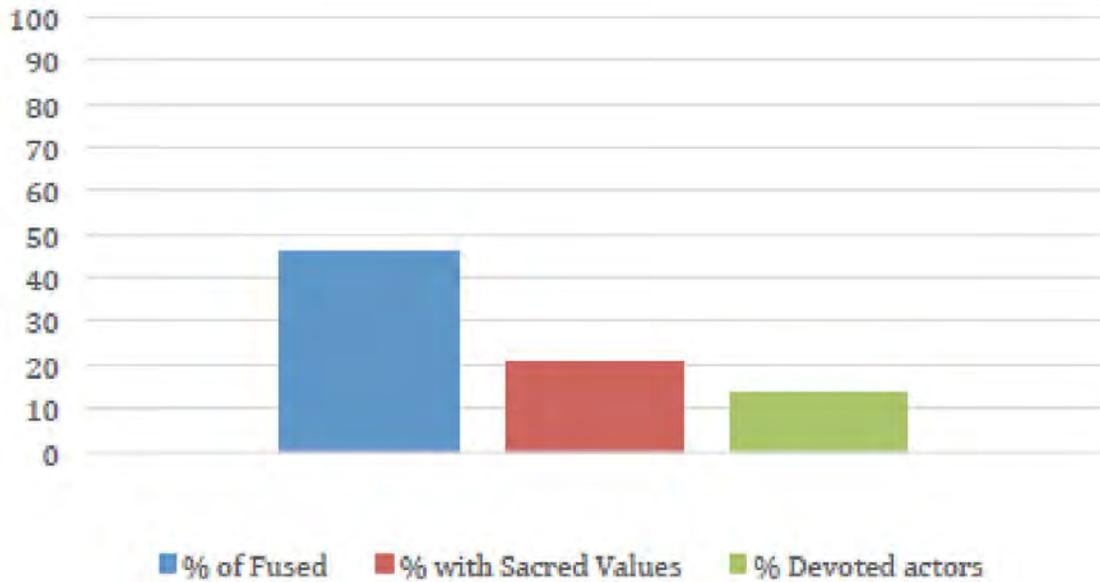
Differences in these variables between fused versus non fused.

An ANOVA on all measures comparing fused to non-fused showed a significant difference (all ps <.001). Fused, as compared to non-fused, displayed more costly sacrifices, Ms = 1.14 vs. 0,47, more aggression in the voodoo task, Ms = 2.24 vs. 1.44, more trust in the ingroup, Ms = 3.50 vs. 3.08, more physical formidability of the ingroup, Ms = .59 vs. .53, more spiritual formidability, Ms = .55 vs. .43, less perception of support of violence, Ms = .39 vs. .47, more collective resilience, Ms = .56 vs. .45. In addition, fused as compared to non-fused perceive Catalans independentists as less human.

Differences in these variables between participants with sacred values versus non-sacred values.

Results were similar in this case: participants with sacred values were more willing to display costly sacrifices, aggression in the voodoo task, more trust in the ingroup, more physical and spiritual formidability, less support for the violence, more collective resilience. They consider the outgroup to be guilty and the ingroup to suffer more. However, there were no significant differences in this case on the dehumanization measure.

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The perception of who is more guilty of the conflict and who has suffered more predicts both defensive (costly sacrifices) and offensive behaviors (voodoo task); however, whereas spiritual formidability only predicts defensive actions, dehumanization of the outgroup predicts offensive actions.

The current study confirms the relatively low percentage of Western European (here, Spaniards) fused with the group (e.g., the country), committed to sacred values (e.g., democracy), and devoted actors (fused and committed to sacred values, and so willing to make costly sacrifices). However, results replicate the findings of previous studies that fused individuals and those with sacred values differ in their responses (and predicted behavior) in comparison to non-fused individuals and who do not have sacred values: Those who are fused and those with sacred values score significantly higher on their perception of who is more guilty of an intergroup conflict and who has suffered more, as well and on their perception of the dehumanizing the outgroup.

Moreover, we have preliminary information showing that defensive and offensive behavior may be predicted by different variables. Whereas spiritual formidability predicts defensive behavior (costly sacrifices for the group), dehumanizing the outgroup predicts offensive behavior (the voodoo task). Perception of who is more guilty for aa conflict together with perception suffered in the conflict predicts both defensive and offensive willingness to act.

Set 4: Exploring other measures as possible outcome indicators (Distinct from costly sacrifices).

Set 4- Study 1:

Set 4 - Study 1 Goals: Here we explore alternative measures that could be used for future studies.

Set 4 - Study 1 Method: One hundred ninety-nine Spaniards participated in this study. Catalans were distributed in a different study. The reason is that we measured fusion with Spain (54.3% were fused) and the unity of Spain as sacred value (43.2% held this value sacred). Next, participants were asked for their support of the government´s measures against pro-independent Catalans. All the scales had alphas >.80.

Set 4 - Study 1 Findings:
The correlation between fusion and sacred value was .29, p<.001. The correlations between the 4 measures included in the questionnaire ranged from 0.522 to 0.722, indicating that they measured similar variables. A multivariate analysis including fusion and sacred values as predictors, and the new four measures, showed main effects of fusion ps <.015, and main effects of sacred values, ps <.05, but no interactions, ps >0.086.

This study replicates previous findings showing that fusion and sacred values are independent factors. Taking this result into account, here we offer evidence for 4 new variables that distinguish fused from non-fused and participants with sacred values from those without sacred values: that is, 3 scales and the voodoo task, which could be used in the future in the field. Also, future research should endeavor to develop dynamic measures of vignettes measuring what these scales are measuring.

Differences between Fused and Non-fused
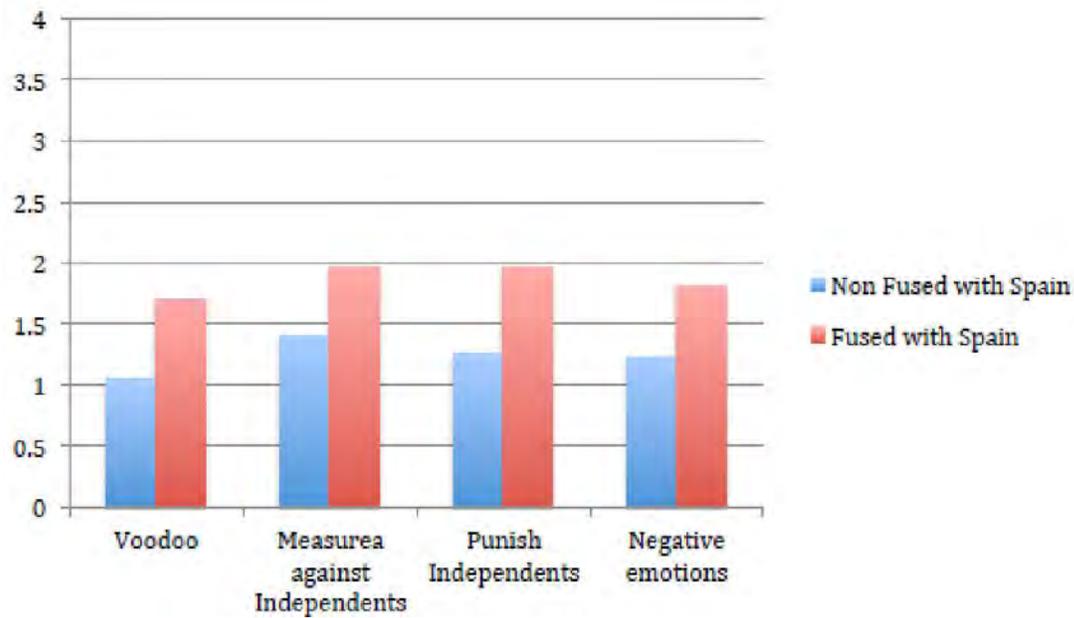
Differences between Unity of the Country as sacred value and non-sacred values
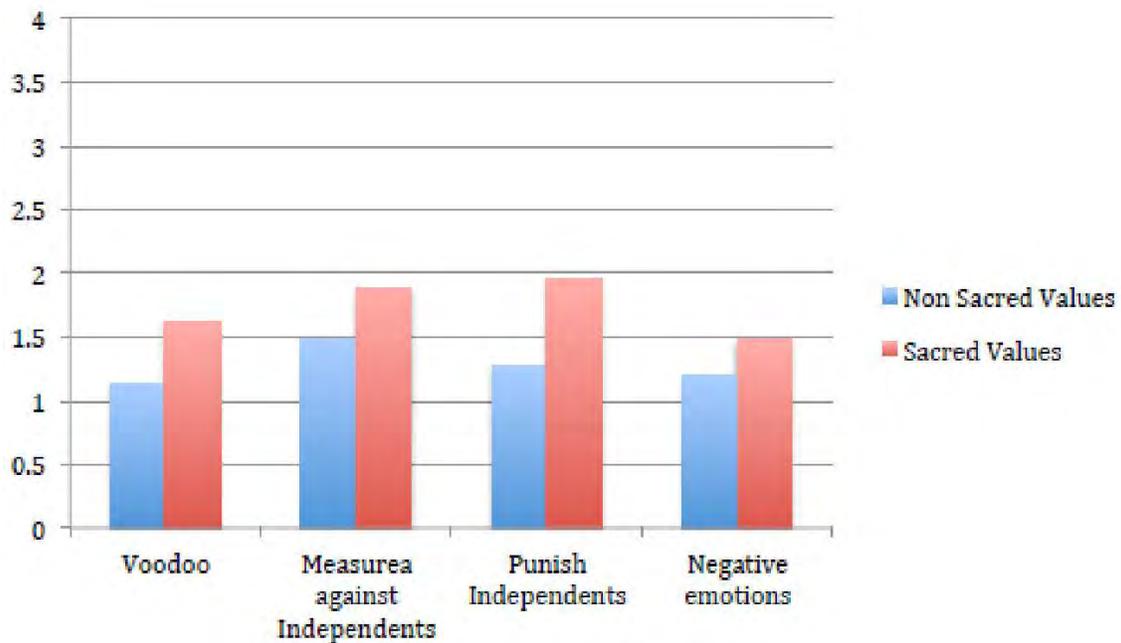
Set 4- Study 2:

Set 4 - Study 2 Goals: The main goal of this study was to replicate and adapt the same study to a more threatening outgroup, as it is ISIS, instead of the Catalans pro-independentists.

Set 4 - Study 2 Method: One hundred and seventy participants responded to a questionnaire including a measure of fusion with the country (56.5% fused), democracy as sacred value (70% with sacred values), and the same outcome measures of the previous study adapted to the Islamic State as the outgroup.

Set 4 - Study 2 Findings:

The correlation between fusion and sacred value was .098, p=.202. The correlations between the 4 measures included in the questionnaire were from 0.428 to 0.644, indicating that they measured similar variables. In this case, there was only a main effect on measures against ISIS and on punishing ISIS.
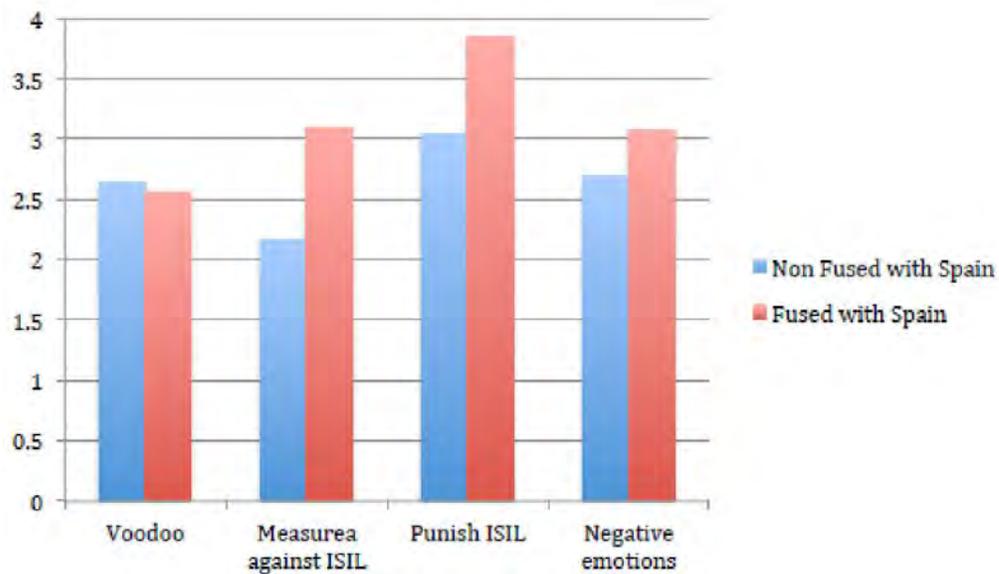
For sacred values, any effect was significant, but it seems that there is a tendency towards lower means for those with democracy as a sacred value. In both cases, the means are always higher than for the previous study (when the outgroup was Catalans).
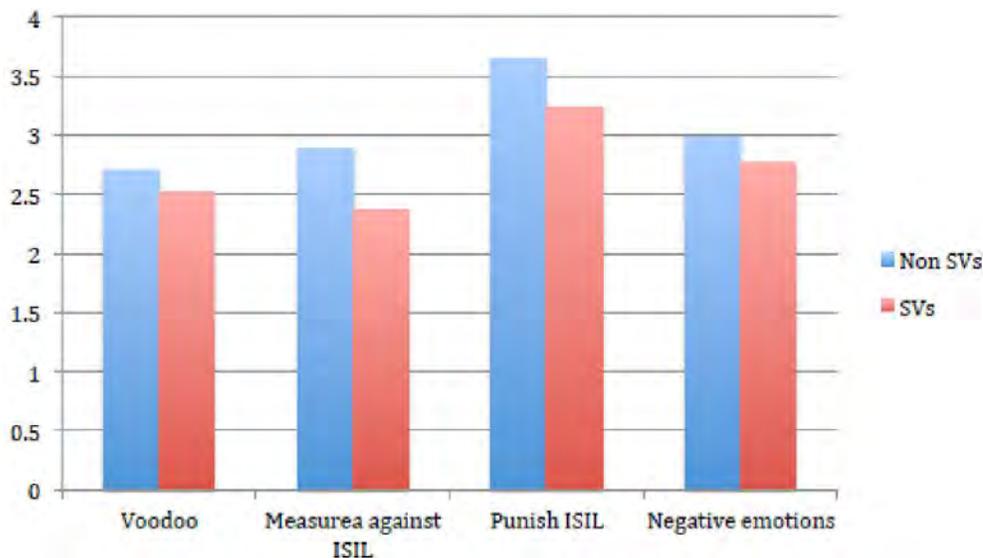
This study again replicates the independence of fusion from sacred values. Here we have found a tendency for fused individuals to accept government actions against the outgroup, but they are more reluctant to support individual actions that depend only on the participant (e.g., the voodoo task).

Summary and Key Findings of Progress Report 8.

Deliverable 3.2
- **Train local research staff in data collection methodology.**
- **Collect data on susceptible and supporting ISIS Population #3.**

Under this deliverable the team **trained the local research staff** in data collection methodology using dynamic measures, including recruitment methods, participant data protection, and requirements for conducting a representative online survey in the West Bank and Gaza. Additionally, **data on susceptible and supporting ISIS Population in Palestine was collected**.

Deliverable 3.3
- **Analyze data on susceptible and supporting ISIS Populations #2 (Morocco) and #3 (Palestine).**
- **Submit experimental study protocols to AFOSR for susceptible and supporting ISIS Population #4 (Lebanon).**

Under this deliverable the team **analyzed the data collected in Morocco and Palestine (detailed below)** and the **experimental study protocol for susceptible and supporting ISIS population in Lebanon** was submitted for sponsor review and approval. The protocol detailed the purpose, scope, location, population, recruitment and data collection methods proposed.

Summary of Morocco and Palestine Studies
This part of the report summarizes the results of five studies, two of them conducted in Morocco (one study in Tetouan and one study in Casablanca), and three in Palestine (three versions of the same study, collecting data with paper and pencil, ipad offline, and online via Facebook).

Study 1 and 2 in Morocco
A.1 Study 1& 2 Data and Methods
Eight hundred and twenty-one Moroccans (*420 in Casablanca*, mean age = 34.69, sd = 12.73, 50.5% female, and *401 in Tetouan*, mean age = 32.05, sd = 13.34, 50.1% female) were face-to-face interviewed and responded to a questionnaire in a tablet. The following issues were addressed in the questionnaire:
- Trust,
- Physical and Spiritual Formidability,
- Collective Resilience,
- Collective resilience dynamic,
- Fight and die for Moroccans, and
- Costly sacrifices for Moroccans

Study 1& 2 Major Findings
Correlational analyses between fight and die and costly sacrifices and the rest of variables separately for Casablanca and Tetouan were made.
Multivariate analyses on trust in Moroccans as compared to other groups and trust in Moroccans under threatening circumstances were conducted. The results showed that participants from Casablanca indicated that participants from Casablanca displayed higher levels of trust in Moroccans than participants from Tetouan, $F (1, 717) = 24.147$, $p < .001$, $\eta^2 = 0.033$. However, no differences between the groups were found for trust under threatening conditions, $F (1, 717) = 1.809$, $p = .179$, $\eta2 = 0.003$.

A multivariate analysis on Physical and Spiritual Formidability was made. The findings suggest that participants from Tetouan considered themselves stronger on personal physical and spiritual formidability, $F (1,809) = 4.243$, $p = .040$, $\eta^2 = 0.005$, and $F (1, 809) = 35.106$, $p < .001$, $\eta^2 = 0.042$.
- Participants from Casablanca perceived Moroccans as stronger on physical formidability $F(1,809) = 15.69$, $p < .001$, $\eta^2 = 0.019$, while participants from Tetouan

perceived Morrocans as stronger on spiritual formidability, F (1, 809)= 11.17, p = .001, η^2= 0.014.

- Participants from Casablanca perceived Arabs as stronger on physical formidability F(1,809) = 8.626, p = .003, η^2= 0.011.
- Participants from Tetouan perceived Ummah as stronger on spiritual formidability F(1,809)= 7.477, p = .006, η^2= 0.009.
- Participants from Casablanca perceived Westerners as stronger on physical formidability F(1,809)= 77.074, p < .001, η^2= 0.087 and participants from Casablanca perceived Islamist Militant Groups as stronger on physical formidability F(1,809)= 64.911, p < .001, η^2= 0.074, and on spiritual formidability, F(1,809)= 10.897, p = .001, η^2= 0.013.

Physical vs. Spiritual Formidability
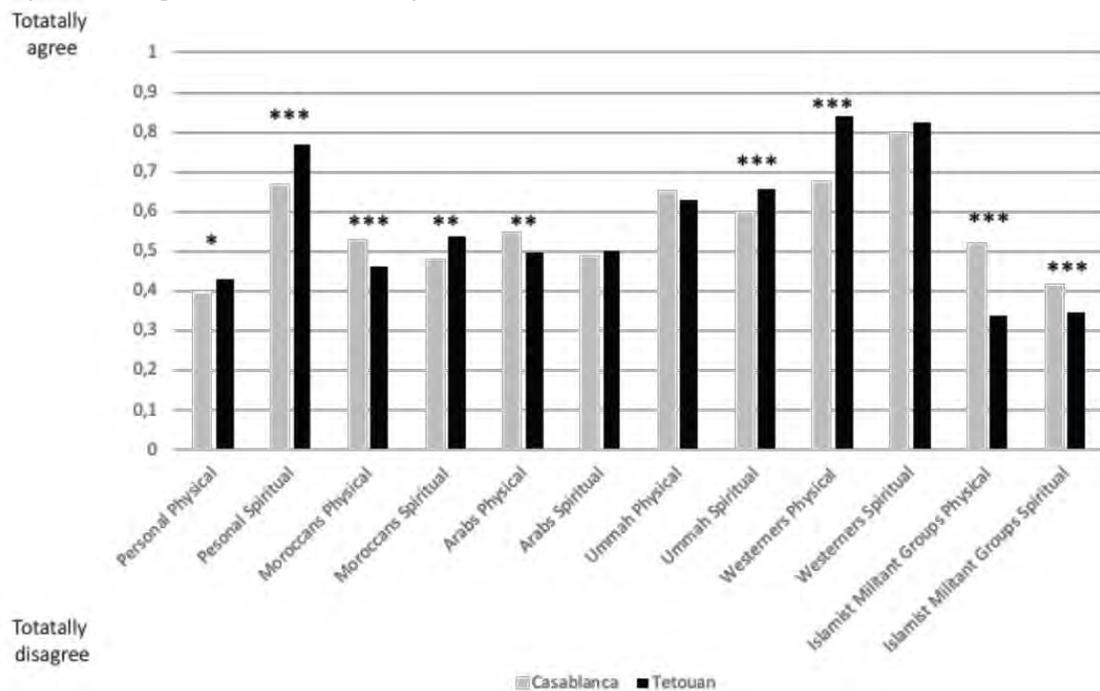
Univariate analyses on collective resilience indicated that there were no significant differences between Casablanca and Tetouan, F (1,803)= 0.608, p = .436, η^2=0.001. *Multivariate analysis on collective resilience (resistance) dynamic* showed that participants from Tetouan consider Moroccans in general as more resilient/resistant F (1,809)= 67.483, p < .001, η^2= 0.077, and versus ISIS, F (1, 809)= 35.137, p < .001, η^2= 0.042. However, there is no significant differences between participants from Casablanca and Tetouan when consider the resilience/resistance of Moroccans versus Westerners, F (1,809)= 0.129, p = .72, η^2= 0.000.

