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ABSTRACT

We outline a theory of *bounded affinity* between religious experiences and beliefs and paranormalism, which emphasizes that religious and paranormal experiences and beliefs share inherent physiological, psychological, and ontological similarities. Despite these parallels, organized religious groups typically delineate a narrow subset of experiences and explanatory frames as acceptable and True, banishing others as either false or demonic. Accordingly, the theory provides a revised definition of the “paranormal” as beliefs and experiences explicitly rejected by science *and* organized religions. To demonstrate the utility of the theory, we show that, after controlling for levels of conventional religious practice, there is a strong, positive relationship between claiming Christian-based religious experiences and believing in, pursuing, and experiencing the paranormal, particularly among individuals not strongly tethered to organized religion. Bounded affinity theory makes sense of recent non-linear and complex moderation findings in the empirical literature and reiterates the importance of the paranormal for studies of religion.

Key Words: paranormal, religious experiences, religiosity, Christians, United States, bounded affinity

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INTRODUCTION

In this study we outline and test a new theory of how religion and the “paranormal” intersect. The theory of *bounded affinity*: 1) provides a revised definition of the paranormal; 2) emphasizes the similarities between religious and paranormal experiences and beliefs; 3) incorporates the antipathy of organized religions toward supernatural beliefs and experiences that fall outside the interpretive framework of their communities; and 4) makes sense of recent empirical findings on religiosity and paranormalism that identify non-linear and complex moderation patterns. To demonstrate the utility of the theory, we investigate the extent to which self-identified Christians who report religious experiences, such as hearing the voice of God, having religious visions, or speaking in tongues, tend to simultaneously embrace paranormalism (e.g. believe in the paranormal and report paranormal experiences, such as hauntings, witnessing Unidentified Flying Objects (UFOs), and seeking revelation via psychics or fortune-tellers).

Although social theorists, past (e.g., James 1986; see Sech et al. 2012) and present (Kripal 2010), as well as folklorists (Bullard 1989; Hufford 1982) have emphasized the similarities between intense religious and paranormal experiences, no extant theories addressing the paranormal sufficiently explain the complex empirical findings between religiosity and paranormalism. Further, no studies have empirically examined the relationship between intensive religious experiences and paranormalism. We address both of these issues. We begin by briefly reviewing the long-standing conflict between two competing explanations about how more conventional religiosity and interest in the paranormal intersect, which we refer to as small-step and exclusivity conjectures.

The Small-Step Conjecture

The small-step conjecture suggests that individuals who report religious experiences are similar to those who hold a paranormal orientation (Rice 2003; Goode 2000, 2012). For example, a person who believes she has been aided by a guardian angel shares much with a person who believes he has encountered a ghost, since both experiences are predicated upon a spiritual orientation to the world, represent a rejection of materialism, are based on belief in disembodied supernatural agents, and are at odds with conventional scientific thinking (also see Bainbridge 2004). Moreover, others have argued that one type of supernatural belief can reinforce other types of supernatural belief (Wuthnow 1978; Brown 1992). As Rice (2003:96)

put it “...it is a small step to move from believing in the devil and angels to believing in ghosts and aliens.”

A small-step perspective further argues that individuals’ views of the universe can be subdivided into rationalist and spiritual orientations. Rationalists confine existence to the here and now, while appeals to a ‘higher order’ or ‘divine plan’ to explain life events are rejected (Krull and McKibben 2006). Spiritualists, on the other hand, maintain that the material world exists on a lower plane of existence and some life events are evidence of an unfolding cosmic plan rather than random or accidental (James [1901-2] 2010). In effect, both religious and paranormal experiences share the belief in powers and agents that operate outside of the physical world, and thus it is the attributed *source* of the agent that determines whether an uncanny experience is framed by the perceiver as a religious, paranormal, or “secular” experience (see Proudfoot 1985). Consequently, the same physiological experience may be interpreted in very divergent ways, including in terms of religion or paranormalism, depending on social and group contexts, as well as the beliefs of the experiencer.

Some research has provided support for the small-step conjecture. Orenstein (2002) found that traditional religious belief had a positive relationship with higher paranormal beliefs, and further that people claiming no religious affiliation were not more likely to endorse New Age beliefs.¹ More specifically, Goode (2000; also see Rudski 2003) found that greater fundamentalism is significantly related to higher levels of belief in paranormal phenomena. By the same token, respondents who disagree with religious beliefs are also more likely to disagree with paranormal phenomena. Accordingly, “...respondents who believed in angels, heaven, divine creation, and the devil also believed the reality of extraterrestrial vehicles, ESP, astrology, lucky numbers, and King Tut’s curse” (Goode 2000:34). Yet the small-step conjecture has received limited support from other empirical studies.

The Exclusivity Conjecture

In direct opposition to the small-step conjecture, the exclusivity conjecture proposes that conventional religious and paranormal beliefs are too culturally distinct for individuals to hold

¹ This is primarily because it is “nonaffiliated believers” that have higher levels of paranormal belief (see Baker and Bader 2014), while non-theists have lower levels of paranormalism (Baker and Smith 2015). Grouped together, these sub-groups effectively cancel each other out.

simultaneously without conflict (Stark and Finke 2000). This perspective assumes that conventional religious and paranormal beliefs represent discrete cultural belief systems. For instance, Christian-based religious experiences connect individuals to the exclusive "correctness" of the theology undergirding those experiences, and thus, perhaps, to the incorrectness of different cultural schema about metaphysical phenomena. It is in the interest of religious groups to attempt to limit spiritual practice that falls outside their control, lest members spread their finite "spiritual capital" across different venues (Bainbridge 2004; Iannaccone 1992, 1994, 1995). Accordingly, stricter religious groups should espouse negative views of alternative beliefs and sanction members who engage in paranormal inquiry (such as visiting a psychic or UFO websites). Moreover, strict groups may directly condemn paranormal beliefs as theologically suspect, or perhaps even evil, suggesting a negative relationship between religiosity and paranormal beliefs. For instance, roughly one-fifth of respondents to a 2007 national survey of Americans agreed with the statement: "Certain paranormal phenomena (such as UFOs and Ouija boards) are the work of the devil." Those affirming this position "tended to be of lower socioeconomic status, to be Evangelicals, and/or to have high levels of service attendance and biblical literalism" (Baker and Bader 2014:586).²

Recent literature has indeed found that active religious adherents in the United States tend to have a lower probability of holding paranormal beliefs. Religious activities, including service attendance, frequency of prayer, and self-identified religiosity have negative effects on paranormal beliefs (Mencken et al. 2008; Stark 2008). Other research concludes that those with conventional Christian beliefs score low on paranormal beliefs (Sjodin 2002; Krull and McKibben 2006). Stark and Bainbridge (1986) argue that paranormal beliefs tend to be strong in areas where traditional Christianity tends to be weak, and vice versa. Because of these patterns, some researchers have concluded that religion and the paranormal occupy independent and incompatible spaces in the religious marketplace (Emmons and Sobel 1981; Stark 2008).

