VIOLATION OF SACREDNESS AND VIOLENCE

by

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DISSERTATION ABSTRACT

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This dissertation aims to present a model of sacredness – MAPR – that emphasizes four components to empirically study sacredness: source of meaning (M), experience of awe (A), protection against the profane (P), and relationship to religion (R). The empirical studies focus on the psychological mechanisms of protecting, and examine the association of violence and violation of sacredness.

Five studies examined the hypothesized effect of violating sacredness on moral judgment and support for war. Hypothetical and semi-real scenarios were created in which a sacred site (versus a military site) is attacked and participants report the degree to which they support war as counterattack. Results showed no effects of sacredness in eliciting violence (Study 1). The proposed effect did not show either with fine-tuned aspects of sacredness: religious sacredness and ethnonational sacredness (Study 2), or under feeling prime (Study 3). This effect did not show with an Iranian sample either (Study 4).

To address possible methodological challenges, we checked the manipulation scenarios by changing the non-sacred condition into a manufacture plant (previously a military site). The null results remained unchallenged (Study 5a). We also examined individuals' attitudes toward attacking the sacred site in Study 2, and counterattacking for the sacred site in Study 3. In addition, some personality variables were included to index

the characteristics of individuals who support protecting the sacredness. No clear pattern was observed.

The results suggest the possibility that the connection of sacredness and violence may be a misconception. The null finding has significant implications in today's tumultuous world, where dialogue is needed between different faith communities, and terrorism can and should be distinguished from religious commitment.

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CHAPTER I

INTRODUCTION TO STUDY OF SACREDNESS

Interests in studying sacredness have a long past (e.g., Otto, 1917; Durkheim, 1912; James, 1902; Weber, 1922), but only a short history in psychology (e.g., Atran & Axelrod, 2008; Baron & Spranca, 1997; Pargament & Mahoney, 2005; Tetlock et al., 2000). The rising attention to perception of sacredness as a consequential psychological process has resulted in fruitful models and typologies (Demerath, 2000; Evans, 2014; Pargament & Mahoney, 2005; Tetlock et al., 2000). Accumulating evidence shows that not only can sacredness be manipulated, but dramatic consequences can follow when sacredness is violated (Ginges & Atran, 2013).

Despite these theoretical and empirical accomplishments, extant psychological research stands without a straightforward, descriptive, and explicit definition of sacredness. Particularly, the obvious question "what constitutes sacredness" is not answered. Dictionary definitions of sacredness focus primarily on its relation to religion and the deity. Secondary meaning has to do with veneration and being "set apart". As an example, the fourth edition of American Heritage Dictionary defines sacred as "(a) Dedicated to or set apart for the worship of a deity; (b) Worthy of religious veneration; (c) Made or declared holy; (d) Dedicated or devoted exclusively to a single use, purpose, or person; and (e) Worthy of respect, venerable."

However, sociological and religious studies perspectives suggest that such a definition can be too narrow. A close reading of classical texts written by prominent theorists such as Émile Durkheim, Mircea Eliade, and their followers reveals 12 major themes identified with sacredness, whose scope goes far beyond religion. These themes

are hierophany (i.e., manifestation of the sacred that gives the world meaning), kratophany (i.e., manifestation of power), opposition to the profane, contamination, sacrifice, commitment, objectification, ritual, mystery, communitas, myth, ecstasy, and flow (Belk, Wallendorf & Sherry, 1989).

Through field work with indigenous cultures, anthropologists have revealed both diversities and patterns in how traditional societies construct sacredness. For instance, Studley (2010) summarizes characteristics of sacred sites for Kham people living in Eastern Tibet. A site tends to be sacred if it is presided over or embodied by a divinity; has low thresholds in its access to the world of spirits; provides an ideal locale to worship gods and ancestors; has associations with supernatural phenomena (e.g., trance, vision, vision quest, enlightenment, miracle); is a conduit of blessing or healing; or is related to the origin stories of a people. Although this list comes from observation of a particular and somewhat isolated group of people, it readily generalizes to other cultures whose people may deal with different objects and spirits, but nevertheless use similar concepts in constructing sacredness.

Geography also contributes to our understanding of sacredness, for the mere fact that sacred natural sites and objects abound across the globe. Many cultures revere mountains (Bernbaum, 1997). Mountains are sacred because their elevation and size make them seem likely as a center and place of power; an ideal place for a deity, ancestors or the dead to dwell; a place of revelation, inspiration, or transformation; and also as a source of water and thus life. Natural objects can be sacred too. Trees are often sacred for their longevity, multitude of uses and as a residence of spirits (Porteus, 1996). Trees can often represent a tradition and identity. Homage has been paid to the fig tree in

many major religions. Certain trees serve as a national icon, such as the cedar of Lebanon, Canada's maple tree, and for Chile the Monkey Puzzle tree (Barrow, 2010).

One can find sacredness among incorporeal ideas as much as in physical matters. Freedom, democracy, and human rights are no less sacred than holy land, ancestor burial sites, or enchanted forests. Ideas of harming the environment for greater economic gains (Tetlock, 2003), trading organs for money (Baron & Leshner, 2000), or accepting a demonized out-group (Atran, Axelrod, & Davis, 2007) can all trigger people's awareness of sacredness and corresponding reactions to protect the sacred from being compromised. Back to an urban, less dramatic setting, based on free-response descriptions of what s/he finds sacred, a college student will tell you that friendship, love, and family are what are sacred to him or her (Saucier, personal communication, 2014).

The above snapshot depicts no more than a tip of the iceberg for the rich meanings embedded in sacredness. It is not hard to see that, given such complexity, a wholesale use of the term sacredness without first specifying its possible components can conceal more than what is manifest. On the other hand, a clearer focus on a certain aspect of sacredness can exclude confounding variables by confining objects of investigation within a manageable domain. Given the wide scope and cultural diversity in sacredness, it is unlikely for any single model to comprehensively explain and describe all aspects of sacredness. The current project, instead, reviews the major empirical literature on sacredness and describes patterns that emerge from those findings. Emphasis is given to psychologically testable ideas.

Specifically, the current paper suggests four components that help explain what sacredness is: source of meaning, experience of awe, protection against the profane, and

religion and spirituality. Taking a tentative, but intuitive approach, this review organizes findings into these four components. In the treatment of each component, I first summarize major tenets whose views support understanding sacredness as such. I then review relevant empirical findings. Lastly I offer some testable hypotheses and directions for future research within each perspective. The current paper suggests that these four perspectives will not only enhance our understanding of sacredness, but open doors for empirical research to examine psychological implications of sacredness.

Sacredness as Source of Meaning

Some of the most powerful accounts of how sacredness is related to identity and meaning are given by indigenous people who maintain lasting attachment to their land. "The limitations of my land are clear to me. The area of my existence, where I derive my existence from, is clear to me and clear to those who belong in my group. Land provides for my physical needs and my spiritual needs. New stories are sung from contemplation of the land. Stories are handed down from spirit men of the past who have deposited the riches at various places, the sacred places. These places are not simply geographically beautiful: they are holy places, places that are even more holy than shrines. They are not commercialized, they are sacred. Veneration is shown to them. They are used for the regeneration of our people, the continuation of our life: because that's where we begin and that's where we return."(cited in Hubert, 1994, p. 9)

The above statement was given by Father Patrick Dodson, a Yawuru man from Broome in Western Australia, recognized as a leader and representative of many Australian aboriginal groups. Like many accounts that could be given by indigenous people from all inhabited lands in the world, this paragraph captures the utmost

significance of the aboriginal's sacred sites, and the need to set those sites apart. The sacred is a source of identity, from which one derives one's existence; it satisfies both physical and spiritual needs; it is not to be contaminated by commercialization, which is instrumental and involves treating everything in terms of its sheer instrumental value; it requires veneration; it has the strongest possible meaning for the aborigines as it defines the destiny for these people.

Many of these themes have been discussed in the previous sections, where sacredness is constructed in terms of religion, awe, or protection against profaning. What is left is sacredness as source of meaning. "Meaning is the web of connections, understandings, and interpretations that help us comprehend our experience and formulate plans directing our energies to the achievement of our desired future. Meaning provides us with the sense that our lives matter, that they make sense, and that they are more than the sum of our seconds, days, and years" (Steger, 2012, p. 65). In this definition, identity is obviously embedded in this web of understandings, and we discuss meaning and identity together as a whole.

It is obvious that sacredness is a source of meaning. Sacredness furnishes the holders of sacredness with the ability to construct and organize subjective and interpersonal experiences and reality (LaMothe, 1998). That sacredness is often related to religion makes it even more worthy of veneration, and sacredness can become a unique source of significance in people's lives (Silberman, 2005).

However, sacredness is not confined to religion. As there are religious phenomena that are no longer sacred, there are sacred things that are not religious (Demerath, 2000). Evans (2003) suggests that the vague definition and often imputed equivalence of

sacredness to the supernatural is caused as much by unscrupulous scholarly work as by vagaries in the English language. For communication of a religious sense, it is better to use the word "holy" in lieu of the word "sacred" (Oxtoby, 1993). Sacredness is better defined in reference to things that are set apart with special meaning, which may or may not involve the supernatural or be related to religion.

Evans (2003) defines sacredness as "set apart" based on the non-rational and sometimes emotional values carried by the sacred. Part of the "set apart" quality is the separation into a different compartment, value-wise. Evans proposes a typology of sacredness that cross-tabulates two sources (natural/supernatural) and two holders (individual/group), resulting in four types of sacredness – personal, spiritual, civil, and religious. Personal sacredness refers to a special meaning in the natural experiences of an individual. Such a sacred object often has personal sentimental value. Examples include personal sacred places such as childhood homes and personal places of retreat. Spiritual sacredness highlights personal connections with the supernatural. Examples often can be found with respect to religious artifacts. Civil sacredness recognizes worldly institutions or natural artifacts that hold significant meanings among social groups. Examples of such forms of sacredness are abundant, such as the Mount Rushmore National Memorial, the Pentagon, the US capitol, the US national flag and the Statue of Liberty; they are icons of American heritage and power. The last category is religious sacredness which features a religious site or artifacts widely recognized and worshipped by a group of devotees.

Sacredness is embedded in tradition. Durkheim (1912) is among the first to establish the social-traditional origin of sacredness. The Durkheimian fusion of tradition and sacredness have seen further development in Becker (1950), who goes so far to assert

that “a society that endows and sustains an impermeable value-system is sacred; one that embodies a permeable value-system is secular” (p. 364). Similarly, Demerath (2000) conceives sacredness in terms of a social function. As a type of tradition, sacredness is real and unchanging, thus providing a reliable source of meaning. “What we term sacred is originally nothing more than what is regarded as more truly real because it is whole and self-founded, while the profane is what happens only now and is therefore purely contingent” (Dupre, 2000, p. 101). The self-founded nature of sacredness has a family resemblance to ‘intrinsic’.

It is useful to ask how one maintains sacredness, and what happens when sacredness is lost. People have a general need for coherence and meaning. “Narrative psychology believes that we secretly portray ourselves as living out a sort of preauthored screenplay, … one with the promise of an intelligent narrative climax that will eventually tie all the loose ends together in some meaningful, coherent way” (Bering, 2011, p. 158). As suggested in the narrative psychological perspective, a successful maintenance of sacredness produces coherence and self-knowledge. A disrupted sacredness leads to loss of meanings. This is probably because when the intrinsic values are taken away, the instrumental pursuits in themselves seem unanchored, or become anchored in values like wealth, power, or hedonic satisfaction that somehow confer meaning less well.

Empirical Implications

There is a rich literature in the study of meaning (c.f., Markman, Proulx, & Lindberg, 2013), but very few of these investigations explicitly connects sacredness with meaning. We introduce one model of meaning that may be useful for future studies associated with sacredness.

According to the Meaning Maintenance Model (MMM), meaning is defined as the "expected relationships or associations that human beings construct and impose on their worlds" (Heine, Proulx, & Vohs, 2006, p.90). MMM proposes that people seek coherent relations within the external world, within themselves, and between themselves and the external world. Disruptions to meaning frameworks lead people to reaffirm alternative frameworks. Notably, these efforts need not be directed at the specific domain of meaning which has been jeopardized. Four exemplar meaning frameworks are proposed by Heine et al. (2006) to capture needs to maintain the coherent relationships: self-esteem, feelings of certainty, interpersonal affiliation, and symbolic immortality. A fluid compensation model suggests that people whose meaning frameworks have been disrupted react by bolstering or reaffirming other meaning frameworks that remain intact. Meaning can be constructed as a cognitive process, which provides information about the presence of reliable patterns and coherence, thus separated from affect (Heintzelman & King, 2014).

Future Directions

The primary task is to establish an empirical link between sacredness and meaning. People who hold a strong notion of sacredness may attain great coherence of meaning, identity and purpose in life. Successful maintenance of sacredness helps an individual to cope with pain, failure, and disappointments, while loss of sacredness can lead to identity crisis and loss of meaning. The primary hypothesis is that priming sacredness increases reported meaning in life (Steger et al., 2006). Sacredness may also increase resilience, give meaning to suffering, and help individuals recover from disappointment.

Investigation of consequences from loss of sacredness can benefit from the fluid compensation framework. People who lose sacredness may look into other resources to make up for the loss of identity and meaning associated with loss of sacredness. A hypothesis states that loss of sacredness leads to a higher need for certainty and interpersonal affiliation. People also ground the abstract notion of sacredness in concrete matters, such as one's cultural heritage. Since tradition is often related to one's identity, a hypothesis states that priming sacredness leads to higher levels of traditionalism and opposition to transformation.

There can be other needs that function in fluid compensation in addition to the proposed self-esteem, feelings of certainty, interpersonal affiliation, and symbolic immortality. For instance, one would tend to hedonic needs, need for wealth or power, or a need for autonomy. However, some of these needs may not sufficiently supply meaning, if what they emphasize is on instrumental or extrinsic purposes. It also has to be noted that, the sources of meaning may not be necessarily sacred in nature or linked to sacredness. Sacredness can be viewed as limiting state of meaning, the meaning at its infinity. The basic human needs in certain circumstances may be intermediate goods – ranked higher than instrumental ones but not as high as sacred ones. Future research can investigate the conditions under which these basic needs are sacred.

Another implication of the meaning component is that we can identify and analyze potentially more sacred objects. Some objects are naturally more sacred because they are likely a good source of meaning. Righetti (2013) examines the sacredness of books based on this characterization. Experiment with sacredness can construct scenarios that take advantage of a concrete sacred matter, such as land, to manipulate various

conditions with sacredness. For instance, a sacred loss condition can be constructed in terms of a family land being sold to a mining company.

Sacredness as Experience of Awe

Awe and religion and spirituality often work together. Awe lies in the root of religious experiences (James, 1902), and individuals primed with awe report higher levels of spirituality (Saroglou, Buxant, & Tilquin, 2008). Religion facilitates the making of awe-inducing artifacts, such as costly and imposing religious monumental architecture (Joye & Verpooten, 2013). However, awe is distinct from religion. If religion offers some sort of meaning system, awe appeals directly to individual experience.

There is a long tradition in constructing sacredness with respect to awe. Dictionaries in general define sacredness in terms of reverence, which is a feeling of deep respect tinged with awe. In one of the most influential accounts of awe, *The Idea of the Holy*, Rudolf Otto (1917) delineates the intense emotional power of the numinous, experienced as a mystery (*mysterium*) that is both terrifying (*tremendum*) and fascinating (*fascinans*) at the same time. Although titled as the Holy (a more religious term), the central topic of Otto's book is about the numinous, a non-rational, non-sensory experience in the presence of God. In a similar rendering, Eliade (1957) coins the terms hierophany and kratophany to argue that sacredness is a manifestation of power. Such a manifestation can cause an abrupt gap in reality, which results in awe. Philosopher Jean-Luc Nancy (2013) defines the sacred as "an encounter or a point of intensity via which the subject approaches what cannot be grasped in itself, but solely in and as this unfinishable approach" (p. 153). In a recent review of sociological works on sacredness, Righetti (2014) summarizes sacredness as "an imminent character of social life that is not

constrained by the boundaries of religious institutions" (p. 133). This view essentially argues that sacredness does not have to be granted solely by religion, and can be derived from out of religion, by the fact that sacredness has a unique emotional aspect, that is, the feeling of awe and deference.

Rituals can have the power to generate a strong emotional charge like awe, and for this reason, ritual is often a source of sacredness. "Sacred symbols have distinct cognitive schema, but their sanctity derives from their emotional meaning. It is the emotional significance of the sacred that underlies 'faith', and it is ritual participation that invests the sacred with emotional meaning" (Alcorta & Sosis, 2005, p. 332). The above position implies that sacredness can be no more than a certain kind of emotional attitude. This position is analogous to the emotivist account of ethics (e.g., Stevenson, 1937) which proposes that moral judgments just state an emotional attitude toward something. However, emotivism is only one possible account of sacredness, and much research needs to be done in examining how rituals create the relevant emotions that lead to sacredness.

Anthropological work shows a deep link between sacred sites and the perceived awe-provoking power of spirits. Across many traditional beliefs, a site is considered as sacred when it is inhabited by spirits. Spirits can have an immaterial, hypothetical existence, or spirits of ancestors that physically existed in history. The spiritistic definition of sacredness was not grouped under the section of religion and spirituality mainly because beliefs in spirits are not as institutionalized as are Abrahamic monotheistic religions. Admittedly, spirits are not necessarily more awe-inspiring than the Christian God. However, spirits invoke sacredness directly through the experience of

awe, while people who perceive sacredness in their religion can also derive sacredness from non-experiential, interpretative sources such as dogma and liturgy.

Spirits are often believed to possess certain supernatural power, which can be used as a positive resource or avoided by all means. Sometimes the spirits are not feared, and there is only a perceived need to respect them. Since awe is defined as a deep respect tinged with fear, this section compiles some examples of spirits being respected, though not necessarily be held in awe. Sacred places can take different forms, the best known of which are sites occupied by chiefs or kings, their ancient palaces, or their places of burial. In Madagascar, use of the term sacred sites is connected with *vazimba* and the ancestors. The *vazimba* are considered earliest inhabitants of the land and they often invoke fear because their discontent can cause calamities (Radimilahy, 1994). For Nso people living in the Bamenda grass fields of Cameroon, sacred sites are where people make offers to please their ancestors in order to obtain blessings from ancestors. These sacred places can belong to the entire lineage of a clan (Mumah, 1994). The power of spirits is often a source of collective identity for the tribe. Individuals receive power for personal protection, and maintain the knowledge of how the whole tribe came to be a people (Carmichael, 1994).

Sacred natural sites also have to do with spirits, and their awe-provoking power. Whether they are mountains, trees, or other natural objects, a sacred place is often thought to be occupied or constituted by spirits which have certain powers (Byrne, 2010). These animist spirits are either "materialized" in some permanent materials such as a rock, or "dwelling" in trees, on a hillock, or in a body of water (Thierry, 1993). Many sites of unusual configuration, such as distinctive rock outcrops, caves, knolls, whirlpools

in a river, and seepage holes, are considered sacred (Theodoratus & LaPena, 1994). The numinous character of such sites can possess agency to act upon people and effect changes in the real world (Gell, 1998). Such agency often invokes a sense of awe.

Empirical Implications

In psychology, awe has recently been constructed as an emotion produced by perception of vastness, and a cognitive need for accommodating this experience to current mental schemes (Keltner & Haidt, 2003). An interpretative phenomenological analysis summarizes ten themes associated with awe: profoundness, connectedness, numinous, fear, vastness, existential awareness, openness and acceptance, ineffable wonder, presence, and heightened perceptions (Bonner & Friedman, 2011). Vastness is particularly studied in relation to awe, perhaps because it is easier to observe and operationalize compared to other themes.

Multiple methods have been applied to experimentally induce awe. One set of methods asks participants to recall and write about a relevant awe-inspiring event. Another set of methods shows subjects awe-invoking video clips that present vast scenes of natural beauty (e.g., BBC's Planet Earth in Valdesolo & Graham, 2014), seemingly realistic but impossible images (Rudd, Vohs, & Aaker, 2012), or the course of childbirth (Van Cappellen & Saroglou, 2012). A field approach exposes subjects to real-life grandeur such as a full-sized replica of a Tyrannosaurus rex skeleton (Shiota, Keltner, & Mossman, 2007), or huge redwood trees.

Studies corroborate anthropological findings that nature is a reliable source of awe even among people living in modern urban settings, and the experience of awe promotes a lesser salience of the self (Shiota, Keltner, & Mossman, 2007). Experience of

awe can alter subjective time perception by making people focus in the present, develop a feeling of having more time at hand, and obtain greater life satisfaction (Rudd, Vohs, & Aaker, 2012). Awe also decreases tolerance for uncertainty, which in turn increases the tendency to believe in nonhuman agents (Valdesolo & Graham, 2014).

The link of awe and nature, and the similarity of their effects on well-being is not accidental. Sacredness may be the common denominator of both awe and people's appreciation of nature. Literature on nature's effects on psychological well-being coincides with those effects produced by awe. People who are more connected with nature and attuned to nature's beauty report greater subjective well-being (Zhang, Howell, & Iyer, 2014), and this correlation is found to be mediated by an elevated meaning in life (Howell, Passmore, & Buro, 2013). Exposure to beautiful nature also increases prosocial behaviors (Zhang et al., 2014).

Future Directions

Psychological research on awe offers multiple options that can reliably prime awe experience. With the theoretical connection established between awe and sacredness, future investigations into sacredness can benefit from methods that are used to manipulate awe. The diverse nature of sacredness poses a challenge to the selection of visual materials used for priming. Perhaps the most straightforward and also effective way to prime sacredness is to ask participants to recall and write about the matters that are sacred to them. Compared to priming materials involving videos and images, recalling sacredness is most domain-generic and can exclude many confounds associated with visual presentations.

Awe is essentially an emotion, and emotions are subject to biological constraints.

Different people may have different susceptibility to the experience of awe, thus sacredness, depending on their biological attributes. Autism is a well known cause of emotional disconnection, while on the other end, a schizophrenic can be emotionally fanatic. “Patients with schizophrenia seek meaning in the bizarre phenomena of their psychoses” (Burns, 2004, p. 840). Their paranoid delusions make schizophrenics more apt to see signs and (mis)attribute meanings to them. People with schizophrenia may find the world teemed with sacred quality, while an autistic person can even struggle with merely comprehending the idea of sacredness. The foregoing supports an emotivist conception of sacredness. Appraisal theory (cf. Scherer, Shorr, & Johnstone, 2001) helps account for why this might be: We only have emotions about events that are relevant with respect to our motives. However, some emotions seem hard to connect with sacredness because of instrumental or selfish motives that are largely responsible for their arising.

Central to the awe component on sacredness is the manifestation, often abrupt, of divinity or power. With such manifestation, individuals experience awe and sacredness is presented to them. This passive reception of sacredness contrasts with Pargament’s sanctification perspective of sacredness, by which people actively search for sacredness. Receiving or searching can both be legitimate ways for people to experience sacredness. Future research can make further distinction of the two components of sacredness, and explore which gives a better account of sacredness or has a stronger impact on behavior.

Literature shows that priming awe increases intolerance of ambiguity and thereby agency detection (Valdesolo & Graham, 2014). It is worth investigating whether priming sacredness leads to intolerance of uncertainty, perception of lower mastery and higher need for control (Buhr & Dugas, 2006). This hypothesis ties to the relationship of

sacredness with religion in terms of agency detection, and to the relationship of sacredness with construction of meaning in life. Suggesting that perception of sacredness may lead to meaning, agency detection, and/or cognitive states connected with uncertainty is not to reduce sacredness into these psychological mechanisms. Obviously sacredness has origins that are not in these mechanisms and combination of these mechanisms does not fully explain what is sacred.

Sacredness as Protection against the Profane

The power of sacredness cannot be fully manifested without the antithetical position played by the profane. Durkheim (1912) characterizes the sacred and the profane as "two categories of things so profoundly differentiated or so radically opposed to one another" (p. 38). The fundamental dichotomy between the sacred and profane perpetuates the "ultimate tension", which "gives rise to images of a great encounter between cosmic forces - order versus chaos, good versus evil, truth versus falsehood - which worldly struggles mimic" (Juergensmeyer, 2003, p. 172). Yet Durkheim goes on to point out that these two categories are not isolated from each other, and under certain conditions what is sacred can become profane and vice versa. "While morally and hierarchically set apart, the sacred and the abject are in fact close relations. Associated with notions of contagion, inspiring fear and awe, the sacred and the abject are productively bound" (Gibson, 2010, p. 56). Therefore, separation of the sacred from the profane must preserve the "original ambiguity" (Young, 1991, p. 310), otherwise both terms lose their potency. It has to be noted that the term "profane" is used to denote both instrumental/extrinsic and abject and contaminating. Many research summarized in this section focuses on the conflict between an instrumental purpose and a sacred, moral imperative. The instrumental position is not

necessarily bad or immoral, but may lie at a different level from the level of sacredness, and the in some circumstances levels need to be held in a strict ordering. The term profane is nevertheless kept because of its encompassing nature and its long tradition in the sociological literature as used in opposition to the sacred.

One research agenda capitalizes on the dichotomy, tension, and binding between the sacred and the profane, to construct sacredness as protection against profaning. Baron and Spranca (1997) blaze this trail with their ingenious study of "protected values", which are values "protected against being traded off for other values" (p. 1). Sacred values are trade-off resistant, and such resistance blocks any attempt to reason in rational terms of cost-benefits. Later, Tetlock et al. (2000) define a sacred value as "any value that a moral community implicitly or explicitly treats as possessing infinite or transcendental significance that precludes comparisons, trade-offs, or indeed any other mingling with bounded or secular values" (p. 853).

Sacredness is non-utilitarian. Economic decision theory essentially argues that instrumentalism or utilitarianism enables all values to be exchangeable under a rational calculus of cost and effect (Kahneman & Miller, 1986). However, this rational decision theory is not fully suitable to describe situations involving sacred matters. People do not trade sacredness for money because monetary gains are considered a serious form of profaning. The deep-rooted incompatibility between the sacred and what is instrumental as well as what is downright profane anticipates such tradeoff resistance. To better capture the unique reasoning process in tradeoff associated with sacredness, an alternative rationality is proposed that takes religious experience and emotion into account (Jerolmack & Porpora, 2004). Consistent with this new rationality, Tetlock

(2003) later found that although trading sacredness for monetary values is prohibited (i.e., taboo tradeoff), people do trade their sacred values with other sacred values (i.e., tragic tradeoff).

Not only is sacredness non-utilitarian, but it has moral connotations. Tetlock develops the Sacred Value Protection Model (SVPM, Tetlock et al., 2000; Tetlock, 2003), entailing that "when sacred values come under secular assault, people struggle to protect their private selves and public identities from moral contamination by the impure thoughts and deeds implied in the taboo proposals" (Tetlock, 2003, p. 320). This model describes individuals' responses when perceiving violation of sacred values, but leaves sacred values unspecified. A key response to violation of sacred values is moral outrage. Such tradeoffs trigger a "constitutive form of incommensurability", and are "morally corrosive" (Tetlock, 2003, p. 321). Atran and Axelrod (2008) reemphasize this point by stating, "Sacred values differ from material or instrumental values in that they incorporate moral beliefs that drive action in ways that seem dissociated from prospects for success" (p. 222). This is probably because prospects for success are connected with an instrumental realm that is fundamentally different, held characteristically in a different compartment, from a moral realm.

The non-utilitarian nature of sacredness makes it a viable candidate to specify fundamental principles, in addition to normative rules, to which social order is anchored (Durkheim, 1912). Sacredness is crucial for understanding morality since it constitutes and characterizes the foundations of morality (Graham & Haidt, 2011). However, not all moral things are naturally sacred (Ginges & Atran, 2014). For instance, it is often considered immoral to trade human organs, but a kidney is hardly sacred. Functional

magnetic resonance imaging (fMRI) studies nevertheless give potentially relevant evidence by showing that sacred values are processed in the same circuits used by the retrieval and processing of deontological rules (Berns et al., 2012).

What makes sacredness a deontological morality may lie in the observation that sacredness serves no instrumental purpose, but is an end in itself. Sacredness is constitutive rather than instrumental (Fowers, 2010). "Activities are called constitutive because they help to constitute a certain pattern of living or characterize one as a particular kind of person" (p. 116). Consistent with the moral propositions in SVPM, constitutive ends justify deontological moral decisions. An individual motivated by constitutive ends would refrain from gaining profits through cheating because honesty characterizes him or her as a person, and cheating is not part of a certain desired pattern of living.

Sacredness has clear moral connotations but may not necessarily prescribe specific rules. Roy Rappaport (1993) puts sacredness at the top rung of the moral ladder in his concept of Ultimate Sacred Postulates (USPs). USPs provide ultimate criteria for assessing principles. They are "absolutely authoritative" and are the least variant parts of ritual, and this "invariance is associated with sanctity" (p. 275). "Sanctity, once emerged, provided a principle upon which the great variety of novel human social organizations could rest; it provided the ground from which the innumerable diverse human adaptations could subsequently radiate" (p. 429). USPs function to sanctify or certify the whole system of understandings. But the fundamental elements are separated from the specific or instrumental ones. USPs are often "taken to set the ultimate goals which instrumentality serves, but to be themselves devoid of instrumentality or purposefulness"

(p. 274).

Empirical Implications

Research along the line of protected values attempts to identify key features that prevent a sacred value to be traded with a secular value, and consequences that follow when such violation occurs. A measure is published in German (Geschützte Werte Skala, [GWS]; Tanner, Ryf, & Hanselmann, 2009) asking for opinions about morally sensitive issues (e.g., organ trade) and whether monetary compensation can be considered in solving this issue. A translation of this scale is in Appendix II. Experimental design might employ hypothesized scenarios, which often involve a certain degree of moral dilemma, to assess participants' willingness to make a trade-off. A sample scenario is included in Appendix III. One problem of these scenarios is that they assess an entity invoked with respect to a morally ambiguous issue, while the entity itself may not be necessarily deemed as sacred.

Baron and Spranca (1997) first lay out five key characteristics of protected values: quantity insensitivity, agent relativity, moral obligation, anger, and denial of the need for tradeoffs. Protected values are amenable to challenge when the tradeoff is also a protected value, that is, there is no profaning to protect against. Thinking of counterexamples and conflicts between two protected values, some calculus in cost-effectiveness analysis is used to solve the conflicts involved with protected values (Baron & Leshner, 2000).

Investigating people's moral judgment in "act versus omission" scenarios helps to establish the link between sacredness and a deontological focus. When a decision is involved with a possible taboo tradeoff, people tend to judge the right or wrong of the

decision by whether an actor acts out of intention, instead of by what follows the actions (Tanner, Medin, & Iliev, 2008). The primary rule is that one should not take an action against the sacred. When a choice must be made between a harmful act (e.g., kill a person) and an otherwise equivalent harmful omission (e.g., let a person die), the decision making a harmful act is judged to be more wrong (Ritov & Baron, 1999). The second rule demands that there are certain things, which essentially protect and enhance the sacred, for which one has moral obligations. One has to act (Tanner & Medin, 2004). Neuro-functional research also supports the association of sacred values with a deontological focus of morality (Duc et al., 2013).

Built upon Baron's work, Tetlock (2013) specifies three propositions that come with SVPM. First, actions or thought experiments that violate sacredness can invoke moral outrage. Second, people engage in symbolic acts of moral cleansing when they breach the wall between the sacred and the profane. Third, people transform prohibited taboo tradeoffs (secular against sacred) to acceptable routine tradeoffs (secular against secular) or tragic tradeoffs (sacred against sacred), when reality constraints demand that a tradeoff be made. Among the three propositions, moral outrage is the crux to understand non-rational decisions that defy negotiations or tradeoffs. Perception of taboo tradeoffs violates one's sacred values, which triggers a protective, emotional response of moral outrage. This emotional response prompts one to make decisions to reject the taboo tradeoff in order to protect the sacred. A path analysis supports the above view with moral outrage mediating the association between keeping sacredness and a refusal of money offerings in trade for the sacred (Chen, 2014).