A repeated measure analyses in fight and die and costly sacrifices for the group showed an interaction effect, F (1, 770)=4.351, p = .037, $\eta 2$= 0.006. The analyses show that participants from Tetouan expressed more willingness for costly sacrifices than participants from Casablanca. However, no differences were found for fight and die for the group. The analyses also showed that the means in fight and die for the group in both locations were higher than the means for costly sacrifices, F (1, 770)= 4.351, p = .037, $\eta 2$= 0.006.

Means for Collective Resilience
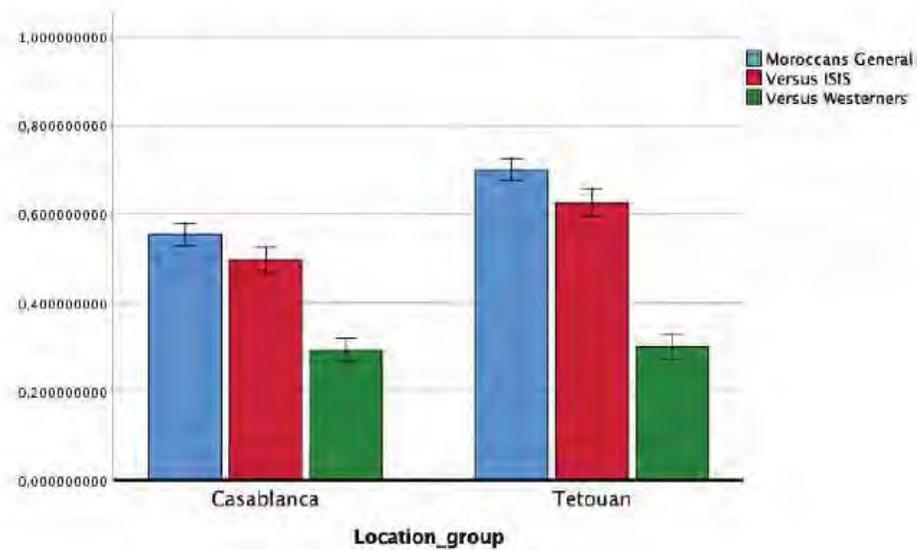
Means of Fight and die and costly sacrifices for the group for participants in Casablanca and Tetouan
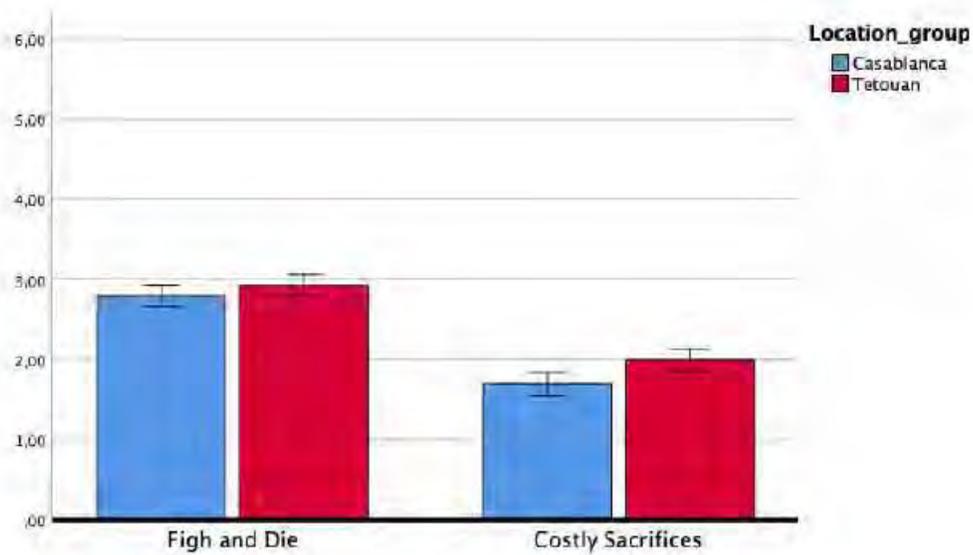
Mediation Analyses: After testing several models, it was found out that the dynamic measure of collective resilience of Moroccans versus westerners was explained the effect of trust on costly sacrifices in both samples, Casablanca and Tetouan.

Trust in Moroccans predicts costly sacrifices for them mediated by collective resilience of Moroccans versus Westerners

Indirect effect Casablanca = 0.03, 95% CI = 0.0103 to 0.0612

Indirect effect Tetouan = 0.04, 95% CI = 0.0174 to 0.0672
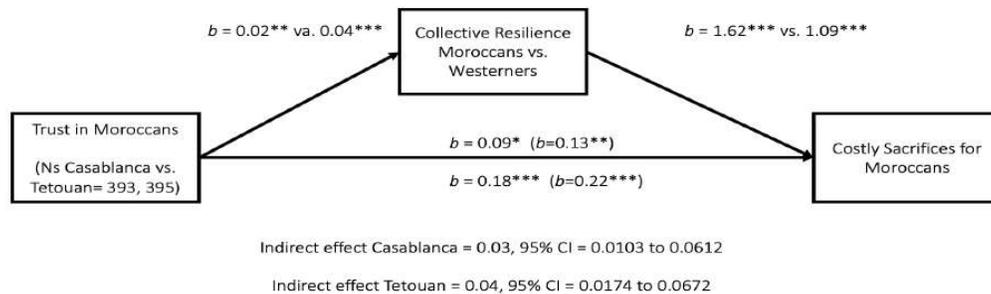
Study 1&2 Key Takeaways
- Spiritual formidability of Arabs, physical and spiritual formidability of the Ummah is positively and significantly correlated with fight and die and costly sacrifices for the group.
- In Casablanca, personal spiritual formidability is positively related to fight and die and costly sacrifices for the group, while in Tetouan it is physical formidability what correlates with fight and die and costly sacrifices.
- In Teotuan, but not in Casablanca, physical formidability correlates with fight and die and costly sacrifices.
- In Tetouan, the physical and spiritual formidability of Westerners correlates negatively with costly sacrifices and fight and die for the group.
- Participants from Casablanca displays high levels of trust in Moroccans than participants from Tetouan.
- Participants from Casablanca show less personal physical and spiritual formidability, less spiritual formidability of Moroccans and Ummah, and less physical formidability of Westerners
- Participants from Tetouan perceive Moroccans in general, and versus ISIS as more collective resilient than participants from Casablanca.
- Participants from Tetouan expressed more willingness for costly sacrifices for the group than participants from Casablanca.

Study 3 Palestine (Paper and pencil questionnaire)
A.2 Study 3 Data and Methods
The study was conducted with 482 Palestinians, all Muslims, 50.9% females. The mean age was 38.33 (sd = 13.376). The subjects responded to a paper and pencil questionnaire through face-to-face interviews. Interviews were conducted in Gaza Strip (470) and in West Bank (75).
The residence of respondents was Jerusalem (75), Jabalia (75), Gaza city (142), Khanyounis (80), Deir al Balah (59), and Rafah (50). The places where they responded to the questionnaire were city (406), village/town (10), and refugee camp (66). The majority of respondents (310) were refugees while the remaining population (173) were non-refugees. The following issues were addressed in the questionnaire:
- Fusion within the group,
- Trust in the group,
- Physical and Spiritual Formidability,

- Perception of moral support of violence,
- Collective resilience/resistance,
- Perception of the conflict between Palestine and Israel,
- Dehumanization of Israelis, and
- Sacred values.

A.2 Study 3 Major Findings

Fusion with the ingroup. A total of 277 participants (57.5%) were fused with the group, 191 (39.6%) non fused, and 14 (2.8%) did not respond.

For sacred values, from the whole sample, 337 (70%) responded that they would not give up to the right of return under any circumstances or for any price. The rest of participants chose for a permanent peace, 39 (8%), substantial monetary compensation, 37 (7.7%), if both were offered, 61 (12.7%), and some did not respond, 7 (1.5%).

The results indicate that on the one hand, fused with Palestine, as compared to non-fused, trust more in Palestinians, consider themselves as stronger on physical and spiritual formidability, consider Palestinians as stronger on physical and spiritual formidability, consider Israelis as weaker in spiritual formidability, are more agree in considering that it is moral to support violence to defend Palestine and the right to return, perceive themselves as more resilient, consider that Palestinians have suffered more than Israelis during the conflict, dehumanize more to Israelis and are more willing to do costly sacrifices for Palestine.

Physical and Spiritual Formidability (Personal, Ingroup, and Outgroup)
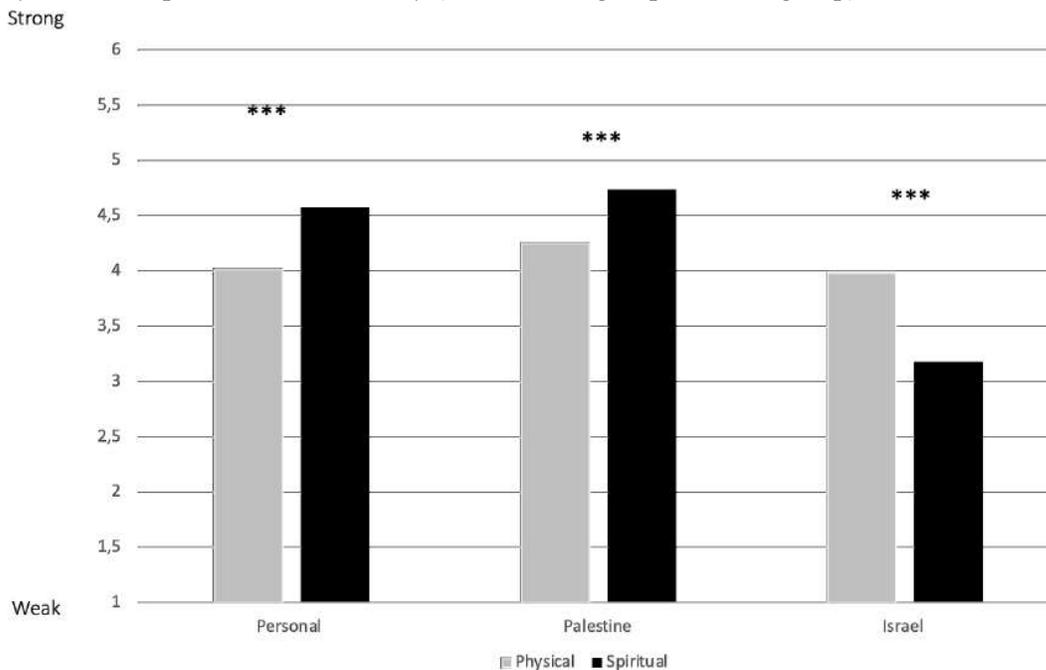
On the other hand, participants who consider the right to return as a sacred value, trust more in Palestinians, consider themselves as stronger on spiritual formidability, consider Palestinians as stronger on physical and spiritual formidability, consider Israelis as weaker in spiritual formidability, are more agree in considering that it is moral to support violence to defend the right to return, perceive themselves and Palestinians as stronger in resilience, consider that Israelis are more guilty of the conflict but that Palestinians are suffering more, dehumanize more to Israelis and are more willing to do costly sacrifices for Palestine.

Repeated measure analyses to compare physical versus spiritual formidability (personal, ingroup and outgroup), and a series of mediational analyses were also made. Repeated measures analyses show that participant perceived themselves as stronger on spiritual than on physical formidability, t (479)=9.64, p <.001. They also perceive Palestinians as stronger on spiritual than physical formidability, t (480)=7.44, p <.001. However, participants perceive Israelis as stronger on physical than on spiritual formidability, t (472)=11.01, p<.001.
Mediation Analyses on the effect of trust on sacrifices mediated by collective resilience. It shows that trust in Palestinians predicts collective resilience and costly sacrifices for Palestinians. Also, the effect of trust on costly sacrifices is mediated by collective resilience.

Indirect effect = 0.19, 95% CI = 0.1219 to 0.2598
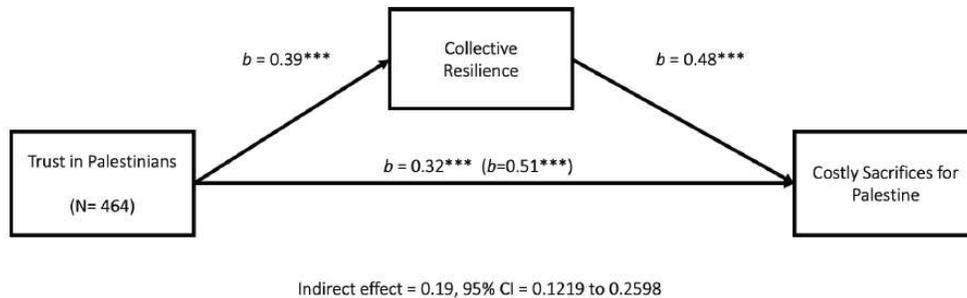
Mediation Analyses on why fusion and sacred values predict costly sacrifices: The fused showed more sacrifices for the group because they trust more in Palestinians, consider moral to support violence to defend Palestine, they perceive themselves as more resilient as individuals, and they de-humanize more to Israelis.

Indirect effect
Via Trust = 0.30, 95% CI = 0.1701 to 0.4600
Via Morality = 0.32, 95% CI = 0.1934 to 0.4667
Via Resilience = 0.12, 95% CI = 0.0479 to 0.2053
Via Dehumanization = 0.14, 95% CI = 0.0719 to 0.2345
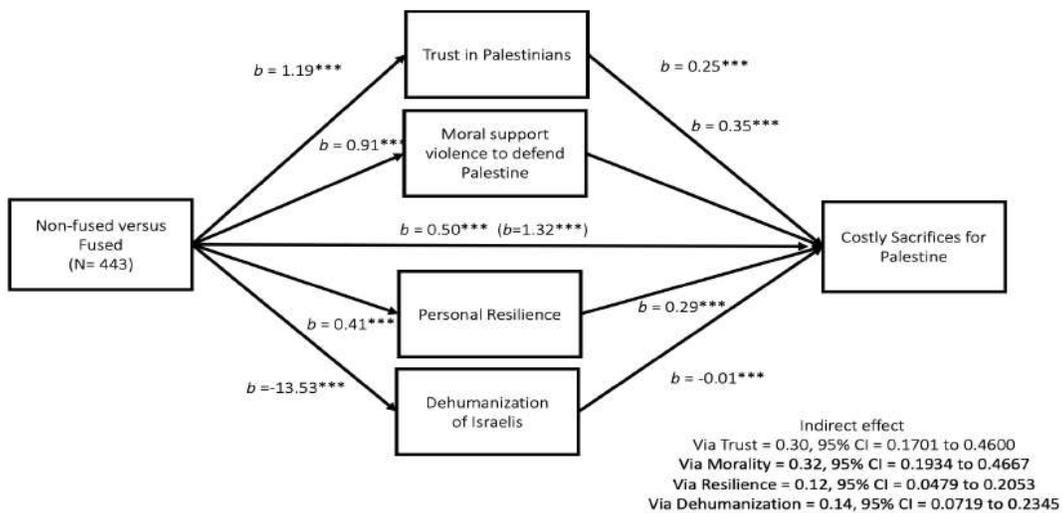
Mediation Analyses on why participant with sacred values display stronger willingness for costly sacrifices for the ingroup: the mechanisms underlying/explaining the effects are the same, but with an addition, as it is that these participants also consider moral to support violence to defend the right to return.

Indirect effect
Via Trust = 0.24, 95% CI = 0.1308 to 0.3693
Via Morality = 0.15, 95% CI = 0.0540 to 0.2642
Via Morality R&R = 0.08, 95% CI = 0.0079 to 0.1662
Via Resilience = 0.11, 95% CI = 0.0371 to 0.2028
Via Dehumanization = 0.17, 95% CI = 0.0851 to 0.2621
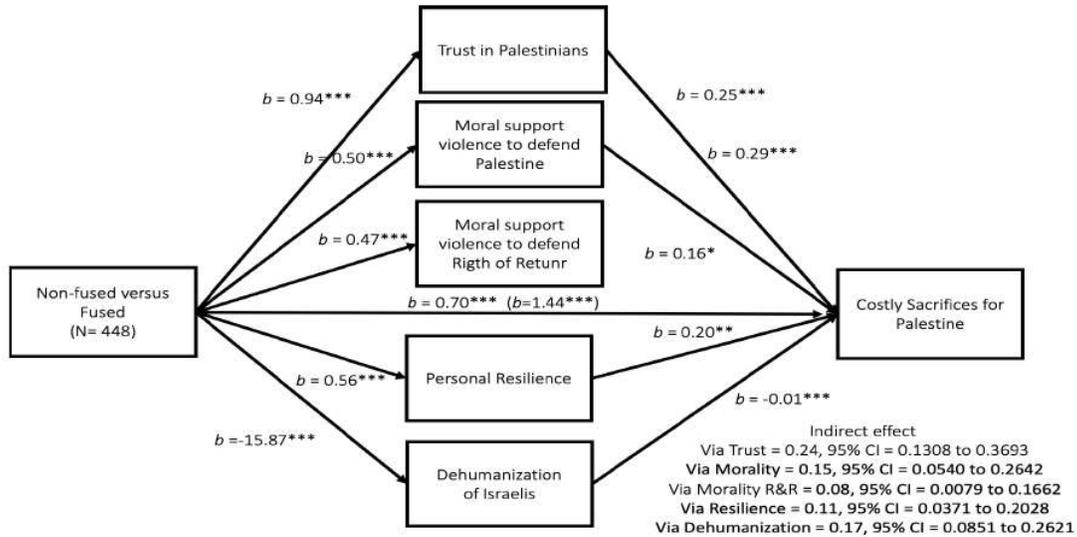
Study 4 Palestine (Ipad)

A.2 Study 4 Data and Methods
This study was conducted with 729 Palestinians, all Muslims, 51.7% females. The mean age was 43.28 (sd = 15.37). The subjects responded to *a tablet/Ipad questionnaire* (all west bank). Their residences were in Jenin (80), Tobas (40), Taulkarm (60), Qalqilia (40), Salfit (40), Nablus (90), Ramallah (90), Jerusalem (50), Jericho (40), Betlehem (50), and Hebron (150). The places of the survey were city (450), village/town (190), and refugee camp (90). Most respondents were non-refugees (506), while the remaining were refugees (223).
The questionnaire included the same questions that in the previous studies, with the difference that participants responded on a tablet, and the questions were showed in an offline version of a platform for dynamic measures (Magi Wise) were those measures that appeared in vignettes in the previous study.

A.2 Study 4 Major Findings
In this sample using the dynamic index of *identity fusion*, 99% of participants were fused with the group, what did not allow to compare fused versus non fused as we did in the previous study.
Of the whole sample, 572 (80.1%) responded that they would not give up the right of return under no circumstances or for any price. This high percentage of individuals with *sacred values* also made it not appropriate to compare participants with sacred values and non-sacred values.

The correlation between fusion and sacredness is r(576) = .122, p = .003. Although significant, the correlation is low indicating that, as previous studies have found, they are independent factors.

The analyses replicate the findings of the previous study. Repeated measures analyses show that participant perceived themselves as stronger on spiritual than on physical formidability, t (690)=14.63, p <.001. They also perceive Palestinians as stronger on spiritual than physical formidability, t (689)=14.39, p <.001. However, participants perceive Israelis as stronger on physical than on spiritual formidability, t (681)=23.83, p<.001.

58

Physical and Spiritual Formidability (Personal, Ingroup, and Outgroup)
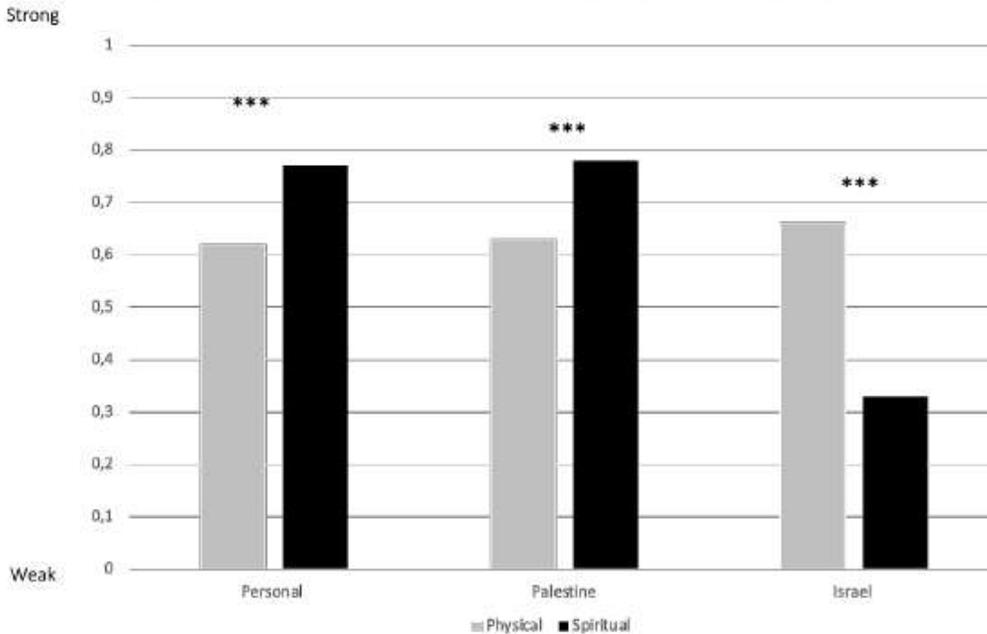
Mediation Analyses on sacrifices and collective resilience: Trust in Palestinians predicts collective resilience and costly sacrifices for Palestinians. Also, the effect of trust on costly sacrifices is mediated by collective resilience.
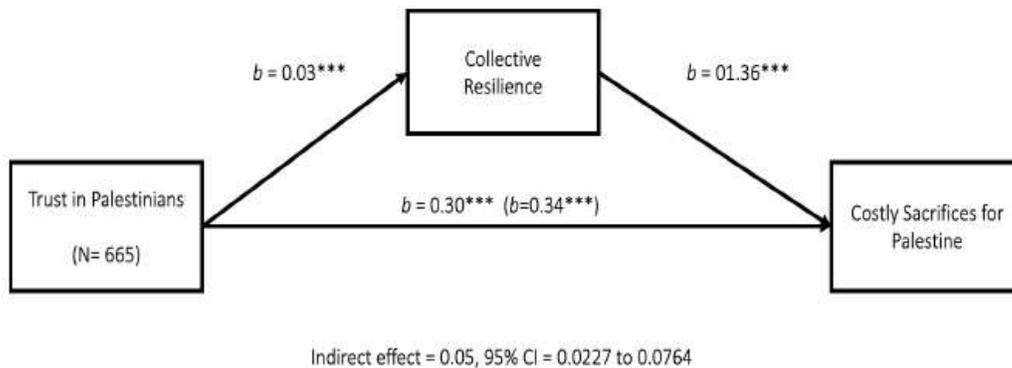
Study 5 Palestine (online)
A.2 Study 5 Data and Methods

The last study was conducted online, recruiting through Facebook. Although 608 participants started the questionnaire, only 1/3 of them responded to all the items. The main aims of this study were to determine whether psycho-social studies using our Magi Wise platform for data collection including dynamic measures can be conducted and if the results obtained through this strategy replicate findings obtained through face-to-face interviews using paper and pencil and vignettes, or a tablet and dynamic measures.