² Notably those who believe the paranormal to be "of the devil" may still strongly believe in the reality of paranormal phenomena, particularly as it pertains to demonology and the occult; however, the efforts by conventional religious groups to demonize the paranormal still lead to lower average levels of paranormal beliefs, and particularly experiences, among active members of stricter religious groups.

Complicating matters, there have also been several studies reporting no significant (linear) relationship between paranormal and Christian beliefs (Donahue 1993; Rice 2003; Sparks 2001).

Bounded Affinity Theory

Recently studies have resolved some of the empirical discrepancies between small-step and exclusivity conjectures by showing nonlinear and/or non-additive effects (Bainbridge 2004; Baker and Draper 2010; McKinnon 2003; Krull and McKibben 2006; Mencken et al. 2009; Bader et al. 2010; Bader et al. 2012; Glendinning 2006). These nonlinear and multiplicative effects suggest the need for a third perspective, one that better reflects the empirical relationship between conventional religiosity and paranormalism. To date, however, researchers have not posited a general theory capable of accounting for the complex array of findings in the empirical literature.

To pursue such a theory, we begin by asking: What distinguishes “religious” beliefs and experiences from “paranormal” beliefs and experiences? The answer, in short, is cultural boundaries, as created and sustained by interpretive communities. Here we refer to the idea of “culture” as created and bound up in interactive social groups, such that interactions produce “idiocultures” that create and assign meaning to cultural narratives and objects (Fine 1979). Specifically applied to religious communities, “plausibility structures” rooted in symbolic communications create shared narratives of meaning and frameworks for understanding experiences, while simultaneously placing social constraints on what are considered acceptable belief systems (Berger 1967). Put another way, the substantive content of narratives about religious and paranormal experiences will differ, and more importantly, interpretive communities will differ on the types of supernatural beliefs and intensive physiological and psychological experiences they recognize as being “true” encounters with the super-empirical, and those which they deem to be delusional or heretical (Taves 1999: 350). If, however, we bracket the layered cultural meanings added to intensive physiological and psychological experiences, as well as to supernatural beliefs, religious and paranormal beliefs and experiences share much in common, particularly from the standpoints of physiology (for experiences) and ontology (for beliefs).

Physiologically, intensive experiential religious and paranormal encounters with the transcendent or “wholly other” (Otto [1923] 1958) share many similarities. Indeed, in some

cases, the same physiological phenomena may be interpreted as paranormal or religious in nature, depending on the cultural context and prior beliefs of the experiencer. Sleep paralysis has been fruitfully analyzed from this point of view (see Adler 2011; Ness 1978). While the biological underpinnings of the experience are the same, the substantive content and retrospective phenomenology of the experience are matters of cultural context and distinction. Experiencers of sleep paralysis may interpret their experience through the lens of witches, ghosts, aliens, or religious supernatural concepts such as Satan, demons, or angels (Hufford 1982; also see Bullard 1989; McNally and Clancy 2005).

Cross-cultural research on anomalous experiences such as extra-sensory perception, out-of-body-experiences, déjà vu, and night paralysis shows that levels of such experiences vary across cultural contexts, with “secular” cultures having higher rates of what would be termed paranormal experiences (McClenon 1988, 1990). Notably, however, such experiences occur across all ranges of religiosity, and even among elite scientists, although at lower rates (McClenon 1993). The prevalence of such experiences related to near-death occurrences, trance, and hypnotizability, coupled with their ability to be interpreted within both organized religious and paranormal frameworks suggests an important role for intensive experiences in theories about the evolutionary origins of religion, as well as in contemporary theories about religion and/or the paranormal (McClenon 1994, 2000).³ From this vantage it becomes clear that whether an experiencer perceives an intensive encounter with the numinous as paranormal or religious in nature is a matter of context rather than physiology or psychology, a fundamental point undergirding James’ ([1901-2] 2010) seminal study of religious experience, but one that has often been lost in more recent theorizing about religion that definitively separates religion from “magic” by claiming that the latter is falsifiable while the former is not (e.g., Stark 2001).

There are also many ontological similarities between paranormal and religious beliefs and experiences. From the standpoint of institutional science, religious and paranormal phenomena are epistemologically equivalent, as both are deemed beyond what is empirically provable or accessible.⁴ The automatism of sectarian and prophetic religious experiences and

³ For theories “of religion,” this is nearly always “or,” as theories focusing on religion rarely incorporate paranormalism as a central concern; however, theorists who focus on the paranormal typically fall into the “and” category by applying wider theories of religion to understand paranormal experiences and subcultures.

⁴ Religious and paranormal concepts are also *not disprovable*, a fact that is often lost on debunkers on all sides.

some paranormal experiences, such as trances or mediumship, also share much in common physiologically and sometimes even phenomenologically. In addition, experiences—Christian or otherwise—can become ‘eye opening’ regarding the possibility of other supernatural phenomena, especially among those who are spiritually inclined but not bounded to exclusivist religious groups. In this way religious experiences and beliefs unmoored from religious communities can have the religiously “incongruous” effect (see Chaves 2010) of leading to experimentation with beliefs and experiences outside of organized religion. Ultimately it is cultural, subcultural, and communal distinctions that deem supernatural beliefs and intensive, uncanny, or extra-ordinary experiences as either conventionally religious or paranormal (Taves 2013a, 2013b).

Although most research on the relationship between religion and the paranormal has focused upon beliefs, religious experiences may especially serve to reinforce the barrier between, or become a bridge across, religion and the paranormal. A direct experience with the divine has the potential to reinforce the ‘Truth’ of a particular religious belief system through contact with the divine (Stark and Finke 2000). Put another way, people who have directly experienced the Virgin Mary should become convinced that the Virgin Mary is "real," lending credence to other claims made by their religious group and undermining the credibility of alternative spiritual explanations. Further, religious experiences may give the individual a sense that they have purpose within broader religious metanarratives and provide psychological rewards unavailable through other means (Baker 2009). For Christians involved in organized communities, having religious experiences create a stronger connection to the veracity of particular Christian belief systems.

We propose a synthesis of small-step and exclusivity conjectures regarding the relationship between religiosity and paranormalism (paranormal beliefs, experiences, and pursuits) that emphasizes the strengths of each approach. We have labeled this theory *bounded affinity* to highlight the inherent similarities between religious and paranormal beliefs and experiences, while also signaling that interpretive communities, particularly organized religions, place cultural boundaries on which types of beliefs and experiences are deemed True (“religious”) or false, or true but demonic (“paranormal”). This approach recognizes the physiological, psychological, and ontological similarities between intensive experiences deemed religious and those deemed outside the bounds of conventional religion—which in cultural

contexts with established yet separate religious and scientific institutions will tend to be classified as “paranormal,” or an analogous label (see Kripal 2010).

