

# PARANORMAL BELIEF AND THE STRANGE CASE OF HAUNT EXPERIENCES: EVIDENCE OF A NEGLECTED POPULATION

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**ABSTRACT:** The current study examines the specific experiences of individuals who have reported haunt phenomena in the context of common paranormal belief measures. One hundred and sixty nine community college students completed online surveys assessing personality traits, cognitive functioning, Tobacyk's (2004) measure of paranormal belief, Gallagher, Kumar, and Pekala's (1994) Anomalous Experiences Inventory, and a measure designed for the current study to assess haunting experiences. Results using Spearman correlations show occasional and small relationships between paranormal belief measures and haunting experiences. Contrary to existing literature, *t* test findings show analytical and personality measures do not significantly differ between those who have experienced haunting phenomena and those who have not. We conclude that previous research in paranormal belief may not apply to individuals who have experienced haunting phenomena due to paranormal belief measures' lack of content regarding haunting experiences.

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*Keywords:* paranormal belief, haunt experiences, personality, cognitive functioning

It is not unusual for people to interpret personal experiences as a ghostly encounter. Rice (2003) reported that 42.1% of the population believes in ghosts, and Gallup and Newport (1991) have reported that 9% of the general population has seen a ghost. McClenon (1994) reported that 30% of his accounts of supernatural events refer specifically to apparition experiences. More research in paranormal beliefs shows that 38% of people believe in ghosts, and in other studies 41% of participants report a belief in ghosts (Irwin, 2009). These findings show that many people believe in ghosts and that researchers credit this type of belief as paranormal belief. Yet, what are the common experiences associated with haunting, and how do these experiences relate to paranormal belief?

A body of research addresses paranormal belief and experience through two common measures, the Paranormal Belief Scale (PB; Tobacyk, 2004) and the Anomalous Experiences Inventory (AEI; Gallagher, Kumar, & Pekala, 1994). Both of these measures address a wide variety of beliefs and experiences about extraordinary and paranormal experiences. However, the current study suggests that research involving paranormal beliefs has rarely examined haunt experiences. For the sake of clarity, we define haunt experiences or haunting as internally perceived (e.g., sensations of a presence, or visions of entities) or externally witnessed phenomena (e.g., objects moving) that are interpreted as spirit activity. Paranormal belief

measures such as Tobacyk's (2004) PB measures and Gallagher et al.'s (1994) AEI measures assess individuals' belief in psychic abilities or witchcraft. Yet little research examines visual, auditory, and physical experiences that are interpreted as haunting experiences. As such, it is unclear to what extent previous relationships with PB or AEI apply to individuals who report and experience haunting phenomena.

The lack of examination of haunting experiences is unfortunate, as haunting encounters are commonly reported in the literature as part of paranormal belief, and haunting experiences are constantly reported to the thousands of paranormal investigation groups that exist in the United States alone. For instance, Hufford (1982) has reported a haunting case involving his principal interest of "old hag" attacks, but witnesses also described noises and movement around the house during regular waking hours. McClenon (1994) has reported many witness accounts of apparition appearances with moving objects, pyrokinesis, backwards writing, and other phenomena. Even in direct poltergeist cases (e.g., Roll, 1972) or haunting in Eastern cultures (Emmons, 1982), many and varied phenomena occur with what individuals describe as haunting experiences.

We approach the current study from a standpoint similar to Hufford (1982) and McClenon (1994, 2002) in the context of the *experiential source hypothesis*. Rather than assuming cultural cues, tradition, or social influence as explanations for haunting phenomena, we focus on the experiences that people interpret as haunting. As such, Hufford (1982) and McClenon (1994, 2002) have explained that experiences represent the heart of any belief and have proposed that interpretation of these experiences creates belief about paranormal events. However, problems may arise with the accurate use of paranormal belief measures in this population due to a lack of assessment of individuals who have had haunt experiences.

Our introduction starts with previous findings on paranormal belief. We propose two important points about previous research that suggest haunt experiences are not appropriately represented. First, little research has been conducted that assesses the types of experiences (e.g., Hufford, 1982; McClenon 1994, 2002) representing haunt phenomena. Specifically, most research has not assessed or operationally defined individuals who have experienced haunt phenomena in their samples. Second, items on both the PB and AEI scales, in their overall measures and subscales, do not directly address common haunt experiences in their content.

### **Traits and Paranormal Belief**

The relationship between PB and other traits and attitudes has not been flattering to people who believe in the paranormal. The body of research conducted has been summarized by Irwin (2009) and diverges into two paradigms of interest to the current study. First, Irwin addresses the

*psychodynamic functions hypothesis* of paranormal belief. This theory presumes that paranormal belief fulfills a psychological need of the individual; as such, research based in this paradigm assumes that deviancy, mental weakness, or psychopathology is an explanation for paranormal belief. The second paradigm provided by Irwin represents the *cognitive deficits hypothesis*. Under this paradigm, researchers assume that paranormal belief is a function of irrational thinking and poor critical thought and analysis. We address some of the core findings of each of these paradigms below.

With regard to Irwin's (2009) psychodynamic functions hypothesis, previous research connects PB with mental instability of some form. For instance, Lange and Houran (1999) found relationships between fear and haunting experiences, whereas Thalbourne and Delin (1994) showed positive correlations between paranormal belief and manic experience ( $r = .34$ ), depressive experience ( $r = .29$ ), bi-polar experience ( $r = .37$ ), hypomania ( $r = .30$ ) and magical ideation ( $r = .68$ ). Other research has found relationships between paranormal belief and negative mental traits. Williams, Francis, and Robbins (2007) found a positive relationship between neuroticism and paranormal belief ( $r = .32$ ). Thalbourne and Houran (2000) reported associations among paranormal belief and a general measure of altered consciousness ( $r = .60-.65$ ) as well as being high ( $r = .65-.57$ ) and daydreaming ( $r = .53-.51$ ).

Other researchers have shown relationships between PB, fantasy tendencies, and related personality traits. For instance, Lindeman and Aarino (2006) showed a relationship between PB and instability ( $r = .04-.20$ ), whereas Smith, Johnson, and Hathaway (2009) demonstrated a relationship between AEI and fantasy tendencies ( $r = .39$ ) and sensation seeking ( $r = .31$ ). Kennedy, Kanthamani, and Palmer (1994) found paranormal belief associated with absorption, a fantasy-driven trait. These findings support other research that found additional relationships between fantasy, openness to experience, sensation seeking, and paranormal belief (e.g., Groth-Marnat & Pegden, 1998; Kennedy, 2005).