In order to determine whether the results were reliable, we replicated two of the analyses conducted in the two previous studies to examine whether the personal perception of physical and spiritual formidability as well as the perception of the ingroup and the outgroup followed

the same pattern. Also, as a stronger test, we wanted to examine whether the mediation indicating that trust predicts costly sacrifices through increasing collective resilience is also replicated. After these two sets of analyses, we include a final section including a comparison of the results found in the three studies conducted in Palestine.

Study 5 Major Findings
The analyses replicate the findings of the previous study. Repeated measures analyses show that participant perceived themselves as stronger on spiritual than on physical formidability, t (205)=9.50, p <.001. They also perceive Palestinians as stronger on spiritual than physical formidability, t (236)=4.89, p <.001. However, participants perceive Israelis as stronger on physical than on spiritual formidability, t (249)=10.48, p<.001.

Physical and Spiritual Formidability (Personal, Ingroup, and Outgroup)
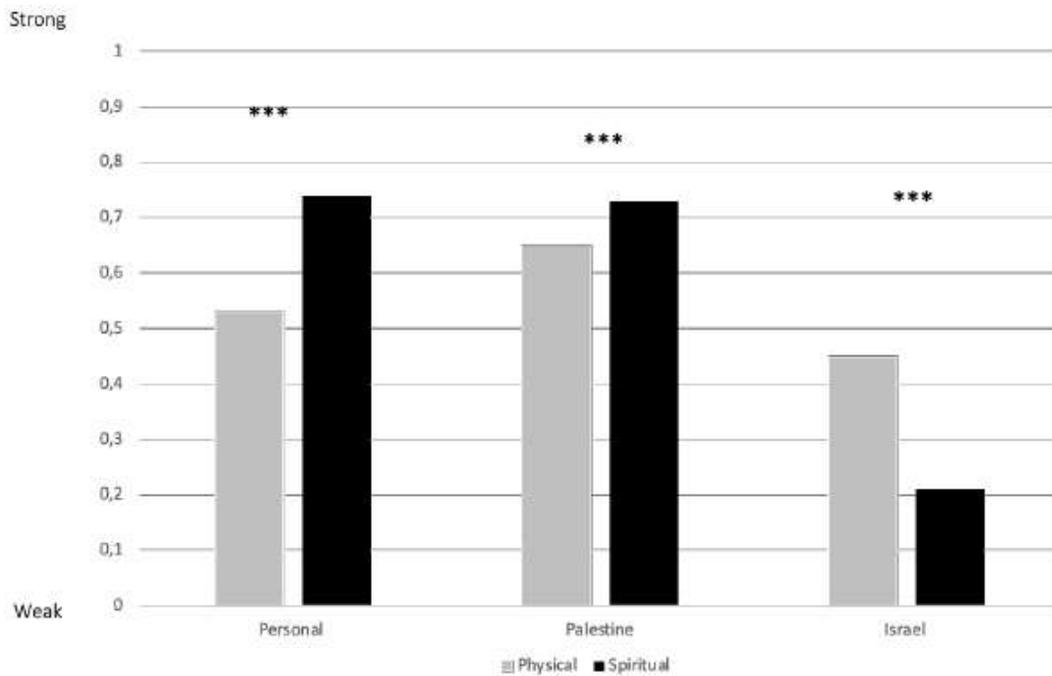
Mediation Analyses on the effect of trust on sacrifices mediated by collective resilience: Among other potential analyses that could be done, this study replicates previous findings showing that trust in Palestinians predicts collective resilience and costly sacrifices for Palestinians. Also, the effect of trust on costly sacrifices is mediated by collective resilience.

Indirect effect = 0.08, 95% CI = 0.0289 to 0.1517
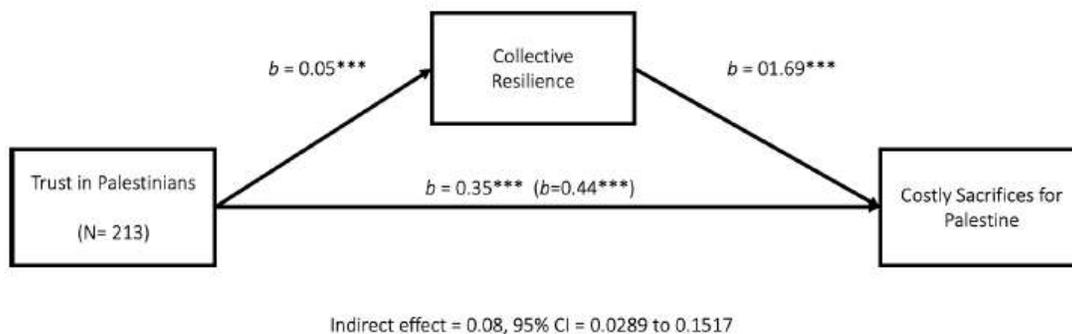
Study 3, 4 and 5 - Key Takeaways

A final comparison for the Palestine Studies, Paper & Pencil vs. Ipad vs. Facebook.

- The level of Trust in the ingroup is similar in the three versions of the Study.
- Participants in all the studies perceive themselves as stronger on Spiritual than on Physical Formidability
- Participants in all the studies perceive Palestine as stronger on Spiritual than on Physical Formidability
- Participants in all the studies perceive Israel as stronger on Physical than on Spiritual Formidability
- Participants in all the studies consider that a high percentage of Palestinians (higher than the mid-point of the scale), consider moral support violence to defend Palestine and the right of return
- The levels of personal and collective resilience are similar in the three studies, and participants perceive the group as slightly more resilient than themselves.
- Participants in the three studies consider that Israelis are more guilty of the conflict between Palestine and Israel, and also that Palestinians have suffered more than Israelis.
- Participants in the three studies de-humanize Israelis
- Participants in the three studies show high levels of costly sacrifices for the country

The results of the three studies conducted in Palestine confirm that the results are similar when the data are collected through face-to-face interviews via paper and pencil including traditional scales and vignette, through face-to-face interviews with a tablet using dynamic measures in an offline version of a platform for data collection, or online via Facebook using the same platform of dynamic measures.

Summary and Key Findings of Progress Report 10.

Deliverable 4.1

- **Submit experimental study protocols to AFOSR for susceptible and supporting ISIS Population #5 (Turkey).**
- **Train local research staff in data collection methodology.**
- **Collect Data on susceptible and supporting ISIS Population #4 (Lebanon).**

Under this deliverable the team **submitted the experimental study protocol for susceptible and supporting ISIS population in Turkey** for sponsor review and approval. The protocol detailed the purpose, scope, location, population, recruitment and data collection methods proposed.

Furthermore, within the scope of this deliverable, **the team trained the local research staff** in data collection methodology using dynamic measures, including recruitment methods, participant data protection, and requirements for conducting a representative online survey in Turkey.

Finally, **data collection was completed in Lebanon.**

Summary and Key Findings of Progress Report 11.

Deliverable 4.2
- **Submit experimental study protocols to AFOSR for susceptible and supporting ISIS Population #6 (UK).**
- **Train local research staff in data collection methodology.**
- **Collect data on susceptible and supporting ISIS Population #5.**

Under this deliverable the team **submitted the experimental study protocol for susceptible and supporting ISIS population in the UK** for sponsor review and approval. The protocol detailed the purpose, scope, location, population, recruitment and data collection methods proposed. The team also **trained the local research staff** in data collection methodology using dynamic measures, including recruitment methods, participant data protection, and requirements for conducting a representative online survey.

Data collection was also completed in Turkey.

Deliverable 4.3

- **Analyze data on susceptible and supporting ISIS Population #4 (Lebanon).**
- **Train local research staff in data collection methodology.**
- **Collect data on susceptible and supporting ISIS Population #5 (UK).**

Under this deliverable the team **analyzed the results of the experimental studies carried out in Lebanon** (detailed below). Additionally, the team **trained the local research staff** in data collection methodology using dynamic measures, including recruitment methods, participant data protection, and requirements for conducting representative online surveys and **completed data collection in the UK**.

Summary of analyses of the data on susceptible and supporting ISIS Populations in Lebanon

Data and Methods

Sample and Recruitment Procedure
A Facebook banner ad was posted – Facebook algorithms control ad placement based on specific criteria requests. Our recruitment selection criteria requested: geographic region: Lebanon (determined by IP address), age: 18 years or older. Interested participants would click on the ad. They would be linked to the informed consent webpage. If they agreed to the terms, they would click to begin the survey.

The Facebook ad linked directly to the informed consent page. After reading the study information, they were asked to confirm they are at least 18 years old and confirm their wish to participate by clicking "I agree" and continue (to the survey questions). The consent document linked to information pages about Artis and provided contact information for follow up questions.

The study material was presented in the respondents' native language (Arabic). Participants were anonymous (no names or other identifying information was recorded/requested or provided to the researchers).

Data was collected in January - February 2021. There were one hundred and seventy-six (176) completed surveys and some partially completed.

Methods
Our methods for the Lebanese survey involved the DIFI for measuring fusion with different groups and values and Magi Wise dynamic measures on:
- Costly Sacrifices,
- Trust,
- Personal physical and spiritual formidability, as well as the perception of physical and spiritual formidability of several groups,
- Resilience, and
- Dehumanization.

The survey also included miscellaneous questions on:
- Threats to Lebanon's future.

- How many years of their lives people have been exposed to armed conflict in their village/town/city.
- Reasons why people join armed groups.
- Which community people most identify with.

Major Findings

Demographics

The mean age is 34.88 (sd= 12.79). As per gender (number of responses=167), 81% of participants were males and 19% were females. Regarding employment (number of responses=163), 52% of the participants were full-time employed, 43% were unemployed and 5% declared to be on temporary leave. In terms of marital statuses (number of responses=163), 47,7% of the participants declared themselves as single, 39.8% as married and 5.1% as divorced. Finally, educational statuses (number of responses 165) of the participants entail: 4.5% primary school, 17% secondary school, 9.7% vocational school and 62.5% university degree.

Identity fusion with groups and values:

Fusion with Family: A total of 71.6% of the full sample are fully fused with the family. This finding replicates previous investigations in countries of the 5 continents indicating that the family is the group for whom most people are willing to die for. Although the percentage of individuals who are fused with the family and for whom the family is sacred, the correlation between fusion and sacred value is moderated, r (174) =0.30, p <.001, confirming our previous findings that fusion and sacred values are different mechanism.

Comparison of Fusion and Sacred Values
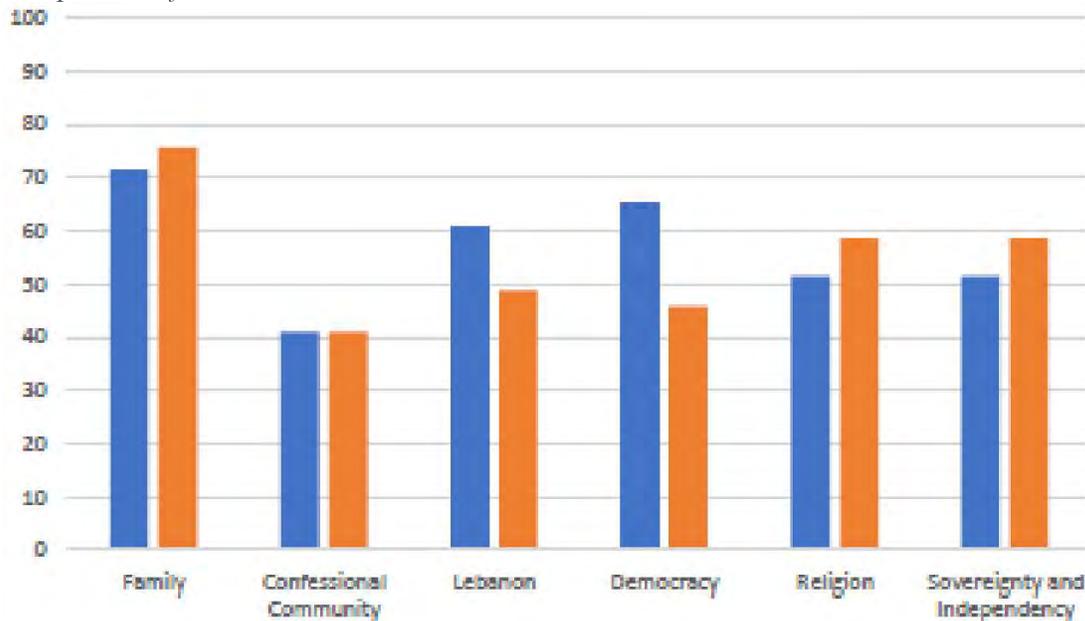
Fusion with Confessional Community: A total of 40.9% of the full sample are fully fused. the correlation between fusion and sacred value is moderated but stronger than in the case of the family, r (174) =0.49, p <.001.

Fusion with Lebanon: A total of 60.8 % of the full sample are fully fused. The correlation between fusion and sacred value is moderated but also stronger than in the case of the family, r (174) =0.52, p <.001.

Fusion with Democracy: A total of 65.3% of the full sample are fully fused. The correlation between fusion and sacred value is r (174) =0.39, p <.001.
Fusion with Religion: A total of 51.5% of the full sample is fully fused. The correlation between fusion and sacred value is r (174) =0.50, p <.001.
Fusion with Sovereignty and Independence: A total of 65.3% of the full sample are fully fused. The correlation between fusion and sacred value is r (174) =0.44, p <.001.

Costly sacrifices
Sacred value predicts sacrifices in all cases (marginally for sacrifices for the family), whereas fusion predicts sacrifices for the country and for democracy. In no case there is a significant interaction between fusion and sacred values.

Costly Sacrifices
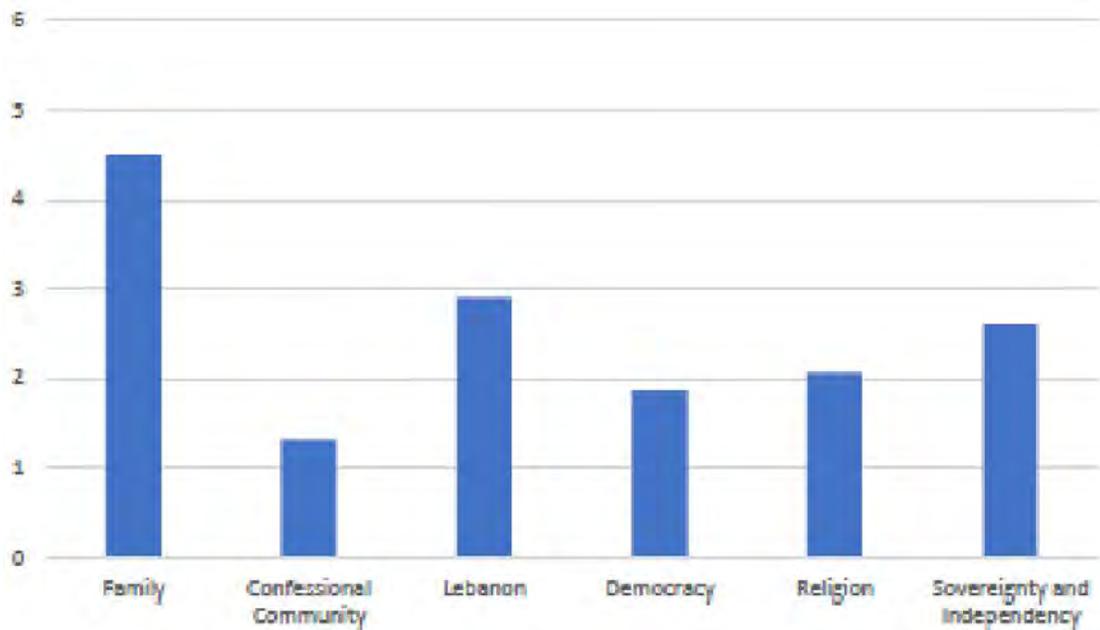
Trust
Trust in the country is significantly correlated with fusion with the country, r (165) =.42, p<.001, the country as a sacred value r (165) =.49, p<.001, and costly sacrifices for the country, r (165) =.56, p<.001.

We also asked participants which non-Lebanese they trust most. Most participants responded by saying that they trust 'other Christian religious authorities,' which was followed by Ayatollah Khomeini, The Pope, and the Druze leader Abu Yussuf Ra'fat al Balaus.
Fusion with Lebanon predicts costly sacrifices for Lebanon through trust for Lebanon. In other words, increased trust for Lebanon increases fusion with Lebanon, which then may result in costly sacrifices for Lebanon.

Trust
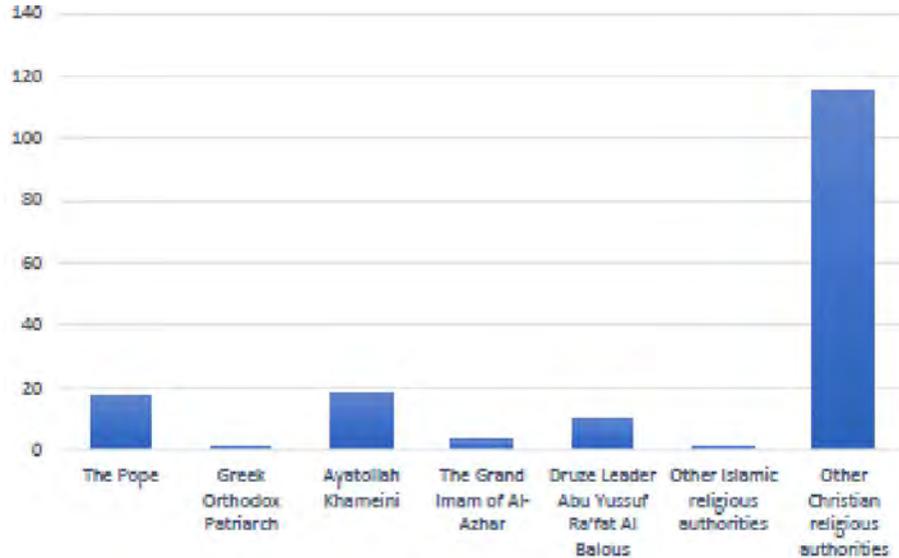
Mediation Analysis (Fusion, CS, Trust)

Indirect effect via Trust for Lebanon: .943, 95% CI: .523 to 1.408

Perception of physical and spiritual formidability
The differences in physical versus spiritual formidability are significant in the case of the personal perception, which is stronger on spiritual formidability (p<.001). In addition, Iran and Israel are considered stronger on physical than spiritual formidability, ps = 0.024, and <.001 respectively).

Resilience (dynamic)
The strongest resilience is the personal (M=0.65, sd=0.33), then the resilience of Lebanese (M=0.49, sd=0.35), then the resilience of the confessional community (M=.42, sd=.39). Interestingly, personal resilience is significantly correlated with personal physical formidability (.35, p<.001) and spiritual (.30. p<.001). However, when physical and spiritual resilience are entered into a regression, only physical formidability predicts personal resilience, beta=.27, p =.013.

Comparison of Physical vs. Spiritual Formidability
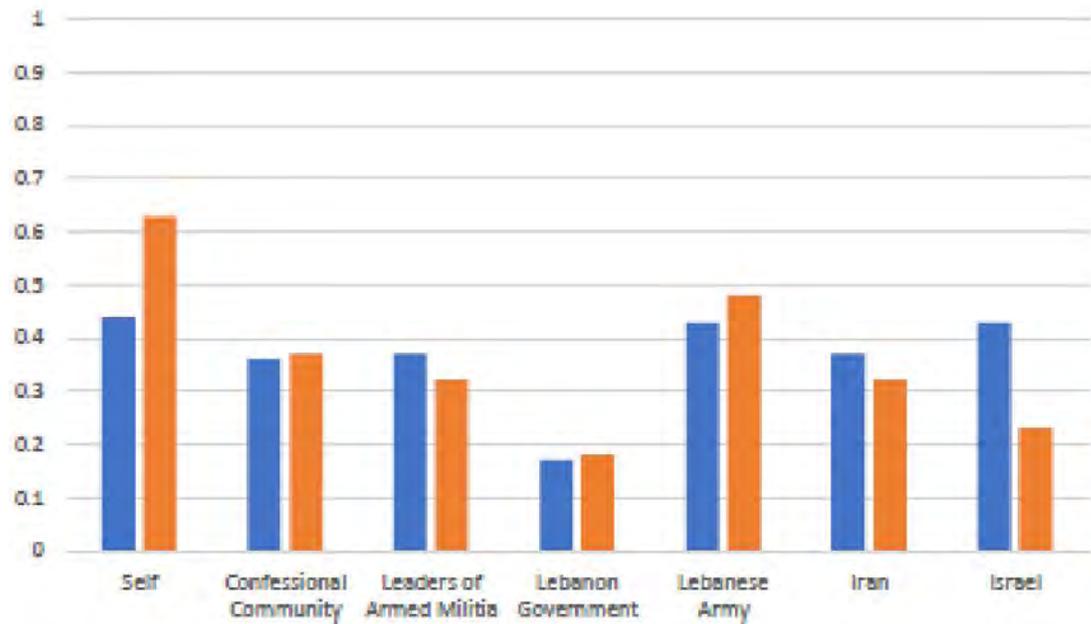
Dehumanization
Participants perceive the enemies of their confessional group as less human than the enemies of Lebanon, p<.001, and that Israelis, p = .012.