Much of the confusion about the relationship between religion and the paranormal in previous literature stems from how the paranormal is defined.⁵ Typically the paranormal is defined only in relation to institutional science (Bader and Molle 2013). Goode, for example, distinguishes between pseudoscience and paranormalism. Proponents of pseudoscience “masquerade their beliefs and practices as if they were science,” while paranormalists believe in “extra-scientific” forces or beings and are less concerned with scientific reasoning or acceptance (Goode 2013:146). Similarly, coming from the perspective of psychology, Irwin (2009:16-7) defines paranormalism as phenomena that are rejected by science. This definition directly implies that it is only a small step between the religious and paranormal supernatural, but misses the antagonistic relationship between organized religion and what gets defined as “paranormal.” In contrast, focusing solely on how stricter religious groups draw paranormalism beyond their bounds and into separate spheres of belief overlooks the similarities between religion and paranormalism (e.g., Stark 2008). The ontological affinities between religious and paranormal beliefs and the physiological affinities between religious and paranormal experiences are apparent, both theoretically and empirically. Although conventional religionists may rebuke paranormalists, in the end, they are kindred spirits.

Bounded affinity theory incorporates both the similarities between religious and paranormal beliefs and experiences, as well as the cultural distinctions drawn by organized religious groups. The social processes demarcating these experiences as natural or supernatural in origin, as well as those subsequent within religious subcultures marking such phenomena as True or false (or “of the devil”) mark a trail to what gets considered paranormal. From this perspective it is clear that the “paranormal” can be most usefully defined by accounting for its relations to both institutional science and organized religion (also see Kripal 2010:9, 39-43, 111-8, 145-7, 168-74). Accordingly, the paranormal can be best defined as beliefs, practices, and experiences that are “dually rejected—not accepted by science and not typically associated with mainstream religion” (Bader et al. 2010:24).⁶

⁵ Empirically, linear modeling of non-linear patterns has also exacerbated this confusion (Baker and Draper 2010).

⁶ We are operating with an understanding of “mainstream religion” as organized religious traditions that have persisted for multiple generations, have at least a basic organizational structure and hierarchy, and are considered

Rooted in this revised definition of the paranormal, *bounded affinity theory* specifies the types of the relationships that should be found between religiosity and paranormalism under different conditions. The three basic premises of the theory are:

- Premise 1:** Intensive religious and paranormal experiences (e.g., seeing visions, hearing voices, channeling, etc.) share similar underlying physiological processes.
- Premise 2:** From the perspective of institutional science, religious and paranormal supernatural beliefs share a similar ontological status.
- Premise 3:** Organized religious groups have a vested interest in restricting the diversity of members' experiential and supernatural interests in order to increase commitment to and investment in the group.

Per Premise 1, we would predict that, absent other concerns, individuals would not perceive a difference between the various phenomena that cultural institutions have demarcated as either "true" or "false," "religious" or "paranormal." Therefore, when the effects of religious practice and exclusivity are statistically accounted for, we would expect a positive relationship between religious experiences and beliefs and embracing paranormalism, as the inherent affinities of religion and paranormalism will come to the fore in the absence of cultural distinctions imposed by organized religious groups.

But, per premise 3, organized religious groups *do* place boundaries upon what constitutes "true" and "false" interpretations of supernatural experiences. There may be little difference between receiving a revelation from Jesus and channeling the cosmic masters from a physiological standpoint, but for many conservative Christian denominations the first represents

(relatively) culturally conventional. The features of generational persistence and cultural conventionality distinguish "mainstream religion" from new religious movements. Notably this means we are not using a purely functional definition of religion as that which produces ultimate meaning, nor a substantive one focused on supernaturalism. Both of these fail to separate the paranormal from religion, which is clearly problematic because social groups themselves make this distinction. Instead we are using a modified version of Durkheim's ([1912] 1995: 44) definition of religion as beliefs and rituals about the sacred "which unite into one single moral community called a Church, all those who adhere to them." Thus, the distinguishing feature between religion and the paranormal is that: "*There is no Church of magic*" (Durkheim [1912] 1995: 42, emphasis in original). This also allows for the relativity of what is considered "religious" and "paranormal" in different cultural or temporal contexts.

received wisdom and the second demonic deception. Thus, we must account for the circumstances under which religiosity will curtail expressions of paranormalism.

Using Glock and Stark's (1965) typology of different types of religious expression (practice, experience, belief, knowledge, and consequences), our premises suggest how specific aspects of religion will relate to paranormalism. Specifically, we posit nine general propositions about how religiosity and paranormalism will intersect.⁷

- 1) If scales/indices of different dimensions of religiosity are examined separate from one another, or combined into a single metric, there will be a curvilinear relationship between religiosity and paranormalism, such that those low and high in religiosity will have lower levels of paranormalism compared to the moderately religious (see Bader et al. 2012; Baker and Draper 2010).
- 2) When examining multiple dimensions of religiosity simultaneously, such as when controlling for different dimensions of religiosity in multivariate contexts:
 - a. Religious practice, such as frequency of participation in community gatherings and reading sacred scriptures, will be negatively related to paranormalism (see Orenstein 2002).
 - b. Religious consequences, such as following specific behavioral rules or accepting exclusivist religious dogma (see Baker and Draper 2010:421), will be negatively related to paranormalism.
 - c. Religious knowledge, such as being able to recall sacred scriptures or having education in historical traditions about a specific religion (produced by those within the tradition), will be negatively related to paranormalism.⁸
 - d. Religious experiences, such as hearing the voice of God or seeing visions, will be positively related to paranormalism.

⁷ Further propositions about the relationship between religion and the paranormal can be derived from the theory, such as the use of particular aspects of religion in certain paranormal subcultures (see Eaton 2015) and the stronger affinity between "enlightenment" paranormalism and religion as compared to "discovery" paranormalism (Bader et al. 2010). For the sake of brevity, we have only outlined the basic expectations of the theory here, in the hopes that researchers will further elaborate and test the theory in future studies.

⁸ To date this proposition has not been tested empirically.

- e. Religious supernatural beliefs, such as belief in angels and demons, will be positively related to paranormalism (see Draper and Baker 2011).⁹
- 3) The positive relationship between religious experiences or supernatural beliefs and paranormalism will be strongest among those with lower levels of involvement in organized religious communities as measured by levels of religious practice, knowledge, or consequences (on this relationship for religious beliefs, see Mencken et al. 2009; Mencken et al. 2008).
- 4) Those who self-identify as religious “seekers,” “spiritual but not religious,” or similar “questing” identities will have the highest average levels of paranormalism by virtue of combining a supernaturalist orientation with an absence of ties to organized religion (see Baker and Bader 2014; Baker and Smith 2015:92; Eaton 2015).

Given the centrality of intensive physiological and psychological experiences to our overall theory, as well as the rarity of examinations of religious experiences in relation to paranormalism in the extant literature (see Draper and Baker 2011 for an exception), we focus here on testing for the positive effects of religious experiences on paranormalism after controlling for religious practice and dogmatism (Proposition 2d), and assessing the moderating effects of religious practice on the relationship between claiming religious experiences and paranormalism (Proposition 3). To do this we examine the relationship between claiming Christian-based religious experiences and paranormalism among self-identified Christians in the United States.