Related to the above, a growing body of research links paranormal belief to a composite measure of mental functioning that researchers classify as transliminality (Lange, Thalbourne, Houran, & Storm, 2000; Thalbourne & Delin, 1994; Thalbourne & Houran, 2000). Although not a direct measure of mental illness, transliminality contains multiple components of psychopathological criteria. Thalbourne and Delin (1994) identify both manic and depressive experience as part of the transliminality measure, as well as schizotypy (Irwin, 2009; Lange, Thalbourne, Houran, & Storm, 2000). Recent work by Kelley (2010a, 2010b, 2011) makes an evolutionary argument that paranormal belief is adaptive because of its association with hypnotizability and transliminality. Shamanistic healing as a hypnosis process should be more effective on those who are susceptible to the influence of shamans as healers. Although Kelley (2010a, 2010b, 2011) stresses the adaptive value of both hypnotizability and transliminality in an

evolutionary context, these states still represent pejorative traits that could be considered signs of weakness in the human character.

Other researchers following Irwin's (2009) cognitive deficits hypothesis have shown a relation between paranormal belief and deficiencies in cognitive and analytical thinking. For instance, Rogers, Davis, and Fisk (2009) demonstrated significant differences in the number of conjunction fallacies that paranormal believers made compared to nonparanormal believers. Smith, Foster, and Stovin (1998) showed a negative relationship between Tobacyk's PB measure and Raven's matrices tests ( $r = -.53$  for full measure,  $r = -.07$  to  $-.61$  for subscales). Watt and Wiseman (2002) later replicated these findings while testing for experimenter effects. Also, Lindeman and Aarino (2006) showed a small but significant negative relationship between PB and analytical thinking ( $r = -.19$ ). Other cognitive functioning and paranormal belief researchers report negative relationships typical to the findings above. When examining analytical tendencies, early work by Tobacyk and Milford (1983) found small relationships between paranormal belief, irrational belief ( $r = .09$ , trend), and critical inference-making with its spiritualism and traditional religious belief subscales ( $r = -.23$ – $-.34$ ). More recent work using the REI (Rational-Experiential Inventory; Epstein, Pacini, Denes-Raj, & Heier, 1996) found no relation between need for cognition and belief in the unusual, esoteric thinking, and superstition, while showing a positive relationship between intuitive thinking styles and these variables ( $r = -.27$ – $-.31$ ). Thus, Epstein et al. (1996) suggest that paranormal belief is unassociated with an analytical nature, but instead associated with intuitive reactions to events. Related research demonstrates relationships between paranormal belief and such cognitive fallacies as contingency and probability estimation (e.g., Blackmore & Troscianko, 1985; Brugger & Graves, 1997; Rogers, Davis, & Fisk, 2009; Tobacyk, Milford, Springer, & Tobacyk, 1988). The general conclusion reached by Lindeman and Aarino (2006) in their review of PB and its predictors is that poorer rational and cognitive functioning is associated with greater degrees of paranormal belief.

However, negative mental and cognitive associations with paranormal belief have not been consistent and are occasionally reversed. Shumaker (2001), for instance, found a positive relationship between PB and mental health. Similarly, Gow, Lang, and Chant (2004) found no relationship between neuroticism and PB. As mentioned previously, Auton, Pope, & Seeger (2003) found a relationship between neuroticism and PB but did not find a relationship between PB and psychopathy. Parra (2006) found what he defined as healthy schizotypy with individuals who had seen ghosts. With regard to cognitive deficiencies, Blackmore (1997) found no differences between high and low paranormal believers and contingency estimation. Likewise, Epstein et al. (1996) demonstrated no relationship between superstitious belief and need for cognition.

## **Haunt Experiences, Sampling, and Measurement**

Despite the negative relationships between PB, personality variables, and cognitive functioning, examining haunt experiences and their relationship to these findings suggests there is reason to wonder if these relationships apply to individuals whose belief in the paranormal comes from haunting experiences. We suggest that some of these findings, and related inconsistencies, may be due to the nature of haunting phenomena and its relation to scales that measure paranormal belief.

As a simple point, studies in paranormal belief have generally neglected either sampling haunt experiences or addressing them in detail beyond subjective physical and emotional states. Wiseman, Watt, Stevens, Greening, and O'Keeffe (2003) demonstrated significant differences between believers and nonbelievers when exposing them to a haunted location. But these researchers cataloged mostly subjective somatic effects (e.g., shortness of breath, dizziness, and headaches). Lange and Houran (1997) performed experiments in which they examined paranormal experiences with demand characteristics (i.e., telling participants that an area was haunted or not haunted), but their results focused on internal perception and sensations gained from the experience. What is notable is that both Wiseman et al. (2003) and Lange and Houran's (1997) samples represented tourists of a known haunted house, and not experiences of individuals who witnessed phenomena in their homes. In other instances, findings involving haunting and paranormal belief were applied to adolescent samples (e.g., Francis & Williams, 2009), which used belief in ghosts or a belief in the ability to talk with the dead as proxy measures of paranormal belief. Research by Parra (2006) examined crisis apparition experiences and their relation to several mental health variables but did not address any other types of phenomena beyond the apparition experience itself and the sensing of a presence. Research by Houran, Kumar, Thalbourne, and Lavertue (2002) examined haunting and its relationship to transliminality using a measure of ghostly experience consisting of eight items taken from the AEI (1994). Previous research from Houran and Lange (2001) showed that these items matched predicted patterns of phenomena in poltergeist experience, but they state that the measure is not comprehensive. Indeed, previous work by Lange, Houran, Harte, and Havens (1996) suggests haunting experiences consist of seven subsets: visual, auditory, olfactory, tactile, sensed presences, object movement, and the erratic functioning of electrical/mechanical equipment. Beyond the research mentioned here, researchers have not conducted studies that address a fuller body of subjective and objective experiences that would comprise the common haunt experience in personal residences and public locations.