The most prominent outcome from SVPM is application of the model to account

for and provide solutions to extreme versions of conflicts such as suicidal terrorism (Atran, 2003) and regional feuds (Atran, Axelrod, & Davis, 2007; Atran & Ginges, 2012). The moral mandate hypothesis predicts that strong moral convictions lead one to treat attitudinally dissimilar others with greater social and physical distance, less tolerance, lower levels of good will and cooperativeness, and a greater inability to resolve disagreement (Skitka, Bauman, & Sargis, 2005). The association of sacred values with moral convictions can spawn intergroup conflict among groups that share different or antithetical values.

Experiments and surveys in Nigeria and the Middle East demonstrate that judgments about the use of war to defend sacred values are driven by deontological reasoning, instead of utilitarian calculus. The protectors of sacredness are callous to quantitative indicators of success, or fail to evaluate their efficacy (Ginges & Atran, 2011). Religious dogmas are especially deontological in nature; when applied improperly they can exacerbate sacredness-driven violence. Studies with Palestinians show that attendance at religious services increase support for suicide attacks, but spiritual practices such as prayer to God does not (Ginges, Hansen, & Norenzayan, 2009). This suggests a social or group-focused, more than a reflective/personal approach to religion, is what correlates with support for suicide attacks.

While taboo tradeoffs are often rejected, symbolic tragic tradeoffs can be useful to bypass irrational reactions against profaning and to resolve conflicts. A series of experiments carried out with Palestinian and Israeli participants reveals a "backfire effect" in that offering material concessions to compromise a sacred value can be interpreted as an insult and thus lead to greater opposition to compromise (Ginges et al.,

2007). However, symbolic compromises made by adversaries over their own sacred values (i.e., tragic tradeoff) increases chances to negotiate. The same model has also been applied to study the sacred values formed around Iran's nuclear program, which is a more temporary issue in contrast to the long-standing nature of the Palestine-Israel conflict (Dehghani et al., 2009). Surveys show that a small but non-negligible portion of the Iranian population believes that acquiring nuclear energy is sacred such that proposed economic incentives and disincentives (more grave sanction) to quit the nuclear program result in a backfire effect (Dehghani et al., 2010). Study of Indonesian Madrassah students replicates this backfire effect (Ginges & Atran, 2009).

Note that individual differences in how people identify with the sacred plays a role in the effectiveness of tradeoffs. Tragic tradeoffs are more acceptable than taboo tradeoffs only when the target issue is considered sacred and identified with by the decision makers (Sachdeva & Medin, 2009). Hindu and Muslim populations in North India have long fought over various sacred sites including Babri Mosque and Kashmir. While both sites are considered sacred to both religious groups, Babri Mosque is more salient to Hindu identity and Kashmir is more salient to Muslim identity. Sachdeva and Medin (2009) find that the tragic tradeoff scenario, e.g., "In return, Vishra Hindu Parishad will recognize the historic and legitimate right of the Muslims/Hindus to the Babri Masjid", wins more approval than does a taboo tradeoff only among Muslims. Muslim identity with the site combined with the sacredness of the site makes a taboo tradeoff even harder to work. However, since Hindus are not identified with the site, they could more easily engage in utilitarian calculus, and more Hindus accept taboo tradeoffs over the Babri Masjid issue. In general, use of symbolic tragic tradeoffs may circumvent

moral outrage triggered by profaning the sacred, and open doors to understand and settle conflicts over sacredness (Atran & Axelrod, 2008).

Future Directions

Most people have sacred values, but those values are often implicit until they are infringed upon. We can make the sacred aspect of matters explicit by hypothetically profaning it. The prediction is that people will be more apt to recognize sacredness and therefore invest in efforts to protect it, when facing profaning threats to the sacredness. A hundred-year-old grove may not get on an environmentalist's radar until some lumber company decides to fell it. Israel's hostility toward Palestine can lay dormant for long periods of time before it breaks into war when a taboo tradeoff is offered that contaminates the sacred.

Manipulation of sacredness using the taboo and tragic trade-off typology can have implications in everyday decisions, such as changing consumer's behaviors (McGraw & Tetlock, 2005). If everyday decisions can indeed be directly influenced by the sacredness-driven reasoning, then it may suggest something general about human nature. Humans may characteristically have an ordered compartmentalization of instrumental values from moral or sacred values, which may be related to the characteristic separation of intrinsic from extrinsic goods.

Tetlock introduces moral outrage as a key consequence when sacredness is violated. Is moral outrage an emotion that reliably indicates sacredness? In other words, when people are invoked with moral outrage about an object being violated, will they then perceive the object as sacred? It also remains an open question whether other emotions could also be involved, such as moral disgust and contempt. However,

contempt could arise when someone violates an instrumental code, e.g., one does something that is stupid (Rozin, Lowery, Imada, & Haidt, 1999).

Studies should investigate naturally sacred objects, in addition to hypothetical scenarios with moral ambiguities. For instance, people demonstrate a naturally high level of attachment to land, especially when the land is or when they believe it has been inhabited for long periods of time by ancestors of the group to which one belongs. This makes protection of native land a naturally sacred idea (Rozin & Wolf, 2008). Field studies open new possibilities for psychology to investigate conflicts associated with sacredness in real life (Ginges, Atran, Sachdeva, & Medin, 2011). Indeed, conflicts over sacredness take place across many places and times. As an everyday example to American citizens, Republican and Democratic parties constantly fight on sacred grounds such as right of fetuses versus right of choice, and limiting the size of government versus government taking care of the people.

People may make huge sacrifices to protect what they deem sacred from being profaned, probably because sacredness fulfills fundamental human needs for meaning and identity. Sacredness is an end in itself, and a person derives meaning and becomes one with the sacred as he sustains and protects the sacred. Consistent with the constitutive goals framework, integrity in goal pursuits is associated with greater meaning. Constitutive activities such as protecting the sacred from profaning partly constitute one's identity and one's life. A hypothesis states that people are motivated to protect their sacred values experience greater meaning and purpose in life.

Thinking in terms of sacredness has cognitive benefits. By evaluating a situation in terms of its emotional involvedness and decision difficulty, sacredness thinking

establishes a system of priorities, and thus enables tough decisions to be made more rapidly (Hanselmann & Tanner, 2008). When the decision situation involves only one sacred value (e.g., taboo trade-off), people perceive the task as negatively emotion-laden, but easy to solve, since they could just make a decision that benefits the sacred value. The solution is even easier than routine tradeoffs where extensive calculus of cost and benefits are involved. Decisions following moral rules associated with sacredness can lead to superior consequences relative to those produced by cost-benefit-maximizing calculations, in high-impact low-probability events and when anticipated utility is not obvious (Bennis, Medin, & Bartels, 2010). A hypothesis states that priming sacredness leads to lower levels of analytic thinking and cost-benefit calculations. Perhaps because these kinds of calculations are unnecessary when a clear system of priorities is in place and is determinative. A related hypothesis states that people primed with sacredness tend to employ less utilitarianism in morally ambiguous situations. Also hypothesized here is that sacredness is not in utilitarianism.

Although what is instrumental/utilitarianism is discussed in opposition to sacredness, the profane can be more broadly about impurity, uncleanness, or abjectness, such that it can be attached to classes or castes of people, as in India with the more pure or sacred Brahmins contrasting with the lowly untouchables, or other forms of sacrilege that contaminate the sacred matter. For example, one can profane by making sex-related or sarcastic jokes about something. Many of these involve imputing basic instrumental motives or characters to personages or things regarded as sacred. In short, there can be many ways of profaning that can be used to invoke notion of sacredness.

Sacredness as Related to Religion and Spirituality

Although the experience of sacredness predates religion and spirituality (Eliade, 1957), religion and spirituality gives rise to many ideas of sacredness (Pargament, 1999). The religious and spiritual aspect of sacredness is argued to be irreducible to any other more basic psychological processes (Pargament, 2013). Empirical studies also find that the more people participate in or think of religious practices, the more likely they are to report having sacred values (Sheikh et al., 2012). Religion and spirituality are conventionally defined in terms of worshipping God and institutional form, thus excluding borderline phenomena such as mystical experience, belief in or communication with spirits or ancestors, or big-dream visions. Some of these extraordinary experiences and forms of spiritism are categorized under and will be discussed in the section of awe. Most of the psychological literature that connects religion and sacredness investigate the highly institutionalized Abrahamic religious traditions. It is also clear that not everything in religion is sacred on an equal footing. The breaking of bread in a communion is deemed more sacred than a fellowship potluck on a Wednesday night. The most sacred elements are those related to the worship of God, as often emphasized in a dictionary definition of sacredness.

Can we then sanctify something non-sacred by adding God to it? Working within a religious paradigm, Pargament and Mahoney (2005) define sacredness with respect to concepts of God, and an object can take on spiritual character and meaning by associating with the divine. Sanctification is to "make sacred", that is, how people "come to sanctify objects or perceive aspects of their lives as having divine character and significance" (p. 180). Sanctification occurs when an individual either perceives an object as a

manifestation of the divine or attributes divine (implying God) qualities to an object.

Of great interest to psychology are benefits of sanctification to one's character and well-being. Major tenets in Christian theology have delineated some effects of sanctification. Sanctification generates love, renews the believer, and enables the renewed person to choose the right from the wrong (Dieter et al., 1987). Translating and expanding these theological terminologies into psychological terms, one finds that commitment to sacredness can have observable consequences. Sacred aspects of life elicit uplifting emotions such as love and gratitude and trepidations like awe and humility. Sacredness can be a valuable personal and social resource, and the loss of sacredness can have devastating effects (Pargament & Mahoney, 2005). As will be obvious in later sections, these implications are not unique to the religious perspective alone; other perspectives on the sacred selectively capitalize on one or more of these implications as well.

Empirical Implications

The primary empirical implication of the religious and spiritual component is that one can manipulate sacredness by sanctifying secular matters, at least among Christian believers. A reliable sanctification protocol is to imbue the target of sanctification with divine quality. For instance, one can measure the perceived sanctity in marriage using scale items written rather specific to followers of Abrahamic religions as, "My marriage is a reflection of God's will". In the same vein, common family themes such as parenting and sexuality are thought to be sanctified by invoking God in the process. Sanctification of these processes is associated with report of greater marital satisfaction, less verbal aggressions during parenting, and greater pleasure gained in sexual intercourse

(Mahoney, Pargament, Murray-Swank, & Murray-Swank, 2003).

Bad things can also be sanctified, and the results are positive. Davis et al. (2010) investigate the effect of seeing divine quality in a transgressor in their Relational Engagement of the Sacred for a Transgression Scale (e.g., "I tried to view him/her as a child of God"). Praying for the aggressor promotes forgiveness of the aggressor, and such an effect remains robust after controlling for religiosity (Davis et al., 2009).

Nature can be sanctified in statements like, "Nature is sacred because it is created by God". Using samples from members of Presbyterian Church of USA, Tarakeshwar et al. (2001) show that belief in sacred nature is associated with stronger pro-environmental attitudes and willingness to invest in efforts to protect the environment, and this effect is greater among clergy than ordinary members of the church. Clergy may have internalized religious beliefs deeper than ordinary members, thus sanctification by God has a greater effect on clergy. Clergy are analogous to the ideologically committed voters identified by Converse (1964). They are the ones who have the most coherent ideology as opposed to a loose amalgamation of beliefs, so their beliefs are more likely to be tightly linked to their actions.

Nontheistic sanctifications (e.g., having transcendent qualities) have similar psychological effects as do theistic sanctifications (e.g., connected to God). People invest more time and energy in their highly sanctified goals. Greater sanctification of strivings is related to a greater sense of life purpose and meaning and joy yielded by strivings (Mahoney et al., 2005).

Some people have a greater aptness to perceive sacredness. The Sacredness in Life Scale measures such an aptness (Doehring et al., 2009). Higher scores on this scale

are associated with higher intrinsic religiosity, higher mysticism, and more positive community service attitudes. Interpretation of this result points towards a distinction and synergy between vertical and horizontal transcendence. While vertical transcendence goes beyond the limits of subjectivity to some higher forms of being, horizontal transcendence focuses on apprehension of the immediate and sense of belonging and relatedness (Goodenough, 2001). As suggested by these authors, "Whereas with intrinsic religiosity and mysticism one reaches toward the transcendent beyond, a positive community service attitude relates to recognizing the penetration of the transcendent into the known world" (p. 69). Since the sacredness marks the boundaries of the known and the unknown (cf. in many indigenous cultures sacredness is the gate to the spiritual world), a person with a high propensity to perceive sacredness is more apt to extend his framework to incorporate the unknown.

A central assumption to Pargament's thesis is that the boundary is dynamic between the secular and sacred (Demerath, 2001), and the secular can be transformed into the sacred. Ethnographical studies document useful examples in which a previously secular or even profane activity is sanctified and becomes part of the sacred. Pop music targeting young people can be used for missionary work and become indispensible for spreading the gospel (Chang, 2009). Gift-giving during Christmas is symbolized as spreading blessings despite the 'sin' of capitalism (Bartunek, 2011). Last but definitely not least, churches have long sanctified money. Heuristics such as tithing transform the impurity of Mammon into a holy cause that supports Christian stewardship (Mundey, Davidson, & Herzog, 2011).

Future Directions

In defining sanctification, Pargament focuses on individuals' attribution of divine quality which downplays the role of social context in the process of consecration. It is common that a religious or spiritual authority confers sacredness via ritual action, for example by blessing. A priest consecrates the communion wafer, and the worshippers observe this ritual and accept that the wafer has now become sacred. The sacred quality arises through this social process. Future investigations of the sanctifying process can benefit from distinguishing and integrating individual and social sanctification.

It may be instructive to note that "related to politics or economics" is not a reasonable component on sacredness. Religion specializes in certain things that are of infinite value, which is pertinent to sacredness, whereas politics and economics specialize in things that can be of great importance but whose value is finite. The difference between infinite value and great value is that the former carries moral weight and is deontological, while the latter is to balance costs and benefits from a utilitarian perspective. Political leaders can sanctify their agenda by engaging in sacredness heuristics. Islamic State of Iraq and Syria (ISIS), for instance, can hardly attract any support outside a certain group of Sunni extremist population when being understood as the self-designated caliphate that claims authority over all other Muslim countries. However, one would be able to understand and even show some respect to the holy cause ISIS invokes for the sake of Islamic religious purity and piety.

It is evident that religion, or more accurately the idea of God, promotes sacredness, but why? What in religion makes people experience sacredness? If religion is sacred, then do non-religious people experience sacredness through religion as much as

do religious people? A hypothesis states that theistic sanctifying (e.g., holy, heavenly, blessed) generates more sacredness among people of higher religiosity than among those of lower religiosity, while non-theistic sanctifying (e.g., everlasting, miraculous, inspiring) generates more sacredness among people of lower religiosity than among those of higher religiosity.

Does sacredness promote religiosity? If the answer is yes, then what in sacredness makes people religious? Pargament (1999) essentially defines spirituality as a search for the sacred, and religion can be a viable channel to fulfill this "ultimate concern" (Emmons, 1999). One explanation for the association of religion and sacredness is that sacredness confers meaning, and religion is a good source of meaning. A hypothesis says that priming sacredness could increase levels of religiosity, and such effect is stronger among people who find religion meaningful. On the other hand, priming meaning may increase perception of sacredness or religiousness.

A promising area will be to investigate the unique cognitive style associated with an aptness to perceive sacredness. Such an aptness often enables a person to transcend self-centeredness. A hypothesis states that priming sacredness would increase individuals' preference for long-term to short-term goals, promote altruistic behaviors, and enhance sustainable attitudes, such as protecting environment (so that future generations can still benefit from it). Given the transcending effect of perceiving sacredness, priming sacredness can lead to humility and lower levels of materialism.

General Limitations and Directions

The current review summarizes extant research on sacredness under four theoretical components: source of meaning, experience of awe, protection from the

profane, and relationship to religion. Two routes are clearly worth exploring in the future. The first is to discover more specific components of sacredness. The second is to study perception of sacredness as a domain general cognitive and psychological process.

Related to the first direction, there can be many components of sacredness not fully captured by the fourfold taxonomy. Sacred values are unchallengeable, but are all unchallengeable values sacred? Ideas considered unquestionable, like what is in Nicene or Apostles' Creed in Christianity, can be sacred only to a subgroup of population that adheres to Christianity. It is also worth exploring the relationship of sacredness and value hierarchy. People have their own tendency to assign relative priority to values; however, the value ordering often shows high consistency across cultures. What is high on the value hierarchy could assume natural sacredness to people across cultural settings.

Another component not fully covered is the power of spirits, and by extension connection with the dead. In this review, spirits and gods (as in institutionalized religions) are intentionally separated in considering their contributions to sacredness. Such a separation assumes that Gods in religion refer to an interpretative system, while spirits are more aligned with experience and emotion. While it aids in the categorization of literature, this way of stating it may apply more to axial-age than to Paleolithic style religion/spirituality, assuming gods to be central to religion. In reality, there is no clear boundary between spirits and gods. An icon in an orthodox church could act like some powerful spirit to be judged sacred. And spirits can assume God-like status in a religion with a whole system of theology built around it, consider Holy Ghost.

Spirits are often sacred because they presumably have power, but the concept of power is not easy to convey in empirical terms. "Power is a spiritual energy or life force

that enables an individual to interact with the forces of the natural and supernatural worlds" (Carmichael, 1994, p. 91). For Mescalero Apache inhabiting in the southwestern US, the most sacred and at the same time most powerful sites are where journeys to the spirit world are enabled (Carmichael, 1994). These include burial sites and sweat lodges. Human burials are thought to present a great potential for visitors to travel to the spiritual dimension assisted by the power of deceased. The unique power of burial sites suggests some connection of sacredness to altered states of consciousness. Because the power of the sacred sites, Native Americans would only visit their sacred sites at times of great tribal need, otherwise they respectfully stay away (Price, 1994).

The power related to sacred sites hinges upon a unique understanding of mythic time (Eliade, 1954) – a period of ahistorical time during which the cosmological events of religious or spiritual beliefs happened – and accordingly beliefs in the existence of the spiritual world parallel to the physical world. This rather ontological stance goes beyond the scope of psychological investigations. One can nonetheless measure belief in existence of a parallel spiritual world, and using this measure to predict perception of sacredness.

Admittedly, what can be held as sacred has a lot to do with cultural and social conditions. What is sacred to a Siberian Shaman can be drastically different from the sacredness of an American college student. It would be fruitful to investigate the full spectrum of sacredness, by expanding investigations to samples representing a wide range of cultures.

Other components of sacredness not covered by the fourfold taxonomy include "connection to striking, dramatic historical events" and "stoppage/transcendence of time"

(including the subjective experience thereof). The former, such as a civil war battleground and the first plane model Wright Brothers created, can be sacred because of its significance in Human civilization that invokes veneration. The latter is a well-defined aspect in mysticism and altered state of consciousness which is worth further investigation (James, 1902).

Related to the second direction, the proposed typology contributes to our understanding of sacredness in two ways. First, it brings the abstract concept of sacredness to life, transforming it into more testable, and psychologically better defined dimensions (i.e., religion, awe, meaning, protection against the profane). The effects of sacredness on dependent variables may be mediated by one or more of the four mechanisms. Second, we have a handy tool to answer natural questions like "what makes something sacred" and "how to determine if one thing is more sacred than the other". We can empirically test if an object of sacredness is more sacred with more than one of these sacred components present. If an additive effect is supported, experiments can combine more than one component of sacredness to produce a stronger effect.

Manipulation of sacredness can use priming questions as general as "Think about something that is sacred to you, and write down why it is sacred to you." A secondary level of manipulation can ask subjects to imagine scenarios where the sacred matter is violated or preserved. Similar questions along the line of maintenance versus loss of sacredness include whether events in the real life protects the sacredness or infringes upon it (e.g., demolition of historical buildings to make room for residence housing), and whether one is maintaining a connection, physical or spiritual, with the sacred, or is cut off from the sacred (e.g., forced to be away from homeland and family).

The four components of sacredness summarized in this paper only describe the kind of questions into which current literature on sacredness tap. They are not the most suitable labels for sacredness itself. The next step would relabel and frame components of sacredness in a more characteristic than descriptive way. Some concepts arise in a cross-cutting way, like what needs to be respected, the distinction between intrinsic and instrumental values, an ordered compartmentalization of values that constitutes a priority system, with the sacred being related to whatever crowns that system. These concepts are more fundamental psychological processes, and could be more easily to operationalize in empirical studies.

In conclusion, the current paper proposes an empirical model that understands sacredness from four components: source of meaning, experience of awe, protection from the profane, and relationship to religion. This model can be useful in advising experimental manipulation with respect to these components of sacredness. Literature drawn from these four components implies that many psychological consequences are associated with maintenance and loss of sacredness. Future research will first establish a reliable and valid method manipulating sacredness and then systematically explore these psychological consequences. At a social level, understanding sacredness can shed light to decision process involved with moralization and aid in conflict resolution. At a personal level, knowing what is sacred, and taking advantage of the motivational power of sacredness can help people lead a meaningful and purpose-driven life.

Violation of Sacredness and Violence

Many human conflicts and atrocities arise from sacred grounds. This dissertation examines people's endorsement of group-based violence under the influences of sacred

concerns, cost-benefit calculations, and individual differences.

Lethal Conflicts on Sacred Grounds

Among the myriad reasons for human conflicts (see White, 2017), dispute over sacred concerns is one that is not to be neglected. We have observed wars fought in the name of religion, from the most recent development of ISIL to the ever recurring duel between Palestine and Israel (Juergensmeyer, 2003). Not just in wars, but in daily violence between groups, religion is a critical factor: Sunni versus Shiite in Yemen, Muslim versus Hindu in India, Buddhist versus Muslim in Myanmar, Muslim versus Christian in Nigeria (Hall, Schuyler, & Trinh, 2000). These and many other conflicts arise, at least in part, from religious demands that human life conform to some particular vision of the sacred. In the broadest of terms, for example, Samuel Huntington (1996) stated in *The Clash of Civilizations*, "A new religious approach took shape, aimed no longer at adapting to secular values but at recovering a sacred foundation for the organization of society — by changing society if necessary" (p. 96). In other words, the "sacred" is at the heart of many of these clashes of civilization.

Not only religion, but control over lands along with their symbolic meanings is also a major cause of fault line conflicts. "The territory at stake often is for one or both sides a highly charged symbol of their history and identity, sacred land to which they have an inviolable right: the West Bank, Kashmir, Nagorno-Karabakh, the Drina Valley, Kosovo" (Huntington, 1996, p.252). Lethal conflicts in response to attack on sacred sites are not rare in the history. To name a few, the first Jewish Revolt arose in response to the Roman governor raiding the temple treasury in Jerusalem. The attack on the Golden Temple in India in the 1980s resulted in the assassination of Indira Gandhi, and

subsequent ethnic riots killed thousands of Sikh. The failures to reach settlement at Temple Mount/Haram el-Sharif in Jerusalem led to the clashes of 2000 (e.g., Hassner, 2009). Consequences of territory conflicts often extend to subjugation and extirpation of those who do not share the same ethnic and cultural heritage, resulting in large number of death. Most generally, this type of conflict makes it clear that the sacred is at the heart of ethnonationalism and the violence that accompanies it.

The list of various aspects of sacredness for which people fight goes beyond religion and lands – the fight for ideologies such as communism, democracy and the Second Amendment, to name a few, has never ceased. Loosely speaking, religion is an ideology and the fight for sacred lands (e.g., religious or historical sites) emphasizes their symbolic value as much as the territory itself. These conflicts are often understood as ideological in nature. Death tolls for ideologically related genocides are extremely high. One estimate is 142 million casualties, of which religion contributes 47 million, and wars associated with communism contribute 93 million. In addition, ethnic cleansing has resulted in 74 million deaths (White, 2012).

In all of this, it becomes clear that the sacred is tangible in its historical impact, but must also be psychological in its origins. How people understand and feel about the sacred makes this violence possible. Understanding sacredness and its association with conflicts from a psychological perspective is, therefore, indispensable to understanding these conflicts, in hopes of an ultimate resolution of at least this form of violence.

Link between the MAPR Model of Sacredness and Conflicts

This dissertation takes on the task of examining the conditions and delimitations under which violation of sacredness encourages violence. A review of both theoretical

and empirical studies on sacredness has led to the proposal of an MAPR model highlighting four key components of what makes sacredness: meaning in life, awe, protection from violation, and religion. Sacred, as what gives meaning and subsequently confers awe, must be protected from violation, and therefore is a focal point of religion. This model has subsequently received some empirical support in correlational data collected from American university student samples. While there is room left to capture the whole domain of sacredness, the MAPR model has empirical implications on study of morality and conflicts.

A closer look at the MAPR model reveals a reasonable underlying mechanism upon which sacred values can aggravate tendencies toward conflict. Note that a conflict decision is made as a joint effect of predominant factors that presumably must operate as well: cost-benefit analysis (c.f. Rational Choice Model, Fearon, 1995; Mason & Fett, 1996) and moral judgment (c.f. Intractable Conflict Model, Coleman, 2000; Staub, 1989). The latter model can be strongly motivated by sacred concerns (Tetlock, 2003), and can overshadow the former economist version of rationality.

On the one hand, sacredness agitates emotion: awe, among many other emotions (e.g., shame in reaction to violations of sacredness), offers an uplifting mood, an awareness of something bigger than the self, and eventually gives meaning in life. This emotion is so powerful that it can create a halo of good feelings of the outcome, and can overshadow a rational calculation of the risks involved. George Orwell (1940) in his review of *Mein Kampf* powerfully summarized this effect. “Human beings don’t only want comfort, safety, short working-hours, hygiene, birth-control and, in general, common sense; they also, at least intermittently, want struggle and self-sacrifice. Fascism

and Nazism are psychologically far sounder than any hedonistic conception of life." This sentiment finds strong echoes in many contemporary terrorist mentalities. Among many, deep in the soul of ISIS ideology is the epic battle between the good (e.g., their Islamic ideal) and an unmitigated evil (e.g., the Western world), which serve as harbingers of the apocalypse and eternal salvation. Suffering and heroism are at the same time the price and the reward in these battles. They can provide a great amount of meaning to individuals who choose to fight.

On the other hand, sacredness defines moral boundaries for the believer. What is sacred is what cannot be violated, and has to be protected regardless of cost. Saucier and Akers (2015) in their study of the democidal (i.e., literally "people murder") mindset summarizes, "Violation of their group's sacred values, values that prescribe certain actions under specific circumstances as a matter of duty, nobility, and honor regardless of consequences, is what drives individuals to endorse violence; because the violence has doubtful moral justification, this is amoralism in the service of sacred values. These values become salient when they are challenged" (p. 17). This circumstance reveals a point where the moral and the sacred paradoxically become potentially most dissonant and compatible at the same time: individuals would be willing to carry out immoral violence by one standard against the violators of sacredness, in the name of morality based on a certain sacred standard.

Violation of Sacredness, Moral Judgment and Endorsement of Violent Warfare

The myriads of wars arising on sacred grounds suggest that violation of sacredness can effectively trigger group-based violence driven by moral judgment of the enemies. Empirical studies have indeed found that sacredness has strong moral

connotations. Tetlock developed the Sacred Value Protection Model (SVPM, Tetlock et al., 2000; Tetlock, 2003), entailing that "when sacred values come under secular assault, people struggle to protect their private selves and public identities from moral contamination by the impure thoughts and deeds implied in the taboo proposals" (Tetlock, 2003, p. 320). Atran and Axelrod (2008) reemphasize this point by stating, "Sacred values differ from material or instrumental values in that they incorporate moral beliefs that drive action in ways that seem dissociated from prospects for success" (p. 222). The association of sacred values with moral convictions can spawn intergroup conflict among groups that share different or antithetical values (Atran, Axelrod, & Davis, 2007). SVPM has proven to be useful in explaining and providing solutions to extreme versions of conflicts such as suicidal terrorism (Atran, 2003) and regional feuds (Atran & Ginges, 2012).

What makes violation of sacredness a strong predictor of war has deep psychological roots. In his Psychology of War, LeShan (2002) argues that a mental shifting from conception of sensory reality to "mythic reality" precedes the war. The mythic reality features an unequivocal moral judgment against the enemy that is evil and justification of the benevolent "us" using all measures to defeat the enemy to regain order and glory. Once this shift has been made, the checks and balances of sensory reality are discarded, and humans begin to see reality as a clash of good and evil that allows for no shadings or subtlety in judgment. Sacredness similarly involves a kind of mythic reality (c.f., Eliade, 1957), and suggests something highly idealized – a world of unmitigated absolutes. Such thinking is used to justify initiating war and committing atrocities – acts that are unthinkable in other circumstances. The "mythic" thinking pattern shuts off

considerations of costs and risks that exist in reality.

In short, violation of sacredness puts an overwhelming emphasis on a morality that undermines the cost-benefit-analysis that is often an important factor in decision-making. Experiments and surveys in Nigeria and the Middle East demonstrate that judgments about the use of war to defend sacred values are driven by deontological reasoning, instead of utilitarian calculus. The deontological reasoning in decision-making may be different from the deontic reasoning involved in sense of duty to a moral norm. But they both involve an absolute that disregards consequences. Research shows that judgments about the use of deadly intergroup violence are insensitive to quantitative indicators of success or to perceptions of their efficacy (Ginges & Atran, 2011).

Current Studies

Both historical incidents and empirical and theoretical studies have suggested that violation of sacredness and, in particular, attacks on sacred land, can effectively trigger moralization and endorsement of violent warfare. The current study utilizes hypothetical vignettes in which a sacred site (vs. a non-sacred military stronghold) of the country of "Ourlandia" is attacked, and subsequently examines people's moral judgment of the attacker and endorsement of violent warfare as a counterattack. The major hypothesis is that people will be more likely to endorse violent warfare for protecting the sacred land. This hypothesis gets at the potential to expose the inherent paradox in the amoral violence driven by protecting the morality associated with sacredness.

Given the importance of cost-benefit-analysis in military decisions, we also include a manipulation of perceived cost (high casualties vs. low casualties) as an additional independent variable. The past literature has shown that violence driven by

protecting the sacred is out of a deontological concern rather than utilitarian consideration of cost and benefit (Atran & Axelrod, 2008). Also, the Affect Heuristic Model (AHM, Finucane, Alhakami, Slovic, & Johnson, 2000) suggests an inverse relationship between perception of risk and benefit. Since an "absolute" value is attached to the sacred, the perceived cost of protecting it will be inhibited. The hypothesis is that violent warfare driven by protection of the sacred will not be subject to influence of costs.

Following the AHM and longstanding theory about hot and cold cognition, we further include a priming manipulation to put individuals under either a hot feeling condition or a cold calculation condition. We examine if people would be more readily influenced by the sacred rhetoric when subjected to their emotional state. The hypothesis is that sacred violence will be more likely following the hot cognition prime.

Apparently, individual differences may also play a significant role in responding to sacredness. In particular, whether an individual takes a sacred or a rational perspective of her civilization directly influences whether this individual will have a concern for sacredness. Similarly, religion and ethnonationalism are strong motivators for moralization and have been found to encourage support for military attacks (Ginges, Hansen, & Norenzayan, 2009). These variables, along with tendencies to make moral judgment and to use military thinking patterns, will be included as important moderators of the study.

One has to note a competing theory that peels through origins of religious wars. The book, *The Myth of Religious Violence: Secular Ideology and the Roots of Modern Conflict* (William T. Cavanaugh), shows that religion is not a universal and transhistorical phenomenon. Religious-secular and religion-politics distinctions are

modern Western inventions. The book shows that what counts as religious or secular in any context corresponds to how power is arranged. The myth of religious violence helps to construct a religious Other, prone to fanaticism, to contrast with the rational, peace-making, secular subject. In domestic politics, the myth underwrites the triumph of the state over the church in the early modern period and the nation-state's subsequent monopoly on its citizens' willingness to sacrifice and kill. In foreign policy, the myth of religious violence reinforces the superiority of Western social orders to nonsecular—especially Muslim—social orders. Their violence is seen as fanatical; our violence is seen as rational and peace making. In academic, government, and journalistic sources, the book shows how the myth of religious violence is used to justify U.S. diplomatic and military actions, including the Iraq War. Peace depends on recognition that so-called secular ideologies and institutions can be just as prone to absolutism, divisiveness, and irrationality.