METHODS

Data

The data used in this study are from the 2005 administration of the Baylor Religion Survey (BRS I). Consisting of a random, national sample of 1,721 U.S. citizens, the BRS I was

⁹ Supplemental analyses using the 2005 and 2007 BRS show that belief in both angels and demons positively relate to paranormalism after controlling for levels of religious practice. Further, these relationships conform to Proposition 3 when examining the moderating effect of religious practice. Results available upon request.

administered and collected by the Gallup Organization.¹⁰ In the analysis we use ordinary least squares and binary logistic regression models to predict the effects of Christian religious experiences on paranormalism. We analyze only respondents who self-identified as affiliated with a Christian tradition when provided with a list of forty possible religious traditions and a write-in option. We limit the analysis to self-identified Christians because the religious experiences in the BRS I are culturally Christian. Non-Christians in this sample may have had experiences that are not listed, and moreover, the experiences that are listed in the BRS may not readily apply to some non-Christians. By limiting the analysis to Christians only, we reduce any potential inherent bias in the design of the questionnaire. In addition, examining only religiously affiliated Christians provides a more stringent test of our bounded affinity propositions by excluding the “spiritual but not religious” population.

Much of the research cited above focuses on paranormal beliefs. We examine three dimensions of paranormalism: beliefs, practices, and experiences. Paranormal beliefs are the most broadly held throughout the general population. Over 50% of the American population is estimated to believe in one or more paranormal phenomenon (Bader et al. 2010). Over one-third of the population has participated in paranormal activities, including researching topics, watching paranormal based shows, and reading paranormal based books. Meanwhile, only 20% of the population has reported a paranormal experience, such as sighting a UFO or encountering a ghost (Bader et al. 2010).¹¹

These three concepts are logically interrelated, and there is the potential for endogeneity among them. It is reasonable to expect that those who have had a paranormal experience also hold paranormal beliefs. However, it is statistically necessary—given the large proportions of Americans who believe—that not all those who hold paranormal beliefs will have had an experience or have done active investigation. Moreover, thanks to the ubiquity of paranormal themed movies, documentaries, and television shows over the last 50 years, it is possible that someone who is interested in the paranormal, and reads books on it, does not have strong

¹⁰ The data are weighted. For full information on the sampling methodology and weighting of the BRS see Bader et al. 2007.

¹¹ Estimated proportions of populations holding at least one paranormal belief or experience are heavily influenced by how many and which types of different paranormal topics are covered (e.g., Moore 2005).

paranormal beliefs (i.e. ‘healthy skeptics’). By expanding the analysis beyond paranormal beliefs to also include experiences and activities we provide a more thorough analysis of how religious practice and Christian-based religious experiences affect paranormalism, broadly conceptualized.¹²

Dependent Variables

We use two sets of analyses of three dimensions of paranormalism in the BRS I. The first set of analyses predicts paranormal activities and experiences. Respondents are asked to indicate whether or not (yes or no) as an adult they had ever done any of the following: “consulted a horoscope to get an idea about the course of your life”; “called or consulted a medium, fortune teller, or psychic”; “visited or lived in a house or place believed to be haunted”; “consulted a Ouija board to contact a deceased person or spirit”; or “witnessed an object in the sky that you could not identify (UFO).” Each of these items is predicted using binary logistic regression.¹³

The second set of analyses combines a set of indicators that measure belief in the paranormal. Respondents were asked to state their agreement or disagreement with a battery of statements about the paranormal, given the following response category choices: strongly disagree, disagree, undecided, agree, and strongly agree. There are seven items about paranormal beliefs we use in these analyses. These include: "Astrologers, palm-readers, tarot card readers, fortune tellers, and psychics can foresee the future"; "Astrology impacts one's life and personality"; "It is possible to communicate with the dead"; "Places can be haunted"; "Dreams sometimes foretell the future or reveal hidden truths"; "Some UFOs are probably spaceships from other worlds"; and "Creatures such as Bigfoot and the Loch Ness Monster will one day be discovered by science." These seven items were chosen after an exploratory factor analysis of 11 paranormal items. The seven ordinal items are combined into an index of paranormal beliefs (Cronbach's $\alpha=.859$ for the subpopulation of self-identified Christians), and have been used

¹² For example, if high levels of religiosity are related to censure of Christians who deviate from the proscribed models of behavior, it is easier to censure activities, such as visiting psychics or mediums, than to censure thoughts/beliefs.

¹³ We also examined two other experiences: having had an out of body experience, and having had a sensation of feeling as one with the universe. The results for these two measures were identical to those reported for UFO sightings. We decided not to include them because they were judged to be too conceptually similar to Christian-based religious experiences.

previously in the literature (see Mencken et al., 2008; Bader et al. 2010; Baker and Draper 2009). The final index is coded so that a high value represents a high level of paranormal belief.¹⁴

Independent Variables

There are eight binary Christian-based religious experiences measures in the BRS I that we use in these analyses. Each respondent was asked if s/he ever had any of the following experiences: "I witnessed or experienced a miraculous, physical healing"; "I spoke in tongues at a place of worship"; "I personally had a vision of a religious figure while awake"; "I felt called by God to do something"; "I heard the voice of God speaking to me"; and "I had a dream of religious significance." Respondents were also asked whether they had ever had an experience where they were in a "state of religious ecstasy" or "filled with the spirit." These yes/no religious experience questions are combined into a count of experiences with a range from 0–8.¹⁵ The median number of reported Christian-based religious experiences among self-identified Christians is two.

Religious Affiliation, Practice, and Dogmatism

We have two sets of religion measures. The first consists of religious tradition as measured by the religious tradition (RELTRAD) classification scheme (see Steensland et al. 2000). We combine Black Protestants and Evangelical Protestants as our suppressed categories.¹⁶ Since the sample is limited to self-identified Christians, Mainline Protestants and Catholics are compared to Black Protestants and Evangelical Protestants. The second religion

¹⁴ We recognize that these are distinct paranormal phenomena, and that the existence of cryptids invokes a literature very distinct from the UFO subculture. However, the data indicate that these items load well together in a factor analysis. We combine them together into an index of paranormal beliefs for the sake of parsimonious analysis.

¹⁵ Similarly, we recognize the important distinctions between different types of religious experiences, such as Glossolalia (e.g., Goodman 1972; Holm 1987), healing (e.g., Singleton 2001), and having visions (e.g., Stark 2005:32-56), all of which have independent literatures identifying important psychological and sociological features of the specific experiences. Our aim here, however, is to make a broader claim about the similarities between and cultural distinctions made about religion and the paranormal, with particular emphasis on the range of claimed intensive religious experiences. In essence, we are seeking to build on the literatures on specific religious or paranormal experiences by making wider claims about how these two dimensions of culture of intersect.