Threats to Lebanon's Future
Participants see corruption of the political class and foreign political/military intervention as the top risk factors for their country. These are followed by religious sectarianism, refugees, and globalization.

Threats to Lebanon's Future
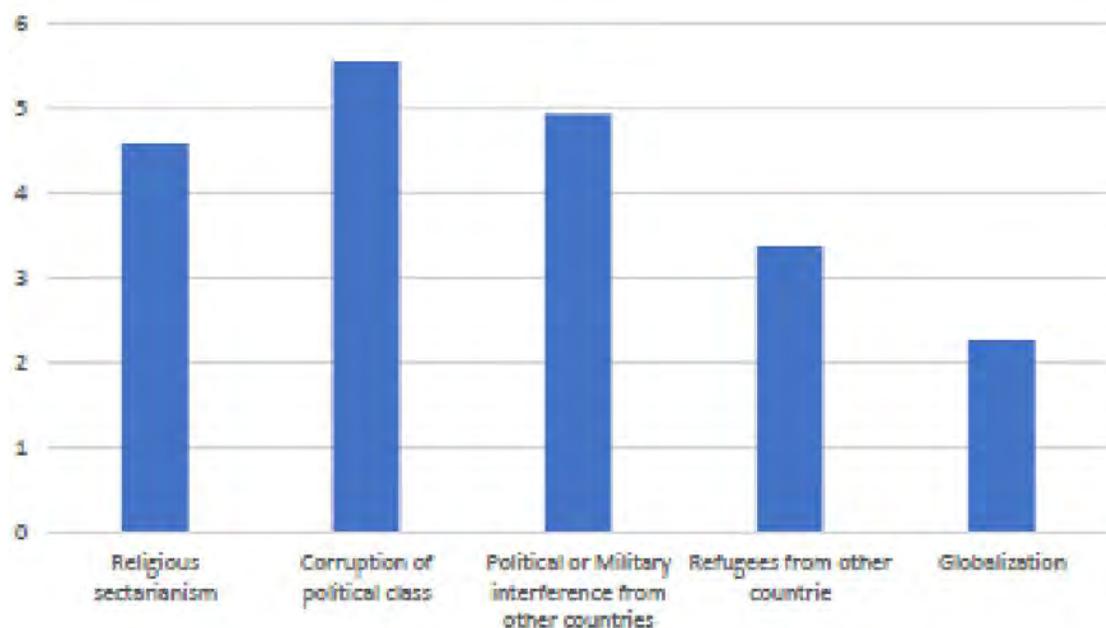
Key Takeaways

1) Lebanese were fully fused with family, confessional community, Lebanon, democracy, religion, and sovereignty and independence.

2) Costly sacrifices for Lebanese people were the highest for family, Lebanon, and sovereignty and independence.

3) Physical formidability of the Self, Lebanese Army, and Israel were the highest, while it was lowest of Lebanon Government, confessional community, and the leaders of armed militia. For spiritual formidability, the Self, Lebanese Army, and confessional community were the highest, but the lowest for Lebanon Government, Israel, and the leaders of armed militia.

4) Corruption of political class and foreign political/military intervention as the top risk factors for their country. These are followed by religious sectarianism, refugees, and globalization.

5) Sacred value predicts sacrifices in all cases (marginally for sacrifices for the family), whereas fusion predicts sacrifices for the country and for democracy

6) Trust in the country was significantly correlated with fusion with the country, the country as a sacred value, and costly sacrifices for the country.

7) Fusion with Lebanon predicts costly sacrifices for Lebanon through trust for Lebanon. In other words, increased trust for Lebanon increases fusion with Lebanon, which then may result in costly sacrifices for Lebanon.

Summary and Key Findings of Progress Report 13.

Deliverable 5.1

- **Analyze data on susceptible and supporting ISIS Populations #5.**

Under this deliverable the team analyzed the data on susceptible and supporting ISIS Population in the UK.

Summary of analyses on susceptible and supporting ISIS Populations in the UK

Data and Methods

Sample and Recruitment Procedure
Multiple Google banners were posted –algorithms control ad placement based on specific criteria requests. Our recruitment selection criteria requested: geographic region: the UK (Google only serves ads within determined by IP address range), age: 18 years or older. Our focus was all of the UK. The study material was presented in English. Interested participants would click on the ad. They would be linked to the informed consent webpage. If they agreed to the terms, they would click to begin the survey. We closed the survey campaign after the number of completed surveys by Muslims reached n=200.

The survey was active for 86 days between 4 July- 29 September 2021. Consequently, we collected data with four hundred and ninety-nine (499) completed surveys and some partially completed. (Note: 200 of the participants were Muslims, while 299 were non-Muslims). It is important, however, that this analysis is based on participants' religious identification given that our goal was to conduct a comparative analysis of responses from Muslims and Christians. Accordingly, responses of 69 participants who declared to be identified with different religious groups or did not report any religion were excluded from the analysis. This brought down our sample from 499 to 430.

Methods
Our methods involved the Dynamic Identity Fusion Index-DIFI, which was developed with DoD support and validated in frontline studies in Iraq and online in Spain. The DIFI is a computer-based measure of "identity fusion" a form of group alignment characterized by a visceral feeling of oneness with a group. Past measures of identity fusion (a single pictorial item and a 7-item verbal scale) have demonstrated a unique capacity to predict willingness to engage in extreme pro-group behaviors (e.g., fighting and dying for one's group). What is unique about DIFI is that it combines the simplicity of the single pictorial item with the higher fidelity afforded by a continuous scale. Furthermore, our methods include several versions of the Magi Wise platform measures we developed for behavioral experiments and surveys in the field. Through Magi Wise, users create and run experiments and surveys involving traditional question types and also dynamic measures and simulations in 2D or 3D (using Unity3D). Our overall study design included the DIFI for measuring fusion with different groups and values and dynamic measures on:
- Costly Sacrifices,
- Trust,
- Personal physical and spiritual formidability, as well as the perception of physical and spiritual formidability of several groups, and
- Resilience

The survey also included miscellaneous questions on Islamic Wedge Issues.

Major Findings
Demographics
In terms of the age groups, 6% of the participants were between 18-24, 39.8% were between 25-30, 36.5% were between 31-40, 11.4% were between 41-50, 4% were between 51-65 and 2.3% were 65 or older. As per gender, 55.1% of participants were males, 44% were females and .9% declared themselves as Other.

Educational statuses of the participants entail: 7.7% primary school, 27.7% secondary school, 20.7% vocational school, 34.4% college or university degree, and 9.5% had masters/doctorate/law or medical degrees. Regarding marital statuses, 51.9% of the participants declared themselves as married, 34.2% as not married, 9.5% as being in civil partnership, 3.5% as separated/divorced and .9% as widowed.

In terms of the community in which they live, about a half of participants live in urban areas (51.6%), while, of the remaining, 45.6% live in suburban areas and 2.8% in rural areas. Moreover, 40% of the participants reported their standard of living as fairly high, and the remaining is broken down as 17% high, 37.4% medium, 4.9% fairly low and .7% low. With regard to employment, 40.5% of the participants were full-time employed, 40% were part-time employed, 11.6% were unemployed, 4.2 were homemakers, 1.9% were students and 1.9% were retired. Regarding religion, 23.7% of the participants declared to be Protestant, 29.8% Catholic, 29.3% Sunni Muslim and 17.2% Shia. When Sunni and Shias are combined, they make up the largest group in terms of religious identification (46.5%).

Identity fusion with groups and values
The groups or values Catholics were most identified with are the UK, Democracy, Political Group and NATO, respectively, whereas Muslims were most fused with Democracy, Religion, Fight against Ethnic/Racial Supremacy, and the UK (See Figure 6). It is a little bit odd that Protestants were fused with almost every group and value almost at the same level, which requires further investigation. On the other hand, it is interesting that Catholics' level of fusion with the Fight Against Illegal Immigration was significantly higher than Muslims (t (326) = 6.11, p <.001.). Similarly, the level of fusion with Political Group among Catholics was significantly higher than Muslims (t (299) = 5.53, p <.001.).

Costly sacrifices
The correlation between the two items for the costly sacrifices they would be willing to do for each group or value were: Democracy (.63), Political party (.66), Religion (.74), Country (UK, .70), NATO (.72), Monarchy (.40), Fight against Sharia (.76), Fight against Supremacy (.60), Fight against Immigration (.66), Palestine (-.30), Israel (.80), and Muslim Ummah (.74).

In some cases, the correlation between the two items is only moderate (and even negative in the case of Palestine). This means that for some context, there is an important difference between the implication of each of these two sacrifices. Muslims are more willing to do sacrifices for religion than Catholics (t (253) = -6.02, p <.001.). It is also notable that Muslims are more willing to go to jail for Palestine than Catholics, but it is quite interesting that Catholics are more willing to die for Palestine than Muslims (t (326) = 8.20, p <.001.).

Fusion

Costly Sacrifice
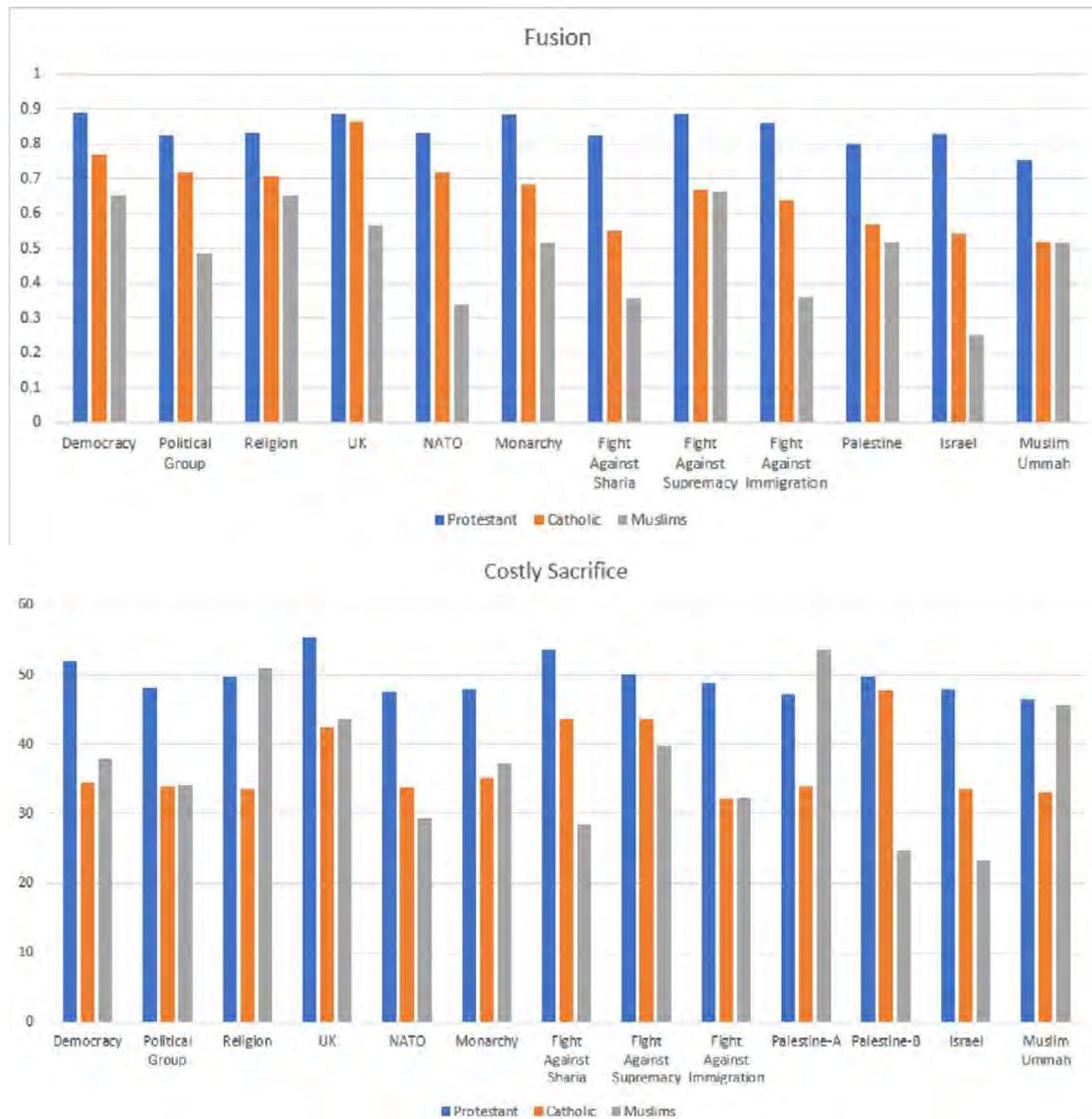
Trust
The results indicate that Muslims trust the most their Religious Institutions, Muslim Ummah and the UK, while their trust for Israel, China and Russia are the lowest.

Perception of physical and spiritual formidability
Muslims saw the USA, UK as physically most formidable, which are followed by the physical formidability of their own and China, respectively. While Protestants' perception of physical formidability was very close for all groups and values (UK and Israel has slightly higher scores), Muslims' perception of USA's physical formidability was significantly higher than Catholics (t (326) = -4.02, p <.001.), whereas Catholics's view of UK's physical formidability was significantly higher than Muslims (t (202) = 4.07, p <.001.). In addition, Muslims saw China to be more formidable in physical terms than Catholics (t (326) = -2.81, p <.003.). Lastly, Muslims' view of their personal physical formidability was significantly higher than that of Catholics (t (316) = -2.51, p <.006.).

Trust

Physical Formidability
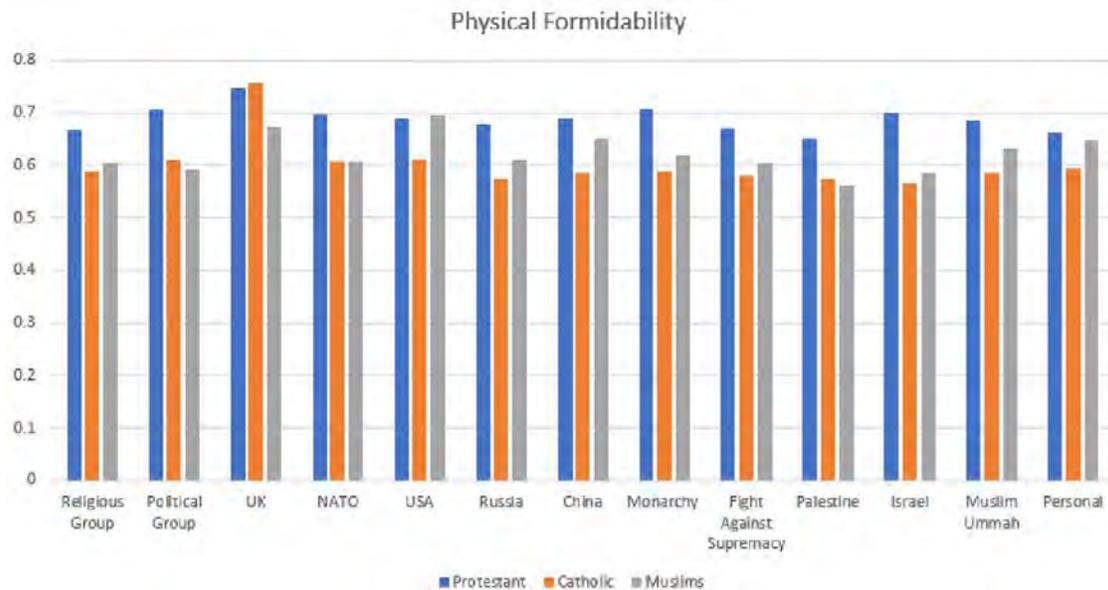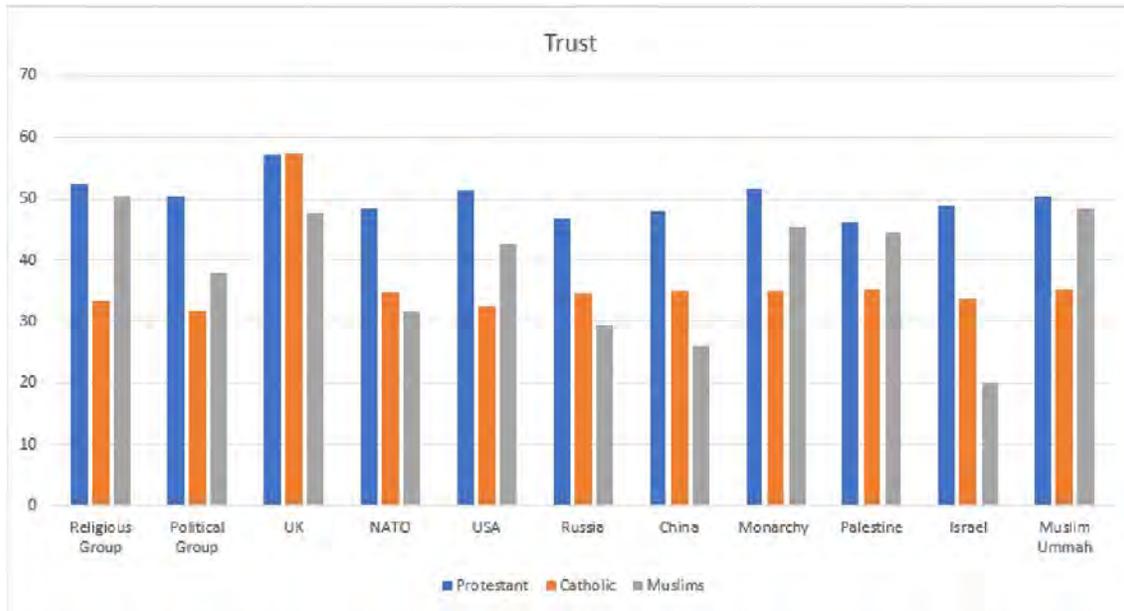
What is interesting is that Muslims' perception of their personal spiritual formidability was significantly higher than Protestants (t (164) = -4.76, p <.001.) as well as Catholics (t (312) = -3.88, p <.001.). Furthermore, Muslims view of Palestine's spiritual formidability was significantly higher than both Protestants (t (137) = -6.03, p <.001.) and Catholics (t (226) = -4.83, p <.001.). Finally, Catholics scored UK significantly higher in spiritual formidability than Muslims (t (326) = 5.78, p <.001.).

Spiritual Formidability
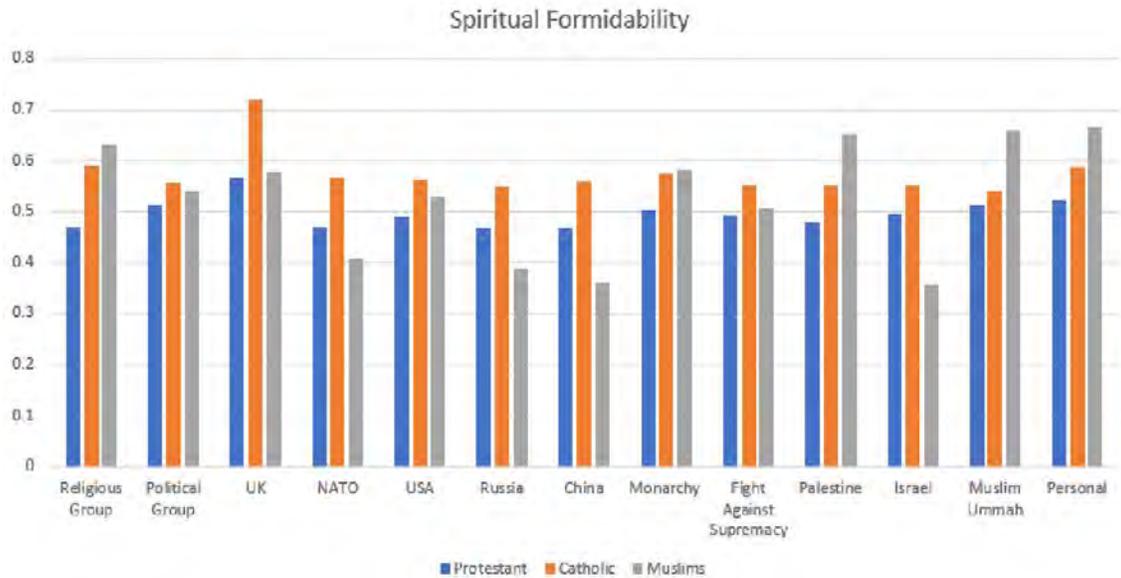
Differences between psychical and spiritual formidability for each target

We conducted a series of repeated measure analyses to compare the physical and spiritual formidability of each target.

Formidability of religious groups. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 26.51$, $p<.001$, Eta square = .11. Protestants perceive their religious groups as stronger on physical than spiritual formidability. Also, protestants perceive spiritual formidability of their religious groups as weaker than the other two groups. In addition, there was also a significant difference between three groups, $F(2,427) = 3.24$, $p<.040$, Eta square = .01. To specify, Post Hoc tests1 indicate that there is a significant difference between Protestants and Muslims, $p < .041$. Protestants view of their religious institutions' physical formidability is significantly higher than that of Muslims, whereas Muslims' perception on the spiritual formidability of their religious institutions is significantly higher than Protestants'.