Karen Armstrong made a similar argument in her *Fields of Blood: Religion and the History of Violence*. Religious conflicts often involve other, non-religious factors, and the violence of many terrorist groups, including Isis may have little to do with Islam. There has been a constant battle, waxing and waning, between secularism and the religious, producing a violent fundamentalist backlash.

There aren't strong empirical evidence showing the religiosity priming leads to violence. Recent meta-analysis showed that religious priming has robust effects across a variety of outcome measures—prosocial measures included. Religious priming does not, however, reliably affect non-religious participants—suggesting that priming depends on the cognitive activation of culturally transmitted religious beliefs (Shariff, Willard,

Andersen, & Norenzayan, 2016).

In two surveys of Palestinians and one cognitive priming experiment with Israeli settlers, prayer to God, an index of religious devotion, was unrelated to support for suicide attacks. Instead, attendance at religious services, thought to enhance coalitional commitment, positively predicted support for suicide attacks. (Ginges, Hansen, & Norenzayan, 2009).

Sacredness is a broader context in the sense that it can include non-religious beliefs. However, it is at the same time a more restricted concept that not all religious beliefs were sacred. Substituting sacredness for religion was a recent attempt made to elucidate what lied behind those monstrous atrocities against the modern society. As appealing as it could sound, it may not be logically sound or empirically supported. The current study tests this idea using a direct method.

In what follows, Chapter II studies the effect of violating sacredness on moral judgment and support for war with an American sample. Chapter III further examines the proposed effect with fine-tuned aspects of sacredness: religious sacredness and ethnonational sacredness. Chapter IV designs priming experiments to enhance individuals' emotional involvement, which is hypothesized to amplify the proposed effect of sacred violence. Chapter V re-examines this effect with an Iranian sample. To address possible methodological challenges, we check the manipulation scenarios in Chapter VI, changing the non-sacred condition into a manufacture plant (previously a military site).

CHAPTER II

STUDY 1: MORAL JUDGMENT AND SUPPORT FOR VIOLENT WARFARE INFLUENCED BY SACREDNESS AND CASUALTY IN THE USA

Study 1 explores the degree to which concerns with sacredness influence people's moral judgment and support for violent warfare against a terrorist attack. This study answers a need to understand motivations that may exist behind many forms of terrorism. Much of terrorist violence is brandished with, if not dictated by, a sacred cause. Such causes often encourage violence as a means to restore a sacred religious order, or to protect the holiness of a land from being contaminated by groups with whom one does not share an identity.

If concerns with sacredness can stir violence, then sacredness being attacked should make the violent reaction even stronger. For this reason, we will manipulate sacred concerns with scenarios in which a terrorist group has attacked one's motherland. In one scenario, the terrorists attack a sacred site, and in the control scenario, the attack site is related to the military. If people are driven by sacred causes to engage in greater violence, we should observe a higher level of support for violence when the sacred site is attacked than when the military site is attacked. The study also includes a casualty variable to demonstrate that violence driven by sacred causes should be insensitive to cost-benefits calculations.

Rationale and Hypothesis

In the current study, we adopted attacks on a military stronghold as the control group because a military site is a legitimate target in warfare. The Geneva Conventions (ICRC, 1977) define a legitimate military target as one "which by nature, location,

purpose, or use makes an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage." Rado (2011) makes an explicit list of legitimate military targets that include "armed forces and persons who take part in the fighting; positions or installations occupied by armed forces as well as objectives that are directly contested in battle; military installations such as barracks, war ministries, munitions or fuel dumps, storage yards for vehicles, airfields, rocket launch ramps, and naval bases". For those sensitive to the rationality of military actions in social life, it is both natural and consequential to have a military camp attacked.

Note that we have included two dependent variables – moral judgment and support for violent warfare, with our primary interest on the latter variable. In other words, moral judgment is a weaker test of our hypothesis. Our expectation is that, if the effect holds for the support for violent warfare, it would have held for moral judgment. We have also included two sets of scenarios — hypothetical and semi-real, with the expectation that the effects may be stronger in the semi-real scenario.

As will be detailed in the method section, this study also included several relevant covariates. Closely related to the dependent variable – support for violence – is a measure of military extremist attitudes. Two variables tap into major components of the MAPR model – meaning and religiosity. Another two variables represent different types of sacredness. Ethnonationalism refers to sacralization of one's ethnic and cultural identity, whereas sacred views of civilization focus on consecrating the nation and society to which one belongs.

Hypotheses

Above all, the sacred site should be rated more sacred than the military site, while they should not differ in importance. The MAPR model of sacredness furnished Hypotheses 1.1 to 1.4 below. Other hypotheses were formulated based on the natural association of the covariates with sacredness motivated violence. We labeled hypotheses with study numbers to keep track of them across studies. For instance, "H1.2" indicates the second hypothesis of Study 1.

Hypothesis 1.1: (Main Effect) Attacking the sacred site (vs. military stronghold) will cause greater moral judgment and support for violent warfare. This hypothesis, central to our interest, follows naturally from the "P" component of MAPR — protection against violation. People resort to extreme measures in response to violation of the sacred.

Hypothesis 1.2: (Main Effect) High casualty estimate will lead to lower support for violent warfare. This hypothesis taps into an important factor in the cost-benefit analysis for warfare.

Hypothesis 1.3: (Interaction) Support for violent warfare will decrease as casualties increase when the military stronghold was attacked. However, when the sacred site was attacked, support for violence will not be as influenced by casualty concerns. This follows from the argument that the obligation of protecting the sacred overwhelms cost-benefits calculations.

Hypothesis 1.4: (Interaction) The effect in Hypothesis 1 will be stronger for those who rate the sacred site sacred. This resonates with the "A" component of MAPR —

perceiving the sacredness. It is suggested that those who can perceive sacredness would be more likely to respond to the violation of sacredness.

Hypothesis 1.5: (Interaction) The effect should be stronger for those who are high in religiosity. Argued as the "R" component of MAPR, religious people should be more familiar with the idea of sacredness. Higher awareness of sacredness, as in Hypothesis 2, may enhance a response to violation of the sacred.

Hypothesis 1.6: (Interaction) The effect will be stronger for those who are high in meaning search and low in meaning presence. This is the prediction from the "M" component of MAPR, which recapitulates the meaning-offering function of sacredness. A meaning searcher would protect the sacred more vehemently as they need to gain meaning from it.

Hypothesis 1.7: (Interaction) The effect would be stronger for those who are high in ethnonationalism. Ethnonationalism sacralizes one's ethnic heritage. High scores on this variable would accentuate one's devotion to sacredness.

Hypothesis 1.8: (Interaction) The effect would be stronger for those who take a sacred duty for their civilization. The variable sacred duty assesses how strongly one tends to sacralize one's cultural identity. High score on this variable would accentuate one's devotion to sacredness.

Method

Participants

A total of 425 undergraduate students enrolled at a state university in the American South participated. The sample was 64% female, and had an average age of 18.5 years (SD = 1.1). The sample was predominantly identified as Christians (84%), and

44% reported their political affiliation with the Republican Party, 23% as Democrats, and 22% as independent.

Experimental Manipulation

A 2 sacredness (sacred site vs. military site) by 2 casualty (large casualty vs. small casualty) by 2 scenario (hypothetical vs. semi-real) mixed design was carried out with vignettes. All participants responded to two scenarios in a within-subject design — first a hypothetical scenario, followed by individual difference variables, and then a semi-real scenario. The hypothetical scenario describes a situation where a hypothetical country of the research participants called "Ourlandia" is attacked by a hypothetical enemy called "Theirlandia," and a counterattack is in preparation. The semi-real scenario describes a situation where the US is attacked by terrorists, and a counterattack is in preparation. A between-subject design randomly assigned individuals into one of the four groups defined by two independent variables. The sacredness independent variable involved the contrast between an attack on a sacred site versus a military site, and the casualty independent variable reflected differences in expected casualties associated with the counter attack. Participants in each of the four groups received hypothetical and semi-real scenarios that were consistent with the manipulation conditions. For instance, participants in the sacred, high casualty group first responded to a sacred, high casualty hypothetical scenario, and then a sacred, high casualty semi-real scenario.

Participants were instructed, "Please read the following scenario carefully. Try as hard as you can to imagine yourself being the person described in the scenario. Try to feel the feelings of this person. Some of the details of the scenario may or may not apply to your current life situation. Nevertheless, try to imaginatively BECOME this person;

and as best as you can, experience the events and emotions of this person. Again, in your imagination BECOME this person."

For the sacredness independent variable, the following paragraphs described the two hypothetical scenarios with boldface used in the original study:

Sacred Condition: You are a citizen of Ourlandia, and your nation has been attacked by Theirlandia. Theirlandia has demonstrated strong military prowess and has attacked and damaged a **sacred site** of your nation. This site is sacred to the Spirit of Ourlandia. It is a place that symbolizes your identity and heritage. It confers meaning and brings a sense of awe into your heart. Your country, Ourlandia, is planning to strike back in response to the attack on this sacred site.

Military Condition: You are a citizen of Ourlandia, and your nation has been attacked by Theirlandia. Theirlandia has demonstrated strong military prowess and has attacked and damaged a **military base** of your nation. This site is an important military stronghold. It is located in one of the key population areas and is of strategic significance for national defense. Your country, Ourlandia, is planning to strike back in response to the attack on the military stronghold.

The following are semi-real scenarios used in the two sacredness conditions.

Sacred Condition: A group of terrorists carried out an attack on the **Washington Monument** in Washington, D.C. These terrorists found a way to break through the security arrangements at this site and drove their car close enough to the Washington Monument to attack it with a car bomb. The attack severely damaged the foundation and body of the Washington Monument. No American lives were lost. This monument was built to commemorate George Washington, commander-in-chief of the Continental Army

and the first American president. It is a place that symbolizes your identity and heritage. It confers meaning and brings a sense of awe into your heart. The American government is planning a violent warfare in response to this terrorist attack.

Military Condition: A group of terrorists carried out an attack on a major **military base** in Southern California. These terrorists found a way to break down a fence and drove their car to a major supply building that they then destroyed with a car bomb. The resulting explosion triggered massive secondary explosions in stored ammunition and produced major damage to numerous base facilities. No American lives were lost. This base is of major strategic importance for national defense because it is a staging area for projecting American power toward Asia. The American government is planning a violent warfare in response to this terrorist attack.

For the casualty independent variable, one of the following paragraphs was attached after the description of the attack:

Large Casualty Condition: An estimate from the military intelligence suggests that **several thousand** of our soldiers will die if this violent warfare is adopted, risking one of the highest casualty counts in recent violent warfare.

Small Casualty Condition: An estimate from the military intelligence suggests that **no more than a dozen** of our soldiers will die if this violent warfare is adopted, and this casualty count is not high compared to other recent violent warfare.

Measures of Dependent Variables

Unless otherwise noted, measures in all studies used a 5-point Likert scale ranging from “0-absolutely disagree” to “4-absolutely agree”.

Immediately following the scenarios, two questions. One asked, “How important do you consider this site described in the above scenario to be?” The other asked, How sacred do you consider this site described in the above scenario to be?” These questions were presented as a manipulation check that the sacred condition was rated as more sacred, while not different from the military condition on the rating of importance.

Dependent variables included two measures involving, first, moral judgment of the attackers and, then, support for violent warfare as a response to the attack.

Moral Judgment: A set of nine items measured moral judgment of the attack, dehumanizing and punitive attitudes toward the attacker, and moral justification of counterattack. These moralizing processes were found to be crucial building blocks in the development of a genocidal mindset (Saucier & Akers, 2015). Instruction said: “Imagine yourself being in that scenario, how would you react to Theirlandia’s attack? What was your way of thinking in arriving at the choice you made?” The full items are included in Appendix A.

Support for Violent Warfare: Used in a previous study (Shaw et al., 2011), nine items served as a measure of support for violent warfare in response to the attack. These items tapped into decisions on utilization of violence and killing, and on the levels of involvement in the warfare. Instructions said, “Again, imagine yourself being in that scenario where your country Ourlandia is planning a counterattack in response to the attack on your sacred site/military stronghold. How would you react? What was your way of thinking in arriving at the choice you made?” The full scale is included in Appendix B.

Moderators and Individual Difference Variables

Age, sex, and political affiliation information were collected in a separate section of demographics before the study. Six psychological scales appeared, in sequence, after the dependent variables to measure six constructs related to the current investigation.

Duke University Religion Index (Koenig & Büssing, 2010) consisted of five items that assess a general level of religiosity including questions on religious participation and religious belief. In addition to serving as a general measure of religiosity, two of the five questions can be used to measure "coalitional religiousness" (e.g., frequency of attending religious meetings), with the other three items measuring more of "devotional religiousness" (e.g., experience the divine). Appendix C has the full list of items.

Ethnonationalism (Saucier, 2015) consisted of four items documenting the tendency to glorify a shared ethnic heritage. High scorers on this scale take great pride in the homeland, ethnic heritage, and achievements of their ancestors. A sample item says, "My ancestors once lived in a golden age with glorious and beautiful achievements." Appendix D has the full list of items.

Moral Absolutism (Peterson et al., 2009) measured, with six items, beliefs in categorical moral standards. High scorers on this scale hold adamant, dichotomous ethical principles, with one's conceptions of morality overriding competing values. A sample item reads, "There are absolutely clear guidelines about what is good and evil. These always apply to everyone, whatever the circumstances." Appendix E has the full list of items.

Militant Extremism (Saucier et al., 2009) included 10 items capturing belligerent thinking patterns that justify the use of violence and extreme measures against enemies.

High scorers tend to support war and violence. Exemplar items are, "We have a duty to attack and kill the enemies of our people" and "Extreme measures are needed now to restore virtue and righteousness in this world." Appendix F includes the full list of items.

Sacred versus Rational Duties of Civilization contained six items that we created to measure two perspectives on one's own civilization. A sacred duty entails a belief in the assistance of divine power (e.g., "Our civilization has God on its side") and an obligation to carry out the sacred duties (e.g., "It is my sacred duty to develop righteousness in my own civilization"). A rational duty, by contrast, fortifies a rational way of life and promotion of what is directed by reason (e.g., "I have civic duties to my civilization, including the promotion of a rational way of life for all of our citizens"). Both duties are self-serving, while those who score higher on sacred duties should be more likely to resort to a sacred cause to justify protecting the country. Appendix G has the full list of items.

Meaning in Life (Steger et al., 2006) consisted of 10 items assessing two separate, yet related, aspects of meaning in life: presence of meaning (e.g., "My life has a clear sense of purpose") and search for meaning (e.g., "I am seeking a purpose or mission for my life"). Appendix H has the full list of items.

Results

We first present some preliminary descriptive analyses, and then will test the hypotheses sequentially.

Distributions and Correlations

Examining the distributional graphs of the dependent variables would help spot violations of normality and existence of outliers – factors that need to be considered

before running group comparisons and least squares linear regressions. Figure 2.1 and Figure 2.2 present the distributions for moral judgment (blue chart on top) and support for violent warfare (red chart at the bottom) across four conditions. Recall that all variables were measured on a 5-point scale with a median of 2.

In general, the distributions were close to normal. Starting with the upper graph in Figure 2.1, we observed that the moral judgment variable had a mean around 2 for both conditions. There was no obvious mean difference, as suggested by the almost horizontal line connecting the means of the two distributions. Moral judgment seemed to have greater variance in the sacred condition than in the military condition. Distributions in the sacred condition were almost identical in the two casualty conditions. However, distributions in the military condition seemed to shift downward as casualty increased. When the casualty estimate was small, a majority of the data were distributed around and above the middle of the scale; whereas under the large casualty condition, a big cluster appeared below the middle. The lower graph in Figure 2.1 shows the distributions of support for violent warfare, which had a slightly lower mean in the sacred condition.

Figure 2.2 shows distributions in the semi-real scenario, which were quite similar to those in Figure 2.1. Again, we did not see obvious mean differences across groups.

Table 2.1 presents the correlations among the variables used in the study. Internal reliability coefficients, Cronbach's alpha, are on the diagonal where internal reliability concerns apply. All variables had acceptable reliabilities greater than .70. With this sample size, $r > .10$ is statistically significant at .05 level. To highlight correlations with large effect sizes, coefficients less than .25 are dimmed in gray. Rows 8 to 11, labeled with "SR", refer to the variables in the semi-real scenarios.

In both hypothetical and semi-real scenarios, dependent variables (DVs) were positively correlated, in the order of magnitude, with militant extremism, conservatism (also being Republican), ethnonationalism, rational and sacred duties of civilization. Ratings of importance and sacredness were strongly correlated with DVs in the semi-real scenario, but weakly in the hypothetical scenario. Neither religiosity (also being Christian) nor meaning was relevant.

Sacred duty was positively correlated with ratings of sacredness, conservatism, religiosity, presence of meaning, and moral absolutism, whereas correlations with these variables were not noticeable of rational duty. Religiosity was one common thread that explained these differences. As these correlations make clear, religious people were more conservative, had more meaning, and were more morally absolute.

The two meaning measures did not show much association with the other variables. They correlated negatively with each other, suggesting that people with abundance of meaning tended to search less. Presence of meaning was correlated with religiosity, sacred duty, and moral absolutism, whereas search for meaning did not.

Figure 2.1. Distributions of dependent variables (jittered) across four conditions in the hypothetical scenario in Study 1.

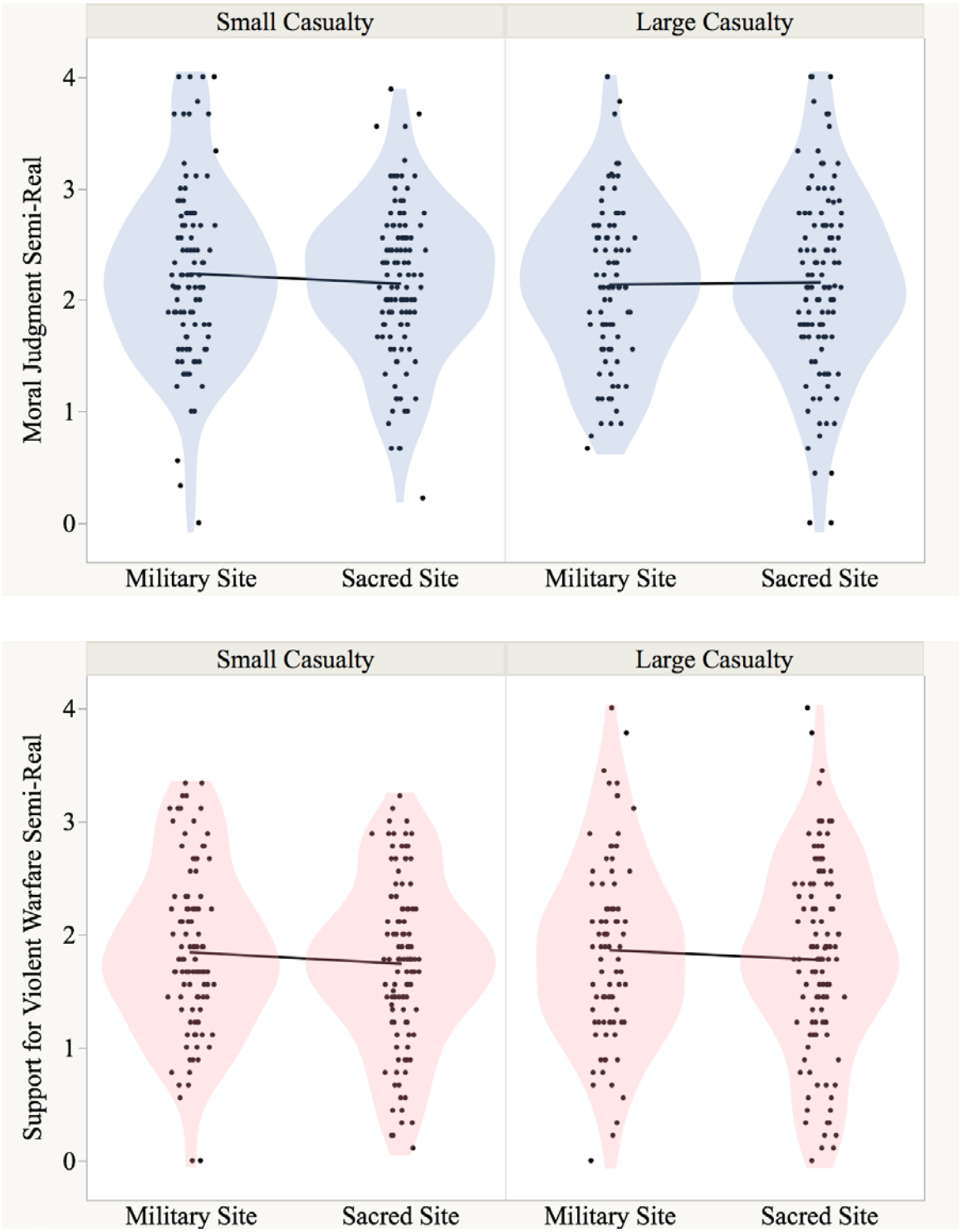

Figure 2.2. Distributions of dependent variables (jittered) across four conditions in the semi-real scenario in Study 1.

Table 2.1. Correlations (off diagonal) and reliabilities (on diagonal) of the variables in Study 1.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Being Female	.	.12	-.04	.02	.05	-.22	-.38	.02	.02	-.17	-.25	-.08	.11	-.01	-.18	.04	-.16	.11	-.05	.00
2. Being Christian		.	.30	.22	.19	.14	.05	.15	.16	.15	.13	.28	.53	.10	.27	.39	.10	.20	.00	.23
3. Being Republican			.	.04	.12	.21	.26	.23	.15	.35	.37	.48	.28	.19	.39	.29	.15	.19	-.01	.25
4. Importance of Site				.	.36	.13	.14	.25	.15	.13	.17	.11	.17	.19	.11	.16	.05	.14	.01	.11
5. Sacredness of Site					.	.17	.03	.24	.42	.20	.07	.14	.17	.27	.17	.25	.11	.17	-.01	.05
6. Moral Judgment						.74	.53	.15	.26	.58	.45	.29	.10	.30	.47	.29	.26	.07	.12	.20
7. Violent Warfare							.81	.21	.13	.51	.78	.38	.05	.25	.45	.17	.27	.02	.04	.14
8. Importance SR								.	.51	.41	.41	.16	.10	.28	.17	.24	.19	.10	.02	.14
9. Sacredness SR									.	.41	.32	.14	.10	.37	.25	.31	.14	.07	.09	.09
10. Moral Judgment SR										.83	.69	.29	.08	.31	.46	.30	.29	.02	.11	.21
11. Violent Warfare SR											.83	.36	.11	.29	.45	.23	.23	.05	.04	.18
12. Conservatism												.	.33	.23	.41	.38	.17	.24	-.09	.36
13. Duke Religiosity													.87	.24	.31	.52	.08	.38	-.10	.41
14. Ethnonationalism														.72	.32	.37	.24	.18	.09	.12
15. Militant Extremism															.79	.53	.33	.20	.09	.39
16. Sacred Duty																.68	.41	.30	-.01	.32
17. Rational Duty																	.59	.14	.03	.11
18. Presence Meaning																		.84	-.30	.33
19. Search Meaning																			.87	-.10
20. Moral Absolutism																				.71

H1.1, H1.2, H1.3: ANCOVA

Results from simple group comparisons did not support our hypotheses. There was no significant between-group difference, across conditions of sacredness or across conditions of casualties, in either moral judgment or support for violent warfare, and there was no significant interaction effect. There was no significant difference for the semi-real scenario either.

Table 2.2 presents the means and standard deviations of variables across two conditions of sacredness, in both hypothetical and semi-real scenarios. In this and in subsequent analyses, the asterisk (*) indicated significance at .05 while double asterisks (**) indicated significance at .01 in the table. The only significant difference occurred with the rating of sacredness. The sacred site was rated more sacred than the military site in the hypothetical scenario, $F = 64.5$, $p = .000$, $\eta^2 = .133$, and in the semi-real scenario, $F = 16.3$, $p = .000$, $\eta^2 = .037$. There was no difference on the rating of importance. Note that these ratings were fairly high on a 0 to 4 scale. These preliminary findings lent support to the validity of our sacredness manipulation.

It was also interesting to examine the within-subject effects of semi-real versus hypothetical scenarios. Sites in the hypothetical scenario were rated more important ($F = 27.19$, $p = .000$, $\eta^2 = .061$), and more sacred ($F = 65.04$, $p = .000$, $\eta^2 = .134$) than sites in the semi-real scenario. In particular, the hypothetical sacred site was rated much more sacred than the semi-real sacred site, $F = 5.84$, $p = .016$, $\eta^2 = .014$. People may have mixed feelings about a military base and the National Monument, while the hypothetical scenarios were better at focusing on the sacred nature of the site.

Table 2.2. Mean comparisons across the sacredness conditions in Study 1.

	Hypothetical		Semi-Real	
Variables	Military	Sacred	Military	Sacred
Importance of Site	3.32(.80)	3.32(.76)	3.06(.90)	3.02(1.08)
Sacredness of Site	2.49(1.15)	3.27(.84)**	2.14(1.30)	2.63(1.20)**
Moral Judgment	2.04(.56)	2.02(.59)	2.18(.75)	2.15(.75)
Violent Warfare	1.77(.73)	1.65(.71)	1.84(.77)	1.76(.78)
Conservatism	3.03(.87)	3.12(.86)		
Duke Religiosity	2.58(1.08)	2.46(1.09)		
Ethnonationalism	2.24(.82)	2.39(.76)		
Militant Extremism	1.64(.67)	1.63(.63)		
Sacred Duty	2.21(.89)	2.22(.81)		
Rational Duty	2.25(.74)	2.27(.64)		
Presence of Meaning	2.55(.87)	2.60(.84)		
Search for Meaning	2.64(.88)	2.49(1.01)		
Moral Absolutism	1.43(.77)	1.31(.76)		

Compared to the semi-real scenario, the hypothetical scenario produced lower moral judgment, $F = 20.62$, $p = .000$, $\eta^2 = .046$, and lower support for violent warfare, $F = 13.44$, $p = .000$, $\eta^2 = .031$. These differences were in the opposite direction to the differences on ratings of importance and sacredness. An explanation would be that semi-real scenarios were more emotionally involving and better at eliciting actions, although hypothetical ones were more focused on target.

Table 2.3 presents means across two conditions of casualty. Casualty did not cause any significant difference in the dependent variables. There was no interaction between casualty and within-subject scenario variable either. It seemed that casualties, at

least in the vignettes were not a primary concern for ordinary people to entertain the idea of supporting for a war (or the manipulation was not effective).

Table 2.3. Mean comparisons across the casualty conditions in Study 1.

Variables	Hypothetical		Semi-Real	
	Small Casualty	Large Casualty	Small Casualty	Large Casualty
Importance of Site	3.39(.75)	3.25(.80)	3.11(.94)	2.97(1.06)
Sacredness of Site	2.94(1.07)	2.89(1.06)	2.41(1.30)	2.40(1.23)
Moral Judgment	2.03(.58)	2.02(.57)	2.19(.74)	2.15(.77)
Violent Warfare	1.67(.69)	1.74(.76)	1.79(.73)	1.81(.83)
Conservatism	3.13(.85)	3.02(.89)		
Duke Religiosity	2.48(1.07)	2.57(1.10)		
Ethnonationalism	2.36(.79)	2.29(.79)		
Militant Extremism	1.63(.67)	1.65(.64)		
Sacred duty	2.27(.87)	2.16(.81)		
Rational duty	2.30(.68)	2.21(.70)		
Presence of Meaning	2.52(.84)	2.64(.87)		
Search for Meaning	2.61(.95)	2.51(.96)		
Moral Absolutism	1.35(.77)	1.38(.75)		

The group comparisons showed that the manipulations of sacredness and cost did not directly influence individual's moral judgment and support for violent warfare. Nor was there an interaction effect between sacredness and casualty. However, effects might have been masked by individual difference variables such as militant extremism, which had displayed high correlation with the dependent variables. To account for the influence

of covariates, we ran analyses of covariance (ANCOVA) controlling for the individual difference variables, and found significant effects.

Table 2.4 presents coefficients from ANCOVA predicting support for warfare (left panel) and moral judgment (right panel) in the hypothetical (upper) and semi-real (lower) scenarios. The results for predicting support for violent warfare were exactly opposite to what H1-H3 hypothesized: support for violent warfare was significantly lower with sacred site than with military site in hypothetical scenario, $F = 9.22$, $p = .003$, $\eta^2 = .022$, and in semi-real scenario, $F = 4.59$, $p = .033$, $\eta^2 = .011$; In other words, a rational military rather than sacred calculation explained the tendency to counterattack. Support for violent warfare was significantly higher for large casualty than for small casualty, $F = 4.69$, $p = .031$, $\eta^2 = .011$; and the interaction was marginally significant, $F = 3.56$, $p = .060$, $\eta^2 = .009$.

Results for predicting moral judgment were not different from simple group comparisons. None of the two main effects and interaction was significant.

The multivariate results for the covariates were consistent with bivariate correlations. In particular, religiosity was not significantly associated with support for war. Sacred view predicted lower support while rational view predicted higher support for war.

Table 2.4. ANCOVA in Study 1.

Variables in the Equation	Support for Violent War			Moral Judgment		
Hypothetical Scenario	*F*	*p*	η^2	*F*	*p*	η^2
Sacredness	9.22	.003	.022	1.04	.310	.002
Casualty	4.69	.031	.011	.28	.598	.001
Interaction	3.56	.060	.009	2.23	.136	.005
Conservatism	41.61	.000	.091	8.83	.003	.021
Duke Religiosity	2.37	.125	.006	2.56	.111	.006
Ethnonationalism	10.30	.001	.024	10.57	.001	.025
Militant Extremism	54.01	.000	.115	45.89	.000	.100
Sacred Duty	11.10	.001	.026	.01	.922	.000
Rational Duty	13.63	.000	.032	3.26	.072	.008
Presence of Meaning	4.66	.031	.011	.19	.661	.000
Search for Meaning	.33	.568	.001	2.47	.117	.006
Semi-Real Scenario						
Sacredness	4.59	.033	.011	1.16	.281	.003
Casualty	1.28	.258	.003	.06	.804	.000
Interaction	1.21	.272	.003	.00	.947	.000
Conservatism	26.49	.000	.060	8.56	.004	.020
Duke Religiosity	1.33	.249	.003	3.73	.054	.009
Ethnonationalism	15.26	.000	.036	13.86	.000	.032
Militant Extremism	42.75	.000	.094	39.68	.000	.087
Sacred Duty	2.30	.130	.006	.38	.533	.001
Rational Duty	3.50	.062	.008	6.68	.010	.016
Presence of Meaning	3.01	.083	.007	3.53	.061	.008
Search for Meaning	.31	.577	.001	.67	.415	.002

Figure 2.3 plots the interaction effect of sacredness and casualty in predicting violent warfare in the hypothetical scenario, after controlling for individual difference variables. Covariates appearing in the model were evaluated at their means. Individuals tended to support war when the military site was attacked, and when estimated casualty was large. Combination of both military and large casualty resulted in the highest support for warfare in the hypothetical scenario. Incidentally, the large casualty effect might make sense in that within the rational military calculation a higher casualty rate might mean a more dangerous enemy that demanded attention.