Per Lange et al. (1996), Hufford (1982), and McClenon (1994, 2002), the current study proposes that haunting experiences represent phenomena that include emotional and somatic states but also involve

more complex events. Some of these experiences are subjective and easily explained by psychological means (e.g., tactile experiences, perception of a sensed presence). Yet other events are more difficult to explain because they represent external phenomena (e.g., RSPK: the movement of objects, and recorded apparitions). Given the many reports provided to paranormal groups and the previous work of researchers in cataloging haunting experiences (e.g., Emmons, 1982; Hufford, 1982; McClennon, 1994; Roll, 1972), it makes sense to examine haunting experiences from lesser somatic states or perceptions to greater events that are more difficult to explain. By cataloging experiences described by participants as haunting, we can examine if the experiences associated with haunting relate to paranormal beliefs, at least as measured by PB and AEI.

However, when we consider haunt experiences and paranormal belief as measured by PB and AEI, several methodological problems manifest. These problems do not represent poor psychometric properties, although the PB measure has been criticized for such (e.g., see Irwin, 2009; Lawrence, 1995a, 1995b; Lawrence, Roe, & Williams, 1997). Rather, our concerns lie with scale content and operational definition issues. Namely, both scales neglect describing events that can be defined as belonging to haunt experiences.

A cursory examination of Tobacyk's (2004) Revised Paranormal Belief Scale or Gallagher et al.'s AEI scale (1994) shows that few items address any aspect of paranormal belief that directly relates to haunting. The current research, similar to complaints of the PB measure made by Lawrence (1995a), notes that the actual construction of items in PB fails to address any aspect of paranormal belief that directly relates to haunting. Out of the seven subsets of the PB scale (e.g., Traditional Religious Belief, Psi, Witchcraft, Superstition, Spiritualism, Extraordinary Life Forms, and Precognition), there is not a single item that asks a question about a belief in haunting and ghosts. This is not to say, however, that some items do not indirectly relate to a belief in ghosts or haunting. For example, Item 25 ("It is possible to communicate with the dead") and Item 1 ("The soul continues to exist though the body will die") could indirectly relate to a person who has had haunting encounters. But these questions might also relate to individuals who are devout with particular religious beliefs. We would not make the claim that haunting experiences do not influence the scores of some of the PB scale subsets. Rather, it appears that scores on the PB measure are not likely to *directly* vary because of haunting experiences. Simply put, the scale does not address them.

Although Gallagher et al.'s (1994) anomalous experience inventory contains more items than Tobacyk (2004), similar issues arise when examining the full scale as well as the haunting and poltergeist subscale created from it (Lange & Houran, 2001). This measure's five subscales (Anomalous Experience, Anomalous Belief, Anomalous Ability, Fear of Anomalous Events, and Drug Use) contain only a few items that directly

assess haunt experience. These items are emphasized in the poltergeist subscale created from the measure. They are:

- (49) "I have seen a ghost or apparition"
- (51) "At times I have felt possessed by an outside force"
- (48) "I have communicated with the dead"
- (66) "I have had a psychical mystical experience which scared me to death"
- (38) "I have experienced objects appearing or disappearing around me"
- (29) "I have experienced my physical body or objects floating in the air"
- (55) "I am able to communicate with the dead"
- (67) "I have seen elves or fairies or other types of little people"

The questions mentioned above might relate to experiences that would be the result of witnessed haunting phenomena, but could also represent a person who believed he or she was an occultist with psychokinetic abilities. In either case, the exact reasons individuals would select these items are unclear. Thus, these items could increase because of haunting experience, but the measure provides no way to indicate that these beliefs result directly from haunting.

Because of the above, it is not unreasonable to question if findings about PB and mental and cognitive deficiencies would apply to individuals who do believe in and report haunting experiences. The lack of representation in the AEI and PB measures, and the lack of studies addressing people that have experienced haunting, suggests the degree to which haunting phenomena contribute to PB and AEI is undetermined. Similar to any research where variables that are not measured in a particular study could affect findings, it is possible that people experiencing haunting may be suppressing or exaggerating relationships between PB and related variables. An equally viable conclusion is that hauntings do not relate at all to current findings on PB, AEI, and their predictors.

### **Summation**

We make the case that neglect of individuals who have experienced haunting phenomena, either by sample or measurement, leaves a gap in paranormal belief research that needs to be addressed. As an initial examination of this possibility, we used an experiential interview measure that addresses common haunt phenomena about personal sensation, visual experiences, auditory experiences, physical sensations, and seen movement. Our first goal was to discover how an experience-oriented measure of haunting experiences relates to subscales in both PB and AEI. Using Spearman Rho correlations, the current study predicts that these measures will relate to each other, yet poorly relate to a measure of haunt experiences. Next, we used haunt experience as a nominal variable to compare measures of neuroticism, personality, analytical tendency, and

paranormal belief between people who report haunting experiences with those who do not. Given the lack of relevant items in either measure to address haunt experiences, we expect that paranormal belief scores will not significantly differ between those who have experienced haunt phenomena (e.g., hauntedds) and those who have not (e.g., nonhauntedds).

## Method

### Sample

One hundred and sixty-nine students from a Midwest community college participated in an online survey in return for credit in their current courses. Participants were informed that these were studies involving their experiences and attitudes in order to minimize biased response. Students were also instructed to complete surveys at the beginning (i.e., first 2 weeks) of the semester, to limit the influence of either sociology or psychology classes on student response. Although data were collected online, participation was exclusively within the college population. Participation in the study was voluntary, and alternate experiences in the form of research reports were provided for student participants. Mean age was 26.73 years ( $SD = 8.53$ ), representing a diverse age range. Gender composition was 55 males and 107 females (7 did not respond). Ethnicity for the current study was mainly Caucasian (84.24%) and the working poor were the majority (62% reported < \$24,000 annual income).

### Measures

The following measures were completed by participants in an online survey format. Participants were required to complete the entire body of measures described below within one sitting.

**Anomalous Experiences Inventory.** This measure was administered in a true/false format. The measure addresses a participant's experiences in Paranormal Beliefs ( $KR-20 = .92$ ), Paranormal Experience ( $KR-20 = .87$ ), Paranormal Ability ( $KR-20 = .93$ ), Paranormal Fear ( $KR-20 = .90$ ), and drug use (Gallagher, Kumar, & Pekala, 1994). Items addressing drug use were not administered, but the 8-item subscale representing poltergeist and haunting experiences (e.g., Lange & Houran, 2001) was included (Poltergeist:  $KR-20 = .85$ ). True responses were collected and summed to produce a measure of anomalous experiences across the categories. Thus, high scores represent greater degrees of experience or belief in each category.