Formidability of Religious Groups
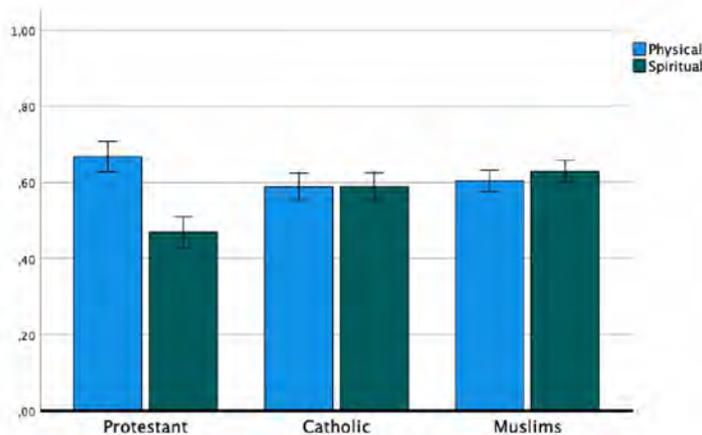
Formidability of Political Party. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 13.78$, $p<.001$, Eta square = .06. Protestants perceive the strength of their political party as stronger on physical than spiritual

formidability. Protestants perceive spiritual formidability of their political party as weaker than the other two group. There was, however, no significant difference between three groups, $F_{(2,427)} = 2.45$, $p<.087$, Eta square = .01.

Formidability of Political Party
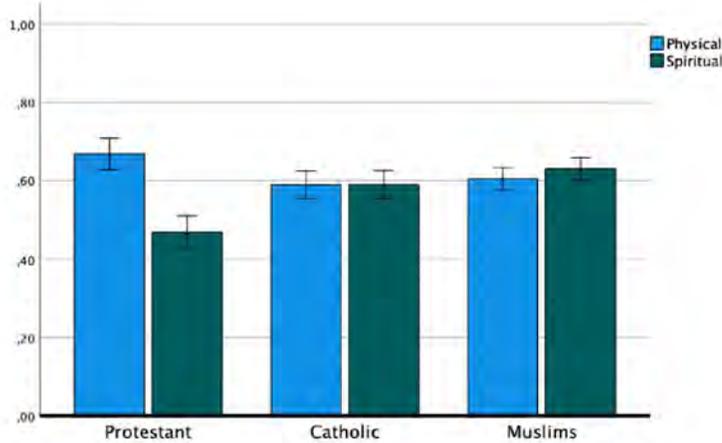
Formidability of UK. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,427)} = 12.61$, $p<.001$, Eta square = .06. Protestants and Muslims perceive UK as stronger on physical than spiritual formidability. In addition, there was also a significant difference between three groups, $F_{(2,427)} = 16.55$, $p<.001$, Eta square = .08. To specify, Post Hoc tests indicate that there is a significant difference between Protestants and Catholics, $p < .001$ as well as between Catholics and Muslims, $p <.001$. Protestants view of UK's spiritual formidability is significantly higher than that of Catholics, and Catholics' perception of UK's physical and spiritual formidability is significantly higher than that of Muslims'

Formidability of the UK
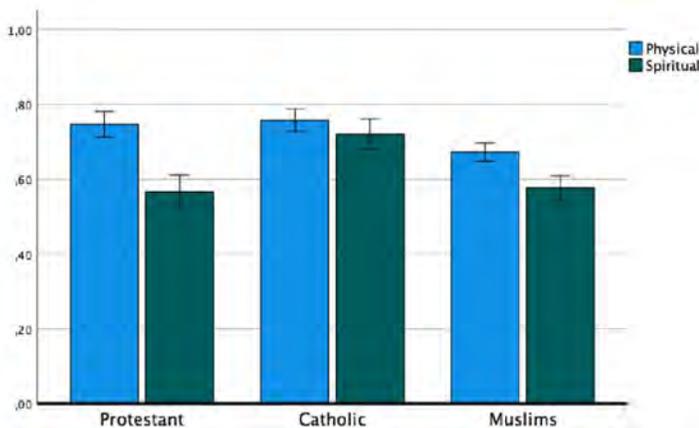
Formidability of NATO. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,427)} = 20.26$, $p<.001$, Eta square = .09. Protestants and Muslims perceive NATO as stronger on physical than spiritual formidability. In addition, there was also a significant difference between three groups, $F_{(2,427)} = 10.68$, $p<.001$, Eta square = .04. To specify, Post Hoc tests indicate that there is a significant difference between Protestants and Muslims, $p < .001$ as well as between Catholics and Muslims, $p <.001$. Protestants view of NATO's physical and spiritual formidability is

significantly higher than that of Muslims, and Catholics' perception of NATO's spiritual formidability is significantly higher than that of Muslims'.

Formidability of NATO
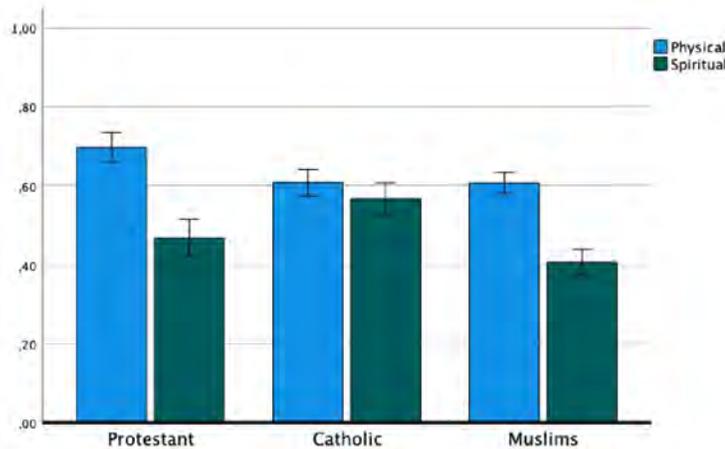
Formidability of the USA. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 12.63$, $p<.001$, Eta square = .05. All three groups perceive the USA as stronger on physical than spiritual formidability. Also, there was no significant difference between three groups in terms of their perceptions of USA's formidability.

Formidability of the USA
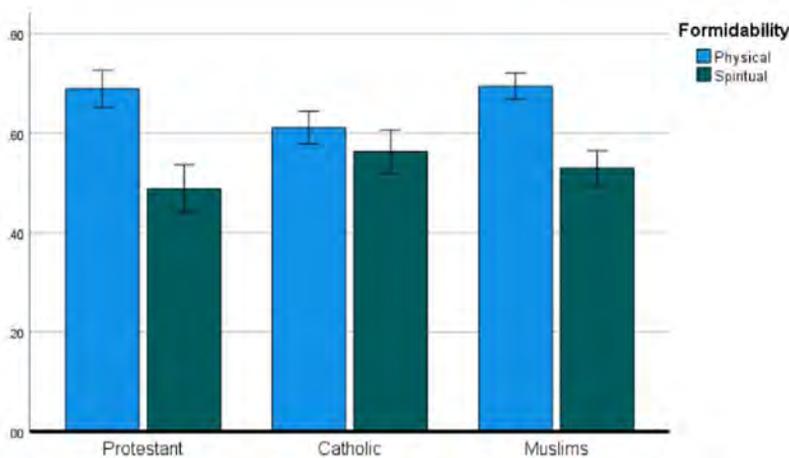
Formidability of Russia. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 22.24$, $p<.001$, Eta square = .09. Protestants and Muslims perceive Russia as stronger on physical than spiritual formidability. Also, all three groups perceive spiritual formidability of Russia as weaker than its physical formidability. In addition, there was also a significant difference between three groups, $F(2,427) = 8.16$, $p<.001$, Eta square = .04. To specify, Post Hoc tests indicate that there is a significant difference between Protestants and Muslims, $p < .002$ as well as between Catholics and Muslims, $p <.001$. Protestants view of Russia's physical and spiritual formidability is significantly higher than that of Muslims, and Catholics' perception of Russia's spiritual formidability is significantly higher than that of Muslims', whereas Muslims' view of Russia's physical formidability is significantly higher than Catholics.

Formidability of Russia
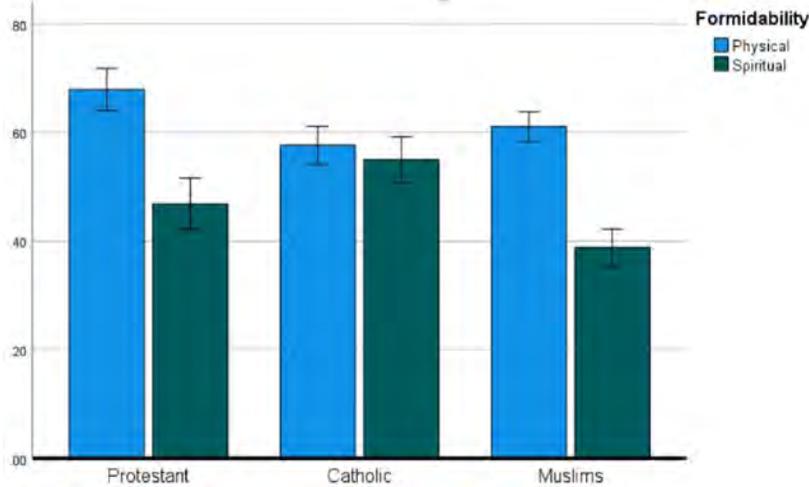
Formidability of China. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,427)} = 33.13$, $p<.001$, Eta square = .13. Muslims and Protestants perceive Russia as stronger on physical than spiritual formidability. Also, all three groups perceive spiritual formidability of China as weaker than its physical formidability. In addition, there was also a significant difference between three groups, $F_{(2,427)} = 7.17$, $p<.001$, Eta square = .04. To specify, Post Hoc tests indicate that there is a significant difference between Protestants and Muslims, $p < .006$ as well as between Catholics and Muslims, $p <.005$. Protestants view of China's physical and spiritual formidability is significantly higher than that of Muslims, and Catholics' perception of China's spiritual formidability is significantly higher than that of Muslims', whereas Muslims' view of China's physical formidability is significantly higher than Catholics. These results are very similar to the results related to Russia

Formidability of China
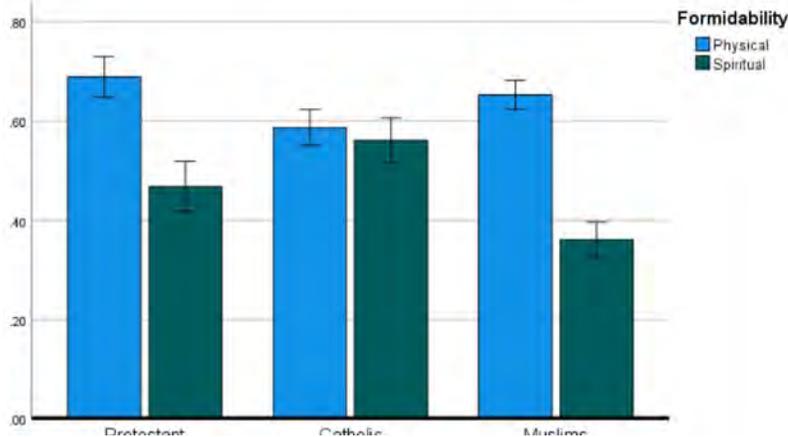
Formidability of the Monarchy. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,427)} = 26.91$, $p<.001$, Eta square = .11. Protestants and Muslims perceive the Monarchy as stronger on physical than spiritual formidability. Also, all three groups perceive spiritual formidability of the Monarchy as weaker than its physical formidability, but this is stronger among Protestants. There was,

however, no significant difference between the three groups, $F(2,427) = .75$, $p<.469$, Eta square = .00.

Formidability of the Monarchy
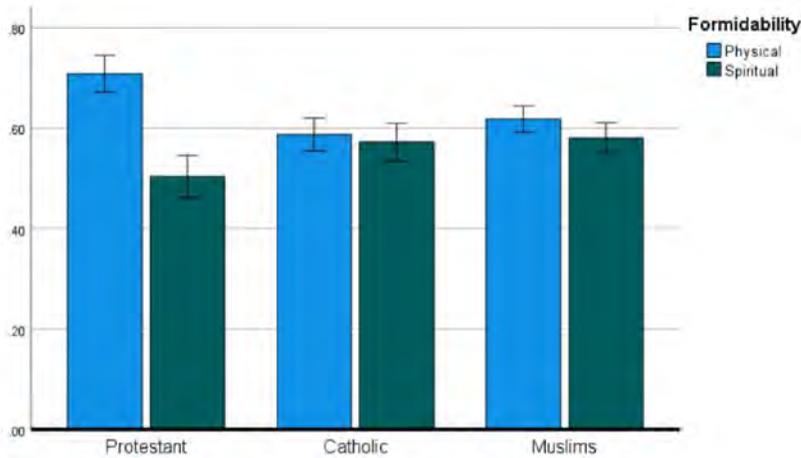
Formidability of the Fight Against Ethnic or Racial Supremacy. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 14.38$, $p<.001$, Eta square = .06. Protestants and Muslims perceive the Fight Against Supremacy as stronger on physical than spiritual formidability. Catholics also perceive the Fight Against Supremacy as slightly stronger on physical than spiritual formidability. There was, however, no significant difference between the three groups, $F(2,427) = .66$, $p<.513$, Eta square = .00.

Formidability of the Fight Against Ethnic and Racial Supremacy
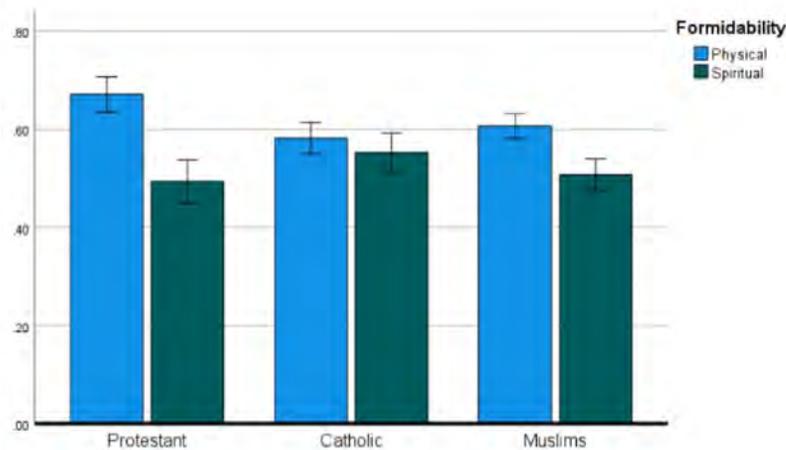

Formidability of Palestine. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 39.85$, $p<.001$, Eta square = .15. Muslims perceive Palestine as stronger on spiritual than physical formidability. Also, Protestants and Catholics perceive physical formidability of Palestine as stronger than its spiritual formidability. In addition, there was also a significant difference between three groups, $F(2,427) = 4.10$, $p<.017$, Eta square = .02. To specify, Post Hoc tests indicate that there is a significant difference between Catholics and Muslims, $p <.041$. Muslims' view of Palestine's

spiritual formidability is significantly higher than Catholics, whereas Catholics' view of Palestine's physical formidability is slightly higher than Muslims.
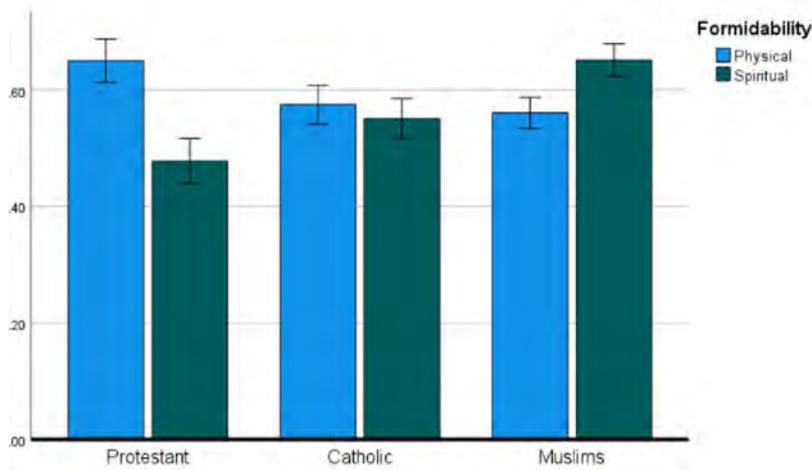
Formidability of Palestine

Formidability of Israel. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 31.14$, $p<.001$, Eta square = .12. Muslims and Protestants perceive Israel as weaker on spiritual than physical formidability. Also, all three groups perceive physical formidability of Israel as stronger than its spiritual formidability. In addition, there was also a significant difference between three groups, $F(2,427) = 17.92$, $p<.001$, Eta square = .08. To specify, Post Hoc tests indicate that there is a significant difference between Protestants and Muslims, $p < .00$ as well as between Catholics and Muslims, $p <.001$. Protestants view of Israel's physical and spiritual formidability is significantly higher than that of Muslims, and Catholics' perception of Israel's spiritual formidability is significantly higher than that of Muslims', whereas Muslims' view of Israel's physical formidability is slightly higher than Catholics.

Formidability of Israel
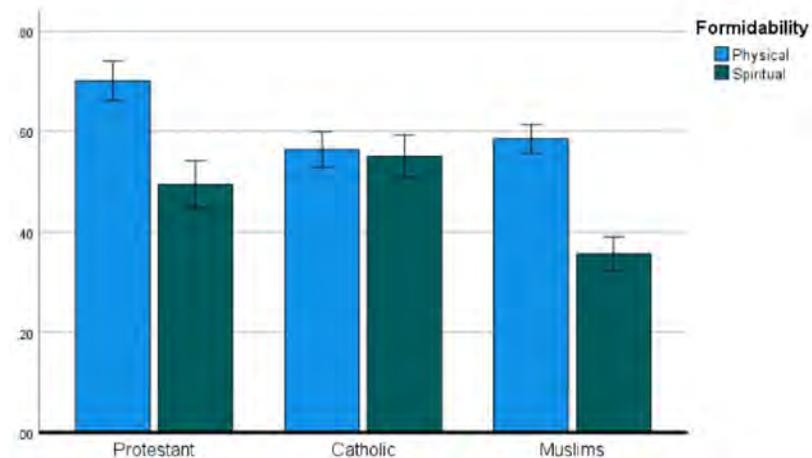
Formidability of the Muslim Ummah. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,427) = 29.90$, $p<.001$, Eta square = .13. Muslims perceive Muslim Ummah as stronger on spiritual than physical formidability.

Also, Protestants and Catholics perceive physical formidability of Muslim Ummah as stronger than its spiritual formidability. In addition, there was also a significant difference between three groups, $F_{(2,427)} = 10.62$, $p<.001$, Eta square = .05. To specify, Post Hoc tests indicate that there is a significant difference between Catholics and Muslims, $p <.001$. Muslims' perception of Muslim Ummah's physical and spiritual formidability is significantly higher than that of Catholics

Formidability of Muslim Ummah
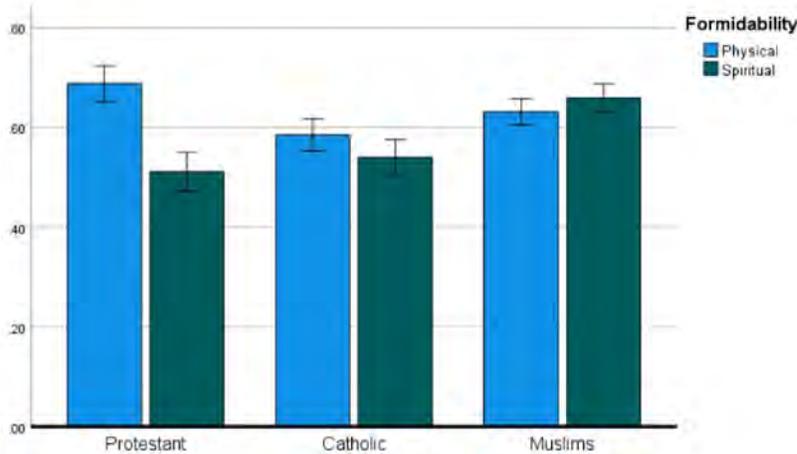
Personal Formidability. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,427)} = 14.83$, $p<.001$, Eta square = .06. Muslims perceive themselves as stronger on spiritual than physical formidability. Also, Protestants perceive their own physical formidability as stronger than their spiritual formidability, while Catholics perceive their physical and spiritual formidability to be almost equal. In addition, there was also a significant difference between three groups, $F_{(2,427)} = 7.85$, $p<.001$, Eta square = .04. To specify, Post Hoc tests indicate that there is a significant difference between Protestants and Muslims, $p < .007$ as well as between Catholics and Muslims, $p <.002$. Muslim's perception of their personal spiritual formidability is significantly higher than that of both Protestants and Catholics'.

Personal Formidability
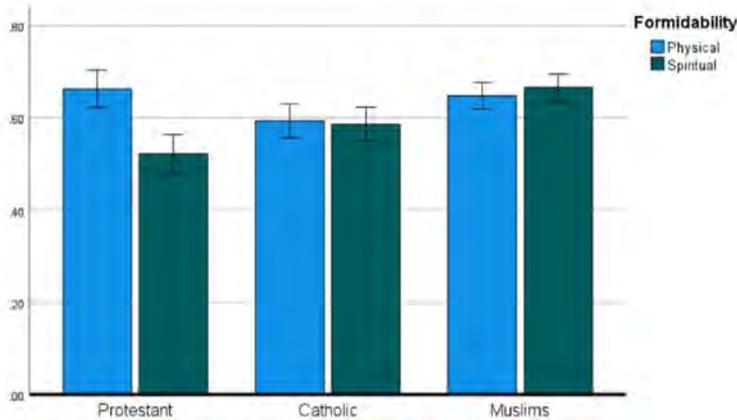
Muslims vs. Christians: Differences between psychical and spiritual formidability
We conducted a series of repeated measure analyses to compare the physical and spiritual formidability between Christians and Muslims.