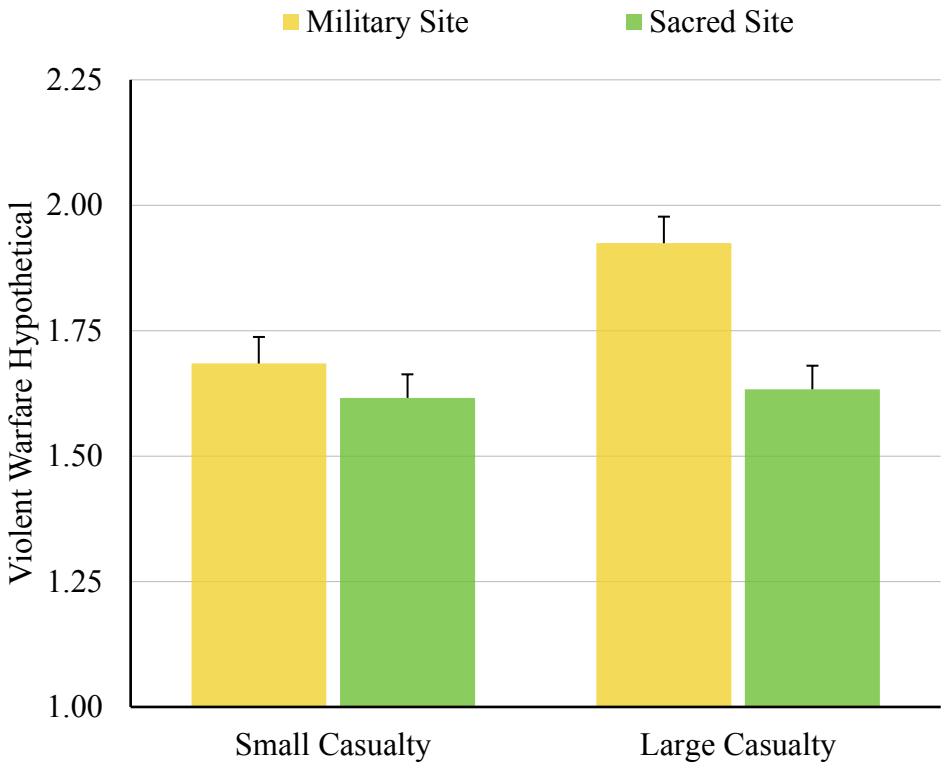

Figure 2.3. Interaction effect in predicting support for violent warfare in the hypothetical scenario.

These results also had two implications for understanding the dependent variable. First, the sacredness effects in the hypothetical scenario had larger effect size than those in the semi-real scenario. Attack on the military site triggered higher levels of support for violence than did attack on the sacred site in both scenarios. But the military site was associated with even stronger violence in the hypothetical scenario than in the semi-real scenario. The semi-real scenario might be too "noisy" to deliver a clear message of sacredness. Second, effects in predicting support for violent warfare were stronger than effects in predicting moral judgment. Questions in measuring moral judgment might be more ambiguous and more difficult to answer than questions on support for war.

Latent Class Analysis

It was likely that the sample was divided in the attitude toward sacredness, such that one group of people would support the war to protect the sacred while another group of people simply discarded the idea of sacredness. To investigate the possibility of implicit group membership, we did latent class analysis. The model was specified with a measurement model and a path analysis. The measurement model defined two latent variables — moral judgment and support for warfare — using their respective items. The path analysis regressed these two latent variables on the sacredness grouping variable. A 2-class model was tested allowing the regression paths to be freely estimated in the two classes. This model would provide parameters indicating whether there existed two separable groups of individuals in the current sample. The 2-class model was compared to a 1-class model (i.e., no hidden subgroups), and it was not significantly better than a 1-class model. Vuong-Lo-Mendell-Rubin likelihood ratio test yielded $p = .08$, suggesting the decision to retain the null hypothesis that the 1-class model fit the data as well.

Moreover, the second class contained only 5 individuals, making it too small to be interpretable. It seemed obvious that the sample did not include any hidden groups based on their response patterns to the sacred versus military conditions.

Moderated Effects

Finally, we carried out moderation analyses to examine the conditional effects. The broad prediction was that effect of sacredness and casualty on the DVs would be a function of individual differences. The predictors in these analyses were sacredness and casualty. The response variables would be support for violent warfare. Moderators were individual difference variables, which included rating of sacredness, religiosity, meaning, ethnonationalism and rational and sacred duties. We also controlled for all the covariates that appeared in the ANCOVA.

Moderation analyses were run with the bootstrap method provided by Hayes' Process module (Hayes, 2013). Statistical significance was informed by the exclusion of 0 from a parameter's 95 per cent confidence interval (95% CI). Low and high values for quantitative moderators are plus/minus one standard deviation from the mean.

The rationale for the moderated effects followed from a five-prong conception of sacredness. The MAPR model furnished effects associated with the first three variables. Sacredness rating represents one's perception of sacredness, and a greater perception of sacredness should reinforce one's response in protecting the sacred. Religiosity is an important component of sacredness, and people high in religiosity should have a better understanding of the sacred. People seek and gain meaning from the sacred; the level of meaning and the motivation to search for meaning would influence the degree to which one would protect the sacred. The other two prongs capitalized on the sacralizing

functions of two variables. Ethnonationalism sacralized one's ethnic heritage, and sacred duty for civilization sacralized the current sociopolitical regime.

H1.4: Sacredness Rating as Moderator

The moderation effect of sacredness rating was marginally significant, $b = .11$ (95% CI = -.01, .23), $p = .068$. Figure 2.4 shows the moderation effect of sacredness rating on sacredness predicting support for violent warfare in the hypothetical scenario. The main effect of sacredness was significant, $b = -.49$ (-.87, -.11), $p = .011$, suggesting that, in general, people were more likely to support violence to protect a military site. However, the interaction effect showed that violence associated with protecting the sacred site would be amplified by sacredness rating. Military site provoked higher violence when sacredness rating was low, $b = -.28$ (-.46, -.10), whereas no difference existed when sacredness rating was high, $b = -.04$ (-.22, .13). This result supported our hypothesis that being able to recognize the sacred enhanced the violence associated with sacredness.

Figure 2.4. Moderation effects of sacredness rating on sacredness predicting support for violent warfare in the hypothetical scenario.

H1.5: Religiosity as Moderator

Religiosity had a significant moderating effect, b = -.12 (-.23, -.02), in the hypothetical scenario. Opposite to what we hypothesized, religiosity mitigated, instead of boosting, violence. People of low religiosity supported violence indiscriminate of the nature of the site, b = -.03 (-.20, .13), whereas people of high religiosity were less likely to endorse violence when the sacred site was attacked, b = -.30 (-.47, -.14). Figure 2.5 graphs the interaction.

We further tested the moderating effects of coalitional and devotional religiousness, respectively. The two respective effects were in the same direction as the total effect. However, the moderating effect of coalitional religiousness was not significant, b = -.06 (-.16, .04), whereas the moderating effect of devotional religiousness was stronger and significant, b = -.14 (-.24, -.04). Such different effects deserve notice.

Figure 2.5. Moderation effect of religiosity on sacredness predicting support for violent warfare in the hypothetical scenario.

H1.6: Meaning as Moderator

We examined the three-way interaction of sacredness moderated by search for meaning which was then moderated by presence of meaning. The three-way interaction in the hypothetical scenario was not significant, b = -.11 (-.23, .03), p = .116, whereas the two-way interaction of sacredness and search for meaning was significant, b = .14 (.01, .26), p = .033, and the interaction was plotted in Figure 2.6.

People of low meaning search were more likely to support violence for the military site, b = -.30 (-.47, -.14). However, support for military-driven violence decreased as search for meaning increased, b = -.04 (-.21, .12). This finding suggested that search for meaning suppressed violence driven by protecting the military site, while did not influence sacredness-driven violence. The results was not anticipated by our MAPR model which hypothesized that individuals would be more likely to protect the

sacred to sustain their meaning system (that is, under high motivation to search for meaning).

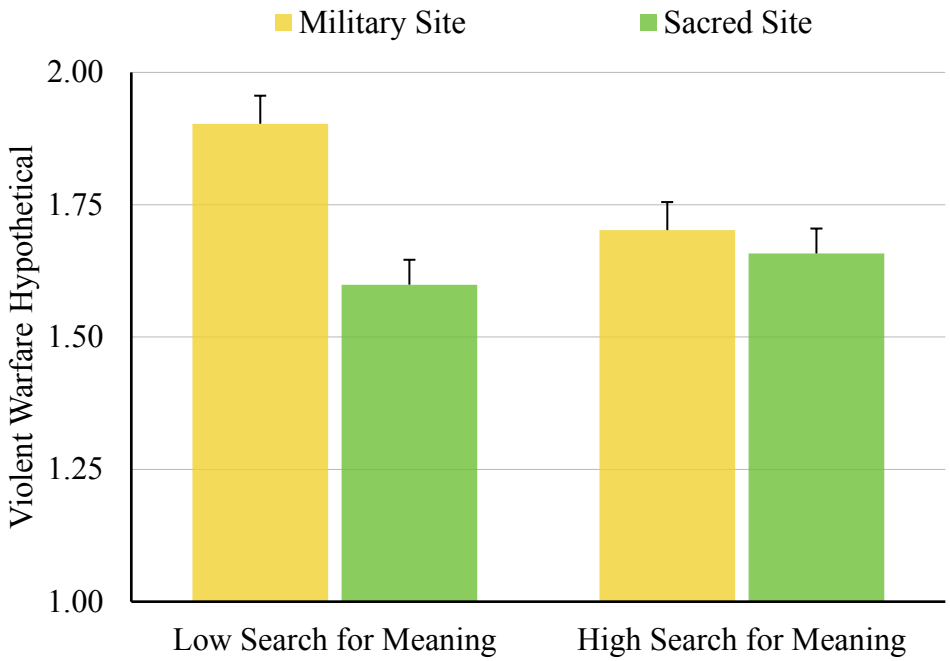

Figure 2.6. Moderation effect of search for meaning on sacredness predicting support for violent warfare in the hypothetical scenario.

H1.7: Ethnonationalism as Moderator

Ethnonationalism was not significantly moderating the effect, b = .10 (-.05, .24), p = .213, in the hypothetical scenario. However, a contrasting pattern emerged for different levels of ethnonationalism. People of low ethnonationalism were less likely to support violence for the sacred site, b = -.23 (-.40, -.05), whereas no difference existed among people of high ethnonationalism, b = -.05 (-.23, .12). This result suggested that, when people sacralized their ethnic and cultural heritage, they were more likely to support violence in order to protect the sacred.

H1.8: Sacred Duty as Moderator

Sacred or rational duty of civilization did not have any significant moderation effects.

Discussion

Results offered evidence for the validity of the sacredness manipulations such that the sacred site was rated more sacred and as important as the military site. The hypothetical scenario had results similar to those in the semi-real scenario, but they also displayed clearer patterns.

The main Hypotheses 1.1-1.3 were not supported with no significant difference found in simple group comparisons. ANCOVA results even suggested an opposite pattern to what we hypothesized. Some of the individual difference variables moderated the effects of sacredness on violence. There was evidence partially supporting Hypothesis 4. Hypotheses 5-8 did not receive statistical support.

Challenges to the Primary Hypotheses

Sacred site did not generate higher levels of support for violent warfare than did the military site. Instead, after controlling for individual difference variables, violence associated with protecting the military site was significantly higher than that associated with sacred site. The results, taken at its face value, argued for the opposite of our sacredness model. Contrary to what we formulated, threat to nation-state can be a much more likely cause for war than was threat to sacredness.

High casualty estimates, contradictory to our hypothesis, encouraged people to support the war. The interaction of casualty with sacredness further showed that violence associated with protecting the military site would be amplified by higher casualty

estimate. It seems that when one has overcome the barrier of supporting a war, cost is no longer a concern, and high casualty rates may even justify the war better. Some kind of romanticism of heroic death may partially account for this surprising result. Or higher casualties might mean a more dangerous enemy that speaks to the rational calculation of a nation state needing to use the military to protect itself. More data are needed to understand how individuals perceived the costs of attacking military or sacred sites. Exploration along this line will come up at Study 2.

These results may be subject to a floor effect. It could be that scenarios in this study failed to effectively influence participants' attitudes at all. We argued that there indeed was a systematic increase in support for war over the baseline militant extremism. Comparing the mean of support for violent warfare to the mean scores on the militant extremism scale, there was a near significant increase in the hypothetical scenario, $t = 1.86$, $p = .06$; and a significant increase in the semi-real scenario, $t = 4.30$, $p < .000$. At the least, the scenarios did apparently ramp up the individuals' violent attitudes.

Attack on a military stronghold may be too strong to serve as a control condition. The attack on a strategic military stronghold poses imminent threat to national security and can require an immediate reaction of warfare. Indeed, many other targets are attacked in a war but pose less imminent threat. These targets include but are not limited to infrastructure such as railway lines and communication stations, industrial sites that supply work opportunities for a large number of individuals, and energy plants producing gas or electricity (Rado, 2011). The choice of a military stronghold may be too extreme in its violence inducing potential for the purpose of demonstrating sacredness-driven violence. However, a military site makes a suitable choice to match the sacred site on the

level of importance. Destroying a critical bridge for economic reasons might be equally important.

Above all, it could be that people are overestimating the role of sacredness associated with violence compared to violence associated with nation state. The results revealed the problem with such bias, by suggesting that sacredness did not instigate higher levels of violence than the nation state. Anecdotally, a suicide attack was leveled near the Prophet's Mosque in Medina - one of Islam's most sacred sites (BBC News, July 6th, 2016). Although the king of Saudi Arabia has promised to strike with an "iron hand" against those terrorists, it didn't seem likely a war would break out anytime soon. This "sacred softness" contrasted with the on-going Saudi use of violence to war against Shite influences in Yemen.

Moderated Effects

Supporting H4, sacredness rating increased the support for violence under the sacred site. Although the interaction effect was non-significant, ethnonationalism increased support for violent warfare under the sacred condition (H7). These results suggested that a greater concern with the sacred led to a greater likelihood of violence associated with the sacred.

Results testing H5 went against our hypothesis. Religiosity suppressed violence for the sacred. Religious people are supposed to have a better understanding of the sacred, and it is almost imperative to protect the purity of the sanctity. The prosocial teachings of Christianity may account for such effects (Shariff et al., 2016), and for some Christian theology – like that of Quaker's – nonviolence or at least a bias against violence is a part of the sacred. Another explanation could be that religion provides a meaning

system and can therefore decrease the need for meaning, and decrease the urgency to protect the sacred. The lack of correlation of religiosity with support for violence could suggest a mix of encouraging and suppressing violence. We have observed the differential effects of coalitional and devotional religiousness as reported in literature (e.g., Gingers, Hansen, & Norenzayan, 2009). However, our finding shows more of the suppressing violence aspect of devotional religiosity than promoting violence aspect of coalitional religiosity.

Results testing H6 about meaning was not clearly supportive of the MAPR model. While the model would predict an enhanced sacredness-violence for people high in meaning search, the results only showed a decrease in military-violence as meaning search increased. It was unclear what the implication could be, and more studies may be needed to test this result against random error.

Next Questions

It remains unrevealed what specific attitudes people hold with respect to the sacred site. Are sacred sites worth protection at the cost of a war? Are sacred sites valuable targets to attack in a war? How does the sacred site compare to the military site in terms of costs and benefits in deciding for violent warfare?

We have also found differential effects of ethnonationalism and religiosity in their effects on support for war. It is likely that the sacred site could mean different things to those who are concerned with ethnonational identity from those who are into religious sacredness. In the following study, we set up scenarios to differentiate these two types of sacredness.

CHAPTER III

STUDY 2: DIFFERENTIAL EFFECTS OF ETHNONATIONAL AND RELIGIOUS SACREDNESS

Results of the previous study in the US revealed that sacredness did not trigger violence any more than security and military factors. This null effect could have reflected a meaningful lack of concern for sacredness in the context of extreme violence. To further examine this possible explanation for the null effect, we included questions that directly probed individuals' attitudes toward the cost and benefit of attacking a sacred site in comparison to attacking a military site.

In Study 1, ethnonationalism and religiosity moderated the effect of sacredness on the support for violence. Study 2 attempted to further assess possible subtleties in the effects of sacredness by comparing conditions of sacredness as a religious sacred site with sacredness as an ethnonational sacred site.

Rationale and Hypothesis

We retested the same hypotheses in Study 1 for reproducibility. Since the sacred condition was split into religious sacredness and ethnonational sacredness, we expected differences between the two sacred conditions. In particular, we hypothesized that an ethnonational site would be considered as more sacred than the religious sacred site in the American sample, and interaction effects would focus on the ethnonational site. Specifically, we expected sacred ratings and ethnonationalism (moderators of the sacred effect in Study 1) to boost violence associated with ethnonational site. Hypotheses 2.1 thru 2.8 were the same as those in Study 1.

In addition, we included questions to explore possible explanations for the null effects found in Study 1. The null effect, should it hold in the second study as well, may reflect the fact that people undervalued the sacred site as a good target for military operations. Additional questions examined attitudes toward attacking a sacred site versus attacking a military site. Six variables – estimated costs, estimated benefits, willingness to take the risk, possibility of retaliation, effectiveness of submission, and general endorsement – measured various aspects of evaluation of an attack on either the military or sacred site.

The basic hypothesis was that people might NOT take sacredness as a motivator for war. Previous results from Study 1 revealed that people did not tend to support war as a "counterattack" for the sacred site. Inclusion of these evaluation variables would assess the degree to which people chose to actively "attack" a sacred site (vs. a military site) in a war. Would the findings show that people did not believe attacking the sacred site would subordinate the enemy, be beneficial or effective to win the war, it would offer support to our hypothesis and would be consistent with findings from previous studies. Hypotheses 2.9 thru 2.14 explored this possibility.

Hypotheses

Hypothesis 2.1: (Main Effect) Support for warfare will be highest for ethnonational site, followed by religious site and military site. This hypothesis came with the assumption that American sample would tend to consider ethnonational site to be more sacred.

Hypothesis 2.2: (Main Effect) High casualty estimate will lead to lower support for violent warfare.

Hypothesis 2.3: (Interaction) Support for violent warfare will decrease as casualties increase when the military stronghold was attacked, but will increase when sacred sites were attacked.

Hypothesis 2.4: (Interaction) Sacredness ratings will boost support for violence associated with sacredness, especially the ethnonational site.

Hypothesis 2.5: (Interaction) Religiosity, especially devotional religiosity, will suppress violence associated with sacredness, especially the religious site.

Hypothesis 2.6: (Interaction) A higher tendency of search for meaning will boost violence associated with sacredness.

Hypothesis 2.7: (Interaction) Ethnonationalism will boost violence associated with sacredness, especially the ethnonational site.

Hypothesis 2.8: (Interaction) Sacred duty will boost violence associated with sacredness. The variable sacred duty assesses how strongly one tends to sacralize one's cultural identity. Previous study did not find significant effect with this variable as a moderator.

Hypothesis 2.9: (Main Effect) Estimated cost to attack a military site would be higher than that to attack a sacred site.

Hypothesis 2.10: (Main Effect) Estimated benefit to attack a military site would be higher than that to attack a sacred site.

Hypothesis 2.11: (Main Effect) Evaluations of risk would be higher for an attack on a military site than to an attack on a sacred site.

Hypothesis 2.12: (Main Effect) Estimated retaliation for attacking a military site would be higher than for attacking a sacred site.

Hypothesis 2.13: (Main Effect) Attacking a military site would be evaluated as more effective in subordinating enemies than attacking a sacred site.

Hypothesis 2.14: (Main Effect) Endorsement would be higher to attack a military site than to attack a sacred site.

Method

Participants

A total of 349 undergraduate students enrolled at a state university in the American South participated. The sample was 64% female, and had an average age of 19.3 years (*SD* = 4.5). The sample was predominantly self-identified as Christians (79%), and 37% reported being Republican, 28% as Democrats, and 24% as independent.

Experimental Manipulation

A 3 sacredness (religious sacred site vs. ethnonational sacred site vs. military site) by 2 casualty (large casualty vs. small casualty) between-subject design was carried out with vignettes. The military scenario and the casualty conditions were identical to those used previously. The religious and ethnonational sacred scenarios added modifiers to the previous sacred scenarios in order to make them more specific:

Religious Sacred: "You are a citizen of Ourlandia, and your nation has been attacked by Theirlandia. Theirlandia has demonstrated strong military prowess and has attacked a site that is sacred to the people of Ourlandia. It is the religious center and the site where people worship and perform rituals. It is a sacred place that symbolizes your identity and heritage. It confers meaning and triggers a sense of awe in your heart. Your country, Ourlandia, is planning to strike back in response to the attack on this sacred site."

Ethnonational Sacred: “You are a citizen of Ourlandia, and your nation has been attacked by Theirlandia. Theirlandia has demonstrated strong military prowess and has attacked a particular site that is sacred to the people of Ourlandia. It is the national monument and the site where people commemorate and celebrate the ancestors, past heroes, and history of the country. It is a sacred place that symbolizes your identity and heritage. It confers meaning and triggers a sense of awe in your heart. Your country, Ourlandia, is planning to strike back in response to the attack on this sacred site.”

Attitudes toward Attacking Sacredness

The second study included the same dependent variables and individual difference variables as the first study. Two new sections, presented in random order, were added after the dependent variables and before the section of individual difference variables. One section described a sacred site of Theirlandia, and the other section a military site of Theirlandia. Following each section were six questions probing attitudes toward attacking that target.

Participants first read the introduction: “Your country, Ourlandia, is planning to strike back in response to Theirlandia’s attack on your military site. A report from military intelligence recommends two potential targets for the counterattack. In the following sections, you will see a description of each of the two targets, and you will respond to several questions associated with attacking these targets.” Then they read one of the two scenarios below.

Target A: “This site is sacred to the Spirit of Theirlandia. It is a place that symbolizes their identity and heritage. It confers meaning and brings a sense of awe into Theirlandians’ heart.”

Target B: “This site is an important military stronghold for Theirlandia. It is located in one of the key population areas and is of strategic significance for Theirlandia’s national defense.”

Six questions, used in both sections, followed the scenario. The first two questions were cost-benefits calculations. The third question tapped into risk-taking. The fourth and fifth questions asked about anticipated outcomes. The last question asked general endorsement of attacking this site:

“Now your country is planning to strike back at Theirlandia’s sacred/military site. Please give an estimate of the costs and benefits of this planned counterattack:

1. In terms of the costs, I would expect the counterattack to be (from “Not at all Costly” to “Extremely Costly”)

2. In terms of the benefits, I would expect the counterattack to be (from “Not at all Beneficial” to “Extremely Beneficial”)

3. If the counterattack on the sacred site is implemented, there is a one-third probability that Ourlandia will win the war and a two-third probability that Ourlandia will be defeated. How strongly would you support the counterattack? (from “Strongly Oppose” to “Strongly Support”)

4. If your country strikes at Theirlandia’s sacred site, what would be the likelihood of massive retaliation from Theirlandia? (from “Highly Unlikely” to “Almost Certain”)

5. What would be the effect of attacking this sacred site in terms of bringing Theirlandia under the control of your country? (from “Not at all Effective” to “Extremely Effective”)

6. Taking the costs and benefits into account, please indicate the degree to which you agree with the statement: I endorse the military attack on Theirlandia's sacred site regardless of how much it would cost to do so."

Results

The key results supported Hypothesis 2.1. Not only did the ethnonational site have a stronger effect, but the previous effect on a sacred site was replicated on ethnonational site only (H2.4 and H2.7). It is likely that, for the American sample, the sacred site was understood as being more ethnonational than religious.

The evaluation variables showed that most individuals attached more value to attack a military site (H2.9 to H2.14). Retaliation was the only variable on which the sacred site was relevant. People believed that attacking a sacred site would incur as much retaliation as attacking a military site.

Distributions and Correlations

Figure 3.1 displays the distributions of moral judgment and support for violent warfare. Distributions for moral judgment were closer to normal, and did not differ much across three sacredness conditions. Ethnonational sacredness had a slightly higher mean than the other two conditions.

Distributions were much more spread out for the support for violent warfare variable, suggesting a great variability in responses. The distribution of religious sacred violence was especially high in variance, reflecting perhaps the variability of religiosity within our sample. The military site had a slightly higher mean than the other two conditions. Means under the large casualty condition appeared to be higher than the means under the small casualty condition. In particular, the large casualty condition

"shifted up" the distribution of military violence, but did not shift the distributions of sacred violence.

Table 3.1 presents the correlations among the variables used in the study. The internal reliability coefficient, Cronbach's alpha, is on the diagonal where it applies. All variables had acceptable reliabilities. With this sample size, $r > .12$ is statistically significant at .05 level. To highlight the large effect sizes, coefficients less than .25 are dimmed.

The pattern of correlations was similar to those found in Study 1. DVs were positively correlated with militant extremism and conservatism. Ratings of importance and sacredness were weakly correlated with DVs. Religiosity, again, was not particularly relevant.

Sacred duty was positively correlated with moral judgment, conservatism, religiosity (also being Christian), ethnonationalism, militant extremism, presence of meaning, and moral absolutism. Correlations with these variables were not noticeable for rational duty. These results largely matched those of Study 1, suggesting a hawkish tendency of people believing in a sacred duty. A major difference from Study 1 was that rational duty did not correlate as strongly with support for violent warfare.

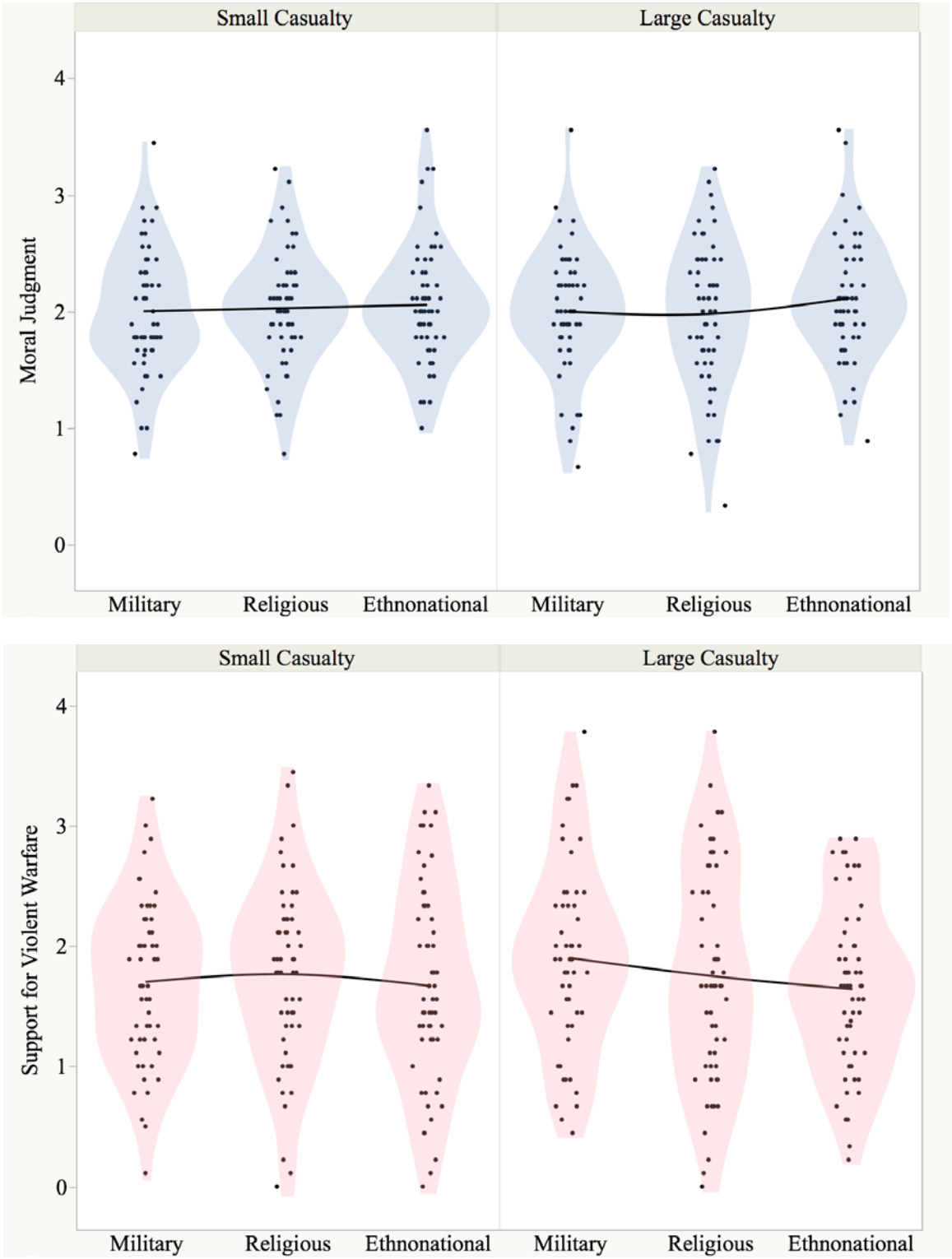

Figure 3.1. Distributions of dependent variables across four conditions in Study 2.

Table 3.1. Correlations (off diagonal) and reliabilities (on diagonal) of the variables in Study 2.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Being Female	.	.05	-.00	-.02	.10	-.06	-.32	-.07	.20	.03	.02	.14	.01	.12	.05	.05
2. Being Christian		.	.33	.11	.18	.19	.19	.27	.58	.17	.34	.52	.08	.18	-.07	.30
3. Being Republican			.	.02	.02	.28	.36	.40	.31	.21	.36	.29	.12	.16	-.07	.27
4. Importance of Site				.	.42	.16	.14	.09	.14	.26	.12	.22	.09	.16	.04	.05
5. Sacredness of Site					.	.19	.04	.10	.18	.20	.14	.21	.01	.05	.02	.11
6. Moral Judgment						.70	.47	.23	.14	.34	.48	.28	.06	.08	.09	.21
7. Violent Warfare							.83	.34	.13	.18	.41	.14	.06	-.04	-.00	.14
8. Conservatism								.	.36	.18	.29	.28	.05	.15	-.09	.34
9. Duke Religiosity									.91	.29	.39	.64	.18	.39	-.12	.46
10. Ethnonationalism										.77	.35	.38	.20	.17	.06	.15
11. Militant Extremism											.82	.60	.20	.14	.12	.37
12. Sacred Duty of Civilization												.69	.30	.35	.00	.38
13. Rational Duty of Civilization													.60	.16	.09	.09
14. Presence of Meaning														.89	-.29	.40
15. Search for Meaning															.88	-.15
16. Moral Absolutism																.77

As in Study 1, the two meaning measures correlated negatively with each other, suggesting that people with an abundance of meaning tended to search less. The presence of meaning was correlated positively with religiosity, sacred duty, and moral absolutism, whereas the search for meaning did not.

H2.1, H2.2, and H2.3: ANCOVA

Table 3.2 presents the means and standard deviations of variables across three conditions of sacredness and two conditions of casualty. The only significant difference occurred on the rating of sacredness. The two sacred sites were rated not different from each other, but more sacred than the military site, $F = 28.86$, $p = .000$, $\eta^2 = .149$. There was no main effect for casualty rate at all.

To account for the influence of covariates, we ran analyses of covariance (ANCOVA) controlling for the individual difference variables. Table 3.3 presents coefficients from ANCOVA predicting support for warfare (left panel) and moral judgment (right panel). The results remained non-significant. This outcome was slightly different from Study 1, which found a moderately higher support for violent warfare with military site than with sacred site. Evidence from two studies taken together leaned toward a null effect in general.

Table 3.2. Mean comparisons across manipulation conditions in Study 2.

	Sacredness Manipulation			Casualty Manipulation	
Variables	Military	Religious	Ethnonational	Small Casualty	Large Casualty
Importance of Site	3.33(.71)	3.43(.76)	3.44(.75)	3.43(.73)	3.37(.75)
Sacredness of Site	2.45(1.18)[2]	3.36(.91)[1]	3.34(.94)[1]	3.08(1.13)	3.05(1.06)
Moral Judgment	2.01(.52)	2.01(.56)	2.08(.51)	2.03(.50)	2.04(.56)
Support for Violent Warfare	1.80(.73)	1.76(.83)	1.65(.75)	1.71(.75)	1.76(.80)
Conservatism	2.99(.86)	3.12(.91)	2.93(.99)	2.96(.91)	3.07(.94)
Duke Religiosity	2.24(1.24)	2.27(1.20)	2.39(1.14)	2.29(1.21)	2.31(1.18)
Ethnonationalism	2.21(.88)	2.25(.85)	2.32(.88)	2.32(.84)	2.20(.89)
Militant Extremism	1.57(.68)	1.56(.74)	1.59(.67)	1.55(.72)	1.60(.68)
Sacred Duty of Civilization	2.10(.90)	2.02(.97)	2.15(.86)	2.08(.88)	2.10(.94)
Rational Duty of Civilization	2.21(.62)	2.08(.78)	2.18(.60)	2.21(.65)	2.10(.69)
Presence of Meaning	2.58(.96)	2.55(.98)	2.54(.86)	2.62(.95)	2.49(.91)
Search for Meaning	2.47(.91)	2.50(1.12)	2.65(.92)	2.47(1.00)	2.61(.97)
Moral Absolutism	1.31(.90)	1.30(.80)	1.32(.67)	1.33(.80)	1.29(.78)

Table 3.3. ANCOVA in Study 2.