**The Revised Paranormal Belief Scale.** This new measure contains 26 items that address paranormal beliefs within seven subscales: Traditional Religious Belief, Psi, Witchcraft, Superstition, Spiritualism, Extraordinary Life-Forms, and Precognition (Tobacyk, 2004). Items were measured in a 7-point Likert scale format, with 1 = "strongly disagree" to 7 = "strongly

agree.” Internal consistency for the measure and its subscales in the current study (e.g., Cronbach  $\alpha$ ) was total measure = .91, Traditional Religious Belief = .87, Psi = .86, Witchcraft = .84, Superstition = .87, Spiritualism = .81, Extraordinary Life-Forms = .70, Precognition = .78.

**Rational-Experiential Inventory.** The 40-item REI is a measure designed to independently assess rational-analytical and intuitive thinking styles (Pacini & Epstein, 1999). Participants completed this measure on a 5-point Likert scale where 1 = “definitely not true of myself” and 5 = “definitely true of myself.” The REI contains four subscales: Rational Ability ( $\alpha = .85$ ), Rational Engagement ( $\alpha = .83$ ), Experiential Ability ( $\alpha = .85$ ), and Experiential Engagement ( $\alpha = .86$ ). The ability subscales were designed to assess ability in both analytical and experiential thought. The engagement subscales were designed to assess enjoyment and use of both rational and experiential thought styles.

**International Personality Inventory Pool: Mini IPIP.** This 20-item measure represents a shortened measure of the Big-5 personality scales of Extraversion, Neuroticism, Conscientiousness, Openness to Experience, and Agreeableness (Donnellan, Oswald, Baird, & Lucas, 2006). Participants answered questions in a 5-point Likert format where 1 = “not at all like me” and 5 = “very much like me.” Internal consistency for these 4-item personality measures ranged from .63 to .78.

**Inventory of Repeated Haunt-Type Experiences.** In order to collect detailed reports of haunting phenomena, participants were asked to report as many specific paranormal or haunting instances (up to four individual reports of perceived haunting events) that they had experienced. As a part of this process, participants completed a check list of haunting phenomena within each individual report. These categories included: (a) the feeling of a presence, positive or negative: Feeling Presences (FP), 2 items, min = 0, max = 4,  $M = .80$ ,  $KR-20 = -.73$ ; (b), knocks, bumping noises, voices, or laughter heard: Hearing Voices (HV), 5 items, min = 0, max = 4,  $M = 1.22$ ,  $KR-20 = -.84$ ; (c) seeing light or dark shapes or mists, or human outlines: Visual Experiences (VE), 7 items, min = 0, max = 8,  $M = 1.22$ ,  $KR-20 = -.88$ ; (d) physical sensations ranging from touch to tugging or hitting: Physical Experiences (PE), 7 items, min = 0, max = 8,  $M = 1.28$ ,  $KR-20 = -.67$ ; and (e) objects moving, being thrown, or disappearing: Movement (M), 6 items, min = 0, max = 4,  $M = .98$ ,  $KR-20 = .20$ .  $KR-20$  values represent analysis over the first report only, as report numbers declined after the first event ( $n < 45$ ), making analysis unreliable. Participants were allowed to check as many items as they felt they personally experienced within each report they completed.

For analysis purposes, several points need to be addressed. Because of the nature of this inventory,  $KR-20$  values were expected to be low or negative. Many items in the checklist are discriminative events and not necessarily additive. For instance, a person who indicates he or she felt a positive presence is not likely to also select that he or she experienced

a negative presence within the same report. As such, item clusters in the inventory should be considered conceptual factors because of their dichotomous nature.

Phenomena items selected across as many as four reports were summed to produce an overall score representing the summed number of phenomena experienced both within and between reports. As such, both single experiences and multiple experiences were represented to produce a score containing the number of phenomena experienced across reports. These items were then grouped by two methods. First, items were summed according to the categories described above (i.e., feeling presences, hearing voices, visual experiences, physical experiences, and movement). Second, with respect to Houran and Lange (2001) and Houran et al. (2002), we divided experiences across categories into lesser or easily explained phenomena: Lesser Haunt Experience (L), 14 items, min = 0, max = 13,  $M = 3.22$ ,  $KR-20 = .03$ , and experiences that are less easily explained and more dramatic: Greater Haunt Experience (G), 13 items, min = 0, max = 15,  $M = 2.29$ ,  $KR-20 = .21$ . We tentatively called these categories lesser and greater haunting experiences. Finally, an overall sum score of all experiences was created: Sum (S), 25 items, min = 0, max = 12,  $M = 2.31$ ,  $KR-20 = .01$ . These summed factors were not normally distributed, and interitem correlations were low by design. Yet, Spearman Rho rank-order correlations show a moderate relationship between these conceptual factors ( $r = .37-.49$ ,  $p < .05$ ), except for Feeling Presences, which was unrelated to the other categories. A full list of haunt inventory items are displayed in the Appendix, and Table 1 provides a full Spearman Rho correlation matrix for haunting experience factors, which we discuss more fully in the Results section.

It is important to note that this measure was designed to represent the degree of haunt experiences that a person has had with respect to both frequency and variety. Whether a person had one experience with a large variety of phenomena that occurred or several experiences in which a few repeated phenomena occurred, the outcome is the same: a greater number of experiences that can be classified as haunting phenomena. Thus, low or high scores on any subscales should be interpreted as a greater number of haunt phenomena experienced, without respect to time-frame of occurrence.

Finally, to gather some perspective on which individuals reported events, several context questions were included in each report. Participants indicated whether they thought their experience was rational or supernatural in origin on a 5-point polar scale where 1 = "rational" and 5 = "supernatural"; how frightened they were from the experience on a 5-point Likert scale where 1 = "not at all frightened" and 5 = "very frightened"; and how much they tried to investigate the event after it was over on a 5-point Likert scale where 1 = "I didn't investigate at all" and 5 = "I tried very hard to investigate events."