¹⁶ There were only small differences between Black Protestants and Evangelical Protestants on most indicators of paranormalism. We therefore combined the two categories for these analyses. This also reduces the problem of multicollinearity between the Black Protestant and race variables.

measure is a relative rank of religious practice and dogmatism based on the following measures: frequency of attendance at religious worship services, frequency of Bible reading, frequency of prayer, and view of the Bible (ranging from an ancient book of history and legends to “The Bible means exactly what it says. It should be taken literally, word-for-word, on all subjects”). These four items form an index with a Cronbach’s $\alpha = .841$. We standardized each item (mean 0, standard deviation 1) and created a rank-order summary measure across all four. A high value on the index means the respondent scores very high on religious attendance, prayer, and Bible reading and inerrancy. This is our main variable measuring how tightly self-identified Christians are bounded to their religious communities. We also test for a multiplicative interaction between religious practice/literalism and Christian-based religious experiences, allowing us to examine the effects of Christian-based religious experiences on paranormalism at different levels of boundedness to conventional religion. Lower order and multiplicative terms were mean-centered.

Sociodemographic Measures

We control for a range of demographic variables that have significant effects in other research on paranormalism (see Fox 1992; MacDonald 1995). The following demographic controls are included in multivariable analyses: age (in years), gender (men=1), marital status (married=1), race (white=1), and whether or not the respondent has children under 18 living at home (yes=1). In past research these variables have been used to measure “stake in conformity” (see Toby 1957; Hirschi 1969). We control for region of the country with three dummy variables (South, Midwest, East). West is the comparison region since paranormalism is more accepted and popular in Pacific coast western states (Stark and Bainbridge 1986). Education is measured as an ordinal system of highest grade completed (no high school, high school graduate, some college/vocational degree, college graduate, and postgraduate). Income is an ordinal scale (\$10,000 or less, \$10,001–\$20,000, \$20,001–\$35,000, \$35,001–\$50,000, \$50,001–\$100,000, \$100,001–\$150,000, \$151,000 or more). Missing cases for variables included in multivariate models were handled with listwise deletion.

RESULTS

Christian-Based Religious Experiences and Paranormal Experiences

The data in Tables 1 and 2 show the binary logistic regression results predicting paranormal activities and experiences. Consistent with Proposition 2a, the religious practice and dogmatism index has a significant negative effect on all of the paranormal activities. Christians who are active in church attendance, praying, reading of religious texts, and are firm in their beliefs about the inerrancy of the Bible participate in the paranormal at a much reduced rate. For each standard deviation *decrease* on the religious practice and biblical literalism measure, the odds of consulting a psychic, a horoscope, visiting a haunted house, attempting to contact the dead, having a prophetic dream, or witnessing a UFO are increased by more than 100%. For the paranormal experiences, our results show that for each standard deviation decrease in religious practice, the odds of witnessing a UFO increase by 122%, and the odds of having a prophetic dream increase by 102%. The strongest effects are for increased odds of a haunting experience (187% increase in odds per standard deviation decrease in religious practice) and attempting to contact the dead (265% increase in odds).

Controlling for religious practice and dogmatism allows us to "remove" the effects of the cultural boundaries placed by religion on the claiming of paranormal activities and experiences. Per Proposition 2d, once such boundaries are removed, there is a positive relationship between Christian-based religious experiences and paranormalism. For each reported Christian-based religious experience, the odds of self-identified Christians consulting a horoscope increase by 13.7%, and the odds of consulting a psychic increase by 20%. The odds of having attempted to contact the dead increase by 27.7%, while the odds of experiencing a haunting increase by 36.7%. Christian-based religious experiences also impact paranormal experiences among self-identified Christians. For each additional Christian-based religious experience reported, the odds of having seen a UFO increase by 23%, while the odds of having a prophetic dream increase by 39.2%.

The data in Tables 1 and 2 also provide the interaction effects used to test Proposition 3. The findings for all three dimensions of paranormalism are consistent with the hypothesized

TABLE 1 Binary Logit Regressions of Paranormal Activities and Experiences on Religious Experiences with Religious Practice

	<u>Consulted Horoscope</u>		<u>Consulted Psychic</u>		<u>Haunting</u>	
	Model 1 b	Model 2 b	Model 1 b	Model 2 b	Model 1 b	Model 2 b
Intercept	.307	.467	-3.627***	-3.481***	-.189	-.006
Rel. Experiences	.129**	.219***	.203***	.242***	.313***	.389***
Education	-.072	-.067	-.019	.004	.006	.011
Income	-.068	-.057	.077	.094	-.292***	-.297***
Age	-.029**	-.031***	-.001	-.001	-.032***	-.033***
Female	1.023***	1.002***	1.598***	1.555***	.714***	.699***
White	-.395	-.471*	.004	-.119	.528*	.497
Catholic ^a	.324	.227	.314	.201	.441*	.335
Mainline Prot, ^a	.184	.083	.178	.039	-.102	-.219
East ^b	.201	.222	.203	.226	-.133	-.123
South ^b	-.257	-.214	-.718*	-.755*	.016	.072
Midwest ^b	.334	.321	-.391	-.409	-.061	-.092
Married	-.314	-.316	-.245	-.215	.073	.087
Children	.143	.185	.074	.125	-.182	-.156
Rel. Practice Index	-.736***	-.223	-.769***	-.051	-1.054***	-.611***
Rel. Ex. by Practice	---	-.368***	---	-.436***	---	-.301***
R-Square	.182***	.224***	.148***	.195***	.217***	.244***
N	1175		1175		1175	

Interactions among Self-Identified Christians

Source: 2005 Baylor Religion Survey

a: Evangelical and Black Protestants are reference category

b: West is reference category

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed tests)

TABLE 2 Binary Logit Regressions of Paranormal Activities and Experiences on Religious Experiences with Religious Practice Interactions among Self-Identified Christians

	<u>Contact Dead</u>		<u>Prophetic Dream</u>		<u>Witnessed UFO</u>	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	b	b	b	b	b	b
Intercept	-1.595*	-1.268	.363	.408	-.976	-.856
Rel. Experiences	.245***	.231**	.392***	.444***	.211***	.263***
Education	-.092	-.047	-.016	-.017	-.015	-.012
Income	-.258**	-.256*	-.086	-.084	-.187**	-.187**
Age	-.027**	-.030***	-.011*	-.011*	.004	.004
Female	1.353***	1.290***	.221	.203	-.004	-.046
White	-.535	-.719*	-.649***	-.667***	-.159	-.215
Catholic ^a	.607	.520	.467**	.418**	.113	.014
Mainline Prot. ^a	.446	.288	.123	.075	.102	.017
East ^b	.332	.445	-.166	-.161	-.778**	-.777**
South ^b	.437	.507	-.139	-.124	-.188	-.179
Midwest ^b	.157	.207	-.114	-.128	-.206	-.219
Married	.503	.589	-.291	-.291	-.359	-.362
Children	-.321	-.201	.049	.053	-.096	-.071
Rel. Practice Index	-1.294***	-.386	-.701	-.521***	-.801***	-.391*
Rel. Ex. by Practice	---	-.503***	---	-.142***	---	-.253**
R-Square	.199***	.249***	.164***	.171***	.101***	.123***
N	1175		1175		1175	