	Support for Violent War			Moral Judgment		
Variables in the Equation	*F*	*p*	η^2	*F*	*p*	η^2
Sacredness	1.23	.294	.011	1.12	.327	.007
Casualty	.06	.811	.004	.04	.842	.000
Interaction	.78	.461	.007	.04	.957	.000
Conservatism	24.60	.000	.069	5.32	.022	.016
Duke Religiosity	.02	.901	.000	3.89	.050	.012
Ethnonationalism	2.41	.122	.007	15.85	.000	.045
Militant Extremism	48.87	.000	.128	49.24	.000	.128
Sacred Duty	6.11	.014	.018	.01	.942	.000
Rational Duty	.21	.646	.001	1.55	.214	.005
Presence of Meaning	3.57	.060	.011	.69	.405	.002
Search for Meaning	.21	.243	.004	.59	.444	.002

Moderated Effects

We wanted to examine whether ethnonationalism would selectively moderate effects of the ethnonational site, and whether religiosity would selectively moderate effects of the religious site. Also we wanted to replicate moderation effects of sacredness rating, sacred duty, and meaning. We sequentially coded the independent variable sacredness into two dummy variables, one contrasting religious with military site, the other contrasting ethnonational with religious site.

H2.4: Sacredness Rating as Moderator

The overall moderating effect of sacredness rating was not significant; however, we observed different patterns for ethnonational sacredness and religious sacredness. Previously, we found that the sacredness rating boosted violence in response to attack on sacred site. In this study, as Figure 3.2 shows, this effect appeared particularly with the ethnonational sacred site. Under low sacredness rating, military violence was significantly higher than ethnonational violence, b = .28 (.02, .53); under a high sacredness rating, the difference became nonsignificant due to an increase in the ethnonational condition, b = .01 (-.25, .27).

H2.5: Religiosity as Moderator

There was no significant interaction effect of religiosity. At both low and high levels of religiosity, military site had the highest mean, followed by the religious site, which was followed by ethnonational site. Devotional religiosity did not significantly moderate the effect either. The pattern shown in Figure 3.3 was similar to Figure 2.5 where religiosity suppressed violence associated with sacredness. Here we saw a decrease in both types of sacred sites.

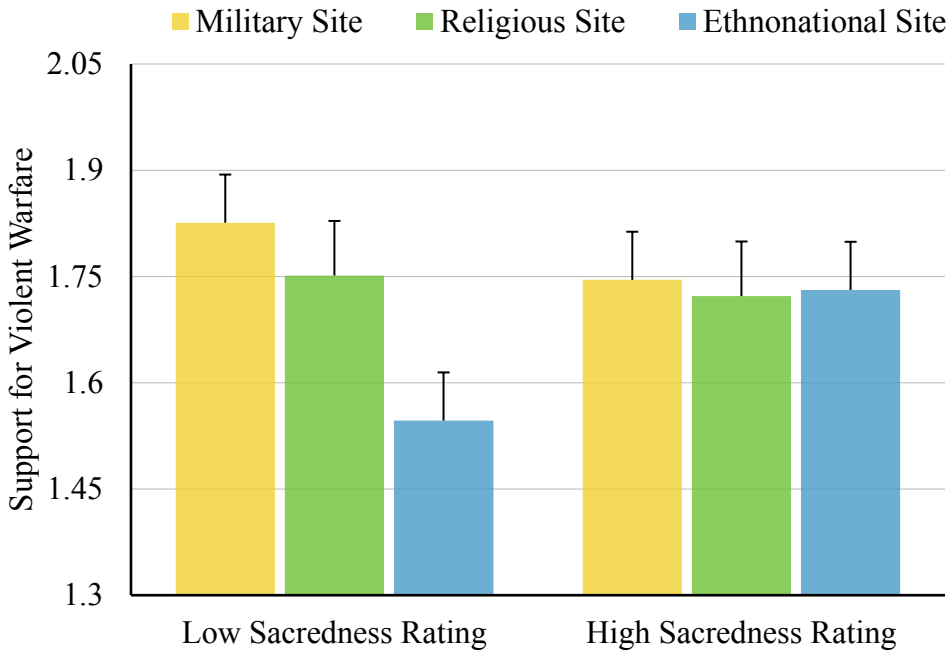

Figure 3.2. Moderating effect (nonsignificant) of sacredness rating on sacredness predicting support for violent warfare.

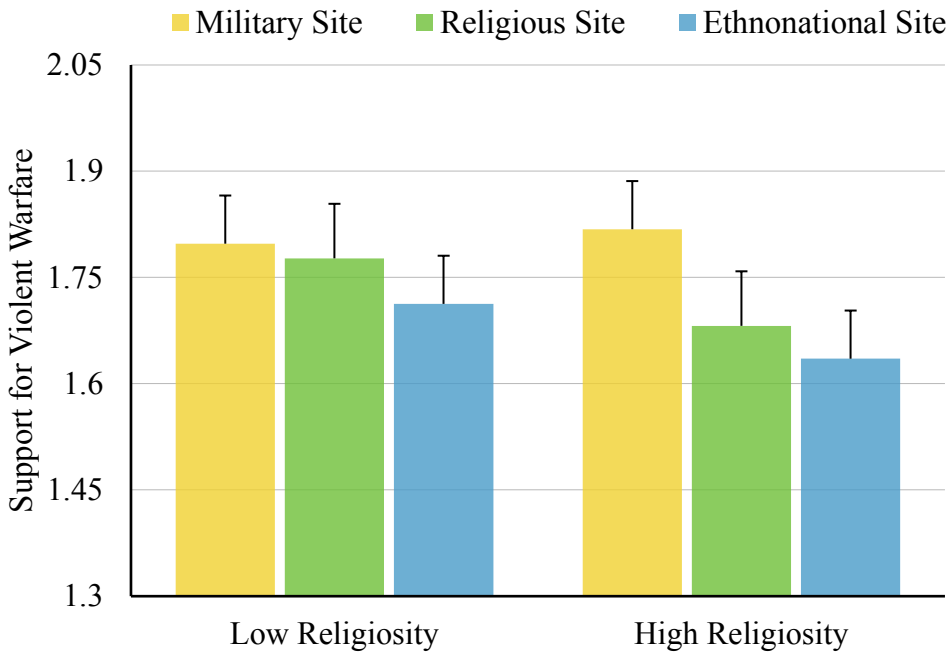

Figure 3.3. Moderating effect (nonsignificant) of devotional religiosity.

H2.6: Meaning as Moderator

The moderating effect of ethnonationalism was not significant.

H2.7: Ethnonationalism as Moderator

The moderating effect of ethnonationalism was not significant, but the direction of change was in the hypothesized direction, shown in Figure 3.4. Increased level of ethnonationalism selectively increased responses to the ethnonational site.

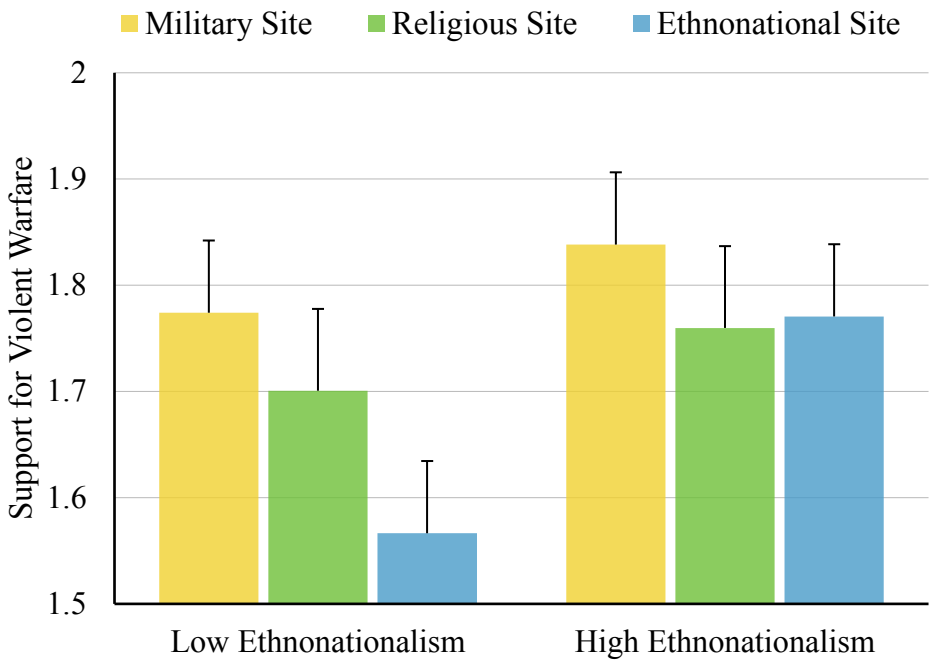

Figure 3.4. Moderating effect (nonsignificant) of ethnonationalism.

H2.8: Sacred Duty as Moderator

As in Study 1, the sacred or rational duty of civilization did not have any significant moderation effects.

Attitudes toward Attacking Military versus Sacred Site

Previous findings suggested that attack on a sacred site did not provoke stronger support for war than attack on military site. This null effect might be associated with a

generally low valuation of sacredness in military operations. To investigate how individuals valued the sacred site versus military site, we examined individuals' attitudes toward attacking sacred site versus military site in a separate set of scenarios where participants made decisions to attack an enemy. Twelve variables measured various aspects of evaluation of the attack on either military or sacred site. Again, these variables were estimated costs, estimated benefits, willingness to take the risk, possibility of retaliation, effectiveness of submission, and general endorsement. In addition, we created a binary variable (labeled as "S > M") with "1" indicating a higher evaluation on the sacred site than on the military site.

H2.9 and H2.10: Costs and Benefits

The left panel of Table 3.4 displays correlations of estimated costs with the major variables in the study. Means are in the last row of the table. The first column records correlations associated with estimated costs in attacking a military site; the second column records estimated costs in attacking a sacred site; the third column displays the correlation associated with S > M. To emphasize correlations of meaningful effect size, we dimmed those under .10, which was the cutoff value for two-tailed significance for this sample. Test of the difference between two dependent correlations with one variable in common followed the procedure provided by Lee and Preacher (2013).

Estimated costs of attacking military site ("military cost" hereafter) correlated with estimated costs of attacking the sacred site ("sacred cost" hereafter) at $r = .27$, $p = .000$. Military cost was significantly higher than sacred cost, $F = 64.87$, $p = .000$, $\eta^2 = .158$. This was not surprising as there is often a higher level of security guarding a military site, making it costlier to attack.

Table 3.4. Correlations of cost and benefit with variables.

	Cost			Benefit		
Variables	Military	Sacred	S > M	Military	Sacred	S > M
Being Female	.05	.21	.05	-.21	-.09	.13
Being Christian	.02	-.03	.01	.11	.17	.02
Being Republican	-.02	-.03	.07	.25	.16	-.04
Importance of Site	.04	.01	.04	.13	.02	-.07
Sacredness of Site	.11	.00	-.01	.05	.01	-.03
Moral Judgment	-.17	-.08	.09	.34	.28	.04
Violent Warfare	-.13	-.12	.04	.51	.30	-.02
Conservatism	-.02	-.02	-.00	.17	.17	.02
Duke Religiosity	-.06	.09	.13	.07	.15	.08
Ethnonationalism	-.09	-.03	.04	.09	.12	.05
Militant Extremism	-.13	-.00	.08	.24	.27	.05
Sacred duty	-.04	.02	.03	.15	.12	.01
Rational duty	.00	-.02	.03	.12	.12	.02
Meaning Presence	-.16	.00	.14	.03	.04	.03
Meaning Search	.13	.12	-.07	.01	-.04	-.02
Moral Absolutism	-.20	-.02	.09	.13	.19	.04
M(SD)	3.27(.83)	2.73(1.20)	15.5%	2.29(1.21)	1.73(1.38)	17.5%

However, several variables displayed selective associations with lower estimate of military cost than sacred cost. People of high militant extremism tended to underestimate military cost, $\Delta r = .13$, $z = 2.03$, $p = .043$. The presence of meaning was associated with a lower military cost, $\Delta r = .16$, $z = 2.50$, $p = .012$, as was moral absolutism, $\Delta r = .18$, $z =$

2.82, $p = .005$. The tendency to underestimate costs associated with attacking military site may account partially for higher support of attacking military site.

Only 15.5% of people believed that the cost of attacking a sacred site would be higher. These people had higher levels of religiosity ($r = .13$) and presence of meaning ($r = .14$). Religiosity and presence of meaning, given their associations with conceptions of sacredness, may get people to attach more weight to a sacred site.

The right panel of Table 3.4 displays variable correlations with the estimated benefit of attacking the military site and attacking the sacred site. Benefit of attacking military site ("military benefit" hereafter) was correlated with the benefit of attacking sacred site ("sacred benefit" hereafter) at $r = .38$, $p = .000$. Military benefit was significantly higher than sacred benefit, $F = 53.02$, $p = .000$, $\eta^2 = .134$. Only 17.5% of people believed that benefits of attacking a sacred site would be higher. Being female was the only significant correlation with such a mindset.

Being Christian, being republican, moral judgment, conservatism, militant extremism, moral absolutism, sacred and rational duty of civilization correlated positively with benefit estimates of attacking both sites. The only difference in correlation was with support for violent warfare, which correlated more strongly with military benefit than with sacred benefit, $\Delta r = .21$, $z = 4.01$, $p = .000$.

These results conformed to expectation H2.10. Our sample assigned a higher benefit to attacking a military site. This may be associated with a higher support for war when a military site was attacked. In fact, those who believed attacking a military site was more beneficial also supported war at a higher level.

H2.11 and H2.12: Risk and Retaliation

The left panel of Table 3.5 compares the variable correlations on perceived risk. Willingness to take the risk of attacking a military site ("military risk" hereafter) was correlated with willingness to take the risk of attacking sacred site ("sacred risk" hereafter) at $r = .46$, $p = .000$. Military risk was significantly higher than sacred risk, $F = 5.79$, $p = .017$, $\eta^2 = .016$. Only 18.3% of people would be more willing to take the risk of attacking a sacred site. These people scored higher on moral judgment and support for violent warfare. There was not a notable difference in correlation patterns between military and sacred risk-taking.

The right panel of Table 3.5 compares the variable correlations on estimated possibility of retaliation from the enemy. Possible retaliation from attacking a military site ("military retaliation" hereafter) was correlated with retaliation from attacking the sacred site ("sacred retaliation" hereafter) at $r = .42$, $p = .000$. Military retaliation was not significantly different from sacred retaliation, while those who believed that attacking the sacred site would more likely incur massive retaliation were still reflective of a minority position (24.1%).

It was interesting to find that our sample believed attacking the sacred site would incur as much retaliation as attacking the military site Some unexamined variable presumably caused participants to believe that the enemy would value (and thus retaliate with respect to) their sacred site as much as military site.

Table 3.5. Correlations of risk and retaliation with variables.

	Risk			Retaliation		
Variables	Military	Sacred	S > M	Military	Sacred	S > M
Being Female	-.11	-.07	.04	-.01	-.06	.03
Being Christian	.09	.11	.07	.02	-.02	-.03
Being Republican	.10	.18	.09	.14	.08	-.10
Importance of Site	.10	.04	-.03	.04	-.00	-.03
Sacredness of Site	.01	.03	.00	.06	.02	-.01
Moral Judgment	.35	.37	.17	-.04	-.10	.03
Violent warfare	.38	.36	.14	-.04	-.01	-.01
Conservatism	.05	.11	.05	.05	-.01	-.06
Duke Religiosity	.05	.10	.07	-.02	-.09	.00
Ethnonationalism	.14	.17	.04	.02	-.07	-.02
Militant Extremism	.33	.32	.08	-.11	-.12	.07
Sacred duty	.19	.12	-.01	-.05	-.10	.02
Rational duty	.08	.04	-.10	.02	.01	.04
Presence Meaning	-.03	-.04	.06	-.03	-.05	.02
Search Meaning	.08	.00	-.07	.01	.10	.04
Moral Absolutism	.04	.09	.07	-.07	-.06	.00
M(SD)	1.37(1.15)	1.22(1.16)	18.3%	3.39(.92)	3.46(1.03)	24.1%

H2.13 and H2.14: Subordination and Endorsement

The left panel of Table 3.6 compares the variable correlations on estimated effect of subordinating the enemy by attacking either the military and sacred site. Subordination by attacking military site ("military subordination" hereafter) was correlated with subordination by attacking the sacred site ("sacred subordination" hereafter) at $r = .27$, p

= .000. Military subordination was significantly higher than sacred subordination, F = 50.12, p = .000, η^2 = .127. Only 17.8% believed that attacking the sacred site would be more effective than attacking the military site to subordinate the enemy. Those individuals were more conservative.

Support for violent warfare correlated more strongly with military subordination than with sacred subordination, Δr = .15, z = 2.50, p = .013. However, conservatism displayed a selective association with sacred subordination, Δr = .19, z = 2.98, p = .003. Conservative people more likely believed that attacking the sacred site was an effective measure of subordination. Religiosity was selectively associated with sacred subordination, Δr = .14, z = 2.17, p = .030. Religious people believed in sacred subordination more than military subordination.

Finally, the right panel of Table 3.6 compares the variable correlations on endorsement of the attack. Endorsing military attack correlated positively with endorsing sacred attack at r = .44, p = .000. Endorsement was higher for attacking the military site than for attacking the sacred site, F = 18.27, p = .000, η^2 = .050. Only 19.2% endorsed attacking the sacred site more than attacking the military site.

Endorsement of military attack overlapped more with being Republican, Δr = .11, z = 2.01, p = .044; moral judgment, Δr = .11, z = 2.21, p = .027; and support for violent warfare, Δr = .18, z = 3.78, p = .000.

In summary, main effects appeared for all variables except retaliation. The sample rated attacking military site being more costly, more beneficial, and more effective to subordinate the enemy; the sample was willing to run a higher risk for and gave higher

endorsement of attacking the military site than the sacred site. Conservatism and religiosity were related to favoring the sacred site as the target of attack.

Table 3.6. Correlations of effect and endorsement with variables.

	Effect of Subordination			Endorsement of Attack		
Variables	Military	Sacred	S > M	Military	Sacred	S > M
Being Female	-.09	-.05	-.05	-.16	-.07	.02
Being Christian	.03	.14	.06	.17	.17	.03
Being Republican	.13	.11	.07	.29	.18	-.01
Importance of Site	-.00	.07	.08	.16	.05	-.00
Sacredness of Site	.07	.10	.04	.06	.04	.02
Moral Judgment	.28	.28	.06	.48	.37	.08
Violent Warfare	.39	.24	.05	.56	.38	.10
Conservatism	.03	.22	.14	.22	.14	.01
Duke Religiosity	.02	.16	.07	.16	.14	.01
Ethnonationalism	.09	.19	.07	.20	.12	-.03
Militant Extremism	.25	.25	.06	.42	.33	.04
Sacred duty	.10	.15	.00	.21	.16	-.02
Rational duty	.04	.07	.03	.06	.03	-.03
Presence Meaning	.03	.10	.10	.05	.02	-.06
Search Meaning	.00	-.08	-.07	.03	.00	-.04
Moral Absolutism	.08	.16	.03	.14	.14	-.03
M(SD)	2.05(1.04)	1.51(1.26)	17.8%	1.41(1.19)	1.12(1.22)	19.2%

Discussion

Results replicated the null effects found in Study 1. An attack on sacred site, whether religious or ethnonational, did not provoke stronger support for war than an

attack on military site. The casualties associated with a counterattack did not change levels of support for war either. Slightly different from Study 1, the null effects remained after controlling for the relevant covariates.

Some evidence from the moderation analyses suggested a distinction of religious sacredness from ethnonational sacredness. Ratings of sacredness and ethnonationalism selectively boosted the effects of ethnonational sacredness, not religious sacredness. These effects matched previous results for the generic sacred site. Such finding implied that, at least in the current American sample, sacredness was understood more as ethnonational than religious.

Moderated Effects

Moderation effects were not statistically significant. However, the patterns were consistent with previous results. In particular, rating of sacredness and ethnonationalism enhanced violence associated with sacredness, whereas (devotional) religiosity suppressed violence associated with sacredness. Meaning and sacred duty did not moderate the effects.

Attitudes toward Attacking Sacredness

Analyses of attitudes toward attacking the sacred site showed that people attached less value to attacking the sacred site than the military site in a war. The only variable on which this generalization did not apply was for retaliation. Our sample believed that attacking a sacred site would incur as much retaliation as attacking a military site.

Taking these results together, we found that people tended to discard sacredness as a motivating factor for war. Even if our sample believed it would cost less to attack a sacred site, support for attacking the sacred site was still lower than support for attacking

the military site. (This result also resonated with the finding of H2.2 that people showed insensitivity to casualty rate.) Nevertheless, our sample still believed that the sacred site was as important as a military site and could mean a great deal to others such that attacking a sacred site would generate as much retaliation as attacking a military site.

Next Questions

We assumed that sacredness would more strongly work on people's emotions such that they would more likely make irrational decisions that support war. With this assumption, we hypothesized that support for violent warfare would be higher for the sacred site than for the military site, because one's decision would be driven more strongly by feelings. The null effect perhaps suggested that the emotional level associated with the sacred scenario was not high enough. The third study examined whether we would observe a difference when individuals were primed to rely on feelings in their decisions.

CHAPTER IV

STUDY 3: FEELING- VS. CALCULATION-BASED PROCESSING AND SACREDNESS

Previous studies failed to find a main effect of sacredness on violence. Our primary goal for this study was to find out whether priming feelings would increase the effect associated with sacredness. To achieve this goal, we primed individuals to explicitly rely on feelings versus calculation in their decisions for supporting the war. In addition, we wanted to retest the main effect of sacredness along with the moderating effects associated with sacredness rating, religiosity and ethnonationalism.

Rationale and Hypotheses

The rationale behind this goal was twofold. On one hand, there is a strong connection between sacredness and emotion. In the MAPR model, awe is a primary emotional component that motivates the experience of sacredness. On the other hand, findings from the study of affective psychology suggest that individuals under the influence of feelings tend to make qualitative value judgments that lead to higher risk-taking tendencies (Hsee & Rottenstreich, 2004). Indeed, empirical studies have found that higher levels of emotional involvement and/or reliance on feeling-based processing led individuals to prefer risky decisions (Zhang, Chen, Luan, & Li, 2016; Zhang, Chen, & Li, 2017). We, therefore, expected individuals to take more risks and to support war for reasons of sacredness fueled by feeling-based processing.

To capture the risk-taking tendencies, we included as dependent variables an extra set of six items that measured cost-benefit attitudes toward counterattacking. These items examined individuals' general estimate of costs and benefits, and their willingness to take

the risk if a counterattack were to be implemented. Some of the questions appeared as "attitudes toward attacking sacredness" in the previous Study 2.

Hypothesis

Hypothesis 3.1: (Main Effect) Support for warfare would be higher when sacred site was attacked.

Hypothesis 3.2: (Interaction) A feeling prime would enhance support for violent warfare in response to an attack on a sacred site.

Hypothesis 3.3: (Interaction) Feeling prime would lead to higher levels of risk-taking for the sacred site.

Hypothesis 3.4: (Interaction) Sacredness ratings will boost support for violence associated with sacredness.

Hypothesis 3.5: (Interaction) Religiosity, especially devotional religiosity, will suppress violence associated with sacredness.

Hypothesis 3.6: (Interaction) Ethnonationalism will boost violence associated with sacredness.

Method

Participants

A total of 410 undergraduate students enrolled at a state university in the Pacific Northwest participated. The sample was comprised of 68% female, and had an average age of 19.6 years old (SD = 2.8). No more than half of the sample was identified as Christians (45%), and only 18% identified with the Republican party.

Experimental Manipulation

A 2 sacredness (sacred site vs. military site) by 2 priming (calculation vs. feeling) between-subject design was carried out with vignettes. The sacredness manipulation used the same hypothetical scenario as in Study 1. For the priming variable, we asked individuals to answer five questions before presenting the scenarios. The calculation prime asked participants to give answers to a set of five questions that required logical or mathematical calculation (e.g., If an object travels at five feet per minute, how many feet will it travel in 360 seconds); the feeling prime asked people to describe their feelings in response to some objects or names (e.g., a baby). These questions were not explicitly related to the research question of sacredness, and have been shown to be effective as operational definitions of calculation versus feeling (Hsee & Rottenstreich, 2004). See appendix I for the full list of questions.

Attitudes toward Counterattacking

This study included the same dependent variables and individual difference variables as those used in Study 1. In addition, we added a set of six items that measured attitudes toward counterattacking with a focus on cost-benefit analysis. These items examined individuals' general estimate of costs and benefits, and their willingness to take the risk if a counterattack were to be implemented.

Endorse Cost: I endorse the military attack regardless of the how much money it would cost to do so.

Endorse Casualty: I endorse the military attack regardless of the casualties it would cost to do so.

Benefit: I expect the counterattack to be (not beneficial to extremely beneficial)

Cost: I expect the counterattack to be (not costly to extremely costly)

Risk Casualty: According to a report from military intelligence, if the counterattack is implemented, there is a one-third probability that no soldiers will die and a two-third probability that over 1000 soldiers of Ourlandia will die. How strongly would you support the counterattack?

Risk Loss: According to a report from military intelligence, if the counterattack is implemented, there is a one-third probability that Ourlandia will win the war and a two-third probability that Ourlandia will be defeated. How strongly would you support the counterattack?

Results

In general, data did not support our hypotheses. We did not identify any interaction effect of sacredness and priming. Feeling-based processing did not increase support for war under the sacred condition. There was no effect on risk-taking either.

Distributions and Correlations

Figure 4.1 presents the distributions for moral judgment (blue chart on top) and support for violent warfare (red chart at the bottom) across four conditions. It was worth noting that the distribution of support for war had a thick tail and appeared a little bit bimodal for sacred site under the feeling prime (the lower right distribution), whereas the distribution was almost perfectly normal for sacred site under the calculation prime (the second red distribution).

Figure 4.1. Distributions of dependent variables across four conditions in Study 3.

Table 4.1 presents the correlations among the variables used in this study. Internal reliability coefficients, Cronbach's alpha, are on the diagonal where it applies. All variables had acceptable reliabilities. With this sample size, $r > .10$ is statistically significant at .05 level. To highlight the large effect sizes, coefficients less than .25 are dimmed in gray.

Dependent variables correlated positively and strongly with militant extremism, conservatism, ethnonationalism, and moderately with rational and sacred duty of civilization. Again, religiosity was not relevant. Slightly different from previous studies, sacred ratings did not correlate with the dependent variables.

Similar to Study 1, sacred duty correlated positively with conservatism (and being Republican), religiosity (and being Christian), and moral absolutism, whereas correlations with these variables were not noticeable for rational duty.

The two meaning measures did not show much of an association with the other variables. They correlated negatively with each other, suggesting that people with abundance of meaning tended to search less. Presence of meaning correlated with religiosity, whereas search for meaning did not.

Despite the fact that the sample was from a different region of the United States than previous studies, the correlational patterns remained quite consistent with findings from the previous studies in this series.

Table 4.1. Correlations (off diagonal) and reliabilities (on diagonal) of the variables in Study 3.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Being Female	.	.07	.03	.04	.23	-.12	-.23	-.08	.04	-.02	-.01	.08	-.05	.05	.02	-.05
2. Being Christian		.	.28	.02	.09	.11	.12	.38	.61	.27	.32	.47	.11	.16	.12	.28
3. Being Republican			.	.01	.03	.13	.21	.47	.24	.18	.25	.28	.15	.14	.01	.13
4. Importance of Site				.	.30	.23	.15	.07	.03	.16	.02	-.03	.02	.05	.07	-.07
5. Sacredness of Site					.	.20	-.01	.03	.11	.13	.10	.13	.02	.11	.10	-.02
6. Moral Judgment						.76	.46	.25	.10	.29	.48	.24	.20	.08	.17	.19
7. Violent Warfare							.84	.31	.08	.23	.39	.19	.15	.06	.04	.07
8. Conservatism								.	.38	.24	.38	.38	.13	.13	.04	.33
9. Duke Religiosity									.91	.26	.38	.60	.13	.29	.06	.31
10. Ethnonationalism										.76	.43	.43	.33	.16	.23	.12
11. Militant Extremism											.82	.60	.31	.17	.17	.35
12. Sacred Duty of Civilization												.72	.44	.23	.12	.32
13. Rational Duty of Civilization													.72	.00	.11	.08
14. Presence of Meaning														.86	-.17	.16
15. Search for Meaning															.83	-.07
16. Moral Absolutism																.70

Table 4.2 presents correlations of the attitude with the other variables. A risk-taking variable (the last column) was created as an average of all six attitude-related variables with "cost" reversely scored. This variable indicated a general tendency to take the risk of supporting a war.

All attitudes variables correlated positively with each other, except that cost correlated negatively with risk taking. This made sense because a higher estimate of cost predict a hesitation to take the risk. Dependent variables correlated with all attitudes variables except for cost. The lack of a correlation of cost with the dependent variables suggested an explanation for the previous result of no casualty effect. Basically, cost or casualties were not a relevant factor when our sample was considering supporting war. Manipulating cost, therefore, had very limited effect.

H3.1, H3.2, and H3.3: ANCOVA

Table 4.3 presents the means and standard deviations of variables across two conditions of sacredness, and two priming conditions. Sacred site was significantly more sacred than the military site, $F = 107.43$, $p = .000$, $\eta^2 = .210$. The sacred site also triggered slightly higher moral judgment, $F = 6.07$, $p = .014$, $\eta^2 = .015$. This was consistent with previous findings.

Table 4.2. Correlations of attitudes variables in Study 3.

	Cost	Benefit	Risk Casualty	Risk Loss	Endorse Cost	Endorse Casualty	Risk Taking
Being Female	.02	-.06	-.15	.02	-.10	-.03	-.09
Being Christian	-.01	.14	.12	.14	.04	.00	.12
Being Republican	-.01	.11	.13	.13	.10	.19	.17
Importance of Site	.09	.19	.11	.09	.18	.09	.16
Sacredness of Site	-.05	.05	.05	.13	.08	.12	.12
Moral Judgment	-.13	.32	.34	.33	.48	.44	.52
Violent warfare	-.10	.35	.50	.37	.55	.50	.60
Conservatism	-.04	.16	.25	.23	.22	.17	.27
Duke Religiosity	.04	.09	.08	.09	.03	.07	.09
Ethnonationalism	-.04	.18	.18	.17	.23	.27	.27
Militant Extremism	-.11	.26	.32	.34	.36	.43	.46
Sacred duty	-.05	.15	.15	.15	.15	.23	.22
Rational duty	-.03	.08	.08	.09	.10	.14	.13
Presence Meaning	.06	.03	.05	.08	.04	.11	.07
Search Meaning	-.03	.06	.02	.04	.05	.05	.06
Moral Absolutism	-.11	.05	.09	.17	.04	.15	.14
Cost	.	-.13	-.05	-.12	-.08	-.13	-.29
Benefit		.	.36	.36	.43	.31	.66
Risk Casualty			.	.46	.52	.51	.74
Risk Loss				.	.43	.53	.73
Endorse Cost					.	.58	.79
Endorse Casualty						.	.77
Risk Taking							.

Table 4.3. Mean comparisons across manipulation conditions in Study 3.