Table 1  
*Spearman Rho Correlations Between Haunting Experience Subscales*

Variable	FP	HV	VE	PE	M	Lesser	Greater	Sum
Feeling Presences		-.08	.03	.01	.05	<b>.46</b>	.09	.11
Hearing Voices			<b>.40</b>	<b>.49</b>	<b>.37</b>	<b>.57</b>	<b>.53</b>	<b>.66</b>
Visual Encounters				<b>.45</b>	<b>.39</b>	<b>.55</b>	<b>.61</b>	<b>.62</b>
Physical Experiences					<b>.47</b>	<b>.69</b>	<b>.53</b>	<b>.76</b>
Movement of Objects						<b>.37</b>	<b>.78</b>	<b>.59</b>
Lesser Experience							<b>.33</b>	<b>.76</b>
Greater Experience								<b>.71</b>

Bold represents  $p < .05$

## Results

### Descriptive Statistics of Haunting Experiences

In order to provide a sample background for the following analysis, several descriptive analyses were performed to provide a contextual picture of haunt phenomena experienced by participants. Although Rice (2003) as well as Gallup and Newport (1991) report belief in ghosts at much smaller percentages, out of 169 participants, 101 reported some type of haunting experience. Out of these 101 participants, 60% reported some type of feeling of a presence, 45% reported some type of auditory phenomena, 43% reported some type of visual phenomena, 44% reported some type of personal physical sensation, and 36% reported some type of object moving. Looking at phenomena as either lesser or greater, 15 participants reported lesser phenomena only, and 6 reported greater types of phenomena only, while 79 participants reported both types. Thus, feeling presences was the most frequently experienced phenomena, while auditory, physical, and visual experiences were experienced by a little less than half of the haunting sample. Overall ratings of individual haunting experiences were viewed as somewhat paranormal in origin ( $M = 2.82$ ,  $SD = 1.52$ ), were reported as somewhat frightening experiences ( $M = 2.23$ ,  $SD = 1.32$ ), but on average were not investigated thoroughly ( $M = 1.63$ ,  $SD = 1.12$ ).

We recognize that the number of participants within the current sample who experienced haunting phenomena is much greater than reported by previous researchers. For the sake of clarification, we wish to point out possible explanations for this difference. From a cultural perspective, we conducted the current study in a rural, mainly poor area within the Bible Belt of America. Thus, one possible explanation is what Irwin (2009) terms the *social marginality hypothesis* (i.e., socially disadvantaged

groups' use of paranormal belief to gain control over life). However, other explanations seem more likely. First, this region (by personal experience and reputation) is known for a frequent and persistent number of haunting stories, known haunted houses, and residential haunting. Second, the more likely culprit for our increased number of haunting reports is that we asked a wide body of questions about haunting phenomena, as opposed to a one- or two-item general response. Thus, the large number of items in the Appendix is partially because we were more inclusive in our approach. Similar to Hufford's (1982) and McClenon's (1994, 2002) approaches to examining paranormal events, the current study would respectfully suggest that for haunting experiences, the devil is in the details.

### **Correlations Between Paranormal Belief and Experience, Haunt Experiences, and Cognitive and Personality Variables**

In order to examine the predictive relationships between haunting experiences, paranormal belief, personality, and cognitive variables, a series of Spearman rank order correlations was conducted. These analyses were conducted in three steps to show a comprehensive picture of how PB, AEI, and haunt experience measures are related among themselves and to each other and cognitive and personality variables. First, Spearman Rho correlations were obtained for each haunting category (i.e., presences, auditory phenomena, visual phenomena, physical phenomena, and movement) as well as lesser, greater, and summed experience ratings. The goal of this analysis was to confirm the interrelation of our haunting experience factors, and the results are displayed in Table 1. Second, Spearman Rho correlations were obtained for AEI and PB scales and scale subsets, and their relation to personality and cognitive variables. These results can be seen in Table 2. The goal of this analysis was to demonstrate the predictive relationships of PB and AEI scales to participants' scores on personality and cognitive variables. Third, we conducted Spearman Rho correlations for PB, AEI, personality measures, and cognitive functioning for each individual factor of haunting experiences. These results can be seen in Table 3. The goal of these analyses was to examine how paranormal belief measures relate to haunting experience measures, and to compare what PB and AEI predict in terms of the cognitive and personality measures in contrast to what the current study's haunt experience measures predict. Please note that correlations for haunting experience categories were individually obtained based on the number of participants who reported that particular type of experience. We excluded those who did not report experiences in order to avoid confounds with the sample of individuals who did not report a particular type of experience. All tests were conducted as two-tailed tests.

Table 2  
Spearman Rho Correlations Between Paranormal Belief Measures, Personality, and Cognitive Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1 Rational Engagement	<b>.67</b>																					
2 Rational Ability	-.04	.00																				
3 Experiential Engagement	.04	<b>.17</b>	<b>.73</b>																			
4 Experiential Ability	-.07	.00	-.01	.01																		
5 Extraversion	<b>.17</b>	<b>.14</b>	<b>.33</b>	<b>.27</b>	<b>.19</b>																	
6 Agreeableness	<b>.21</b>	<b>.37</b>	-.01	-.01	-.13	<b>.21</b>																
7 Conscientiousness	-.32	-.28	<b>.20</b>	.12	.04	<b>.17</b>	.02															
8 Neuroticism	<b>.47</b>	<b>.50</b>	.08	.04	<b>.19</b>	<b>.24</b>	.08	-.14														
9 Openness to Experience	-.05	-.12	-.02	-.03	.01	-.16	-.25	.07	-.05													
10 AEI Paranormal Experience	-.03	-.08	-.08	-.06	-.05	-.20	-.18	-.01	.03	<b>.79</b>												
11 AEI Paranormal Belief	.05	-.06	-.04	-.06	.04	-.11	-.18	-.01	-.03	<b>.78</b>	<b>.71</b>											
12 AEI Paranormal Ability	-.23	-.20	.10	.02	-.04	-.03	-.02	<b>.21</b>	-.15	<b>.25</b>	<b>.21</b>	<b>.20</b>										
13 AEI Paranormal Fear	-.09	-.12	-.01	-.05	-.02	-.11	-.22	.07	-.01	<b>.87</b>	<b>.66</b>	<b>.68</b>	<b>.21</b>									
14 AEI Poltergeist	.06	.12	.14	.14	.05	<b>.29</b>	<b>.29</b>	.01	.08	-.14	-.18	-.11	-.01	-.09								
15 PB Religious	.08	.06	.04	.05	-.08	-.05	-.04	-.09	.11	<b>.37</b>	<b>.47</b>	<b>.34</b>	<b>.03</b>	<b>.35</b>	<b>.16</b>							
16 PB Psi	.13	.00	.13	.12	.00	.13	-.09	-.06	.09	<b>.21</b>	<b>.28</b>	<b>.31</b>	-.01	<b>.21</b>	<b>.25</b>	<b>.49</b>						
17 PB Witchcraft	-.37	-.27	.06	.02	.10	-.13	-.25	<b>.17</b>	-.11	<b>.39</b>	<b>.36</b>	<b>.29</b>	<b>.14</b>	<b>.34</b>	-.25	<b>.14</b>	<b>.19</b>					
18 PB Superstition	.01	.05	.07	.12	-.04	-.08	-.17	.01	.10	<b>.48</b>	<b>.60</b>	<b>.36</b>	<b>.08</b>	<b>.43</b>	<b>.07</b>	<b>.64</b>	<b>.49</b>	<b>.30</b>				
19 PB Spiritualism	-.01	.02	-.10	-.05	-.11	-.22	-.14	-.05	.07	<b>.34</b>	<b>.45</b>	<b>.32</b>	<b>.12</b>	<b>.32</b>	-.09	<b>.50</b>	<b>.40</b>	<b>.29</b>	<b>.55</b>			
20 PB ELF	-.02	-.05	.11	.11	.10	-.05	-.19	.04	.14	<b>.43</b>	<b>.45</b>	<b>.36</b>	<b>.13</b>	<b>.36</b>	.05	<b>.54</b>	<b>.48</b>	<b>.48</b>	<b>.57</b>	<b>.47</b>		
21 PB Precognition	-.04	-.04	.10	.13	.02	-.01	-.15	.01	.10	<b>.43</b>	<b>.50</b>	<b>.39</b>	<b>.09</b>	<b>.41</b>	<b>.29</b>	<b>.77</b>	<b>.71</b>	<b>.42</b>	<b>.81</b>	<b>.65</b>	<b>.77</b>	
22 PB Total Measure																						