Source: 2005 Baylor Religion Survey

a: Evangelical and Black Protestants are reference category

b: West is reference category

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed tests)

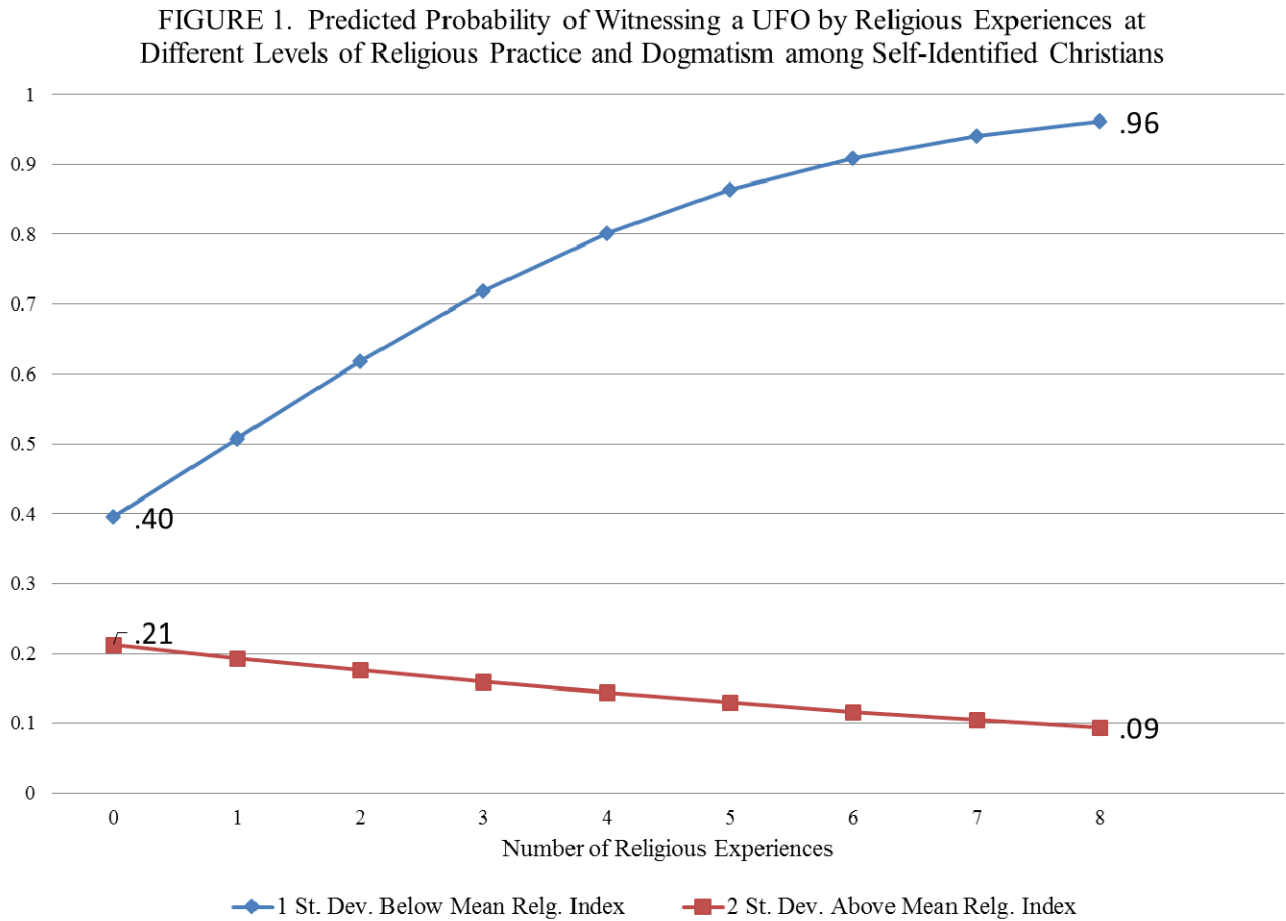
relationship.¹⁷ Christian-based religious experiences have a positive effect on the odds that self-identified Christians with lower levels of religious practice and dogmatism (e.g., one standard deviation below the mean on the religious practice index) report engaging in paranormal activities. Among lower religiosity Christians, each additional Christian-based religious experience increases the odds of consulting a horoscope by 63%, the odds of consulting a psychic increase by 38%, the odds of visiting a haunted house increase by 84%, and the odds of trying to contact the dead increase by 83%. Conversely, among highly religious Christians (two standard deviations above the mean on religious practice and biblical literalism), the odds of participating in paranormal activities decrease for each reported Christian-based religious experience.

Table 2 also presents the interaction for paranormal experiences. We find that among Christians with lower levels of religious practice and dogmatism (one standard deviation below the mean on religious practice index) there is a positive relationship between Christian-based religious experiences and having a paranormal experience. Among Christians with very high levels of religiosity (two standard deviations above the mean), there is a negative effect on seeing a UFO, but there remains a slight positive effect on having had a prophetic dream. While we consider dreams that came true to be a paranormal experience, in that they defy scientific explanation, there is reference in the Bible (e.g., Genesis 31:24) for God-given prophetic dreams among common people, and having dreams of religious significance is included in our religious experiences index. Christian respondents conflating the dreams that come true in our survey question with dreams of religious significance likely explains the continued positive effects among the highly religious.

The interactions for witnessing a UFO show a slightly different pattern. In this model Christian-based religious experiences have a slight negative effect on the odds of witnessing a UFO, but only at very high levels of religious practice (two standard deviations above the mean on the religious practice index); however, at low levels of religiosity, Christian-based religious experiences have a strong positive effect on claiming a UFO sighting. Figure 1 presents the interaction between religious practice, Christian-based religious experiences, and the probability

¹⁷ In supplementary analyses we also tested our propositions on the probability of consuming media about psychics, UFOs, ghosts, cryptids, and astrology using binary logistic regressions for each paranormal topic. Results mirror those presented for paranormal beliefs, experiences, and activities.

of witnessing a UFO. At low levels of religiosity, the probability of self-identified Christians seeing a UFO increases dramatically as the number of claimed religious experiences increase, to the extent that at six or more religious experiences, the probability of witnessing a UFO exceeds .9.



Christian-Based Religious Experiences and Paranormal Beliefs

Table 3 presents the OLS regression models predicting our third dimension of paranormalism: beliefs. As with our models of paranormal experiences and activities, the results are consistent with our propositions.