	Sacredness Manipulation		Priming	
Variables	Military	Sacred	Calculation	Feeling
Importance of Site	3.48(.60)	3.59(.55)	3.54(.59)	3.53(.57)
Sacredness of Site	2.56(.96)	3.46(.78)**	3.02(.96)	2.99(1.00)
Moral Judgment	1.86(.51)	1.99(.57)*	1.95(.55)	1.89(.54)
Violent warfare	1.50(.67)	1.46(.68)	1.48(.65)	1.49(.70)
Conservatism	1.62(.76)	1.60(.72)	1.64(.76)	1.57(.72)
Duke Religiosity	1.37(1.14)	1.51(1.14)	1.47(1.21)	1.41(1.08)
Ethnonationalism	2.20(.75)	2.30(.81)	2.25(.74)	2.25(.82)
Militant Extremism	1.22(.62)	1.20(.62)	1.21(.59)	1.21(.65)
Sacred duty	1.64(.86)	1.66(.90)	1.67(.85)	1.62(.90)
Rational duty	2.10(.81)	2.17(.77)	2.21(.74)	2.06(.83)
Presence of Meaning	2.27(.86)	2.29(.82)	2.34(.86)	2.22(.82)
Search for Meaning	2.79(.76)	2.78(.70)	2.73(.75)	2.84(.71)
Moral Absolutism	.97(.58)	.97(.56)	1.06(.61)	.88(.51)
Cost	3.31(.62)*	3.16(.63)	3.18(.61)	3.29(.65)
Benefit	2.33(.94)**	2.02(1.03)	2.13(1.01)	2.23(.98)
Risk Casualty	1.64(1.03)	1.50(1.00)	1.55(1.04)	1.59(.98)
Risk Loss	1.32(.98)	1.31(1.03)	1.34(1.03)	1.28(.97)
Endorse Cost	1.66(1.12)	1.54(1.11)	1.56(1.12)	1.64(1.11)
Endorse Casualty	.97(.93)	1.00(.96)	.99(.93)	.98(.96)
Risk-Taking	1.44(.64)	1.37(.67)	1.40(.68)	1.41(.63)

There were also significant main effects of sacredness on cost and on benefit. Estimated cost was lower when sacred site was attacked, $F = 5.14$, $p = .024$, $\eta^2 = .013$. Estimated benefit was also lower for sacred site, $F = 10.40$, $p = .001$, $\eta^2 = .025$. However, there was no main effect on risk-taking. This finding suggested that individuals perceived both lower costs and lower benefits to counterattack for the sacred site. Note the similarity with previous findings in Study 2 where individuals also indicated lower costs and benefits for *attacking* the sacred site. Results, therefore, have consistently shown the low valuation associated with the sacred site.

There was no interaction effect between priming and sacredness. In addition, there was no main effect of priming.

Table 4.4 presents coefficients from ANCOVA procedures predicting support for warfare (left panel), moral judgment (middle panel), and risk-taking (right panel). The main and interaction effects in predicting these three dependent variables remained non-significant.

These preliminary results, once again, failed to reveal the main effect of sacredness in predicting violence (H3.1). More importantly, the priming of feelings did not boost the effect of sacredness on violence (H3.2), nor on a willingness to take the risk (H3.3). Results thus far have indicated that sacredness did not provoke higher levels of violence, even when feelings (i.e. hot cognition) dominated the decision process.

Table 4.4. ANCOVA in Study 3.

	Support for War			Moral Judgment			Risk Taking		
Variables in the Equation	*F*	*p*	η^2	*F*	*p*	η^2	*F*	*p*	η^2
Sacredness	.24	.624	.001	9.59	.002	.024	.63	.427	.002
Priming	.34	.560	.001	1.19	.277	.003	.02	.902	.000
Interaction	.00	.949	.000	2.70	.101	.007	.03	.874	.000
Conservatism	20.72	.000	.050	6.15	.014	.015	10.01	.002	.025
Duke Religiosity	2.57	.110	.006	4.55	.034	.011	4.56	.033	.011
Ethnonationalism	1.60	.206	.004	1.73	.190	.004	4.62	.032	.012
Militant Extremism	38.39	.000	.088	64.79	.000	.141	58.71	.000	.129
Sacred Duty	2.34	.127	.006	1.28	.259	.003	.82	.365	.002
Rational Duty	.92	.337	.002	1.17	.280	.003	.13	.720	.000
Presence of Meaning	.05	.825	.000	.86	.354	.002	.01	.939	.000
Search for Meaning	1.33	.249	.003	3.66	.057	.009	.76	.385	.002

Moderated Effects

We wanted to replicate the three moderating effects with sacredness rating, religiosity, and ethnonationalism found in previous studies.

H3.4: Sacredness Rating as Moderator

There was a nonsignificant moderating effect of sacredness rating on sacredness predicting moral judgment, *b* = .11 (-.03, .25), *p* = .109. However, the pattern was similar to previous results. When sacredness rating was low, violence associated with sacredness was lower, b = -.13 (-.33, 08); when sacredness rating was high, sacred violence increased over military violence, b = .09 (-.09, .28). Figure 4.2 shows this pattern.

Figure 4.2. Moderation effects of sacredness rating on sacredness predicting support for violent warfare.

H3.5: Religiosity as Moderator

Different from previous results, religiosity did not display a significant moderation effect, b = .02 (-.09, .12), p = .307; nor did devotional religiosity, b = .02 (-.09, .12), p = .353.

H3.6: Ethnonationalism as Moderator

Ethnonationalism did not significantly interact with sacredness either, b = .01 (-.14, .17), p = .161.

Discussion

This study included a feeling prime in order to turn up the emotional volume of the sacredness condition. However, we did not find any significant interaction of sacredness with priming. It turned out that the decision with respect to supporting the war

for sacredness had little to do with whether feeling or calculation was a dominant mode of information processing.

It should be pointed out that we did not assume that the emotions in general would prime aggressive emotions of attack. Instead, the theory of affective psychology of value furnished our hypothesis that a feeling-dominated decision process would catalyze a feeling-susceptible sacredness-driven violence. In other words, we have focused on the interaction effect of feeling and sacredness, and not the main effect of the feeling prime. However, it would not be surprising that priming of a more specific subset of emotions – anger, shame, fear – might be more likely to encourage violence. The media, for example, essentially prime emotions in these conditions, and often very specific negative emotions. It is possible that some of the more specific emotional primes might be more effective for sacred than for military site counterattack.

In addition, counterattacking for the sacred site was considered as less costly and less beneficial; these results paralleled those of Study 2 where sacred site was undervalued as a target to attack. These findings, again, suggested that the sacred site was not a major motivator for launching a war.

Moderated Effects

Different from previous studies, sacredness rating, religiosity, and ethnonationalism all failed to demonstrate significant moderating effects, although the patterns were similar to previous ones. Failure to achieve statistical significance was partly due to the large standard errors in the test. Compared to the samples in the previous two studies, the current sample was more liberal, less religious, and more ideologically

heterogeneous. This demographic difference might be a factor contributing to the different results.

Next Questions

The population of American students may introduce bias by being more secular and less violent than the general population. Such characteristics may have put a cap on how much participants would support war to protect a sacred site. Samples from a different political and religious background would be useful to test the generalizability of the current results. In Study 4, we recruited a sample of Iranian Muslim students to further test the robustness of our results.

CHAPTER V

STUDY 4: MORAL JUDGMENT AND SUPPORT FOR VIOLENT WARFARE INFLUENCED BY SACREDNESS AND CASUALTY IN IRAN

Study 4 aims to extend the findings from Study 1 to a Muslim population. The inclusion of an Iranian sample not only adds a cross-cultural component to the current study, but has a direct implication for our primary hypotheses. American society is relatively secular with no established national religion, and the Christian religion is only one of many social rationalities that direct people's beliefs. In contrast, Iran is a traditionally religious society, and Shiite Islam permeates social life. Compared to American students, Iranian individuals were expected to have a different, if not deeper, understanding of sacredness, and Muslim beliefs should exert a greater impact on how people interact with the sacred.

Rationale and Hypothesis

It was possible that the Iranian sample would have a different understanding of the sacred than the American sample in Study 1. It was also possible that the moral implications of Islamic theology in the context of theocratic Iran would differ noticeably from those of Christian theology in the secular US. Given these important differences, we would test all of the hypotheses as first proposed in Study 1.

Hypotheses

Hypothesis 4.1: (Main Effect) Attacking the sacred site (vs. military stronghold) will cause greater moral judgment and support for violent warfare. This hypothesis, central to our interest, follows naturally from the "P" component of MAPR — protection

against violation. People resort to extreme measures in response to violation of the sacred.

Hypothesis 4.2: (Main Effect) High casualty estimate will lead to lower support for violent warfare. This hypothesis taps into an important factor in the cost-benefit analysis for warfare.

Hypothesis 4.3: (Interaction) Support for violent warfare will decrease as casualties increase when the military stronghold was attacked. However, when the sacred site was attacked, support for violence will not be as influenced by casualty concerns. This follows from the argument that the obligation of protecting the sacred overwhelms cost-benefits calculations.

Hypothesis 4.4: (Interaction) The effect in Hypothesis 1 will be stronger for those who rate the sacred site sacred. This resonates with the "A" component of MAPR — perceiving the sacredness. It is suggested that those who can perceive sacredness would be more likely to respond to the violation of sacredness.

Hypothesis 4.5: (Interaction) The effect should be stronger for those who are high in religiosity. Argued as the "R" component of MAPR, religious people should be more familiar with the idea of sacredness. Higher awareness of sacredness, as in Hypothesis 2, may enhance a response to violation of the sacred.

Hypothesis 4.6: (Interaction) The effect will be stronger for those who are high in meaning search and low in meaning presence. This is the prediction from the "M" component of MAPR, which recapitulates the meaning-offering function of sacredness. A meaning searcher would protect the sacred more vehemently as they need to gain meaning from it.

Hypothesis 4.7: (Interaction) The effect would be stronger for those who are high in ethnonationalism. Ethnonationalism sacralizes one's ethnic heritage. High scores on this variable would accentuate one's devotion to sacredness.

Hypothesis 4.8: (Interaction) The effect would be stronger for those who take a sacred duty for their civilization. The variable sacred duty assesses how strongly one tends to sacralize one's cultural identity. High score on this variable would accentuate one's devotion to sacredness.

Method

Participants

Participants were 257 undergraduate students enrolled at a public university in Tehran, Iran. The sample was comprised of 54% female, and had an average age of 22.3 years old (SD = 4.6). The sample was predominantly identified as Muslim (93%).

Experimental Manipulation

Similar to Study 1, A 2 sacredness (sacred site vs. military site) by 2 casualty (large casualty vs. small casualty) by 2 scenario (hypothetical vs. semi-real) mixed design was carried out with vignettes. All participants responded to two scenarios in a within-subject design — first a hypothetical scenario, followed by individual difference variables, and then a semi-real scenario. The hypothetical scenario describes a situation where a hypothetical country of the research participants called "Ourlandia" is attacked by a hypothetical enemy called "Theirlandia," and a counterattack is in preparation. The semi-real scenario describes a situation where the Iran is attacked by terrorists, and a counterattack is in preparation. A between-subject design randomly assigned individuals into one of the four groups defined by two independent variables. The sacredness

independent variable involved the contrast between an attack on a sacred site versus a military site, and the casualty independent variable reflected differences in expected casualties associated with the counter attack. Participants in each of the four groups received hypothetical and semi-real scenarios that were consistent with the manipulation conditions. For instance, participants in the sacred, high casualty group first responded to a sacred, high casualty hypothetical scenario, and then a sacred, high casualty semi-real scenario.

The hypothetic scenarios were identical to those used in Study 1. The difference existed in the adaptation of two semi-real scenarios to the Iranian context. The sacred condition in Iran described an attack on a holy, historical mosque Masjed-e Jāmé located in the ancient city of Isfahan. Masjed-e Jāmé is the oldest Friday mosque in Iran. The mosque is not only a sacred place for worshipping and holding memorial ceremonies, but an outstanding example of Iranian Islamic architectural style spanning over 12 centuries. Given its distinctive cultural value, Masjed-e Jāmé was inscribed as a UNESCO world heritage site in 2012. The military condition involved an attack on a military base in the Isfahan area.

Sacred condition: A group of terrorists carried out an attack on the Masjed-e Jāmé of Isfahan. These terrorists found a way to break through the security arrangements at this site and drove their car close enough to the holy mosque to attack it with a car bomb. The attack severely damaged the foundation and body of the Masjed-e Jāmé. No Iranian lives were lost. The Masjed-e Jāmé is the oldest Friday (congregational) mosque in Iran. It is a place that symbolizes the identity, nobility, and heritage of the Iranian civilization. The Iranian government is planning a violent warfare in response to this terrorist attack.

Military condition: A group of terrorists carried out an attack on a major military base in the Isfahan area. These terrorists found a way to break down a fence and drove their car to a major supply building that they then destroyed with a car bomb. The resulting explosion triggered massive secondary explosions in stored ammunition and produced major damage to numerous base facilities. No Iranian lives were lost. This base is of major strategic importance for national defense because it is a staging area for both military logistics and civil aviation in the western part of the country. The Iranian government is planning a violent warfare in response to this terrorist attack.

Dependent and individual difference variables used the same measures as in Study 1. We followed the procedures of translation and back-translation to adapt the English-language measures into Farsi (the Persian language spoken in Iran). In this translation process, a Farsi native speaker first translated a measure from English to Farsi and another unaffiliated Farsi speaker translated the Farsi measure back to English. Differences between the back-translation and original measures were resolved and used to update the Farsi translation. Appendix has full versions of most of the scales used in this study in Farsi.

Results

In general, the results in Iran were consistent with previous results from the US. There was no significant main effect of sacredness promoting violence.

Distributions and Correlations

Figure 5.1 and Figure 5.2 present the distributions for moral judgment (blue chart on top) and support for violent warfare (red chart at the bottom) across four conditions in

the hypothetical and semi-real scenarios. Recall that all variables were measured on a 5-point scale with a median of 2.

Distributions in the hypothetical scenario (Figure 5.1) were close to normal. Distribution of the support for violent warfare variable seemed to have a greater variance than that of moral judgment. The moral judgment variable in the semi-real scenario, upper graph in Figure 5.2, showed a negative skew. Majority of the sample scored at mid-to-high range of the scale, with quite a few at the ceiling, and the scale mean hit nearly 3. Support for violent warfare variable was less skewed.

Table 5.1 presents the correlations among the variables used in the study. Internal reliability coefficients, Cronbach's alpha, are on the diagonal where it applies. All but the moral absolutism variables had acceptable reliabilities. With this sample size, $r > .15$ is statistically significant at .05 level. To highlight the large effect sizes, coefficients less than .25 are dimmed in gray. Rows 8 to 11, labeled "SR", refer to the variables in the semi-real scenarios.

In both scenarios, DVs were strongly and positively associated, in the order of magnitude, with militant extremism, sacred duty, and religiosity. Being Muslim, ethnonationalism, rational duty, presence of meaning, and search for meaning were selectively associated with moral judgment but only weakly with support for violent warfare. Rating of sacredness was associated with DV only in the semi-real scenario.

Figure 5.1. Distributions of dependent variables (jittered) across four conditions in the hypothetical scenario in Study 4.

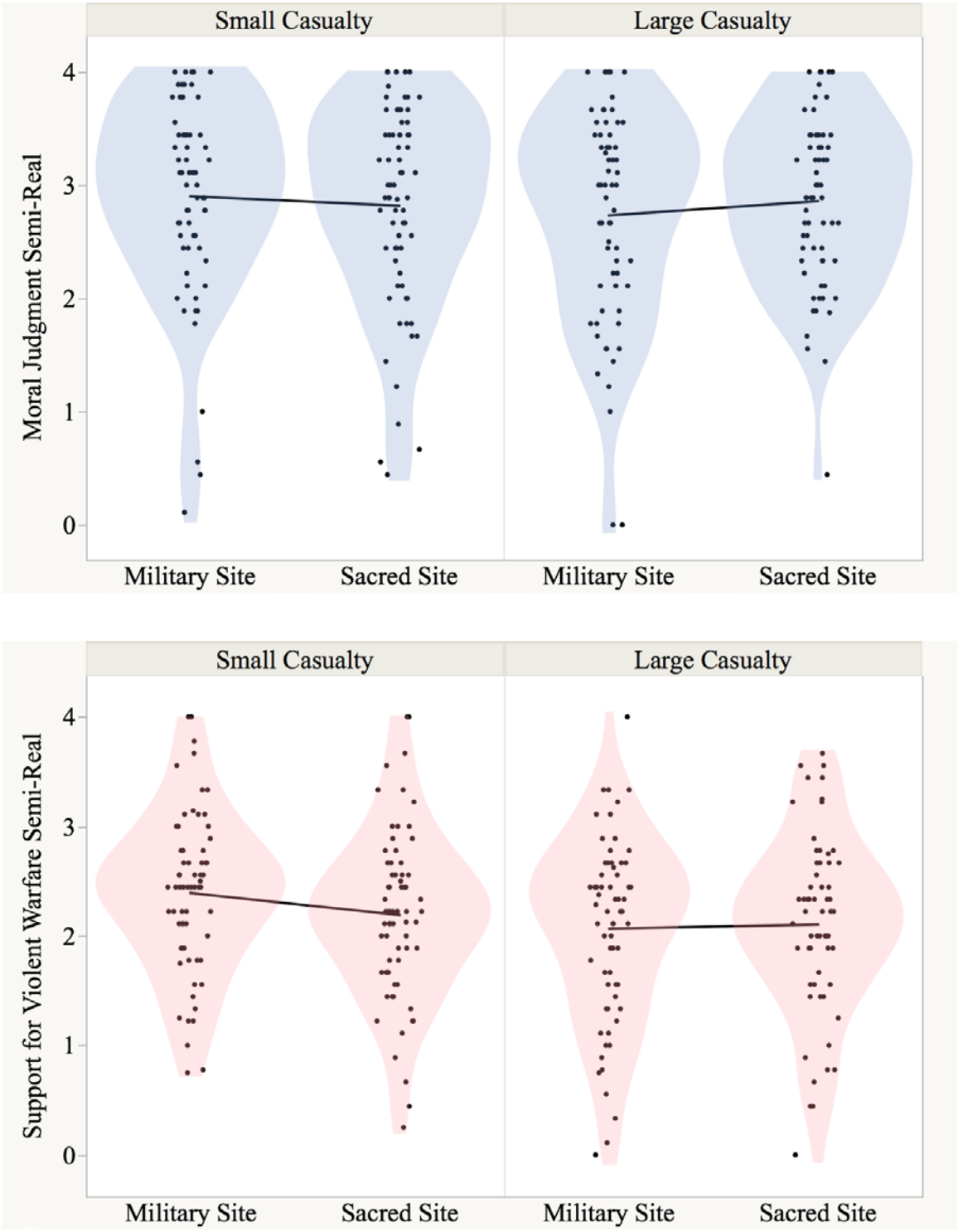

Figure 5.2. Distributions of dependent variables (jittered) across four conditions in the semi-real scenario in Study 4.

Table 5.1. Correlations (off diagonal) and reliabilities (on diagonal) of the variables in Study 4.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Being Female	.	.03	.01	-.04	.03	-.07	-.01	-.00	-.12	-.10	.01	.05	.03	-.03	.01	.02	-.05	.00	-.13
2. Being Muslim		.	.32	.23	.36	.18	.26	.13	.45	.12	.05	.27	.35	.02	.13	.10	.33	.34	-.10
3. Importance of Site			.	.58	.28	.25	.57	.44	.36	.31	-.08	.39	.35	.19	.26	.31	.36	.30	-.08
4. Sacredness of Site				.	.35	.22	.36	.56	.35	.32	.05	.44	.37	.30	.31	.26	.31	.20	.12
5. Moral Judgment					.83	.47	.37	.39	.58	.40	.10	.31	.37	.43	.34	.29	.33	.26	.15
6. Violent Warfare						.76	.26	.34	.34	.67	.23	.33	.19	.43	.34	.18	.14	.08	.25
7. Importance SR							.	.57	.42	.38	-.01	.29	.35	.21	.28	.32	.38	.30	-.02
8. Sacredness SR								.	.39	.44	.13	.35	.34	.34	.39	.34	.30	.20	.07
9. Moral Judgment SR									.89	.49	.10	.39	.41	.42	.36	.37	.42	.30	.12
10. Violent Warfare SR										.77	.23	.32	.25	.44	.32	.21	.24	.14	.23
11. Conservatism											.	.18	.00	.24	.29	.11	.01	-.11	.24
12. Duke Religiosity												.84	.42	.41	.38	.34	.33	.13	.24
13. Ethnonationalism													.79	.22	.31	.35	.36	.31	.05
14. Militant Extremism														.79	.65	.46	.10	.07	.39
15. Sacred Duty															.69	.58	.18	.13	.30
16. Rational Duty																.78	.25	.14	.12
17. Presence Meaning																	.78	.33	-.05
18. Search Meaning																		.84	-.10
19. Moral Absolutism																			.39

The pattern parted from what we found in the US. First of all, religiosity and sacred duty were not correlated with support for violent warfare in the US but became major predictors in Iran. Secondly, conservatism as a major predictor of the DV in the US became irrelevant in Iran. Thirdly, meaning had some effect on moral judgment in Iran but was irrelevant in the US. The major discrepancy was in the role that religion and attitudes toward tradition (i.e., conservatism) played in promoting violence. In the US, conservatism was associated with more violence, whereas in Iran religiosity was. In the US, conservative people also reported high levels of religiosity (rs > .33); in Iran, the correlation was much weaker (r = .18, p < .05).

Sacred and rational duties were very similar in their correlational patterns except that sacred duty was strongly correlated with support for violence, conservatism, and moral absolutism whereas rational duty was not. It was interesting to see that both sacred and rational duties strongly correlated with religiosity. In the US, only sacred duty did. Rational duty in Iran may be interpreted through a religious lens which is the mainstream ideology for the Iranian society.

Presence of meaning was positively correlated with search for meaning, in contrast with the negative correlation in the US. Presence of meaning was more strongly associated with rating of sacredness and religiosity while both were associated with being Muslim, moral judgment, and ethnonationalism. In the US, meaning was not strongly associated with ethnonationalism or being Christian. This suggested that ethnic and religious tradition were important sources of meaning for Iranians.

H4.1, H4.2, H4.3: ANCOVA

Table 5.2 presents the means and standard deviations of variables across two conditions of sacredness, in both hypothetical and semi-real scenarios. The only significant difference occurred on the rating of sacredness. The sacred site was rated more sacred than the military site in the hypothetical scenario, $F = 8.04$, $p = .005$, $\eta^2 = .034$. There was no difference on the rating of importance.

Table 5.2. Mean comparisons across the sacredness conditions in Study 4.

	Hypothetical		Semi-Real	
Variables	Military	Sacred	Military	Sacred
Importance of Site	2.98(1.26)	3.09(1.21)	3.01(1.19)	2.83(1.23)
Sacredness of Site	2.50(1.34)	2.98(1.31)**	2.40(1.30)	2.69(1.23)
Moral Judgment	2.41(.83)	2.42(.81)	2.89(.80)	2.84(.79)
Violent Warfare	2.14(.83)	2.06(.80)	2.22(.83)	2.13(.79)
Conservatism	2.07(.93)	1.97(1.03)		
Duke Religiosity	2.37(.99)	2.34(1.08)		
Ethnonationalism	3.00(.76)	2.93(.87)		
Militant Extremism	2.25(.68)	2.22(.81)		
Sacred Duty	2.48(.87)	2.53(.89)		
Rational Duty	2.88(.87)	2.76(.94)		
Presence of Meaning	2.90(.78)	2.88(.72)		
Search for Meaning	3.18(.76)	3.04(.77)		
Moral Absolutism	1.56(.59)	1.64(.65)		

It was also interesting to examine the within-subject effects of semi-real versus hypothetical scenarios. There was no significant difference in rating of importance between the sites in the hypothetical scenario and the sites in the semi-real scenario. The

site in the *hypothetical scenario* was rated more sacred, $F = 7.09$, $p = .008$, $\eta^2 = .026$. This suggested that the hypothetical scenario was better than the semi-real scenario in manipulating levels of sacredness. The specific examples used in the semi-real scenarios, a military base and the Masjed-e Jāmé, may have introduced confounding variables. That hypothetical scenario performed better was similar to what we found in Study 1.

Moral Judgment was significantly higher in the semi-real scenario, $F = 90.74$, $p = .000$, $\eta^2 = .256$. Support for violent warfare was marginally higher in the semi-real scenario, $F = 3.71$, $p = .055$, $\eta^2 = .014$. These patterns were similar to the findings in the US in Study 1.

Table 5.3 presents means across two conditions of casualty. Small casualties caused a significantly higher support for violent warfare in the semi-real scenario, $F = 4.46$, $p = .036$, $\eta^2 = .017$. Other than that, casualty did not influence any other variables with statistical significance. The general direction in the dependent variables favored for small casualties. This was opposite to what we have observed in the US where large casualties increased violence. It suggested that in Iran, casualties could indeed be a factor when deciding for war. This sensitivity to casualties in Iran might be partly associated with knowledge of the relevantly recent event of the Iran-Iraq War.

The group comparisons showed that the manipulations of sacredness and cost did not directly influence individual's moral judgment and support for violent warfare. Nor was there an interaction effect between sacredness and casualty. Table 2.4 presents coefficients from ANCOVA predicting support for warfare (left panel) and moral judgment (right panel) in both the hypothetical and semi-real scenarios. There was only one significant effects pertaining to H4.1-H4.3: Support for war in the semi-real scenario

was significantly lower for high casualties, $F = 7.84$, $p = .006$, $\eta^2 = .032$. Religiosity was still significantly associated with support for war in the hypothetical scenario.

Table 5.3. Mean comparison across the casualty conditions in Study 2.

Variables	Hypothetical		Semi-Real	
	Small Casualty	Large Casualty	Small Casualty	Large Casualty
Importance of Site	3.01(1.22)	3.01(1.25)	2.99(1.18)	2.79(1.22)
Sacredness of Site	2.83(1.30)	2.65(1.35)	2.70(1.22)	2.41(1.24)
Moral Judgment	2.43(.80)	2.30(.86)	2.86(.88)	2.80(.84)
Violent Warfare	2.12(.80)	2.10(.79)	2.29(.75)*	2.08(.82)
Conservatism	2.03(1.01)	2.06(.98)		
Duke Religiosity	2.31(1.06)	2.42(1.01)		
Ethnonationalism	2.94(.82)	2.87(.90)		
Militant Extremism	2.23(.77)	2.28(.72)		
Sacred Duty	2.52(.93)	2.58(.83)		
Rational Duty	2.88(.93)	2.77(.88)		
Presence of Meaning	2.86(.76)	2.81(.82)		
Search for Meaning	3.03(.81)	3.07(.80)		
Moral Absolutism	1.59(.61)	1.64(.61)		

Table 5.4. ANCOVA in Study 4.

Variables in the Equation	Support for Violent War			Moral Judgment		
Hypothetical Scenario	*F*	*p*	η^2	*F*	*p*	η^2
Sacredness	.07	.792	.000	.19	.663	.001
Casualty	.37	.546	.001	2.09	.149	.009
Interaction	.41	.524	.002	.20	.659	.001
Conservatism	2.26	.134	.009	.02	.895	.000
Duke Religiosity	4.46	.036	.018	.04	.834	.000
Ethnonationalism	.18	.671	.001	3.56	.060	.015
Militant Extremism	19.87	.000	.075	32.59	.000	.119
Sacred Duty	2.17	.142	.009	.24	.626	.001
Rational Duty	3.57	.060	.014	.08	.783	.000
Presence of Meaning	.32	.572	.001	3.91	.049	.016
Search for Meaning	.48	.489	.002	1.56	.212	.006
Semi-Real Scenario						
Sacredness	.25	.618	.001	.00	.960	.000
Casualty	7.84	.006	.032	.09	.762	.000
Interaction	.31	.580	.001	1.2	.281	.005
Conservatism	3.77	.053	.016	.08	.783	.000
Duke Religiosity	.79	.375	.003	.58	.446	.002
Ethnonationalism	2.63	.106	.011	4.37	.038	.018
Militant Extremism	29.51	.000	.111	26.02	.000	.097
Sacred Duty	.07	.798	.000	.02	.900	.000
Rational Duty	2.46	.118	.010	4.08	.044	.017
Presence of Meaning	4.80	.030	.020	9.78	.002	.039
Search for Meaning	2.03	.156	.008	1.10	.296	.005

Moderated Effects

The broad prediction was that effect of sacredness and casualty on the DVs would be a function of individual differences. The predictors in these analyses were sacredness and casualty. The response variables would be support for violent warfare. Moderators were individual difference variables, which included rating of sacredness, religiosity, meaning, ethnonationalism and rational and sacred duties. We also controlled for all the covariates that appeared in the ANCOVA.

H4.4: Sacredness Rating as Moderator

Rating of sacredness marginally moderated the effect of sacredness on support for violence in the hypothetical scenario, b = -.11 (-.24, .03), p = .084. The moderated effect was stronger in the semi-real scenario, b = -.13 (-.26, .00), p = .057.

As shown in Figure 5.3, sacredness rating increased support for violence in both conditions, while the increase in the military condition was higher than the increase in the sacred condition. Support for violent warfare was equally low when sacredness rating was low, b = .06 (-.18, .29), but was higher for military site when sacredness rating was high, b = -.27 (-.50, -.03). This pattern was different from that in the US, where sacredness rating selectively boosted support for violence in the sacredness condition.

H4.5: Religiosity as Moderator

The moderating effect of religiosity, shown in Figure 5.4, was not significant, b = -.07 (-.24, .10), nor did devotional religiosity, b = -.10 (-.27, .07) or coalitional religiosity, b = -.10 (-.27, .07). Results in the semi-real scenario was similarly not significant, b = -.07 (-.24, .10). The findings did not show the pacifying effect of religiosity as found in the US. In particular, sacredness-driven violence did not decrease as religiosity increased.

Figure 5.3. Moderation effect of sacredness rating on sacredness predicting support for violent warfare in the semi-real scenario.

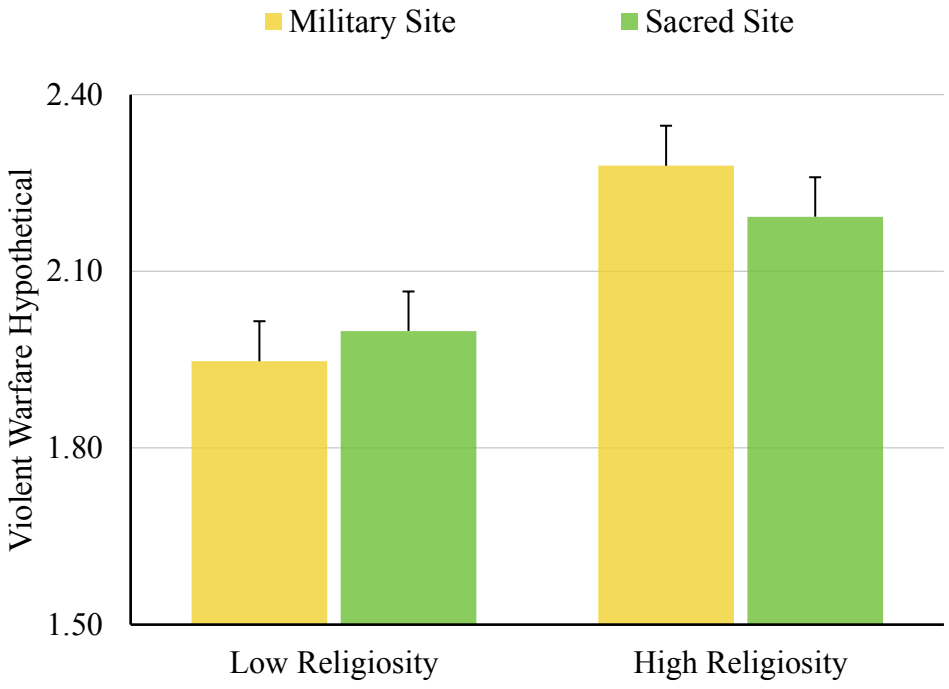

Figure 5.4. Moderation effect (nonsignificant) of religiosity on sacredness predicting support for violent warfare in the hypothetical scenario.

H4.6: Meaning as Moderator

There was no significant moderating effect with neither presence of meaning, b = -.07 (-.29, .15), nor search for meaning, b = -.03 (-.25, .19).

H4.7: Ethnonationalism as Moderator

There was no significant moderating effect with ethnonationalism, b = -.15 (-.69, .38).

H4.8: Sacred Duty as Moderator

There was no significant moderating effect with neither sacred duty, b = .05 (-.15, .25), nor rational duty, b = -.09 (-.28, .10).

Differences across Three Populations

We carried out a series of studies on sacredness-driven violence in three quite different cultures. Study 1 involved student samples at University of Tennessee at Chattanooga (UTC), Study 3 included student samples at University of Oregon (UO), and Study 4 benefited from participation of Iranian students in Tehran. As many of the major variables consistently appeared in all of these studies, it would be of interest to compare means of these variables across three populations. Table 5.5 displays the means with superscripts indicating rank.