Formidability of religious institutions. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,428) = 18.67$, $p<.001$, Eta square = .04. There was also a significant difference between groups, $F(1,428) = 5, 54$, $p<.019$, Eta square = .01. Protestants perceive their religious institutions as stronger on physical than spiritual formidability. Muslims see the spiritual formidability of their religious institutions stronger than physical formidability. Also, Christians view of the physical formidability of their religious institutions is significantly higher than Muslims' view of their religious institutions, whereas Muslims' perception of the spiritual formidability of their religious institutions is significantly higher than that of Christians.

Formidability of Religious Groups
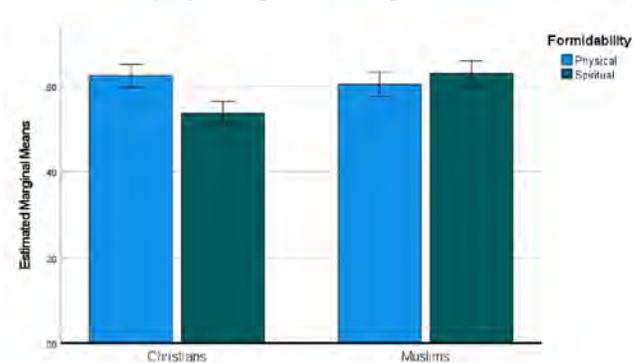
Formidability of Political Party. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,428) = 6.92$, $p<.009$, Eta square = .01, but the difference between groups was not significant. Christians perceive their political group as stronger on physical than spiritual formidability. Muslims see the spiritual formidability of their political group stronger than its physical formidability
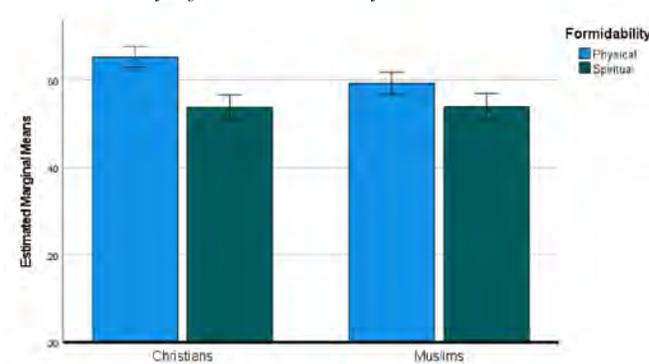
Formidability of Political Party

<u>Formidability of UK.</u> The interaction between the group and the factor (physical versus spiritual formidability) was not significant, $F_{(2,428)} = .62$, p<.080, Eta square = .00. However, the difference between groups was significant, $F_{(1,428)} = 20.15$ p< .001, Eta square = .04. Christians' view of both physical and spiritual formidability of the UK was significantly higher than Muslims.
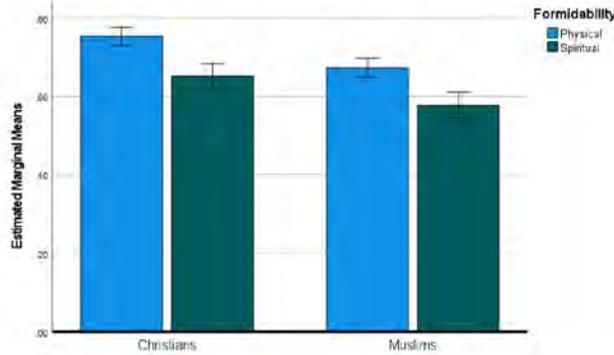
Formidability of the UK

<u>Formidability of NATO.</u> The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,428)} = 8.89$, p<.003, Eta square = .02, as well as the difference between Christians and Muslims, $F_{(1,428)} = 21.37$, p<.001, Eta square = .04. Christians perceive NATO as stronger on physical than spiritual formidability. Muslims see the spiritual formidability of NATO stronger than its physical formidability. Also, Christians' perception of both physical and spiritual formidability of NATO is significantly higher than Muslims.
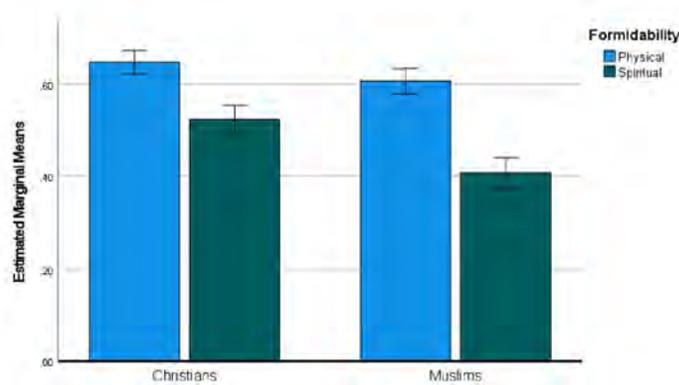
Formidability of NATO

<u>Formidability of the USA.</u> The interaction between the group and the factor (physical versus spiritual formidability) was not significant, $F_{(2,428)} = 3.78$, p<.052, Eta square = .009, as well as the difference in perception of the USA between Christians and Muslims, $F_{(1,428)} = 1.92$, p<.166, Eta square = .004.

Formidability of the USA
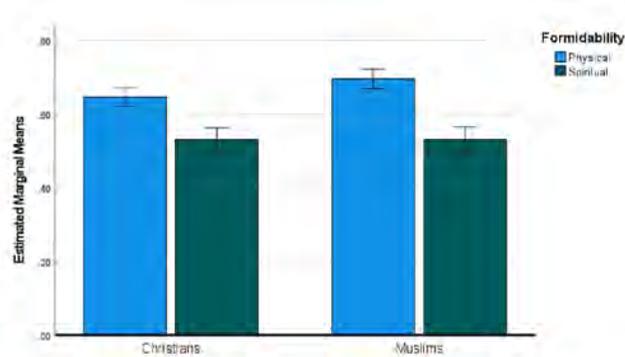
Formidability of Russia. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,428) = 17.67$, p<.001, Eta square = .04, as well as the difference between Christians and Muslims, $F(1,428) = 16.15$, p<.001, Eta square = .03. Both Christians and Muslims perceive Russia as stronger on physical than spiritual formidability. Also, Christians' perception of both physical and spiritual formidability of Russia is significantly higher than Muslims

Formidability of Russia
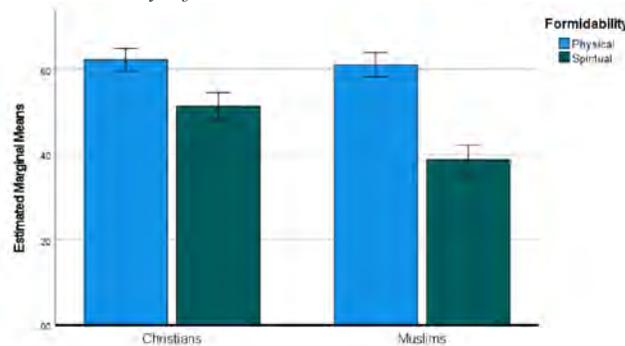
Formidability of China. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,428) = 38.51$, p<.001, Eta square = .31, as well as the difference between Christians and Muslims, $F(1,428) = 14.35$, p<.001, Eta square = .03. Both Christians and Muslims perceive China as stronger on physical than spiritual formidability. Also, Muslims' perception of the physical formidability of Russia is significantly higher than Christians, whereas Christians' view of the spiritual formidability of China is significantly higher than Muslims.

Formidability of the Monarchy. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,428) = 8.26$, p<.004, Eta square = .08, but there is no significant difference between Christians and Muslims, $F(1,428) = .23$, p<.631, Eta square = .001. Both Christians and Muslims perceive Monarchy as stronger on physical than spiritual formidability.
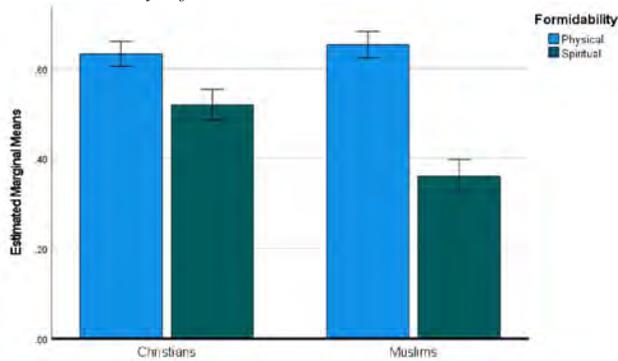
Formidability of China

Formidability of the Monarchy
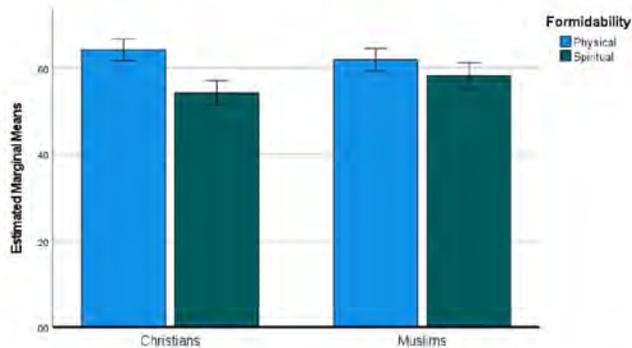
Formidability of the Fight Against Ethnic or Racial Supremacy. The interaction between the group and the factor (physical versus spiritual formidability) was not significant, $F_{(2,428)}$ = .38, p<.845, Eta square = .00. Also, the difference in perception of the Fight Against Ethnic or Racial Supremacy between Christians and Muslims was not significant, $F_{(1,428)}$ = .94, p<.332, Eta square = .002.

Formidability of the Fight Against Ethnic and Racial Supremacy
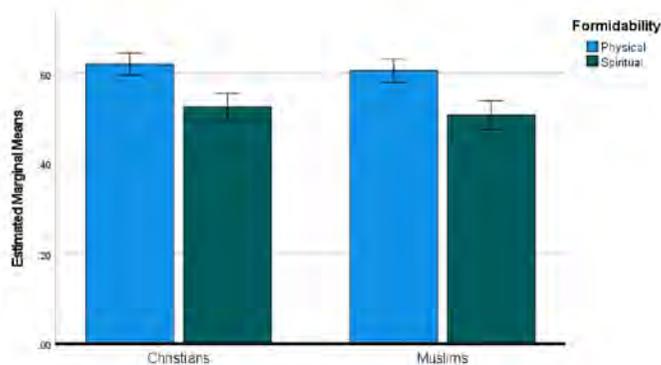
Formidability of Palestine. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,428)}$ = 56.14, p<.001, Eta square = .11. The difference between Christians and Muslims was also significant, $F_{(1,428)}$ = 8.21, p<.004, Eta

square = .01. Muslims perceive Palestine as stronger on spiritual than physical formidability, while Christians perceive physical formidability of Palestine as stronger than its spiritual formidability. In addition, Christians' view of the physical formidability of Palestine is significantly higher than Muslims, whereas Muslims' perception of the spiritual formidability of Palestine is significantly higher than Christians.

Formidability of Palestine
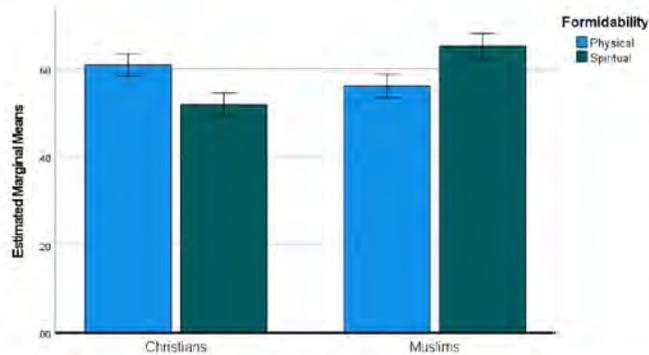
Formidability of Israel. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,428) = 26.52$, $p<.001$, Eta square = .28. The difference between Christians and Muslims was also significant, $F(1,428) = 33.03$, $p<.001$, Eta square = .07. Both Christians and Muslims perceive Israel as stronger on physical than spiritual formidability. In addition, Christians' view of the physical and spiritual formidability of Israel is significantly higher than Muslims.
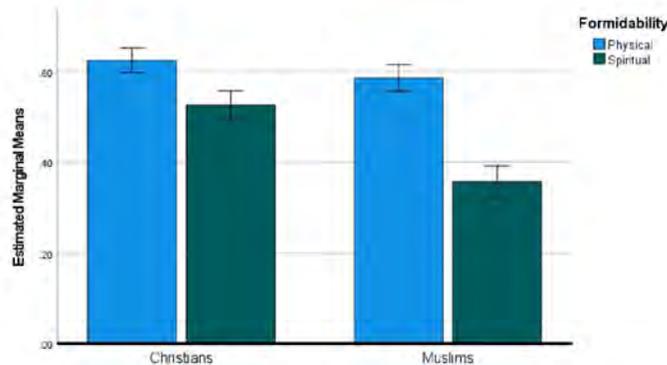
Formidability of Israel

Formidability of Muslim Ummah. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F(2,428) = 37.22$, $p<.001$, Eta square = .08. The difference between Christians and Muslims was also significant, $F(1,428) = 18.16$, $p<.001$, Eta square = .01. While Christians perceive Muslim Ummah as stronger on physical than spiritual formidability, Muslims view Muslim Ummah as stronger on spiritual formidability than physical. In addition, Muslims' perception of the spiritual formidability of Muslim Ummah is significantly higher than Christians.
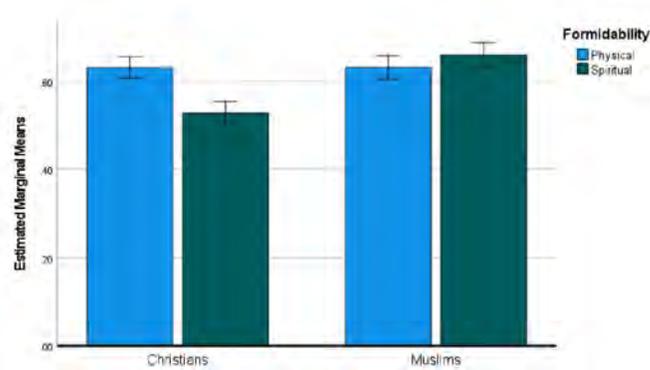
Formidability of Muslim Ummah

Personal Formidability. The interaction between the group and the factor (physical versus spiritual formidability) was significant, $F_{(2,428)} = 12.25$, $p<.001$, Eta square = .02. The difference between Christians and Muslims was also significant, $F_{(1,428)} = 15.73$, $p<.001$, Eta square = .03. While Christians perceive themselves as stronger on physical than spiritual formidability, Muslims view their spiritual formidability to be higher than their physical formidability. Also, Muslims' perception of their own physical and spiritual formidability is significantly higher than that of Christians.

Personal Formidability
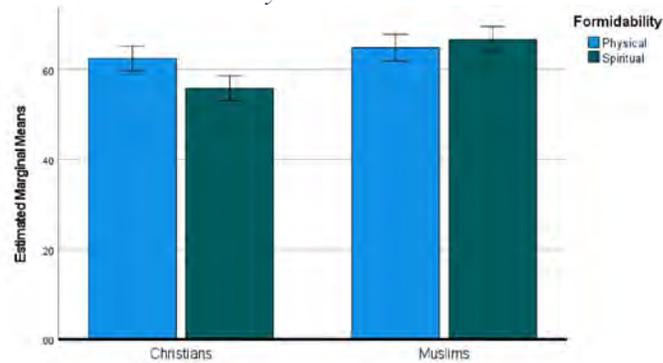
Sunnis vs. Shias: Differences between psychical and spiritual formidability
We conducted a series of repeated measure analyses to compare the physical and spiritual formidability between Sunnis and Shias, using four items, i.e., religious institutions, Palestine, Muslim Ummah and Self.
Formidability of religious institutions. The interaction between the group and the factor (physical versus spiritual formidability) was not significant, $F_{(2,198)} = 1.63$, $p<.020$, Eta square = .008. The difference between Sunnis and Shias was also not significant, $F_{(1,198)} = .93$, $p<.760$, Eta square = .00. These statistics indicate that there are no significant differences between Sunnis and Shias in terms of their perception of the formidability of their religious institutions.

*Formidability of Religious Groups*
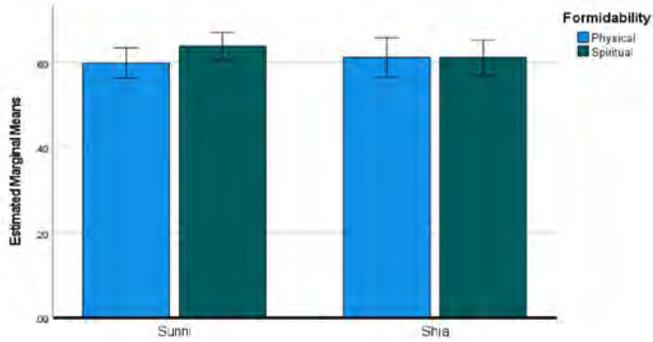
Formidability of Palestine. The interaction between the group and the factor (physical versus spiritual formidability) was not significant, $F(2,198) = .16$, $p<.690$, Eta square = .001. The difference between Sunnis and Shias was also not significant, $F(1,198) = 1.73$, $p<.189$, Eta square = .00. These statistics indicate that there are no significant differences between Sunnis and Shias in terms of their perception of Palestine's physical and spiritual formidability.
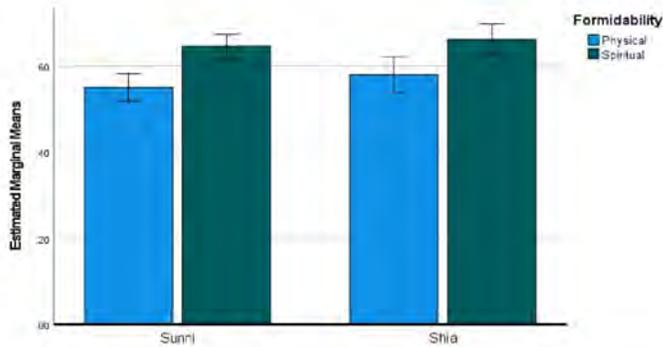
Formidability of Palestine

Formidability of Muslim Ummah. The interaction between the group and the factor (physical versus spiritual formidability) was not significant, $F(2,198) = .35$, $p<.853$, Eta square = .019. The difference between Sunnis and Shias was also not significant, $F(1,198) = 1.10$, $p<.294$, Eta square = .00. These statistics indicate that there are no significant differences between Sunnis and Shias in terms of their perception of Muslim Ummah's physical and spiritual formidability

Formidability of Muslim Ummah
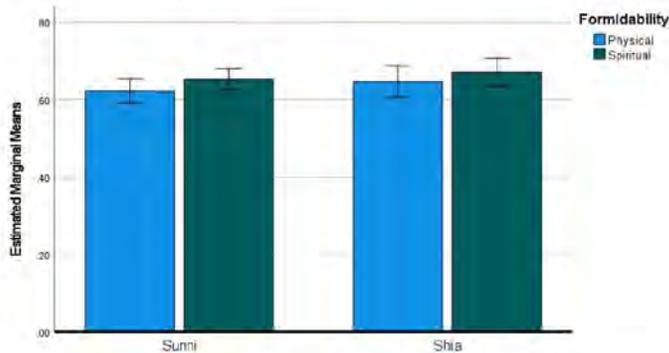
<u>Personal Formidability.</u> The interaction between the group and the factor (physical versus spiritual formidability) was not significant, $F_{(2,198)} = .687$, p<.408, Eta square = .01. The difference between Sunnis and Shias was also not significant, $F_{(1,198)} = .11$, p<.737, Eta square = .00. These statistics indicate that there are no significant differences between Sunnis and Shias in terms of their perception of their own (personal) physical and spiritual formidability.