TABLE 3 Ordinary Least Squares Regression of Paranormal Beliefs on Religious Experiences with Religious Practice Interactions among Self-Identified Christians

	Model 1			Model 2		
	b	s.e.	β	b	s.e.	β
Intercept	21.603***	1.065		22.001***	1.020	
Rel. Experiences	.453***	.101	.148	.862***	.097	.269
Education	-.327**	.112	-.087	-.315**	.107	-.084
Income	-.336**	.129	-.088	-.331**	.123	-.086
Age	-.039***	.011	-.109	-.039***	.001	-.108
Female	2.314***	.329	.195	2.128***	.317	.181
White	-2.081***	.509	-.114	-2.318***	.489	-.127
Catholic ^a	2.344***	.429	.171	1.916***	.414	.139
Mainline Prot. ^a	1.941***	.411	.146	1.622***	.396	.122
East ^b	.481	.504	.033	.630	.484	.044
South ^b	-.438	.469	-.034	-.320	.451	-.025
Midwest ^b	.136	.481	.012	.081	.462	.006
Married	-.588	.387	-.049	-.546	.372	-.045
Children	-.647	.432	-.045	-.519	.416	-.036
Rel. Practice Index	-2.493***	.267	-.321	-.876**	.306	-.113
Rel. Ex. by Practice	---			-1.176***	.121	-.394
R-Square	.211***			.274***		

Source: 2005 Baylor Religion Survey

a: Evangelical and Black Protestants are reference category

b: West is reference category

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed tests)

These data show that, net of religious practice and biblical literalism, for each additional religious experience a self-identified Christian reports, scores on the paranormal belief index increase by .148 standard deviations. Religious practice and biblical literalism, on the other hand, has a significant net negative effect, such that for each standard deviation increase in religiosity, belief in the paranormal declines by .321 standard deviations.¹⁸

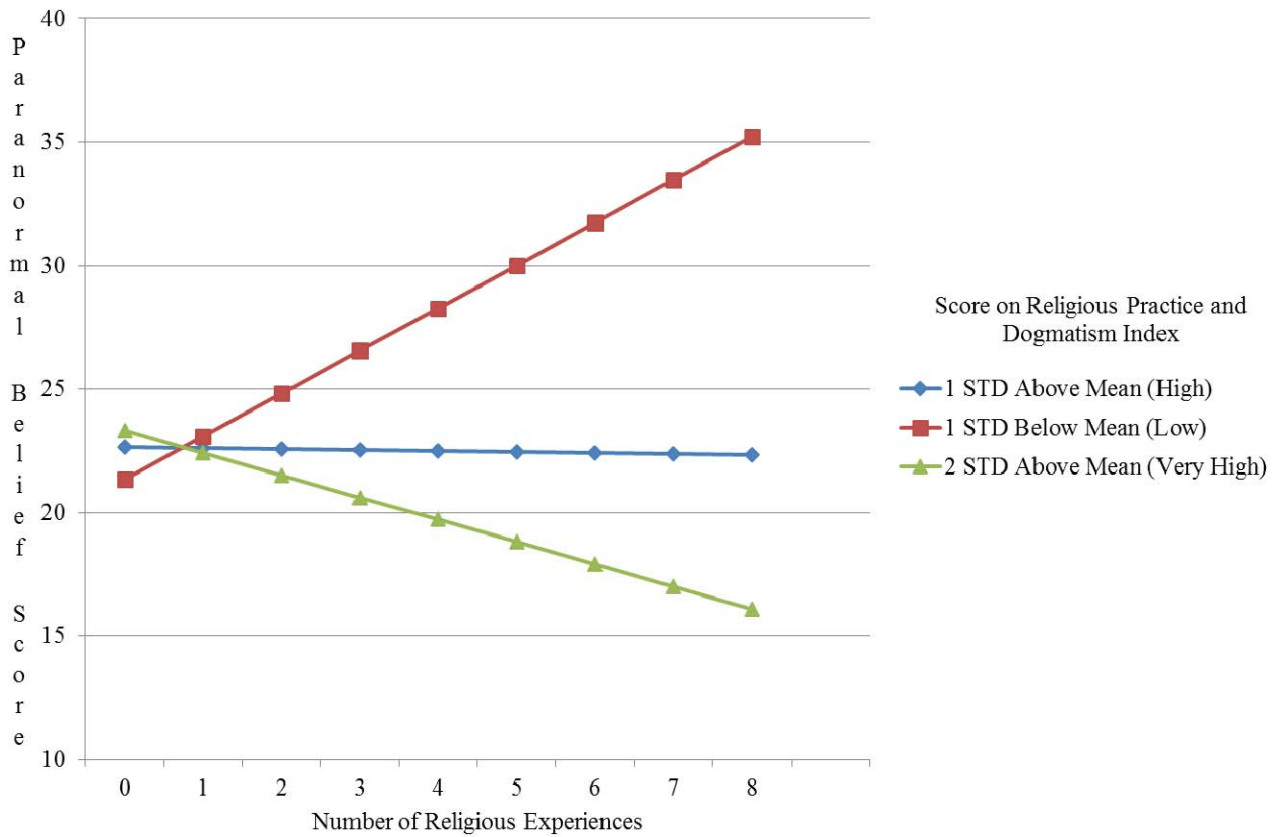
Model 2 in Table 3 provides the interaction analysis between Christian-based religious experiences and paranormal beliefs. At two standard deviations above the mean on the religious practice index, religious experiences have a negative effect ($b = -.9$) on paranormal beliefs. In this context, for each additional religious experience, belief in the paranormal is predicted to decline by .279 standard deviations. Among self-identified Christians who scored low on the religious practice and literalism index (one standard deviation below the mean), Christian-based religious experiences have a strong positive effect on paranormal beliefs ($b = 1.7$). These findings are consistent with Proposition 3. In this context, for each additional Christian-based religious experience a respondent reported, the paranormal index increased by .54 standard deviations.¹⁹

¹⁸ To assess whether there were differential effects of religious experiences on specific paranormal beliefs, we conducted supplemental regression models predicting each of the indicators in the paranormal belief index one at a time, while also controlling for the interactive relationship between religious experiences and religiosity. The religious experiences index significantly predicted higher levels of belief in each paranormal item at p -values $\leq .001$, with the exception of belief in cryptids, which had a p -value = .006. The strongest effect sizes at the mean level of religiosity, in order of strength, were for: belief in hauntings ($b = .180$), prophetic dreams ($b = .175$), contacting the dead ($b = .162$), UFOs ($b = .132$), psychics ($b = .119$), astrology ($b = .106$), and cryptids ($b = .065$). At one standard deviation below the mean level of religiosity, the strongest positive effects were for hauntings ($b = .218$), contacting the dead ($b = .210$), and prophetic dreams ($b = .185$). Notably these correspond to “enlightenment” forms of paranormalism, which hew closer to religious views than “discovery” items such as cryptids, which mimic science (results available upon request).