UO students had highest importance rating of the hypothetical site, followed by UTC and then by Iran, F = 28.67, p = .000, η^2 = .051. UO and UTC also had higher sacredness rating than Iran, F = 4.79, p = .009, η^2 = .009. However, higher rating of sacredness or importance did not translate to higher support for war. Iran was highest on moral judgment, F = 49.91, p = .000, η^2 = .085, and highest on support for violent

warfare, $F = 57.07$, $p = .000$, $\eta^2 = .096$. Taken together, these data offered another piece of indirect evidence for the lack of association between sacredness and violence.

The remaining variables suggested that our samples from UTC and Iran scored higher on traits that correlated positively with higher levels of violence than the sample from UO. In particular, Iran was highest on militant extremism, followed by UTC, and followed by UO, $F = 187.01$, $p = .000$, $\eta^2 = .258$. UTC was highest on conservatism, $F = 324.53$, $p = .000$, $\eta^2 = .376$. Iran was higher on ethnonationalism than UTC and UO, $F = 69.62$, $p = .000$, $\eta^2 = .114$. Iran was highest on moral absolutism, followed by UTC and then by UO, $F = 77.21$, $p = .000$, $\eta^2 = .125$.

In addition, UTC and Iran were higher on religiosity than UO, $F = 112.73$, $p = .000$, $\eta^2 = .173$. Iran was highest on sacred duty, $F = 88.31$, $p = .000$, $\eta^2 = .141$, and on rational duty, $F = 64.86$, $p = .000$, $\eta^2 = .107$. Iran was both higher on presence of meaning, $F = 42.63$, $p = .000$, $\eta^2 = .073$, and on search for meaning, $F = 32.97$, $p = .000$, $\eta^2 = .058$.

Discussion

Putting together what we have found in the four studies, we came to the consistent finding that there was NOT a clear connection between violation of sacredness and greater violence. Precisely, attack on the sacred site did not provoke higher levels of support for war than attack on a military site. This major finding held true for two American samples, varying in levels of conservatism, and for an Iranian sample. In addition, we found that estimated casualties of the war did not influence people's decisions.

Table 5.5. Mean comparisons across Study 1 UTC, Study 3 UO, and Study 5 Iran.

Variables	Study 1 UTC	Study 2 Iran	Study 4 UO
Importance of Site	3.32(.78)[2]	3.04(1.23)[3]	3.53(.58)[1]
Sacredness of Site	2.91(1.07)[1]	2.74(1.34)[2]	3.01(.98)[1]
Moral Judgment	2.03(.58)[2]	2.41(.82)[1]	1.92(.55)[3]
Support for Violent Warfare	1.70(.72)[2]	2.10(.82)[1]	1.48(.68)[3]
Conservatism	3.08(.86)[1]	2.02(.99)[2]	1.61(.74)[3]
Duke Religiosity	2.52(1.09)[1]	2.36(1.03)[1]	1.44(1.14)[2]
Ethnonationalism	2.32(.79)[2]	2.96(.82)[1]	2.25(.78)[2]
Militant Extremism	1.63(.65)[2]	2.23(.75)[1]	1.21(.62)[3]
Sacred Duty of Civilization	2.21(.85)[2]	2.51(.87)[1]	1.65(.88)[3]
Rational Duty of Civilization	2.26(.69)[2]	2.82(.91)[1]	2.13(.79)[2]
Presence of Meaning	2.57(.85)[2]	2.89(.75)[1]	2.28(.84)[3]
Search for Meaning	2.56(.96)[3]	3.11(.77)[1]	2.78(.73)[2]
Moral Absolutism	1.36(.76)[2]	1.60(.62)[1]	.97(.57)[3]

Cultural Differences

One stark contrast between the US and Iranian data was the role religiosity and conservatism played in people's support for violence. Religiosity showed a pacifying effect in the US while it was a booster for violence in Iran. Conservatism was irrelevant in Iran while serving as a major predictor of violence in the US. Relatedly, people endorsing that they had a sacred duty for their civilization in Iran supported warfare more while people with high rational duty in the US supported warfare more.

Differences in the ideologies of the two societies may help explain such a contrast. Both societies would resort to violence if doing so maximizes their interests.

What differs is the rationale behind violence. US is a secular society and justification of violence comes from what is reasonable. Iran is a theocratic society under the strong influence of Islam. Violence is then justified by what religion and the sacred would demand. In Islam, the lesser outer jihad is the defensive war one is warranted to wage in response to attack. The greater inner jihad is the war one wage against sin within oneself (Post, 2009). The data seemed to point toward a lesser jihad effect.

One might likely form a (mis)conception that in a traditionally religious society, protection of the sacred site would be more urgent than protection of the military site. Data from these two societies showed otherwise. Sacredness is important but may not be more important than protecting the integrity of a military site when it comes to be a matter of national security. The thesis that sacredness motivates violence is partially true at best. People can use sacredness to rationalize violence, but an attack no the sacred site does not necessarily provoke violence.

Methodological Challenges

We have addressed some of the possible challenges. Inclusion of the manipulation check questions showed that the scenarios indeed varied in level of sacredness but remained constant in level of importance. The strong correlation of militant extremism with the dependent variables was evidence that the dependent variables indeed measured a tendency to violence. Although the use of college student as participants may have introduced biases to the results, drawing samples from three cultures partially addressed this bias and demonstrated a certain level of generalizability.

Another possible challenge was that our control condition, military site, might be confounded with sacred elements. A military site, although not explicitly rated as sacred,

may have indeed tapped into sacred spots such as national security or sovereignty. In the next study, we address this possibility by substituting a manufacturing plant for the military site.

These studies so far have suggested that only in the rare cases do individuals support violent warfare for a sacred site more than for a military site. As a follow-up, we explore the characteristics of those individuals who would prefer sacred site to attack, and who would prioritize the sacred site to defend.

CHAPTER VI

STUDY 5: ADDRESSING METHODOLOGICAL CONCERNS

This chapter will serve as a follow-up to the results from previous studies. Three sub-studies will address the methodological challenge that the use of a military site as the control condition introduced potential confounds, and will investigate the psychological characteristics of those who endorsed violence protecting or attacking the sacred site versus the military site.

Rationale and Hypothesis

A key finding from previous studies was that violation of sacredness did not motivate violence more than an attack on a non-sacred but equally important target. A military site was used in previous studies as the control target. A possible challenge was that the military site might have triggered some sacred concepts with its relevancy to national security. To address this challenge, Study 5a used as the control an attack on a manufacturing plant, which supposedly carries less connotation of sacredness.

Study 5b explored the characteristics of people who would support war for a sacred site more than for a military site. To achieve this goal, we asked participants to respond to both the sacred and military conditions, and examined closely the characteristics of those for whom sacredness-driven violence was higher than military-driven violence.

Study 5c used a within-subject design to examine directly the characteristics of individuals who would support attacking a sacred site more than attacking a military site in a war. Recall that Study 2 partially examined this question and found that being

female, high religiosity, and high conservatism were associated with assigning higher value to attacking a sacred site.

Method

Participants

Study 5a included a total of 451 undergraduate students enrolled at a state university in the Southeast US. The sample was comprised of 64% female, and had an average age of 18.5 years old (SD = 1.6). The sample was predominantly self-identified as Christians (87%).

Study 5b included 272 undergraduate students from the same institution. The sample was comprised of 60% female, and had an average age of 19.2 years old (SD = 2.4). The sample was predominantly self-identified as Christians (78%).

Sample 5c included a total of 372 undergraduate students from the same institution. The sample was comprised of 69% female, and had an average age of 18.6 years old (SD = 1.2). The sample was predominantly self- identified as Christians (86%).

Study 5a Measures

A 2 sacredness (sacred site vs. manufacturing plant) by 2 casualty (large casualty vs. small casualty) by 2 scenario (hypothetical vs. semi-real) mixed design was carried out with vignettes. The major difference from the Study 1 scenarios appeared in the "control condition" being changed to a manufacturing plant. Previously, it was a military site. In contrast to Study 1, the semi-real scenarios used the Lincoln Memorial instead of the Washington Monument, and used an automobile manufacturing plant instead of a military camp. For the sacredness independent variable, the following paragraphs described the two hypothetical scenarios:

Sacred Condition: You are a citizen of Ourlandia, and your nation has been attacked by Theirlandia. Theirlandia has demonstrated strong military prowess and has attacked and damaged a **sacred site** of your nation. This site is sacred to the Spirit of Ourlandia. It is a place that symbolizes your identity and heritage. It confers meaning and brings a sense of awe into your heart. Your country, Ourlandia, is planning to strike back in response to the attack on this sacred site.

Manufacture Condition: You are a citizen of Ourlandia, and your nation has been attacked by Theirlandia. Theirlandia has demonstrated strong military prowess and has attacked and damaged a **manufacturing center** in your nation. No Ourlandians lost their lives. This manufacturing center is located in one of the key population areas and is of strategic significance for the national economy. Your country, Ourlandia, is planning to strike back in response to the attack on this manufacturing center.

The following described the semi-real scenarios:

Sacred Condition: A group of terrorists carried out an attack on the **Lincoln Memorial** in Washington, D.C. These terrorists found a way to break through the security arrangements at this site and attacked the statue of Abraham Lincoln with a bomb. The attack severely damaged the statue. No American lives were lost. The Lincoln Memorial is a national monument built to honor and enshrine the legacy of the 16th president Abraham Lincoln who led our nation through its civil war and preserved the Union. It is a place that symbolizes your identity and heritage. It confers meaning and brings a sense of awe into your heart. The American government is planning to strike back in response to this terrorist attack.

Manufacture Condition: A group of terrorists carried out an attack on a big **automobile manufacturing plant** in the Midwest. These terrorists found a way to break down a fence and drove their car to a major supply building that they then destroyed with a car bomb. The resulting explosion triggered massive secondary explosions and produced major damage to numerous manufacturing facilities. No American lives were lost. This factory provides tens of thousands of jobs, and is a major source of tax revenue for the country. The American government is planning to strike back in response to this terrorist attack.

The same casualty descriptions used in Study 1 followed each of the scenarios making a total of 2*2*2 = 8 different conditions. Each participant responded to two scenarios in one of the four sacredness by casualty conditions: one scenario describing the hypothetical situation and the other scenario describing the semi-real situation. After reading each scenario, participants answered three questions whose composite score served as a measure of the dependent variable support for violence: 1) How much do you support the US involvement in this war? 2) How much do you support using violence in the war? 3) Would it be acceptable for civilians from the terrorist country to die as a result of this war? Following the three questions were two questions asking how important and how sacred the participant believed the site in the scenario was.

Study 5b Measures

We included the same hypothetical sacred and military scenarios as used in Study 1. Following each scenario, participants answered one questions, "How much do you support Ourlandian involvement in this war". Each participant responded to both

scenarios in random order of presentation. Half the sample received the military site first whereas the other half received the sacred site first.

In addition, we measured several constructs marking psychological adaptiveness and maladaptiveness of those who endorsed attacking military or sacred site.

First of all, the Dark Triad measured three personality traits: Machiavellianism, Narcissism and Psychopathy (Jones & Paulhus, 2014). Narcissism is characterized by grandiosity and egotism. Machiavellianism includes manipulation and exploitation of others, a cynical disregard for morality, and use of deception to gain power. Psychopathy broadly captures antisocial behavior, impulsivity, and emotional callousness.

Secondly, we recorded positive psychological processes with the variables of self-esteem (Roserberg, 1965) and satisfaction with life (Diene, Emmons, Larsen, & Griffin, 1985). Two measures recorded negative psychological functioning, depression and anxiety (Costello & Comrey, 1967).

Study 5c Measures

We included the same two scenarios used in Study 2, in which the participants were to *attack* a military site or a sacred site. The six evaluation measures – cost, benefit, risk, retaliation, subordination, and endorsement – were included after each scenario. Each participant responded to both scenarios in random order of presentation.

In addition, we measured several constructs marking psychological adaptiveness and maladaptiveness of those who endorsed attacking the military or the sacred site.

First of all, the Dark Triad – Machiavellianism, Narcissism and Psychopathy (Jones & Paulhus, 2014) – was included as in Study 5b.

Secondly, two measures recorded positive psychological process, self-esteem (Rosenberg, 1965) and satisfaction with life (Diene, Emmons, Larsen, & Griffin, 1985). Two measures recorded negative psychological functioning, depression and anxiety (Costello & Comrey, 1967).

Finally, we recorded three basic religious orientations or motivations (Gorsuch & McPherson, 1989). The intrinsic religious orientation involved treating religion as the master motive in life Extrinsic personal and extrinsic social religious orientations used religion as the means to attain personal comfort for the former and social advantage for the latter.

Results for Study 5a

Table 6.1 summarizes the group comparisons. Compared to the manufacture plant, the sacred site was rated more sacred in both hypothetical, $F = 84.18$, $p = .000$, $\eta^2 = .176$, and semi-real scenarios, $F = 20.38$, $p = .000$, $\eta^2 = .053$. However, in the hypothetical scenario, the sacred site was also more important, $F = 19.72$, $p = .000$, $\eta^2 = .048$, and this resulted in a small but significant main effect, $F = 4.21$, $p = .041$, $\eta^2 = .011$. We argue that this main effect was due to a higher rating of importance for the sacred site. Indeed, this effect disappeared after controlling for importance. There was not a main effect for sacredness in the semi-real scenario either.

Small casualty encouraged higher support for war in the hypothetical scenario, $F = 5.39$, $p = .021$, $\eta^2 = .013$. This result was reasonable and had appeared in Study 4 with the Iranian sample. However, there was no interaction effect.

The hypothetical scenario once again demonstrated better performance than the semi-real scenario. It was rated as both more sacred, $F = 45.58$, $p = .000$, $\eta^2 = .110$, and

more important, $F = 12.55$, $p = .000$, $\eta^2 = .033$, than the semi-real scenario. People may have held different opinions and feelings towards an automobile manufacture and the Lincoln Memorial; these idiosyncratic opinions and feelings could have confounded the manipulation conditions and blurred their focus.

Table 6.1. Mean comparisons across the sacredness and casualty conditions in Study 5a.

	Hypothetical		Semi-Real	
Variables	Manufacture Plant	Sacred Site	Manufacture Plant	Sacred Site
Importance of Site	2.75(1.02)	3.20(1.00)*	2.69(1.06)	2.89(1.09)
Sacredness of Site	2.08(1.27)	3.12(1.00)*	1.96(1.23)	2.54(1.19)*
Support for War	1.72(1.03)	1.93(1.00)*	1.84(1.04)	1.73(1.06)
	Small Casualty	Large Casualty	Small Casualty	Large Casualty
Importance of Site	3.03(1.01)	2.98(1.06)	2.68(1.07)	2.90(1.08)
Sacredness of Site	2.63(1.27)	2.69(1.21)	2.28(1.15)	2.32(1.29)
Support for War	1.97(.99)*	1.73(1.03)	1.80(1.03)	1.76(1.07)

Results for Study 5b

As in Study 3, we created a variable, S>M indicating those who supported war for sacred site (sacred war) more than for military site (military war). Table 6.2 reports the means and correlations of support for war for the military site, for the sacred site, and for S>M. Military correlated significantly with sacred war, $r = .56$. There was no within-subject difference between support for military war and support for sacred war. Only 20.3% of people supported sacred war more than military war.

Table 6.2. Correlations of support for violence with other variables.

Variables	Military War	Sacred War	S > M
Being Female	-.15	-.19	-.06
Being Christian	.05	.17	.05
Conservatism	.18	.22	-.00
Machiavellianism	.15	.11	-.03
Narcissism	.10	.02	-.10
Psychopathy	.10	.02	.04
Depression	-.05	-.04	.08
Anxiety	-.13	-.03	.10
Self-Esteem	.18	.08	-.11
M(SD)	2.49(1.16)	2.50(1.16)	20.3%

These results were consistent with the no-difference findings in the between-subject designs. An average person would not support war for the sacred site more than for the military site. Those who would did so were only 1/5 of the population.

People who supported military war were more conservative, more Machiavellian, less anxious, and higher in self-esteem. People who supported war for sacred site were more likely to be Christian and conservative.

These results suggested that a major motivation for supporting sacred warfare was being Christian, which may be related to higher perception of sacredness.

Results for Study 5c

Left panel of Table 6.3 compares the variable correlations on perceived cost. Recall that "cost" measured how costly the individual estimated attacking a

military/sacred site would be. Military cost (i.e., estimated cost of attacking a military site) was not significantly correlated with sacred cost, $r = .06$. Military cost was significantly higher than sacred cost, $F = 81.26$, $p = .000$, $\eta^2 = .181$. Only 17.2% of people perceived higher cost of attacking the sacred site.

Conservatism was associated with higher sacred cost than military cost, $\Delta r = .19$, $z = 2.67$, $p = .008$. Extrinsic social religious orientation was associated with higher sacred cost, $\Delta r = .19$, $z = 2.67$, $p = .008$.

Table 6.3. Comparing correlations of cost and benefit with variables.

	Cost			Benefit		
Variables	Military	Sacred	S > M	Military	Sacred	S > M
Being Female	.07	-.01	-.11	-.03	-.03	-.07
Being Christian	.02	-.05	-.04	.03	.09	.03
Conservatism	-.07	.12	.01	.09	.17	.06
Intrinsic	.05	-.05	-.05	.04	.15	.01
Extrinsic Social	-.08	.11	.09	-.01	.05	.04
Extrinsic Personal	.06	.01	-.02	.08	.09	.01
Machiavellianism	.01	.08	.03	.03	.09	.05
Narcissism	-.05	.01	.06	.03	.07	.07
Psychopathy	-.05	.10	.10	-.04	.12	.11
Depression	-.07	-.02	.02	-.12	.03	.06
Anxiety	-.02	-.02	-.03	-.08	.06	.00
Self-Esteem	-.01	.01	.04	.08	-.02	-.04
Life Satisfaction	.02	.10	.09	.08	-.04	-.05
M(SD)	2.93(.84)	2.27(1.19)	17.2%	2.69(.98)	1.79(1.10)	13.7%

The right panel of Table 6.3 compares the variable correlations on estimated benefit. Military benefit (i.e., the estimated benefit associated with attacking a military site) was not significantly correlated with sacred benefit at $r = -.01$. Military benefit was rated significantly higher than sacred benefit, $F = 136.50$, $p = .000$, $\eta^2 = .271$. Only 13.7% people believed that attacking the sacred site would be more beneficial. These people tended to score higher on psychopathy.

The left panel of Table 6.4 compares the variable correlations on willingness to take the risk. Military risk was significantly correlated with sacred risk, $r = .18$, $p = .000$. Military risk was significantly higher than sacred risk, $F = 94.58$, $p = .000$, $\eta^2 = .204$. Only 15.3% of people would be more willing to run higher risk attacking the sacred site. These people scored higher on Machiavellianism and psychopathy. In addition, they tended to be depressed and low in self-esteem. By contrast, those who were more willing to run the risk of attacking the military site were less anxious, $\Delta r = .20$, $z = 3.03$, $p = .002$. These results suggested that motivation to attack the sacred was associated with psychological maladaptation.

The right panel of Table 6.4 compares the variable correlations on expected retaliation. Military retaliation was significantly correlated with sacred retaliation at $r = .14$, $p = .009$. Attacking the sacred site was believed to be significantly more likely to trigger massive retaliation, $F = 94.10$, $p = .000$, $\eta^2 = .203$. Over half (51.1%) believed that retaliation associated with attacking the sacred site would be higher than that attacking the military site. These people tended to score lower on psychopathy, and also lower in anxiety, $\Delta r = .14$, $z = 2.05$, $p = .040$. These results suggested that fearing to attack the sacred site was associated with healthy psychological functioning.

Table 6.4. Comparing correlations of risk and retaliation with variables.

	Risk			Retaliation		
Variables	Military	Sacred	S > M	Military	Sacred	S > M
Being Female	-.15	-.10	-.09	-.05	-.06	.03
Being Christian	.05	.07	.02	-.09	-.07	.05
Conservatism	.23	.18	-.06	.07	.05	-.02
Intrinsic	.13	.10	-.08	-.03	.00	.04
Extrinsic Social	-.02	.10	.07	.08	-.03	-.03
Extrinsic Personal	-.03	.04	.03	-.08	-.13	.01
Machiavellianism	-.00	.08	.12	.06	.03	.00
Narcissism	.10	.13	.01	.00	-.07	.02
Psychopathy	.10	.19	.11	.14	-.04	-.10
Depression	-.10	.03	.15	.02	-.08	-.07
Anxiety	-.20	.00	-.01	.03	-.11	-.08
Self-Esteem	.09	.00	-.11	-.02	.04	.09
Satisfaction Life	.09	-.01	-.10	-.04	.01	.07
M(SD)	2.05(1.11)	1.36(1.04)	15.3%	2.39(1.22)	3.14(1.03)	51.1%

The left panel of Table 6.5 compares the variable correlations on perceived effect of subordinating the enemy. The military effect correlated significantly with sacred effect, $r = .10$, $p = .045$. The military effect was significantly higher than sacred risk, $F = 99.72$, $p = .000$, $\eta^2 = .214$. Only 15.6% of people believed that attacking the sacred site would be more effective to subordinate the enemy. These people scored higher on Machiavellianism and depression.

Those who believed that attacking the military site was more effective in subordinating the enemy were less depressed, $\Delta r = .16$, $z = 2.30$, $p = .021$, and less anxious, $\Delta r = .18$, $z = 2.62$, $p = .009$. This was similar to the results of willingness to run the risk.

Table 6.5. Comparing correlations of effect and endorsement with variables.

	Effect for Subordination			Endorsement		
Variables	Military	Sacred	S > M	Military	Sacred	S > M
Being Female	-.11	-.03	-.05	-.15	-.14	-.08
Being Christian	-.01	.00	-.02	-.04	.09	.08
Conservatism	.14	.11	-.01	.10	.23	.07
Intrinsic	.05	.09	.02	-.01	.05	-.03
Extrinsic Social	-.09	.13	.09	-.02	.16	.09
Extrinsic Personal	.04	.03	-.01	.00	.06	.04
Machiavellianism	.15	.13	.01	.11	.09	-.00
Narcissism	.09	.10	.01	.08	.08	-.01
Psychopathy	.09	.19	.10	.15	.22	.06
Depression	-.14	.02	.11	-.07	.05	.12
Anxiety	-.22	-.04	.07	-.13	.00	.00
Self-Esteem	.09	-.05	-.06	.03	-.05	-.10
Satisfaction Life	.06	-.02	-.02	-.01	-.00	-.03
M(SD)	2.45(1.03)	1.76(1.03)	15.6%	2.01(1.05)	1.34(1.09)	12.1%

The right panel of Table 6.5 compares the variable correlations on endorsement of attack. Military endorsement was significantly correlated with sacred endorsement at $r = .29$, $p = .000$. People endorsed attacking the military site significantly more than sacred

site, $F = 103.35$, $p = .000$, $\eta^2 = .219$. Only 12.1% endorsed attacking the sacred site more than attacking the military site. These people tended to be more depressed.

Endorsement for attacking the sacred site was more strongly associated with conservatism, $\Delta r = .13$, $z = 2.14$, $p = .033$. These people were more likely to use religion to enhance their social status, $\Delta r = .18$, $z = 2.92$, $p = .004$. By contrast, those who endorsed attacking the military site were less anxious, $\Delta r = .13$, $z = 2.10$, $p = .036$.

In summary, support for actively attacking a sacred site was associated with a range of psychological maladaptation, including Machiavellianism, psychopathy, depression, and anxiety. These people were also more conservative, and more likely to use religion as a means for achieving social goals instead of taking faith as ends. These results corresponded with those found in Study 2, and completed the picture that people were less likely to associate violence with the sacred.

Discussion

Results from Study 5a lent further support to the null effects consistently found in Study 1 through Study 4. No significant difference existed in support for war between an apparently non-sacred manufacture site and a sacred site.

In Study 5b and Study 5c, we investigated two situations using within-subject designs. The first situation asked individuals to support warfare in response to an attack on either a military site or a sacred site. The second situation asked individuals opinions about attacking either an enemy country's military site or sacred site.

In both situations, counterattacking for the sacred site or attacking the sacred site was associated with psychological maladaptation, including higher levels of anxiety and depression, lower levels of self-esteem, and psychopathy. These results suggested an

explanation for the lack of sacredness-related violence among psychologically healthy individuals.

In summary, there was not a necessary association between violation of sacredness with violence at the population level. Violating the sacred did not trigger higher levels of violence. However, this result did not rule out the possibility that a minority of the population indeed could be motivated for aggression in the name of sacredness. These people tended to be more psychologically maladjusted. The correlational pattern suggested two possibilities: sacredness-related violence may appeal particularly to people with certain psychological maladaptation; and/or engagement with sacredness-related violence exacerbated existing psychological challenges. Future research could explore these possibilities.

CHAPTER VII

GENERAL DISCUSSION

This dissertation primarily hypothesized that a violation of sacredness would lead to higher levels of violence than other non-sacred forms of violation. Tests of this hypothesis rested upon the assumption of an MAPR (meaning, awe, protection, and religion) model that sacredness symbolizes identity and heritage, confers meaning and brings a sense of awe. The major independent variable was an attack on a sacred versus an attack on a non-sacred site, and the main dependent variable assessed support for war in counterattack. Samples included students from the American South (Study 1, Study 2, Study 5a), students from the Pacific Northwest (Study 3), and students from Tehran in the Islamic Republic of Iran (Study 4). The experimental design utilized vignettes to operationalize the independent variable, and a self-report of support for war (Appendix B) operationalized the dependent variable.

For the sacred condition, the hypothetical vignette described an attack on a sacred site in the following terms: "You are a citizen of Ourlandia, and your nation has been attacked by Theirlandia. Theirlandia has demonstrated strong military prowess and has *attacked and damaged a sacred site of your nation. This site is sacred to the Spirit of Ourlandia. It is a place that symbolizes your identity and heritage. It confers meaning and brings a sense of awe into your heart.* Your country, Ourlandia, is planning to strike back in response to the attack on this sacred site." This scenario focused on the M (meaning) and A (awe) components of the MAPR model, leaving out R (religiousness). The rationale for this omission was that sacredness serves as a more fundamental psychological process than religiousness, and many seemingly non-religious values can

also be sacred, for instance in this study, the value of nationalism. By testing the hypothesis on an areligious sacredness, these studies aimed at a broader level of generalizability that could apply to violence associated with both religious and secular causes.

In addition, however, we also examined possible differences between religious sacredness and non-religious sacredness. In Study 2, we refined sacredness into two separate scenarios. One scenario described an important place of religious worship, "It is the religious center and the site where people worship and perform rituals;" and the other described a monument of *ethnonational* significance, "It is the national monument and the site where people commemorate and celebrate the ancestors, past heroes, and history of the country".

For the non-sacred control condition, the hypothetical vignette described an attack on a military base that emphasized its strategic importance without any reference to sacredness, meaning, or awe. The non-sacred condition replaced the italicized part of the vignette above with "*attacked and damaged a military base of your nation. This site is an important military stronghold. It is located in one of the key population areas and is of strategic significance for national defense*." The rest of the narratives remained unchanged.

We later considered the possibility of a non-religious yet sacred confound with this manipulation given that people might take a military base as a symbol of national sovereignty which could have inspired a sense of sacredness. To address this issue, in Study 5a we adopted a new non-sacred condition describing an attack on "*a*

manufacturing center in your nation. This manufacturing center is located in one of the key population areas and is of strategic significance for the national economy."

In addition to these hypothetical vignettes, we also included semi-real vignettes that described a real-life site as a within-subject manipulation of the independent variable. That is, participants first responded to a hypothetical sacred/non-sacred scenario and then responded to similar semi-real scenarios. For the sacred real-life site, Study 1 used the Washington Monument, Study 4 used the Jame Mosque in the city of Esfahan in Iran, and Study 5a used the Lincoln Memorial Monument in Washington, DC. For the non-sacred real-life site, Study 1 used a military base in Southern California, Study 4 used a military base outside of Esfahan, and Study 5 used an automobile manufacturing plant in the Midwest of the US. It is worth noting that these real-life sites also demonstrated variability in terms of religious and ethnonational significance. For instance, the Washington Monument was more relevant to ethnonational sacredness while the Jame Mosque had a stronger religious connotation.

Main Findings

Results from all five studies consistently showed no statistically significant effect of a violation of sacredness in comparison to non-sacredness as a support for greater violence. The null effect occurred in both hypothetical and semi-real scenarios, with two variants of sacredness (ethnonational and religious), under two variants of the control condition (military and manufacture), and across three geocultural locations (American South, American Pacific Northwest, Iranian). Summarizing the sample means of support for war across all studies, Figure 7.1 shows that a violation of sacredness did not promote higher levels of violence. The black bar in each of the boxes was the mean with the top

boundary showing the first quartile and the bottom boundary showing the third quartile of the distribution of sample means.

The proposed effects did not exist even after controlling for individual difference variables that included conservatism, religiosity, ethnonationalism, militant extremism, and meaning.

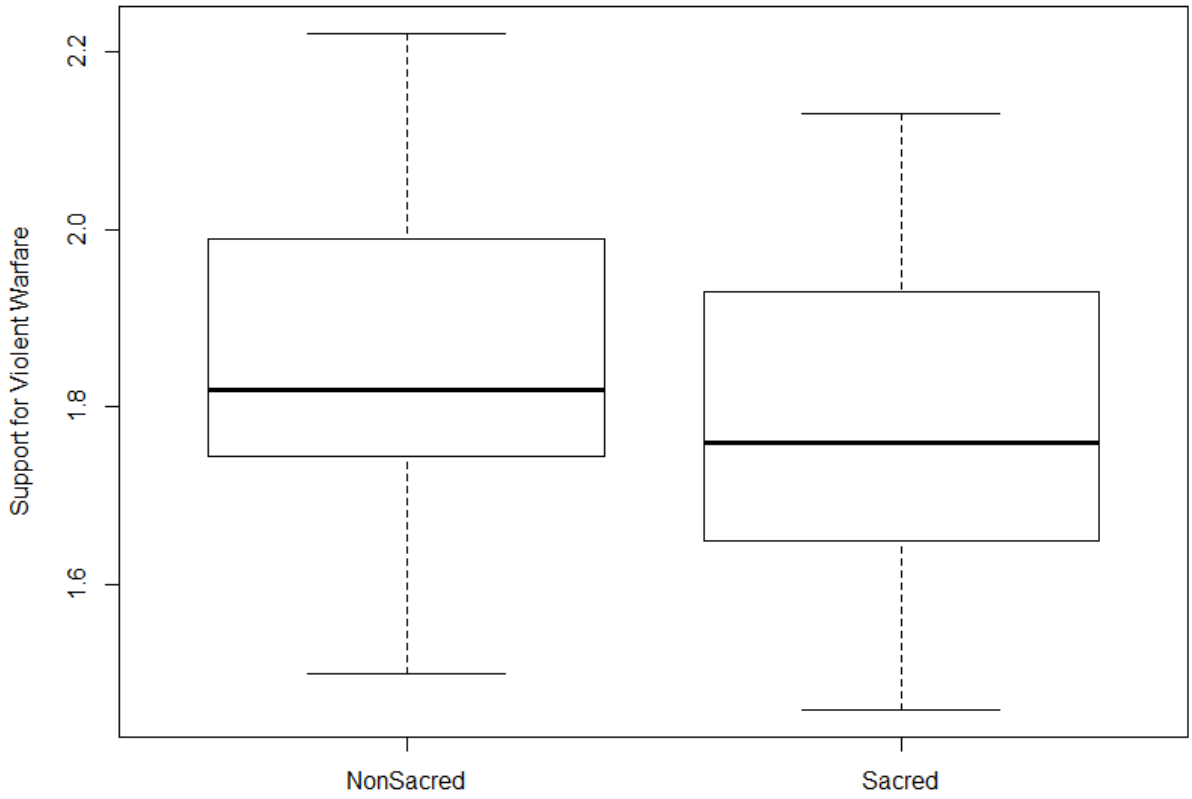

Figure 7.1. Mean support for violent warfare between sacred and non-sacred groups from Study 1 to Study 5.