Personal Formidability
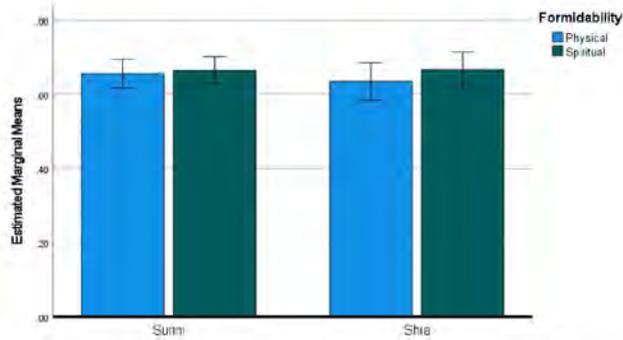
Resilience

For Protestants, the strongest resilience is the UK (M=0.45, sd=0.25), China (M=0.41, sd=0.21) and NATO (M=0.36, sd=0.20). Catholics see the UK (M=0.52, sd=0.29), China (M=0.36, sd=0.21) and their Religious Institutions (M=0.35, sd=0.27) as the most resilient. On the other hand, Personal Resilience (M=0.49, sd=0.30), their Religious Institutions (M=0.48, sd=0.30) and the USA (M=0.46, sd=0.27) have the strongest resilience for Muslims.
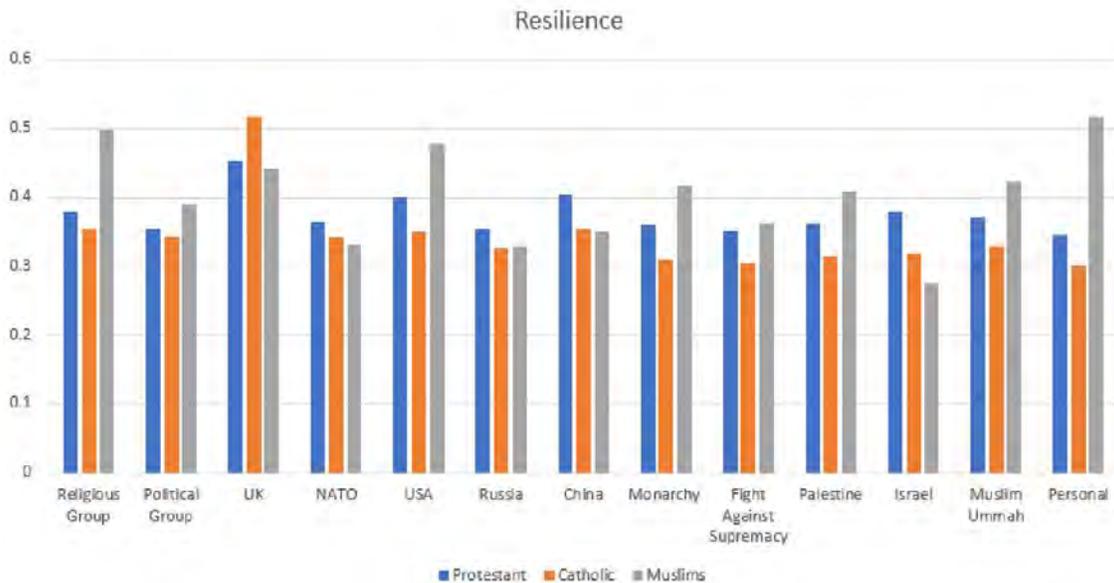

Furthermore, for Muslims, personal resilience was significantly correlated with personal physical formidability (.56, p<.001) and spiritual (.57. p<.001). When formidability measures were entered into a regression, both physical formidability and spiritual formidability predicted personal resilience, beta=.45, p < .001 and beta=.51, p <.001, respectively. In addition, for Muslims, their resilience of their Religious Institutions was significantly correlated with physical formidability of their Religious Institutions (.54, p<.001) as well as

spiritual (.40. p<.001). When formidability measures were entered into a regression, both physical formidability and spiritual formidability of their Religious Institutions predicted resilience of their Religious Institutions, beta=.36, p < .001 and beta=.30, p <.010, respectively.

Threats to Muslims Ummah′s future
For Muslims, the top threats to Ummah's future come from Corrupt Muslim Leaders, ISIS-like groups, and Terrorism, respectively. They also see China as a greater threat than USA and Russia.

Threats to Muslims Ummah′s Future
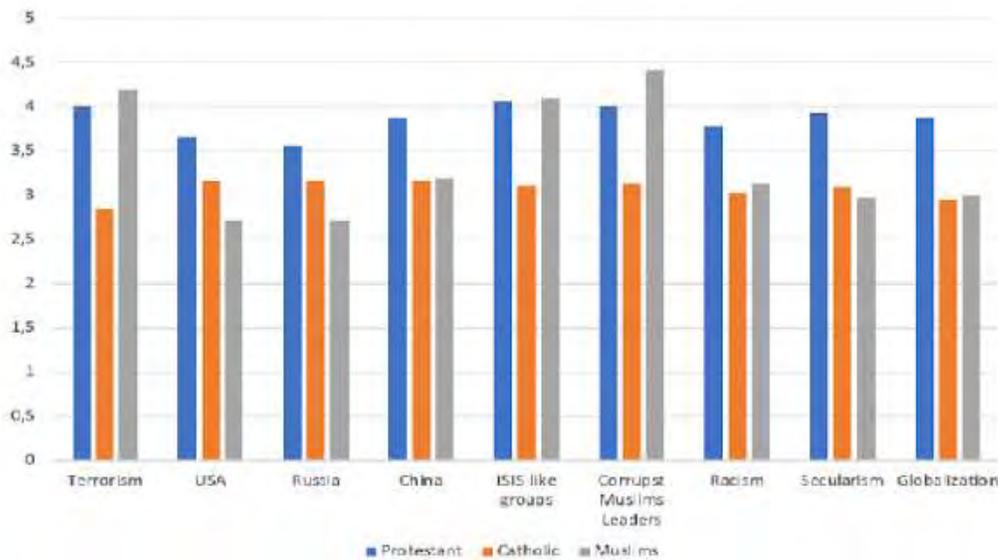
Mediation Analyses for the UK
Results show that fusion with the UK predicts costly sacrifices for the UK through trust for the UK. In other words, increased trust for the UK increases fusion with the UK, which then may result in costly sacrifices for the UK

*Mediation analysis (Fusion on Costly Sacrifices vie Trust measure) for the UK*

Indirect effect via Trust for the UK: 11.72, 95% CI: 7.395 to 16.445

Parallel mediation analysis (Fusion on Costly Sacrifices via Formidability and Trust measures) for the UK

Indirect effect via Trust: 6.95, CI: 2.972 to 11.383
Indirect effect via Trust: 10.07, CI: 5.802 to 15.059
Indirect effect via Spiritual Formidability and Trust: 3.23, CI: 1.159 to 5.698
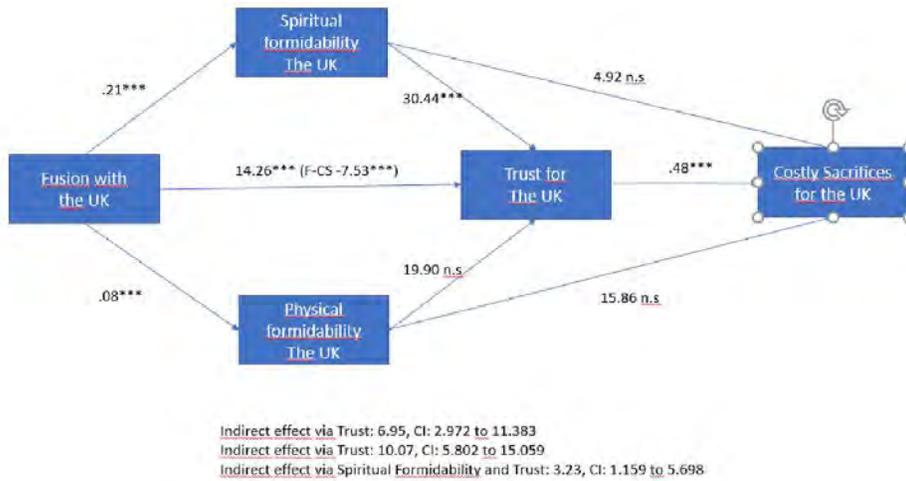
Mediation Analyses for Palestine

In the case of Palestine, fusion with Palestine directly affects costly sacrifices (A-willing to live up liberty and go to jail) for the group. There was also a significant indirect effect of fusion with Palestine on costly sacrifices for it through spiritual (but not physical) formidability for Palestine. To explicate, increased spiritual formidability may increase fusion with Palestine, which may in turn increase costly sacrifices for Palestine.

Parallel mediation analysis (Fusion on Costly Sacrifices via formidability measures) for Palestine

Indirect effect via Spiritual Formidability: 3.80, CI: 0.882 to 7.476
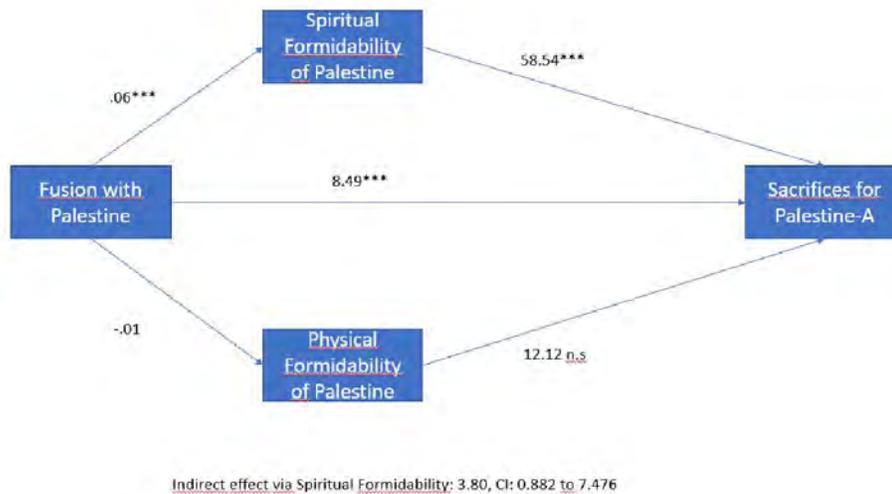
In addition, fusion with Palestine predicts spiritual formidability and trust for Palestine, but not physical formidability for Palestine and costly sacrifices for Palestine. However, there was a significant indirect effect of fusion with Palestine on costly sacrifices (A-willing to live up liberty and go to jail) for Palestine through spiritual formidability and trust for Palestine, as well as through their combination.

Indirect effect via Spiritual Formidability: 2.47, CI: .506 to 5.222
Indirect effect via Trust: 10.07, CI: 5.802 to 15.059
Indirect effect via Spiritual Formidability and Trust: 1.32, CI: .237 to 2.773
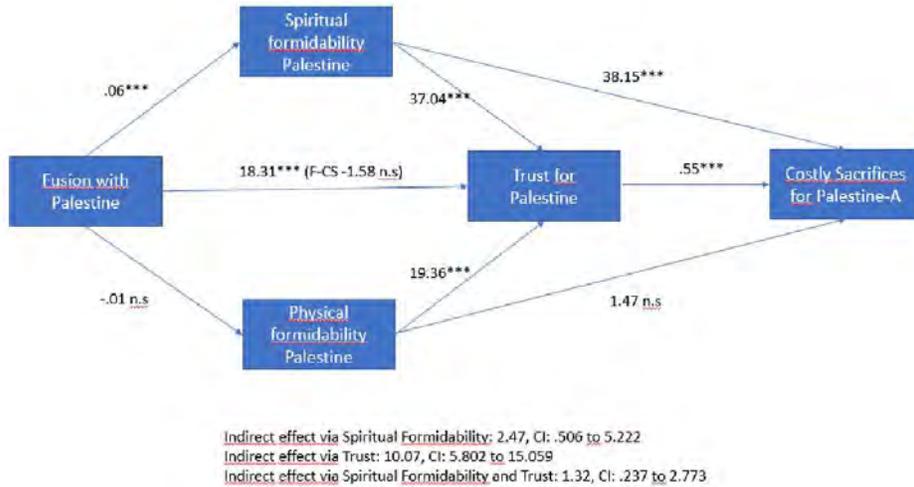
Mediation Analysis for Muslim Ummah

In the case of Muslim Ummah, fusion with Ummah directly affects costly sacrifices (A-willing to live up liberty and go to jail) for the group. There was also a significant indirect effect of fusion with Ummah on costly sacrifices for it through spiritual and physical formidability for Ummah. In other words, increased spiritual and physical formidability of Ummah may increase fusion with Ummah, which may in turn increase costly sacrifices for Ummah.

Parallel mediation analysis (Fusion on Costly Sacrifices via Formidability measures) for Muslim Ummah

Indirect effect via Spiritual Formidability: 2.16, CI: 0.298 to 4.831
Indirect effect via Physical Formidability: 2.35, CI: 0.358 to 4.794
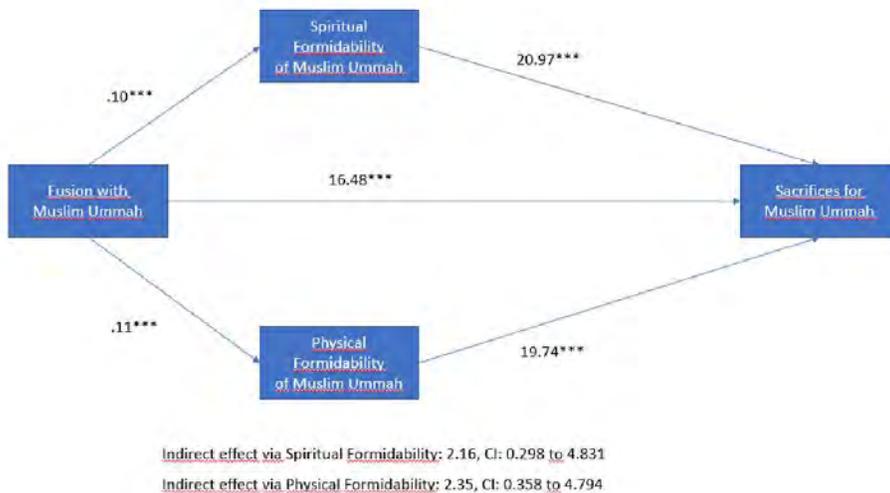
In addition, fusion with Ummah predicted spiritual formidability, physical formidability, trust and costly sacrifices (A-willing to live up liberty and go to jail) for Ummah. There was also a significant indirect effect of fusion with Ummah on costly sacrifices for it through trust for

Ummah, and through trust and physical (not spiritual) formidability for Ummah. This means that increased trust and physical formidability of Ummah may increase sacrifices for Ummah.

Parallel mediation analysis (Fusion on Costly Sacrifices via Formidability and Trust measures) for Muslim Ummah

Indirect effect via Trust: 8.39, CI: 4.622 to 12.494
Indirect effect via Physical Formidability and Trust: 1.42, CI: .095 to 3.063
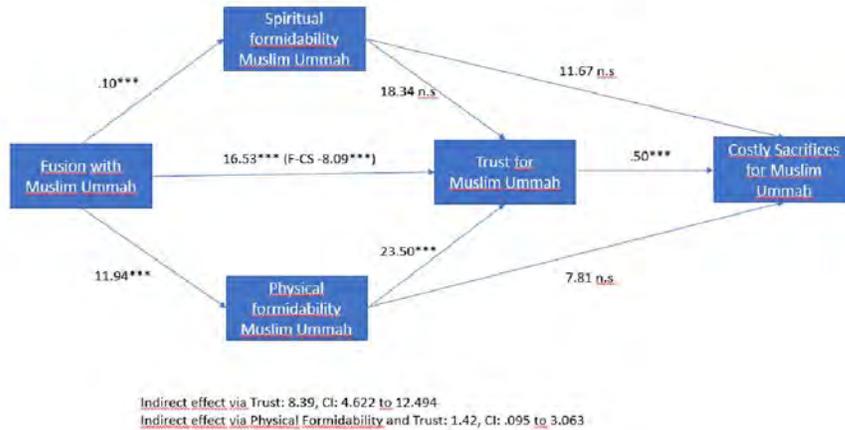
Regression Analysis

For the two most important values for Muslims, simple linear regression was used to assess whether: i) fusion with democracy significantly predicts costly sacrifices for democracy, and ii) fusion with religion significantly predicts costly sacrifices for religion.

The results of the regression for democracy suggested that fusion with democracy explained 15% of the variation, R^2= .15, $F(1,198)$, 35.38, $p < .001$. Fusion with democracy significantly predicted costly sacrifices for democracy, b = 18.47, t = 5.96, $p < .001$. Similarly, the results of the regression for religion suggested that fusion with religion explained 14% of the variation, R^2= .14, $F(1,198)$, 31.44, $p < .001$. Fusion with religion significantly predicted costly sacrifices for religion, b = 22.77, t = 5.60, $p < .001$.

Key Takeaways

1) For the Protestants, fusion with democracy, the fight against supremacy, the UK, and the Monarchy, and were the highest, while fusion with Muslim Ummah was the lowest. For the Catholics, fusion with the UK, democracy, and NATO were the highest, while fusion with Muslim Ummah and the fight against Sharia were the lowest. For the Muslims, fusion with the fight against supremacy, religion, and democracy were the highest, whereas fusion with Israel, NATO, and the fight against Sharia were the lowest.

2) For the Protestants, costly sacrifices for the UK, the fight against Sharia, and democracy were the highest, while it was lowest for NATO, political group, and Palestine. For the Catholics, costly sacrifices for Palestine, fight against supremacy, and the fight against Sharia were the highest, while costly sacrifices for NATO, religion, and the fight against Immigration were the lowest. For the Muslims, costly sacrifices for Palestine, religion, and Muslim Ummah was the highest, while costly sacrifices for Israel, and the fight against Sharia are the lowest.

3) The Protestants trust in the UK, the Monarchy, and religious groups the most while they trust in Palestine, Russia, and China the least. The Catholics trust in the UK, Muslim Ummah, and the Monarchy the most, while they trust in political group, the USA, and religious

groups. The Muslims, trust in the religious groups, Muslim Ummah, and the UK the most, while they trust in Israel, China, and Russia the least.

4) Muslims see the spiritual formidability of their religious institutions, political party, NATO, Palestine, Muslim Ummah, the Self stronger than physical formidability. Muslims see the physical formidability of Russia, China, the Monarchy, Israel stronger than spiritual formidability. Among Sunnis and Shias, there is no difference in formidability of religious institutions, Palestine, Muslim Ummah, and the Self.

5) For Muslims, the top threats to Ummah's future come from Corrupt Muslim Leaders, ISIS-like groups, and Terrorism, respectively. They also saw China as a greater threat than USA and Russia.

6) Increased spiritual and physical formidability of Ummah may increase fusion with Ummah, which may in turn increase costly sacrifices for Ummah. Increased spiritual formidability may increase fusion with Palestine, which may in turn increase costly sacrifices for Palestine. Fusion with democracy significantly predicted costly sacrifices for democracy, and fusion with religion significantly predicted costly sacrifices for religion.

Deliverable 5.2 Analyze data on susceptible and supporting ISIS Population #6.

Under this deliverable the team analyzed the data on susceptible and supporting ISIS Population in Turkey.

Summary of analyses of the data on susceptible and supporting ISIS Population in Turkey

Data and Methods
Sample and Recruitment Procedure
Multiple Google banners were posted –algorithms control ad placement based on specific criteria requests. Our recruitment selection criteria requested: geographic region: Turkey (Google only serves ads within determined by IP address range), age: 18 years or older. Our focus was all of Turkey. The study material was presented in Turkish. Interested participants would click on the ad. They would be linked to the informed consent webpage. If they agreed to the terms, they would click to begin the survey. The survey was active for 13 days between 24 May-6 June 2021. Consequently, we collected data with three hundred and seventy-one (371) completed surveys and some partially completed. (Note: 41 participants were able to complete the survey after we paused the campaign, because the link was still operational. Hence is the n=371).

Methods
Our methods involve the Dynamic Identity Fusion Index-DIFI, which was developed with DoD support and validated in frontline studies in Iraq and online in Spain. The DIFI is a computer-based measure of "identity fusion" a form of group alignment characterized by a visceral feeling of oneness with a group. Past measures of identity fusion (a single pictorial item and a 7-item verbal scale) have demonstrated a unique capacity to predict willingness to engage in extreme pro-group behaviors (e.g., fighting and dying for one's group). What is unique about DIFI is that it combines the simplicity of the single pictorial item with the higher fidelity afforded by a continuous scale. Furthermore, our methods include several versions of the Magi Wise platform measures we developed for behavioral experiments and surveys in the field. Through Magi Wise, users create and run experiments and surveys involving traditional question types and also dynamic measures and simulations in 2D or 3D (using Unity3D). Our overall study design included the DIFI for measuring fusion with different groups and values and dynamic measures on
  • Costly Sacrifices,
  • Trust,
  • Personal physical and spiritual formidability, as well as the perception of physical and spiritual formidability of several groups,
  • Resilience.

Major Findings
Demographics
In terms of the age groups, 56.1% of the participants were between 18-24, 19.7 % were between 25-30, 11.1% were between 31-40, 7.3 % were between 41-50, 1.9% were between 51-65 and 3.8% were 65 or older. As per gender, 58.2% of participants were males, 24.8% were females, 2.7% declared themselves as Other and the remaining 14.3% preferred not to reply.

Educational statuses of the participants entail: 6.2% primary school, 25.1% secondary school, 18.1% vocational school, 41.8% college or university degree, and 8.9% had masters/doctorate/law or medical degrees. Regarding marital statuses, 17.8% of the participants declared themselves as married, 65.8% as not married, 7.3% as being in civil partnership, 4 % as separated/divorced and 5.1% as widowed.

In terms of the community in which they live, the majority of participants live in urban areas (78.4%), while, of the remaining, 10.5% live in suburban areas and 11.1% in rural areas. Moreover, little more than half of the participants reported their standard of living as medium (52.6%), and the other half is broken down as 11.6% high, 8.6% fairly high, 15.1% fairly low and 12.1% low.

Finally, with regard to employment, 29.6% of the participants were full-time employed, 10.8% were part-time employed, 20.2% were unemployed, 3.2 were homemakers, 33.7% were students and 2.4% were retired.

Identity fusion with groups and values
It is interesting that the highest level of fusion was with democracy. But equally interesting, and rather contradictory, was that the next three institutions/values that participants fused were the Turkish Military, Turkish Intelligence (MIT) and Ultranationalism. There was a significant difference between democracy and these three items, t (370) = 5.93, p<.001, t (370) = 2.54, p<.006, t (370) = 4.57, p<.001, respectively.

Furthermore, it was also noteworthy that the level of fusion with US is significantly higher than with Russia (t (370) = 5.99, p <.001.). Another striking result is that fusion with ISIS was the lowest among participants. The fact that fusion with the Diyanet (Turkish State Religious Authority), the ummah and religious group people most identify with is quite low also has important ramifications for understanding religious extremism in Turkey.