Bold represents  $p < .05$

First, with regard to the relationships between haunting experience factors, relationships between factors, except Feeling Presences, were moderately interrelated ( $r = .37-.49$ ; see Table 1). Lesser, Greater, and Sum categories were all interrelated with all other factors except Feeling Presences ( $r = .37-.78$ ). Thus, whereas feeling presences seems unrelated to other haunt experiences, the other factors appear “experientially connected,” suggesting a link between these individual experiences and our conceptual factors of haunt phenomena.

With regard to the correlations of PB, AEI, and cognitive and personality variables, the findings can be seen in Table 2. An examination of the relationships between these measures shows that individual factors of PB modestly to moderately interrelate ( $r = -.25-.57$ ), with a few exceptions (see Table 2). Overall relationships of the subset scales to the overall PB measure are stronger ( $r = .29-.81$ ). Interestingly, the Religious Belief subscale of paranormal belief relates poorly to the other subsets ( $r = -.25-.25$ ), and does not significantly relate to three of the seven PB factors. For AEI, relationships between the five factors are modest to strong ( $r = .20-.87$ ), and AEI Paranormal Fear only modestly relates to the other factors ( $r = .20-.25$ ). AEI and PB are moderately interrelated ( $r = -.18-.60$ ), with a few exceptions (see Table 2). However, the subscale of AEI Fear is completely unrelated to the PB scales ( $r = -.01-.14$ ). Thus, the AEI and PB subscales are moderately intercorrelated (with noted exceptions), and the full scales are moderately related to each other.

When the relationships of the PB and AEI subscales with the personality and cognitive function measures are examined, most are found to be nonsignificant, with exceptions noted below. With regard to cognitive function, AEI Fear and PB Superstition, which are unrelated to each other,  $r(157) = .14$ , n.s., are both negatively and significantly related to Rational Engagement ( $r = -.23$  to  $-.37$ ) and Rational Ability ( $r = -.20$  to  $-.27$ ). For AEI and PB predicting our personality variables, Neuroticism was predicted by PB Superstition and AEI Fear ( $r_s = .17-.21$ ). Conscientiousness was predicted by all of the AEI subsets (except AEI Fear), PB Religious Belief, PB Superstition, PB Spiritualism, and PB Precognition ( $r = -.25-.29$ ). Agreeableness was predicted by AEI Paranormal Experience, AEI Paranormal Belief, PB Religion, and PB ELF ( $r = -.22-.29$ ). Thus, two specific subscales of PB and AEI were negatively related to a tendency toward analytical thinking and reasoning, and about half of the subscales of both the PB and AEI were related to three of the Big 5 personality variables.

In context of our previous analysis, results from Spearman Rho haunting factor correlations can be seen in Table 3. In support of our hypothesis, the majority of measures, including subscales of the AEI and PB, failed to predict the current study's haunting experience factors, with exceptions noted below. Feeling Presences was significantly related ( $p < .05$ ) to Rational Engagement,  $r(56) = .28$ ,  $p < .05$ , and yet unrelated to any of the PB or AEI subsets. Hearing Voices was significantly related to Openness to

Experience,  $r(76) = .26, p < .05$ , whereas in Table 2 it can be seen that neither AEI nor PB relates to this personality factor. Hearing Voices was also related to the Paranormal Ability subscale of the AEI,  $r(76) = .24, p < .05$ . Visual Experiences was associated with the Paranormal Ability subscale of the AEI,  $r(68) = .25, p < .05$ , the PB subscales of Superstition,  $r(68) = .26, p < .05$ , and Neuroticism,  $r(68) = .21, p < .05$ , as well as the AEI Poltergeist subscale,  $r(68) = .24, p < .05$ . Physical Events was significantly associated with Extraversion,  $r(71) = .24, p < .05$ , which again was not related to either PB or AEI, and Physical Events was also related to the AEI: Paranormal Ability,  $r(71) = .31, p < .05$ ; Movement (of objects) was significantly associated only with Rational Engagement,  $r(57) = .35, p < .05$ , whereas AEI and PB inversely predicted Rational Engagement (see above, or Table 2); both the AEI and PB subscales were unrelated to our movement of objects experience category.

These correlations taken in conjunction with Table 2 demonstrate that the haunt experience subscales only modestly relate to a few specific subscales of both PB and AEI. Rational Engagement is the only variable all three measures predict (although in opposite predictive directions). There is only one instance where PB, AEI, and haunt experiences inter-relate with one another and predict a personality or cognitive variable: Visual Experiences is related to PB Superstition,  $r(68) = .26, p < .05$ , and both variables predict Neuroticism—PB:  $r(156) = .17, p < .05$ ; VE:  $r(68) = .21, p < .05$ . Thus, the haunt experience subscales independently predict factors of the personality and cognitive variables that the AEI and PB do not.