¹⁹ To assess whether there were differential effects for specific religious experiences on paranormalism, we conducted supplemental regression models predicting paranormal beliefs that rotated in each of the religious experiences in our index one at a time, while also controlling for the interactive relationship between the respective experience and religiosity. Each of the religious experiences significantly predicted higher levels of paranormal beliefs at p -values $\leq .001$. The strongest effect sizes at the mean level of religiosity, in order of strength, were for: having religious visions ($b = 2.85$), miraculous healing ($b = 2.55$), feeling religious ecstasy ($b = 2.49$), hearing the voice of God ($b = 2.41$), feeling called by God ($b = 2.14$), having a religious dream ($b = 1.84$), speaking in tongues ($b = 1.73$), and feeling filled with the spirit ($b = 1.29$). At one standard deviation below the mean level of religiosity, the strongest positive effects were for healing ($b = 3.37$), visions ($b = 3.26$), and voices ($b = 3.19$). In general, religious experiences that involve sensory effects beyond feeling (e.g., seeing, hearing, and healing) have the strongest positive effect on paranormalism after accounting for religiosity. This follows the distinction outlined in Baker (2009) between more “deviant” and more conventional religious experiences. Glossolalia presents a

This relationship is depicted in Figure 2. In the interaction model, all other control effects remain consistent, and the predictive power of the model is increased by 30% $((.274 - .211) / .211 = .298)$ as a result of adding the multiplicative term between religiosity and the religious experiences index.

FIGURE 2. Effects of Religious Experiences on Paranormal Beliefs at High and Low Levels of Religious Practice and Dogmatism



primary exception. Speaking in tongues is so closely tied to organized Christian groups in the U.S. that experiencers are more likely to remain tethered to conventional religiosity, in particular because the question on the 2005 BRS asks respondents if they have ever spoke in tongues *at a place of worship*. Results available upon request.

DISCUSSION

With research having documented the non-linear and non-additive relationships between conventional religiosity and paranormalism, the long-standing question of whether religious beliefs and experiences facilitate or hinder paranormalism can be reassessed in a more precise manner. Once the generalized negative effects of organizational and exclusive religious participation on paranormalism are accounted for, it is indeed only a small-step from being touched by an angel to believing in ghosts, UFOs, and trying to contact the dead.

Bounded affinity theory, which includes a revised definition of the paranormal, makes sense of the empirical relationships between religion and the paranormal, and explains why different aspects of religion can hold negative, positive, or nonlinear relationships to paranormalism, depending on the cultural and empirical contexts under examination. This approach also recognizes and highlights the importance of the “paranormal” for disciplines engaged in studies “of religion” by locating each in relation to the intensive physical and psychical experiences that lie at the heart of both.

Our study also highlights the contextual nature of the ‘divine contact’ thesis proposed by Stark and Finke (2000) which applies only to those Christians with a restricted Christian worldview, or those with higher than average levels of religiosity. Our findings suggest that Christians who have lower levels of religiosity have unrestricted spiritual orientations toward the world, and that supernatural experiences of any variety make them more open to alternative explanations about the nature of the universe.

While the purpose of this article is not to provide a direct critique of previous empirical findings, our results do inform this literature. Many studies of the paranormal have approached the topic from a marginalization perspective, hypothesizing that the poor and less educated were drawn to the paranormal as an attractive system of beliefs which serve as an alternative to the dominant system (Christianity), but which then further excludes the poor and less educated (see Mears and Ellison 2000; Goode 2000; Orenstein 2002; Krull and McKibbin 2006; Wuthnow 1976). Our findings, however, do not show strong support for this conclusion. We find that while income and education have negative effects on paranormal beliefs (and some activities in the case of income), education has no net effect on paranormal activities. The paranormal may be eschewed by income elites, but in terms of education, there are no net differences across categories for paranormal activities and experiences (see Lewis 1992). We find that younger

people have higher odds of participating in most paranormal activities and higher average levels of paranormal beliefs. Young people, even young Christians, are open to the possibility of the paranormal much more so than their parents or grandparents.²⁰ Racial minorities also had higher rates of paranormal belief and prophetic dream experiences. Furthermore, our results replicate past research finding women are more inclined to believe and participate in the paranormal (see Mears and Ellison 2000; Rice 2002).

Finally, we conclude with our recommendations for future studies. In terms of qualitative assessments of the intersection between religion and paranormalism, the degree to which organized religions condemn or discourage particular beliefs and experiences varies, ranging from neutral indifference to absolute demonization. For instance, the Catholic Church strongly condemns astrology as demonic, but is effectively neutral about extra-terrestrials (Bader et al. 2012). Future research should examine the processes through which specific religious organizations condemn different types of paranormalism, and how varying strategies affect parishioners' engagement with the paranormal. Just as studies of the processes through which institutional science demarcates its own cultural territory by categorizing certain topics as pseudoscience have proven insightful about the cultural boundaries of science (e.g., Ben-Yehuda 1985; Northcote 2007; Pinch and Collins 1984), studies of how organized religion divides and claims (or rejects) the cultural landscape of supernaturalism can be insightful about the institutional structure and boundaries of religion (e.g., Taves 1999).

Regarding quantitative research, the scope of the Christian-based religious experiences and paranormalism we examined are limited by the length of our survey. Future studies should attempt to expand the base of these categories. Still, the BRS data are uniquely positioned to address bounded affinity theory, given that it is currently the only national survey which has extensive measures of paranormalism and religious experiences, as well as diverse metrics of religiosity. We call for additional research on this topic with U.S. population data. One interesting question which such data could answer is whether or not the relationships documented in this study have changed over time. We know that across the American religious landscape the number of the religiously nonaffiliated has increased over the last 25 years, particularly an increase among “nonaffiliated believers” (Baker and Smith 2015; Hout and

²⁰ Analyses of more recent data show in a decline in the effects of age, suggesting a cohort transition rather than life-course effects. This conjecture awaits applicable trend data and more thorough analysis.

Fischer 2014) as well as a decline in organizational participation (Chaves 2011). Our theory predicts that an increase in paranormalism should follow, but this hypothesis awaits applicable trend data with relevant measures of religion and the paranormal. Finally, we call for more attempts to apply *bounded affinity* theory to paranormalism in cross-national research (Bader et al. 2012; Molle and Bader 2013), particularly in areas where Christianity is not the dominant religion, as this will allow for a better understanding of how cultural contexts shape the general connections we have outlined between conventionalized “religion” and supernatural beliefs and experiences marked as “paranormal.”

In terms of theories of religion, we echo the calls of scholars in religious studies who emphasize that intensive physiological and psychological experiences—such as automatism, visions, or perceiving direct connections to non-material dimensions and entities—lie at the heart of nearly all religious traditions. Ultimately religious traditions create their cultural “chains of memory” by delimiting certain instances and/or types of intensive religious experiences and revelations as “True,” while labeling others as “false” (Hervieu-Léger 2000; Taves 2013b). The connections between religious and paranormal supernatural experiences, along with the centrality of intensive experiences to the study of religion reiterate that “if the paranormal lies at the origin point of so much religious experience and expression, it should also lie at the center of any adequate theory of religion” (Kripal 2010:253). As a result, any comprehensive theory of religion must incorporate the affinities and antagonisms between organized religions and the diffuse cultural realm labeled “paranormal.” We have provided a detailed “middle range” theory (Merton 1968) about religion and paranormalism, but the integration of this model into wider paradigms focused on religion remains to be done.

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