Fusion with groups and values

Groups/Values

- Democracy
- Turkish Military
- Turkish Intelligence
- Nationalism
- Fight agains corruption and mafia
- EU
- NATO
- USA
- Uyghurs
- Turkish Government
- Palestine Cause
- Russia
- The Diyanet
- Ummah
- Political Group
- Israel
- Religious Group
- Kurd
- ISIS
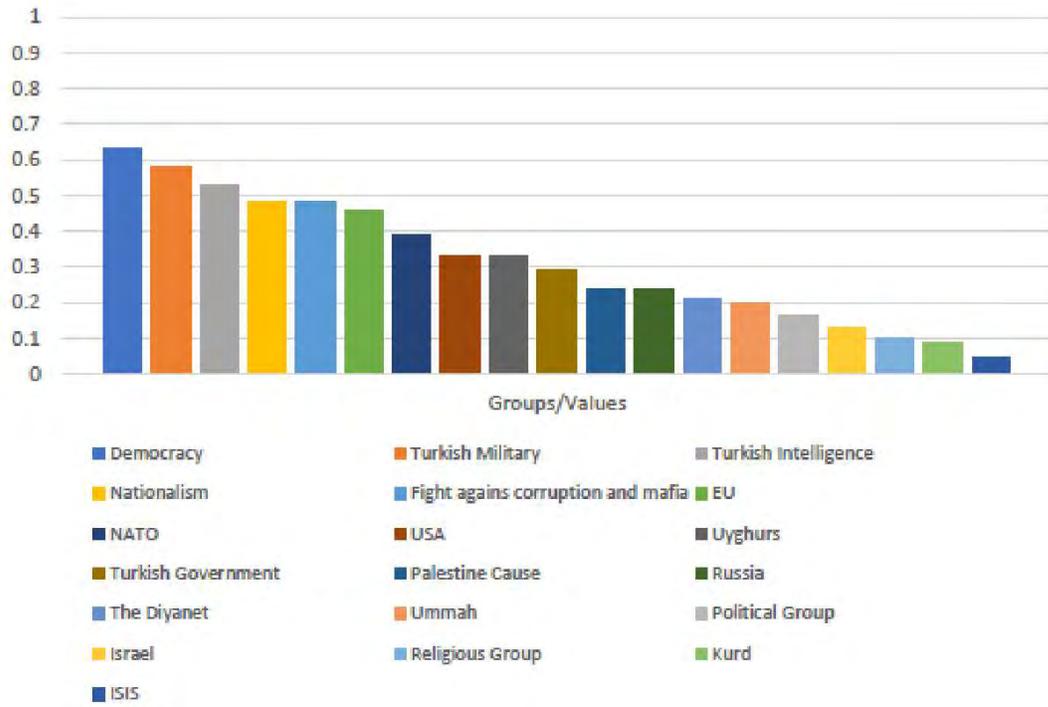
Costly sacrifices

Turkish Military, democracy and MIT were the groups and value participants were most willing to sacrifice for. Considering that culturally and traditionally Turks were very much attached to their respective political groups, it was interesting that the score for willingness to sacrifice for the Turkish military was higher than for the political group participants identify with, $t(370) = 12.45$, $p<.001$, and that sacrifice for MIT was also higher than for the political group, $t(370) = 7.20$, $p<.001$. The Diyanet, Kurdish Identity and Israel were the groups and value that they were less willing to make costly sacrifice for.

Costly Sacrifices
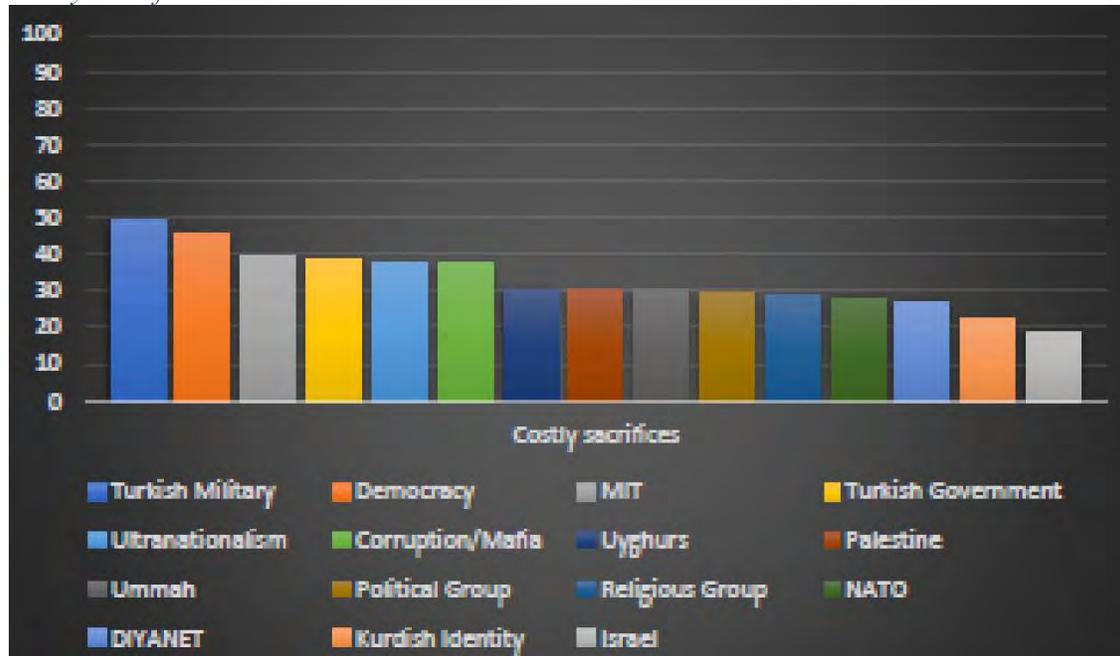
Trust

Turkish Military, Democracy and MIT (Intelligence) were the groups and value that participants trusted most. It was remarkable that trust for the Military and MIT was greater than for religious group identified with, $t(370) = 13.82$, $p<.001$ and $t(370) = 10.83$, $p<.001$, respectively. Whereas Israel, Kurdish identity and ISIS were the groups participants least trust. In addition, participants have moderate trust in EU and NATO, while their trust for the USA is greater than their trust for Russia and China (USA-Russia, $t(370) = 3.56$, $p<.001$ and USA China $t(370) = 4.95$, $p<.001$).

Perception of physical and spiritual formidability

Participants saw Turkish government stronger on physical formidability than on spiritual formidability. They saw Turkish military and ultranationalism as equal in terms of its physical and spiritual formidability. It was interesting that participants scored significantly higher on ISIS's physical formidability than spiritual, which was consistent with their lack of fusion with the group. They also differentiated between the physical and spiritual formidability of various groups and values. For example, they scored higher on physical formidability than spiritual for NATO, USA, Russia, EU, China, Diyanet, and Israel. Lastly, participants saw themselves as more spiritually formidable than physically formidable.
Trust
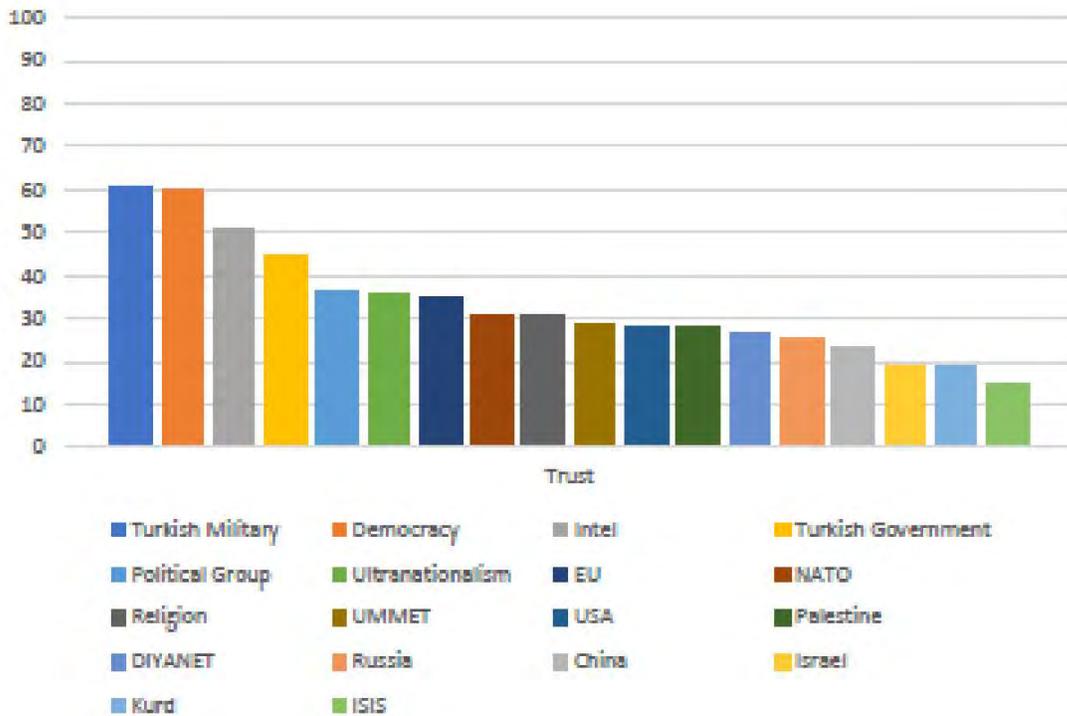
Physical and Spiritual Formidability
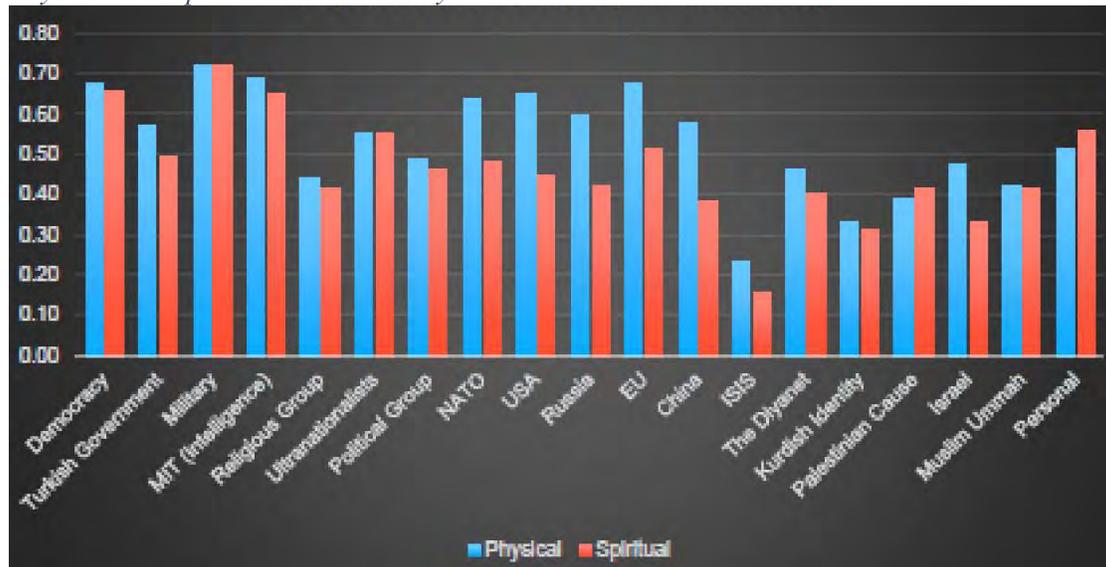

Resilience

There are almost no differences, which may indicate that maybe participants could not fully understand the concept of resilience.

Threats to Turkey's future

Participants saw terrorism, corruption, and refugees as the highest risk factors in Turkey, whereas the UK, globalization and Greece are seen the lowest risk factors. Terrorism and corruption were understandable, given that the country has suffered from both of these problems for decades. The refugee problem, however, was something that Turkish citizens

became concerned with more recently, especially because of the inflow of migrants due to the Syrian crisis and the US withdrawal from Afghanistan. It will not be erroneous to state that the refugee problem manifests itself as one of the most important issues that can be exploited as a wedge by malign influencers like Russia and China for the purposes of fragmenting Turkey and NATO. It was also striking that Greece is at the bottom of the list of threats for Turkey's future, which runs counter to a popular perception that Greece is Turkey's number one enemy.

Threats to Turkey's Future
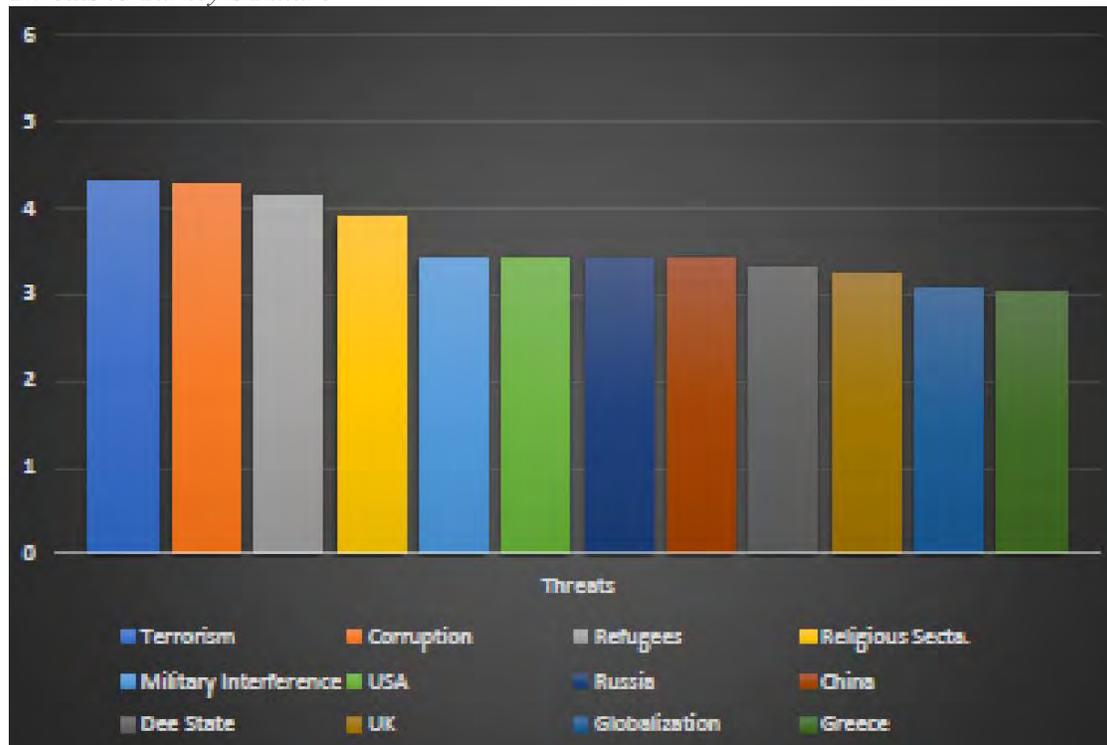
Support ideas

It was quite interesting that the EU accession process has higher support than the government's EU accession policies, t (370) =10.46, p<.001. Participants' second choice for support ideas was the parliamentary system, which is also noteworthy in that Turkey had abandoned it for the Presidential System only a few years ago (in 2018). This outcome was consistent with the current debate in Turkey that the new Presidential System should be abolished, and the parliamentary system be reinstituted. Moreover, the conversion of Hagia Sophia from a museum to mosque received moderate support, while the government's management of the Covid crisis and granting refugees citizenship were the least supported ideas.

Mediation Analyses (Fusion on Costly Sacrifices via formidability measures) for the Turkish Military and Ultranationalism

The previous results seem to indicate that the most important group was the Turkish Military, and the most important value was democracy. Then, an important question was whether being fused with this group and value predicts costly sacrifices and through which mechanism. in the case of the group, fusion with the Turkish Military (TM) predicts physical

and spiritual formidability, trust, and costly sacrifices for the TM. The effect of fusion on sacrifices is produced through spiritual formidability (but not through physical) and trust.

Parallel mediation analysis (Fusion on Costly Sacrifices via formidability measures) for the Turkish Military
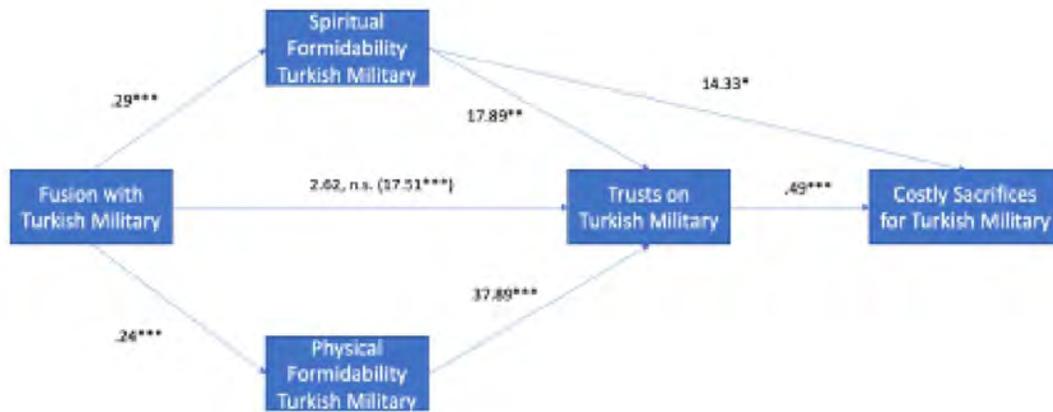
Furthermore, our findings above indicate that ultranationalism was an important value for participants as it ranks among the top six values in all but one measures, i.e., fusion, costly sacrifices, formidability and trust.3 As seen in Figure 13, the model indicates that: 1) Fusion with ultranationalism predicts perceptions of physical and spiritual formidability of the group as well as trust and sacrifices for it; 2) the effect of fusion on trust is produced through spiritual and physical formidability; and 3) the effect of fusion on sacrifices is produced through trust.

Parallel mediation analysis (Fusion on Costly Sacrifices via measures of Formidability and Trust) for Ultranationalism
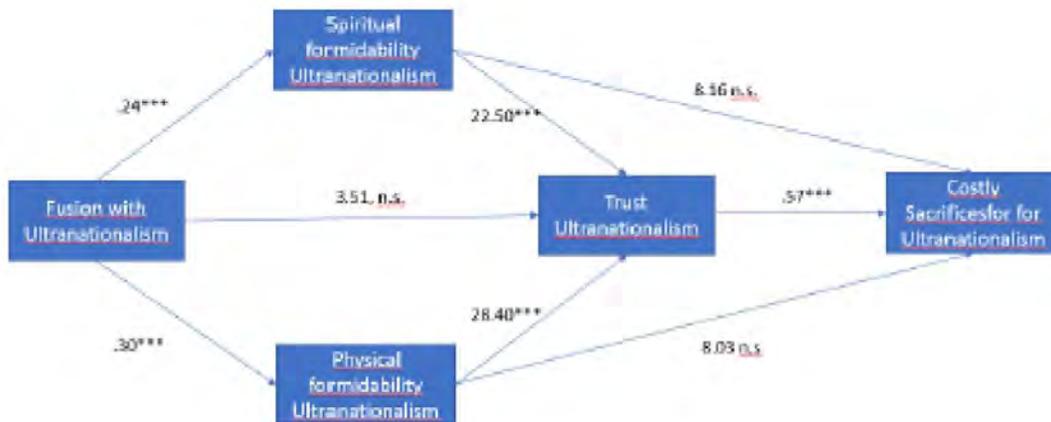
Key Takeaways
1) The highest level of fusion among Turks was democracy. Equally interesting, yet rather contradictory, was that the next three institutions/values that participants fused with were the Turkish Military, Turkish Intelligence (MIT) and Ultranationalism. Fusion with ISIS was the

100

lowest among participants. Fusion with the Diyanet (Turkish State Religious Authority), Kurdish population, and religious groups were the least fused in Turkey.

2) Turkish Military, democracy and MIT were the groups and values participants were most willing to sacrifice for. Whereas the Diyanet, Kurdish Identity and Israel were the groups and values that they were less willing to make costly sacrifices for.

3) Turkish Military, Democracy and MIT (Intelligence) were the groups and values that participants trust most while Israel, Kurdish identity, and ISIS were the groups participants least trust.

4) Participants viewed the Turkish government as stronger on physical formidability than on spiritual formidability. They saw Turkish military and ultranationalism as equal in terms of its physical and spiritual formidability. It is interesting that participants scored significantly higher on ISIS's physical formidability than spiritual, which is consistent with their lack of fusion with the group. They have less spiritual formidability of outer group countries (USA, Israel, Russia, China) than physical. Turks are willing to make sacrifices for the Turkish Army and ultranationalism when spiritual formidability and trust were produced.

5) Participants considered terrorism, corruption, and refugees as the highest risk factors in Turkey, whereas the UK, globalization and Greece were seen as the lowest risk factors.

KEY FINDINGS ACROSS SURVEYS

Perhaps the most significant set of findings across surveys concerns the mediation:

FUSION (with Cultural Groups & Core Values) → SPIRITUAL FORMIDABILITY → TRUST → COSTLY SACRIFICES

A. It is rare to have a successful full mediation involving four variables in any one setting, much less across multiple cultural settings and involving different methods, strategies to measure variables, and different types of populations (e.g., fighters, noncombatants).

B. Spiritual Formidability and Trust were both variables derived from field interviews in conflict zones – *not* from a priori theories – and subsequently validated in mass surveys.

C. Note that the mediation works *only* in the direction indicated. The linear mediation is telling us that spiritual formidability affects sacrifices by increasing trust (rather than trust affecting sacrifice by increasing spiritual formidability).

D. The mediation, replicated in different cultural settings and via different measures (e.g., dynamic, static), thus represents a validated set of transcultural pathways to costly sacrifices, including *will to fight* – an issue whose evaluation the US Congress resolved in summer 2022 to make a priority issue for US national security.

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