Our dichotomy of lesser and greater haunt experiences was overall not significantly predicted by any of the measures, with two exceptions. Lesser Haunt Experiences was significantly associated with the Precognition subscale of paranormal belief,  $r(99) = .28, p < .05$ , and the AEI Poltergeist subscale,  $r(99) = .24, p < .05$ . Greater Haunt Experiences was associated with Extraversion,  $r(99) = .22, p < .05$ . Extraversion was not predicted by either the AEI or PB subscales (per Table 2).

Finally, the overall measure of haunt experience, which included the summation of all five categories, was significantly predicted by Extraversion,  $r(99) = .21, p < .05$ , Paranormal Experience of the AEI,  $r(99) = .20, p < .05$ , AEI Poltergeist,  $r(99) = .23, p < .05$ , PB Superstition,  $r(99) = .24, p < .05$ , and PB Precognition,  $r(99) = .25, p < .05$ . Again, no predictive overlap was apparent for summed haunt experience and either the AEI or PB subscales.

In overall summary, the correlative relationships between the paranormal belief measures, haunt experiences, and personality and cognitive variables show that all three of these measures (i.e., PB, AEI, and haunt experiences) are only modestly related with a few specific factors. More importantly, with two exceptions, these measures independently predict different cognitive and personality variables.

Table 3  
*Spearman Rho Correlations Between Paranormal Belief and Experience, Haunt Experiences, Cognitive, and Personality Variables*

Sample Size	(58)	(78)	(70)	(73)	(59)	(101)	(101)	(101)
Measure	FP	HV	VE	PE	M	L	G	Sum
Rational Engagement	.28	.19	.00	.03	<b>.35</b>	.03	.02	.00
Rational Ability	.20	.21	-.03	.02	.21	.00	.05	.00
Experiential Engagement	.06	.01	.01	.06	.06	.13	-.09	.05
Experiential Ability	.06	.00	.14	.05	.02	.07	-.05	.05
Extraversion	-.08	.14	.15	<b>.24</b>	.01	.11	<b>.22</b>	<b>.21</b>
Neuroticism	-.16	-.17	<b>.21</b>	.13	.05	.05	.17	.11
Conscientiousness	-.09	.03	.13	.11	.15	-.01	.14	.03
Agreeableness	.02	.02	.18	.04	.09	.13	.00	.09
Openness to Experience	.23	<b>.26</b>	.12	.23	.20	.18	.02	.08
AEI: Para Experience	-.02	.00	.21	.20	-.02	.19	.09	<b>.20</b>
AEI: Para Belief	.17	.06	.20	.10	.17	.16	.00	.14
AEI: Para Ability	.09	<b>.24</b>	<b>.25</b>	<b>.31</b>	.20	.18	.06	.18
AEI: Para Fear	.16	-.01	.06	.00	.17	.16	-.07	.11
AEI: Poltergeist	-.02	.08	<b>.24</b>	.22	.01	<b>.24</b>	.17	<b>.23</b>
PB: Religious	.01	.00	-.10	.00	-.05	-.07	.00	-.02
PB: Psi	.16	.00	.10	.06	.08	.17	.00	.12
PB: Witchcraft	.17	-.01	.03	-.10	.12	.03	-.01	.01
PB: Superstition	.04	.00	<b>.26</b>	.03	.06	.16	.19	<b>.24</b>
PB: Spiritualism	.06	.03	.09	.12	-.02	.09	.00	.07
PB: ELF	.10	-.05	.00	-.02	-.06	.04	.03	.02
PB: Precognition	.10	.06	.16	.20	-.05	<b>.28</b>	.07	<b>.25</b>
PB: Total	.15	.00	.10	.08	.01	.16	.03	.11

FP = feeling presence, HV = auditory phenomena, VE = visual phenomena, PE = physical phenomena, M = movement, L = lesser haunt experience, G = greater haunt experience, Sum = summary of all experiences. Bold represents  $p < .05$ .

### **Differences in Measures for Individuals Who Have and Have Not Experienced Haunting Phenomena**

To examine if people who experience haunt phenomena rate differently than those who have not experienced haunt phenomena, independent  $t$  tests were conducted across paranormal belief, personality, and cognitive ability measures. Results are presented in Table 4.

Table 4  
*Differences in Measures for Individuals Who Have and Have Not Experienced Haunting Phenomena*

Measure	No Experience		Experience		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Rational Engagement	34.72	6.84	35.10	7.62	0.35	.71
Rational Ability	35.41	7.20	36.48	6.77	0.93	.35
Experiential Engagement	<b>30.98</b>	<b>7.13</b>	<b>33.85</b>	<b>7.32</b>	<b>2.39</b>	<b>.01</b>
Experiential Ability	32.48	6.22	34.49	7.16	1.77	.07
Extraversion	12.62	3.91	12.67	3.79	0.07	.93
Neuroticism	11.22	3.31	11.21	2.95	0.02	.98
Conscientiousness	14.84	3.48	14.26	3.55	1.00	.31
Agreeableness	15.00	3.26	15.39	3.00	0.76	.45
Openness to Experience	14.74	3.08	14.50	3.22	0.46	.64
AEI: Para Experience	<b>9.06</b>	<b>6.54</b>	<b>14.41</b>	<b>7.94</b>	<b>4.50</b>	<b>.00</b>
AEI: Para Belief	<b>6.64</b>	<b>3.86</b>	<b>8.63</b>	<b>2.78</b>	<b>3.84</b>	<b>.00</b>
AEI: Para Ability	<b>3.01</b>	<b>4.52</b>	<b>4.99</b>	<b>5.19</b>	<b>2.49</b>	<b>.01</b>
AEI: Para Fear	2.82	2.47	3.46	2.43	1.62	.11
AEI: Poltergeist	<b>1.11</b>	<b>1.83</b>	<b>3.09</b>	<b>2.57</b>	<b>3.20</b>	<b>.00</b>
PB: Religious	20.98	7.04	22.51	5.78	1.47	.14
PB: Psi	<b>13.58</b>	<b>6.68</b>	<b>16.03</b>	<b>5.42</b>	<b>2.50</b>	<b>.01</b>
PB: Witchcraft	<b>13.74</b>	<b>6.54</b>	<b>16.76</b>	<b>5.57</b>	<b>3.07</b>	<b>.00</b>
PB: Superstition	7.03	4.34	7.16	4.58	0.16	.86
PB: Spiritualism	<b>13.72</b>	<b>5.91</b>	<b>16.55</b>	<b>5.72</b>	<b>2.95</b>	<b>.00</b>
PB: ELF	9.74	4.26	10.88	3.76	1.74	.08
PB: Precognition	<b>12.58</b>	<b>5.52</b>	<b>14.78</b>	<b>5.41</b>	<b>2.43</b>	<b>.02</b>
PB: Total	<b>91.35</b>	<b>28.49</b>	<b>104.67</b>	<b>22.88</b>	<b>5.36</b>	<b>.00</b>