Moderated Effects

This dissertation proposed several interaction effects associated with sacredness. It hypothesized that large casualties of counterattacking would discourage people's support for war. Since sacredness defies rational analysis, we hypothesized that casualties would not influence decisions under the sacredness condition. Results showed that

casualty levels did not influence support for war in the sacred or control conditions. In short, no interaction was observed.

Drawing on theories from decision-making research that emotion-oriented processing leads to higher risk preference in decisions (Zhang et al., 2016), we hypothesized that emotion-oriented processing could increase support for war associated with sacredness. We manipulated emotional-oriented processing by priming individuals with affect-laden questions, such as "what do you feel when you think of a baby." However, we found no support for this hypothesis in Study 3. A priming of emotion did not increase support for war associated with the sacred site.

The effect of sacredness might depend on how much an individual perceived sacredness. Therefore, we hypothesized that people giving higher sacredness rating would be more likely to support violence for the sacred site. We did indeed observe a marginally significant effect in Study 1, and in Study 2 an effect selectively for the ethnonational sacred site. However, such an effect did not show up in Study 3, and was reversed in Study 4. We reasoned that the sample in Study 3 from the Pacific Northwest was more liberal and less supportive of war in general than the other samples form the American South, thus attenuating this effect. On the other hand, the Iranian sample in Study 4 scored higher on ethnonationalism than the other two samples, which perhaps explained why support for war was higher for the military site.

Another two hypotheses reflected assumptions of the MAPR model. The hypotheses were that religiosity and a search for meaning would boost violence associated with sacredness. However, results from Study 1 showed that religiosity actually suppressed violence associated with the sacred site. Devotional religiousness,

calculated with items indicating internalization of religion (e.g., "My religious beliefs are what really lie behind my whole approach to life") was responsible for this suppression effect; coalitional religiousness, represented by items measuring participation in religious activities, did not show a moderating effect. Results in Study 2 and 3 were in the same direction, but not significant. The differential effects of devotional versus coalitional religiousness have been well documented in psychological research (Preston, Ritter, & Hernandez, 2010). Religion as a coalition activates a mindset of ingroup versus outgroup which can facilitate competitiveness against outsiders. On the other hand, devotional religiousness as internalization of supernatural principles can promote compliance with moral rules, and thus reduce violence.

Search for meaning did not show any significant effect. We hypothesized that people would protect the sacred site as a source of meaning. However, people high in search for meaning did not indicate higher support for war when the sacred site was attacked.

Attitudes toward Attacking and Counterattacking Sacredness

The lack of a support for sacredness as a prompting stimulus for war could have had something to do with a low evaluation of sacred sites in general. Results in Study 2 and Study 3 supported that possibility. Our sample believed that a counterattack for the sacred site would be less costly and less beneficial than a counterattack for the military site. When asked to choose a target for attacking the enemy, the sample indicated that attacking a sacred site was less costly, less beneficial, and less useful than attacking a military site. The sacred site received low valuation in both situations of attack and counterattack.

Then, who supported violence for sacredness? Study 5b showed that those who supported counterattacking for the sacred site were more likely to be Christian and politically conservative in the US. Study 5c showed that those who favored attacking a sacred site over a military site scored higher in psychopathy, Machiavellianism, and depression, and lower in self-esteem. On the other hand, religion did not correlate with poorer mental health. Religion and mental health factors, therefore, seemed to operate independently to influence violence.

In short, these preliminary results suggested that individual difference variable did motivate sacredness-related violence Such motivations appeared in people who were Christian, psychologically maladaptive, and politically conservative.

Sacred Duty, Conservatism, and Violence

We created two original short scales measuring justification of ones' civilization in terms of sacred and rational duty (see Appendix G). Sacred duty entails a belief by persons that God is on their side, and this form of duty dictates that interactions with other cultures be guided by what is sacred. Rational duty entails a commitment to a rational way of life, and it dictates that interactions with other cultures be guided by what is rational. Correlational results showed that both forms of duties predicted militant extremism and justified support for war in the US. In Iran, sacred duty had a much stronger association with violence. Hence, different ideological heuristics may function to justify violence in different societies.

Worth emphasis was the robust positive correlation between political conservatism and militant extremism (and also, support for war) in the US (rs > .30), and less so in Iran. Literature in political psychology suggested that uncertainty avoidance

and threat management (e.g., perceptions of a dangerous world) contributes independently to conservatism (Jost et al., 2007), which in turn predicts aggression (De Zavala, Cislak, & Wesolowska, 2010). The cultural difference between American and Iranian data might be related to the different levels of threats people of the two cultures were perceiving. More importantly, it reflects the extent to which people of these two culture dovetails perceived stress with aggression.

Possible Methodological Challenges

Methodological challenges may deserve consideration from at least three angles.

The first angle examines the face validity of the independent variable manipulations. Did individuals find the site described in the sacred scenario more sacred than that in the control scenario? The answer is positive. Manipulation checks across all five studies showed that individuals rated the sacred site as being more sacred than the non-sacred control. In addition, both sites were rated as important as each other, reducing the possible influence of "importance" on decisions. Indeed, the sacred site in the hypothetical scenario of Study 5a was rated more important, and that perhaps accounted for the higher level of support for war.

It is always possible that demand characteristics played a role in the manipulation checks. However, the inclusion of real-life sacred sites and the rating of those sites – Washington Monument, Lincoln Memorial Monument, and Jame Mosque – as being more sacred showed that it was not mere demand characteristics of people to find sacredness in the scenario. Sacredness as an empirical reality appeared in the evaluations of sacredness, and thus these evaluations could not be reduced to merely demand characteristics on the manipulations.

The second angle pertains to the validity of the dependent variable measure. A competing argument is that support for war could have failed to capture violent responses to an attack on the sacred site, thus failing to differentiate the sacred from the non-sacred. However, we found that support for war correlated strongly and positively with militant extremism and conservatism, giving evidence to its face validity. The distributions of this variable in most studies were close to normal (see Figure 2.1, 3.1, 4.1 and 5.1), showing no obvious signs of ceiling or floor effects. Finally, this measure was indeed sensitive to manipulating conditions: Study 5a showed that support for war was significantly higher when the site was rated more "important."

War might be a disproportionately strong action in response to attack at a physical site. For many of our student subjects, human life (both the soldiers and the citizens of enemy's country) may be more sacred than any sacred monument. One would be less likely to risk something that is more sacred (human lives) to retaliate for a strike that killed no one. Diplomacy may be considered a better path forward that might prevent loss of life with military escalation.

Another possible explanation for the lack of support for war is that participants may not believe that a retaliatory military attack accomplishes anything in service of the sacred, once it has been destroyed. It is worth exploring the possibility of using violence to recapture a sacred site that had been occupied and was threatened with destruction. A related research interest might investigate, in a 2 (protect vs. avenge) by 2 (site target vs. human target) factorial design, support for war for the purpose of either protecting or revenging while varying the target as either a sacred physical site or human lives. Our

preliminary prediction is that people would support revenge for attack on human lives whereas protection for attack on a sacred site.

The third angle delves deeper into the symbolic value of the manipulation scenarios. To what degree does the attack on a sacred site represent the idea of violating sacredness? Sacred land has been a major concern in many real-life conflicts. For instance, Israelis refer to their country as "The Land" (Ha-Aretz), whereas for Palestinians, land and honor are two sides of the same coin (Atran & Axelrod, 2008). Land can be a strong embodiment of sacredness, according to recent development of embodiment theory in psychology (Glenberg, 2010; Meier, Schnall, Schwarz, & Bargh, 2012). In this sense, an attack on sacred land demonstrates, at least, face validity as representing a violation of sacredness.

Having these methodological caveats in mind, the uniform null effects uncovered from four studies might call for either a major modification of the theoretical MAPR model of sacredness or forgoing the connection between violation of sacredness and violence. We have sufficient evidence showing that meaning, awe, and religion are major constituents of sacredness, and the manipulations with respect to these three factors have indeed increased the level of sacredness as measured through self-report. We are left to seriously entertain the possibility that our hypothesis about violent protectors of sacredness might be ill-advised in the first place, and the reproducible null effects may indeed point toward a true lack of connection between sacredness and violence.

Misconception of Sacredness and Violence

The unfortunate marriage of sacredness and violence finds its place not only in wars and global terrorism, but also in noble fights for freedom and dignity. The

Declaration of Independence concluded with the words: "And for the support of this Declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other our Lives, our Fortunes and our sacred Honor." We have also learned from the Israeli-Palestinian conflict that protectors of sacred values take unyielding positions against mundane tradeoffs like that of material benefits (Atran & Axelrod, 2008).

The co-occurrence or correlation of sacredness and violence in historical events, however, does not prove that sacred values drive or cause people to kill and die. Findings from this dissertation offered no support for such a possibility, even when sacredness was placed under attack. In fact, the hypothesized causality between violence and the sacred may be a misconception created by political powers. In the following sections, I will analyze the possible misconception of sacredness as a cause of violence in two interrelated sections. In the first section, I will argue that violence leads to sacredness, not the other way around. Often taking the form of war and heroic death, violence gives rise to a sense of sacredness, which in turn justifies the violent act. In the second section, I will examine the myth of religious violence and argue that no clear-cut boundary exists between religion and the secular when considering the motivations for violence (Cavanaugh, 2009). Combined with empirical findings about the differential effects of coalitional versus devotional religiousness, this leads to the argument that threats to group identity rather than sacredness may be a more direct cause for violence (Preston, Ritter, & Hernandez, 2010).

Violence as Sacred Sacrifice

To say that sacredness causes violence may be confusing cause with effect. Perhaps it is violence that gives rise to a sense of sacredness (e.g., the blood rites; Ehrenreich, 1998). Death and terror are, essentially, forms of sacred sacrifice (Kahn, 2008). Within a given society, death in the defense of beliefs is what makes beliefs sacred (Marvin & Ingle, 1996). In this sense, warfare constitutes a central ritual allowing the society to discover its faith with the shedding of blood. Violence defines the sacred, and it is not the sacred that defines the violence.

Warfare can function like psychotherapy to cure societies of the triviality of mundane daily life. War infuses life with passion. In one of his most famous speeches, *The Soldier's Faith*, delivered on Memorial Day 1895, Oliver Wendell Holmes, Jr. (later chosen as Associate Justice of the Supreme Court of the United States) extolled the obedience of soldiers in offering their life in the American Civil War. Their sacrifice drove away doubt and reconstituted the nation's threatened beliefs, "We have shared the incommunicable experience of war; we have felt, we still feel, the passion of life to its top" (Holmes, 1992, p. 94).

War also has a cleansing power and comes with a fantasy of redemption. This fantasy is fueled by the flow of blood as self-sacrifice. The greater the losses suffered in the war, the greater its cleansing power. War seems to save a civilization from steep decline, as in World War I, and fulfills the task of societal rejuvenation and regeneration (Griffin, 2007).

Such rhetoric culminates in an absolutism of death. There is no higher purpose for dying than dying itself. Braender (2009) argues that the latent function of this sacrifice is

that by dying, soldiers prove that something is worth dying for. This is, of course, totally irrational, as dying violates two fundamental social norms: self-preservation and the prohibition against killing. Violence sanctifies the cultural structures that prompt the violation of these social norms. Facts and fact-based logic no longer apply (Victoria, 2010).

With these implicit functions of war and the irrationality of its justification in mind, we can find abundant examples in a variety of cultural contexts of how the act of dying and killing gives rise to a sense of sacredness. German Nazis, for instance, transformed carnage into national revelation. The themes of struggle, battle, and death pervaded both high culture and popular culture in Germany during the World War II (Baird, 1990). Death, without reference to any other entity, took on the ennobling force of a sacrament. The blood of the martyrs became a cornerstone of Hitlerian "religion," preaching a doctrine of violence in which heroic death was seen as more beautiful than life.

Death in war receives sanctification by being either a personal sacrifice or a sacrifice for the common good. In Nepal People's War, the warrior maintains a unique relationship with the divine by making a personal sacrificial gift, the *bali dân*, a gift that results in a noble death (Lecomte-Tilouine, 2006). By comparison, the Chinese communist martyrs, during the Korean War, exalted revolutionary heroism against individual heroism with a focus on sacrificing for the masses (Zhu, 2014).

The irony of death being the cause rather than the effect of the sacred is that it annihilates all meaning, yet fashions meaning *ex nihilo*. Massive casualties, like that of the over 620,000 soldiers lost in the American Civil War, presented powerful

discontinuities and significant changes in many war survivors' assumptions about death (Faust, 2009). On the other hand, destruction of the old meaning system marked a sacred rite to the rise of new ones (Linderman, 1987). In that sense, death and war live in harmony with sacredness, despite their destructive nature.

In summary, one has to recognize that the connection between violence and sacredness is not as simple as unidirectional. Despite the assumption that protection of sacredness breeds violence, people can actually obtain a sense of sacredness from engaging in violent behaviors. This is especially relevant in times of turbulence and uncertainties that call for reconstruction of meaning systems. Sacrifice through death and killing fills in the vacuum of meaning for the society (Vlahos, 2008). Since our data did not offer any support to the likely false stereotype that sacredness breeds violence, the idea that violence breeds sacredness becomes a more reasonable explanation for the sacredness-violence dialectic.

Religion, Group Identity, and Violence

Any suggestion that violence is a cause of the sacred rather than vice versa, of course, goes against the idea that religion expresses a sacredness as a special cause that demands violence as an effect. The shedding of blood is viewed in many religions as a creative force of history, and martyrdom answers the call of what faith demands. One example appears in the extreme views on religious martyrdom championed by Global Jihadism. This perspective appears in the work of Sheikh Abdullah Azzam, a Palestinian Sunni Islamic scholar and founding member of al-Qaeda. Azzam (2002) once preached the necessity of blood in creating history. "History does not write its lines except with

blood. Glory does not build its lofty edifice except with skulls, Honor and respect cannot be established except on a foundation of cripples and corpses."

On the other hand, such an understanding of jihad and *shahid*, an Islamic term designating those who die only for Allah, may reflect only a partial, and perhaps distorted, reading of the Quran. A historical and holistic study of jihad contextualizes and challenges the military jihad and martyrdom in Islam. The term "jihad," in combination with the phrase *fi sabil Allah,* translates literally to "striving in the path of God," and takes on multiple and sometimes inconsistent connotations in the development of Quranic scholarship. The specifically belligerent and militant interpretations may not preserve the authentic understanding of jihad and shahid (Afsaruddin, 2013). It is not true that the theology of jihad unambiguously makes Islam a religion prone to violence.

Similar ambiguities in the readings of scripture are also not uncommon within in the Judeo-Christian religious tradition. Abraham's preparations for sacrificing his son in response to God's command, in Genesis 22 of the Hebrew Bible, is used to both justify and protest war (Delaney, 2006). The Old Testament draws, in many places, an analogy between destroying the corporal body and establishment of the communal Body. For instance, the first murderer Cain was also the builder of the first city. This analogy has been interpreted to advance the argument for necessity of sacrifice in the process of generating the new (Bryson, 2003). As much as jihad can imply holy war against non-believers, Christians can interpret Scriptures as calls for killing and sacrifice as well.

Just as some Islamic scholars would oppose the militant interpretation of jihad and shahid, some New Testament theologians have cautioned that war is anti-Christian. Hauerwas (2011) argues that Christians who at least implicitly worship war have

confused the sacrifice of war (giving up personal lives) with the sacrifice of Jesus Christ for the salvation of all. As described in Christian traditions, these are two very different sacrifices, one losing and taking life and the other gaining life. The reality of Church is centered on the sacrifice of Jesus as the beginning of a new kind of life that stands against the sacrifice of war.

As these contrasting perspectives make clear, little consensus exists among theologians on the role religion plays in violence. The connection of religion and violence is even more dubious when examined empirically. It all depends on what one means by "religion". If one means the supernatural principle – to live up to the moral standards set by supernatural agents – then religion can activate a goal of virtue (Preston, Ritter, & Hernandez, 2010), and religious priming reliably elicits prosociality (Shariff, Willard, Andersen, & Norenzayan, 2015). If one means belief in God(s), an idealized persecuting divine figure can be a major trigger of violent responses, whereas a loving God may not (Jones, 2006). Finally, if one means by religion a cultural coalition, a religious ingroup versus outgroup, then activating the religious principle can both facilitate co-operation with fellow group members while encouraging competitions against outsiders (Preston, Ritter, & Hernandez, 2010). Results from the current study showed some mitigating effect of religion, and broadly speaking, did not find evidence that sacredness (one of the foundations of religion) would encourage violence at all.

If it was not sacredness that explained violence, what did? A plausible explanation would identify group identity as a major motivation behind violence (Feldman, 2010). The connection between group identity and violence is reciprocal. Men do not go to war just to kill and win, but through their sacrifice to keep the society united.

In this sense, martyrs die at the hands of the group itself (Marvin & Ingle, 1999). Identity cultivates one's willingness to sacrifice for the group (Atran, Sheikh, & Gomez, 2014). From a psychoanalytic perspective, individuals go to war to help the group survive the projection of an internal danger in the face of an alleged threat (Fornari, 1975).

The symbiosis of violence and sacredness may also fulfill a human need of immortality. By abandoning their separate selves, mortal beings can partake in the immortality of the nation (Skya, 2009). "As the soldier dies, so the nation comes alive" (Koenigsberg, 2009). Perhaps scapegoating theory can support this alternative explanation (Girard, 1979). The maintenance of group unity requires that violence be projected outward. Acts of communal violence and the resulting shock and collective repression generate our very sense of the sacred.

Conclusion

Even though the present data suggest that sacredness is not an explanation of violence, sacredness is often used to justify violence and exonerate people from their violent crimes. "Whenever a society must motivate its members to kill or to risk their lives, thus consenting to being placed in extreme marginal situations, religious legitimations become important" (Berger, 1967, p.44). A recent example is Cliven Bundy and the militia occupiers of the federal building at Malheur National Wildlife Refuge. These people romanticized a violent way of life but elevated it in the name of protecting their constitutional rights where none had been taken away. By contrast, the Standing Rock Sioux protesters against the building of Dakota Pipeline did not engage in violence. An obvious sacred object (i.e., burial sites and water) was at the risk of being destroyed,

while no armed violence broke out. This, again, resonates with our argument that protection of sacredness does not necessarily give rise to violence.

I would like to end this dissertation with a Sioux prayer, wishing for peace by invoking everlasting and unitary sacredness.

"Grandfather Great Spirit

All over the world the faces of living ones are alike.

With tenderness they have come up out of the ground

Look upon your children that they may face the winds

And walk the good road to the Day of Quiet.

Grandfather Great Spirit

Fill us with the Light.

Give us the strength to understand, and the eyes to see.

Teach us to walk the soft Earth as relatives to all that live."

APPENDIX A

MORAL JUDGMENT

Original Scale	Farsi Translation
1. Theirlandia should be morally condemned to attack Ourlandia's sacred site.	1. «سرزمينِ آن‌ها» براي حمله به مكان مقدسِ «سرزمينِ ما» بايد از نظر اخلاقي محكوم بشود.
2. It is morally imperative for Ourlandia to attack back in response to Theirlandia attacking the sacred site.	2. از نظر اخلاقي لازم است «سرزمينِ ما» در پاسخ به حمله «سرزمين آن‌ها» به آن مكان مقدس به آن‌ها حمله كند.
3. Ourlandia is good.	3. «سرزمينِ ما» خوب است.
4. Theirlandia is evil.	4. «سرزمين آن‌ها» شر است.
5. Theirlandia deserves punishment.	5. «سرزمين آن‌ها» سزاوار مجازات است.
6. People in Theirlandia are not really human.	6. مردم «سرزمين آن‌ها» واقعا انسان نيستند.
7. Ourlandia must crush and annihilate Theirlandia.	7. «سرزمين ما» بايد «سرزمين آن‌ها» را در هم بشكند و از بين ببرد.
8. Violent warfare is justified to deal with Theirlandia.	8. اقدام نظامي براي رسيدگي كردن به «سرزمين آن‌ها» موجه است.
9. Ourlandia cannot be blamed if they destroy Theirlandia.	9. نمي‌توان «سرزمين ما» را سرزنش كرد اگر كه «سرزمين آن‌ها» را نابود كند.

APPENDIX B

SUPPORT FOR VIOLENT WARFARE

Original Scale	Farsi Translation
1. How much do you support using violence in the war?	1. چه اندازه از استفاده از خشونت در این جنگ حمایت مي‌کنید؟
2. How much time do you think Ourlandia should commit to this war?	2. فکر مي‌کنید چه مدت زمان «سرزمین ما» باید دست به این جنگ بزند؟
3. To fund this war, the president tells the Ourlandian people that he will increase their taxes. Would you support this tax increase?	3. براي پشتيباني مالي اين جنگ، رئيس جمهور به مردم «سرزمين ما» مي‌گويد که ماليات‌هاي آن‌ها را افزايش خواهد داد. چقدر احتمال دارد شما از اين افزايش ماليات حمايت بکنيد؟
4. How likely would you be to join the military to fight in this war?	4. چقدر احتمال دارد براي مبارزه در اين جنگ به ارتش بپيونديد؟
5. How likely would you support a family member's decision to fight in this war?	5. چقدر احتمال دارد از تصميم يکي از اعضاي خانواده براي مبارزه در اين جنگ حمايت کنيد؟
6. Would it be acceptable to kill Theirlandian attackers in this war?	6. آيا کشتن مهاجمينِ «سرزمينِ آن‌هائي» در اين جنگ قابل قبول است؟
7. Would it be acceptable for Theirlandian civilians to die as a result of this war?	7. آيا قابل قبول است که شهروندان «سرزمين آن‌ها» در نتيجه اين جنگ بميرند؟
8. Would it be acceptable for innocent people to die as a result of this war?	8. آيا قابل قبول است افراد بي‌گناه در نتيجه اين جنگ بميرند؟
9. Overall, how much do you support the Ourlandia involvement in this war?	9. در مجموع، چقدر از درگيري «سرزمين مائي»ها در اين جنگ حمايت مي‌کنيد؟

Shaw, Quezada, & Zárate, 2011

APPENDIX C

DUKE RELIGIOSITY

Original Scale	Farsi Translation
1. How often do you attend church/temples/mosques or other religious meetings? 1. Never 2. Once a year or less 3. A few times a year 4. A few times a month 5. More than once per week	1. هر چند وقت يكبار به مسجد/كليسا/معبد يا ديگر مجامع ديني مي‌رويد؟ 1. هرگز 2. يكبار يا كمتر از يكبار در سال 3. چند بار در سال 4. چند بار در ماه 5. بيش از يک بار در هفته
2. How often do you spend time in private religious activities, such as prayer, meditation or Bible study/scriptures? 1. Rarely or never 2. A few times a month 3. Once a week 4. Two or more times per week 5. More than once a day	2. هر چند وقت يكبار در فعاليت‌هاي ديني خصوصي مانند نماز، مراقبه، يا مطالعه متون مقدس شركت مي‌كنيد؟ 1. بندرت يا هرگز 2. چند بار در ماه 3. يكبار در هفته 4. دو يا سه بار در هفته 5. بيش از يک بار در روز
Please indicate your agreement with the statements below using the scale: 1 = I strongly disagree 2 = I tend to disagree 3 = I am not sure 4 = I tend to agree 5 = I strongly agree	طفا موافقت خود را با اظهارات زير با استفاده از اين مقياس مشخص كنيد: 1 = شديدا مخالفم 2 = تا اندازه‌اي مخالفم 3 = مطمئن نيستم 4 = تا اندازه‌اي موافقم 5 = شديدا موافقم
3. In my life, I experience the presence of the Divine (i.e., God).	3. در زندگي‌ام، حضور الهي (يعني خدا) را تجربه مي‌كنم.
4. My religious beliefs are what really lie behind my whole approach to life.	4. همه رويكرد من به زندگي واقعا بر اساس باورهاي ديني‌ام است.
5. I try hard to carry my religion over into all other dealings in life.	5. بسيار مي‌كوشم دينم را در همه جزئيات زندگي‌ام وارد كنم.

Koenig & Büssing, 2010

APPENDIX D

ETHNONATIONALISM

Original Scale	Farsi Translation
1. The homeland of my people is sacred because of its monuments to our ancestors and heroes.	1. وطنِ مردم من مقدس است به علت آثار تاريخي مربوط به اجداد و قهرمان‌هاي ما.
2. I honor the glorious heroes among my people who sacrificed themselves for our destiny and our heritage.	2. من براي قهرمان‌هاي باشكوه در ميان مردمم كه جانشان را براي سرنوشت و ميراث ما فدا كرده‌اند احترام قائلم.
3. My ancestors once lived in a golden age with glorious and beautiful achievements.	3. روزگاري اجداد من در يک عصر طلائي با دستاوردهاي باشكوه و زيبا زندگي كردند.
4. My first loyalty is to the heritage of my ancestors, their language and their religion.	4. وفاداريِ نخست من به ميراث اجدادم، زبان آن‌ها، و دين آن‌هاست.

Saucier, 2015

APPENDIX E

MORAL ABSOLUTISM

Original Scale	Farsi Translation
1. Right and wrong are not usually a simple matter of black and white; there are many shades of gray. (R)	.1 خوب و بد معمولا یک مساله سادة سفید و سیاه نیست؛ سایه‌هاي خاکستري زیادي وجود دارد.
2. There are absolutely clear guidelines about what is good and evil. These always apply to everyone, whatever the circumstances.	.2 رهنمودهاي کاملا روشني درباره آنچه خیر و شر است وجود دارد. این رهنمودها همیشه، درباره همگان، و در هر موقعیتي صدق مي‌کنند.
3. There is really only one proper way to think and behave morally.	3. واقعا تنها یک شیوة مناسب تفکر و رفتار کردن وجود دارد.
4. “Morality” is relative to each person — there is no truly ‘‘correct’’ set of rules that should govern one’s conduct. (R)	4. «اخلاق» براي هر فردي نسبي است (هیچ مجموعه قواعد واقعا «درست» که باید سلوک فرد را هدایت کند وجود ندارد).
5. Any other moral values or ways of thinking and behaving that conflict with my conception of morality are wrong.	5. هر ارزش یا شیوه دیگري از تفکر و رفتار که با برداشت من از اخلاق ناسازگار باشد نادرست است.
6. The moral values and beliefs that help to enrich my life may not necessarily work for everyone. (R)	6. باورها و ارزش‌هاي اخلاقي که به من کمک مي‌کند زندگي‌ام را پر بار کنم لزوما براي دیگران موثر واقع نمي‌شود.

Peterson, Smith, Tannenbaum, & Shaw, 2009

APPENDIX F

MILITANT EXTREMISM

Original Scale	Farsi Translation
1. Our enemies are more like animals than like humans.	1. دشمنان ما بیشتر شبیه حیوان‌اند تا انسان.
2. We have a duty to attack and kill the enemies of our people.	2. ما وظیفه داریم به دشمنان مردم‌مان حمله کنیم و آن‌ها را بکشیم.
3. If you are protecting what is sacred and holy, anything you do is moral and justifiable.	3. اگر فرد در حال محافظت از چیزي مقدس باشد، هر کاري بکند اخلاقي و توجیه پذیر است.
4. Government is illegitimate unless based strictly on God's authority as found in the holy book.	4. حکومت، نامشروع است مگر آنکه دقیقا مبتني بر قدرت خداوند آنگونه که در کتاب مقدس است باشد.
5. Foreigners have stolen land from our people and they are now trying to steal more.	5. خارجي‌ها زمین را از مردم ما دزدیده‌اند و اکنون مي‌کوشند بیشتر بدزدند.
6. If necessary, we should use force to cleanse the world of corruption.	6. در صورت لزوم، براي پاک کردن جهان از فساد باید از زور استفاده کنیم.
7. Going to war can sometimes be sacred and righteous.	7. به جنگ رفتن گاهي مي‌تواند مقدس و درستکارانه باشد.
8. We should become warriors in the army of righteousness.	8. ما باید جنگویاني شویم در ارتش درستکاري.
9. The best way to die is defending your beliefs.	9. بهترین راه مردن، دفاع کردن از باورهایت است.
10. Extreme measures are needed now to restore virtue and righteousness in this world.	10. به اقدامات شدیدي نیاز است تا فضیلت و درستکاري را در این دنیا به حال اول برگرداند.

Saucier, Akers, Shen-Miller, Knežević, & Stankov, 2015

APPENDIX G

SACRED AND RATIONAL DUTIES OF CIVILIZATION

Original Scale	Farsi Translation
Sacred Duty	
1. Our civilization has God on its side.	1. خدا طرفدار تمدن ماست.
2. It is my sacred duty to develop righteousness in my own civilization.	2. اين، وظيفه مقدس من است كه درستكاري را در تمدن خودم گسترش دهم.
3. Our interactions with other cultures must be guided by what is sacred to our civilization.	3. تعاملات ما با ديگر فرهنگ‌ها بايد توسط آنچه براي تمدن ما مقدس است هدايت بشود.
Rational Duty	
4. Our civilization is committed to a rational way of life.	4. تمدن ما ملتزم است به يک شيوه زندگي عاقلانه.
5. I have civic duties to my civilization, including the promotion of a rational way of life for all of our citizens.	5. من نسبت به فرهنگم وظايف شهروندي دارم، از جمله ارتقاء يک شيوه زندگي عاقلانه براي همه شهروندانمان.
6. Our interactions with other cultures must be guided by what is regarded as rational within our civilization.	6. تعاملات ما با ديگر فرهنگ‌ها بايد توسط آنچه درون فرهنگمان عاقلانه است هدايت بشود.

APPENDIX H

MEANING IN LIFE SCALE

Original Scale	Farsi Translation
1. I understand my life's meaning.	1. معناي زندگي‌ام را درک مي‌کنم.
2. I am looking for something that makes my life feel meaningful.	2. به دنبال چيزي مي‌گردم که موجب شود زندگي‌ام معنادار احساس بشود.
3. I am always looking to find my life's purpose.	3. من هميشه در جستجوي يافتن هدف زندگي‌ام هستم.
4. My life has a clear sense of purpose.	4. زندگي‌ام داراي يک حس روشن هدف است.
5. I have a good sense of what makes my life meaningful.	5. حسي خوب دارم از آنچه زندگي‌ام را معنادار مي‌کند.
6. I have discovered a satisfying life purpose.	6. يک «هدفِ زندگي» کشف کرده‌ام که رضايت بخش است.
7. I am always searching for something that makes my life feel significant.	7. هماره در حال جستجوي چيزي‌ام که موجب شود زندگي‌ام معنادار بشود.
8. I am seeking a purpose or mission for my life.	8. در جستجوي يک هدف يا ماموريت براي زندگي‌ام هستم.
9. My life has no clear purpose.	9. زندگي‌ام هدف روشني ندارد.
10. I am searching for meaning in my life.	10. در جستجوي معنا براي زندگي‌ام هستم.

Presence: 1, 4, 5, 6, & 9 (R); Search: 2, 3, 7, 8, & 10

(Steger, Frazier, Oishi, & Kaler, 2006)

APPENDIX I

STUDY 3 PRIMING CONDITIONS

Calculation Priming	Feeling Priming
1. If an object travels at five feet per minute, then by your calculations how many feet will it travel in 360 seconds?	1. When you hear the name "Mother Teresa," what do you feel? Please use one word to describe your predominant feeling.
2. If a consumer bought 10 books for $540, then, by your calculations, on average, how much did the consumer pay for each book?	2. When you hear the word "baby," what do you feel? Please use one word to describe your predominant feeling.
3. On a farm, the number of chicken is twice the number of goats; there are 10 goats. How many animals (chickens plus goats) does this farm have?	3. When you hear the words "pine trees," what do you feel? Please use one word to describe your predominant feeling.
4. Josh takes a train from New York City to Boston which runs for 4 hours and 30 minutes. If the train leaves at 7 AM, when will Josh arrive at Boston if the train runs on time?	4. When you hear the word "universe," what do you feel? Please use one word to describe your predominant feeling.
5. A shirt is on sale with 20% off of its listed price, and you have a coupon that will take an additional 10% off. If the shirt originally costs $10, how much does it cost after the discount?	5. When you hear the word "honesty," what do you feel? Please use one word to describe your predominant feeling.

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