Bold represents  $p < .05$

For the AEI, participants who experienced haunt phenomena had significantly higher scores on AEI Paranormal Experience (9.06 vs. 14.41),  $t(156) = 4.50$ ,  $p < .01$ , AEI Poltergeist (1.11 vs. 3.09),  $t(156) = 3.20$ ,  $p < .01$ , AEI Paranormal Belief (6.64 vs. 8.63),  $t(156) = 3.84$ ,  $p < .01$ , and AEI Paranormal Ability (3.01 vs. 4.99),  $t(156) = 2.49$ ,  $p = .01$ , than those who did not experience haunt phenomena. For PB, participants who reported haunt phenomena had significantly greater scores on the overall measure (91.35 vs. 104.67),  $t(156) = 5.36$ ,  $p < .01$ , Psi (13.58 vs. 16.03),  $t(156) = 2.50$ ,  $p = .01$ , Witchcraft (13.74 vs. 16.76),  $t(156) = 3.07$ ,  $p < .01$ , Spiritualism (13.72 vs. 16.55),  $t(156) = 2.95$ ,  $p < .01$ , and Precognition (12.58 vs. 14.78),  $t(156) = 2.43$ ,  $p = .02$ , compared with those who did not.

With regard to personality and cognitive variables, haunted and nonhaunted did not significantly differ on mean scores of Neuroticism, Extraversion, Agreeableness, Conscientiousness, or Openness to Experience.

Likewise, haunted did not differ on mean scores of Rational Engagement, Rational Ability, or Experiential Ability. However, a significant difference was shown for Experiential Engagement (30.98 vs. 33.85),  $t(156) = 2.39$ ,  $p = .01$ , wherein those who experienced haunting phenomena scored higher than those who did not.

## **Discussion**

The goal of the current study was to provide an initial analysis of how haunting experiences predict paranormal belief and experience as defined by Tobacyk's (2004) Paranormal Belief Scale, and Gallagher et al.'s (1994) Anomalous Experiences Inventory. We expressed concerns that paranormal belief and experience as measured by these constructs raise questions about whether people who have experienced haunt phenomena are accurately represented in these measures. More importantly, we wished to test if associations between PB and AEI with other personality measures would apply to individuals who have experienced haunting phenomena.

Generally speaking, the current article provides initial evidence that validates our concerns. Individuals who reported haunting experiences did rate significantly higher on several subscales of both the PB and AEI. Yet, relationships between these measures and haunt experiences, on the whole, are nonexistent, and where relationships do exist, they are inconsistent across haunting categories and weak in variance explained.

### **Paranormal Belief and Haunt Experience**

In the current study, both PB and AEI did not predict haunting experiences as a whole, including the subscale specifically associated with poltergeist and haunt experience. The exception to this statement was AEI Paranormal Ability, which significantly, albeit weakly, related to hearing voices, visual experiences, and physical experiences. The paranormal ability section of the AEI contained some of the specific items mentioned in the AEI Poltergeist subscale, namely the ability to communicate with the dead or supernatural forces. In this sense at least, the current study provides some evidence that these types of supernatural communication items indirectly relate to someone having seen or experienced voices or apparitions. Yet two out of several items within a specific subscale do not explain why this factor, which is operationally defined as a person's belief in extraordinary abilities, would relate to haunting experiences. The general interpretation of haunting experiences is that they are conceived as the result of external and invisible entities, and not a person's special powers. Even if items do significantly relate to haunt experience, the nature of the items themselves still does not address haunting, and increases in these scores could be due to other beliefs, including ESP, mediumship, or new age occult practices.

Paranormal belief, as measured by Tobacyk (2004), was poorly predictive of haunting experiences. Only the Superstition subscale predicted any type of haunt phenomena, and only for the Visual Experiences category. Although poltergeist subscale items may account for why AEI subscales relate to haunting experience, none of the superstition items on PB remotely relates to haunt experiences. Therefore, we have no clear explanation for why visual haunting experiences would promote a belief in superstitions such as unlucky numbers or curses from breaking a mirror.

In a similar vein, even when haunting phenomena are reconfigured into lesser or greater haunting events, or as an overall score, these measures did not fare much better. Out of 12 PB and AEI subscales, only 4 significantly predicted across the three experience summations of lesser, greater, and overall haunt experiences. Specifically, PB Precognition, and AEI Poltergeist predicted lesser haunt experiences, while neither AEI nor PB predicted greater haunt experiences. However, the sum measure was predicted by AEI Paranormal Experience, AEI Poltergeist, PB Superstition, and PB Precognition.

As the AEI Paranormal Experience measure has much overlap with the AEI Poltergeist items (6 of the 8 items in the poltergeist scale come from AEI Paranormal Experience), it is not surprising to see that both correlated with the same measure, at least in the overall sum category. However, both the Paranormal Experience and the Poltergeist measures of the AEI did not reliably predict either of the categories of haunt experience (most relationships were not significant). When they did significantly predict haunting experience, the relationships explained little variance.

As there seems to be no consistent pattern across these configurations, and items in these subscales have limited representation with haunting phenomena, we interpret this evidence in two ways. First, although our haunting experience measure is conceptual, the subscales do moderately and significantly relate to each other and the sum measures of haunt experience. Significant relationships between paranormal belief and haunting experience measures are likely the result of inclusion of haunting subscale categories in the sum measure that already relate to a particular PB or AEI subset. As such, it seems likely that the lesser and greater dichotomies and overall sum scores of haunting experience may not contain much unique covariation with AEI and PB subscales.

Second, the lack of consistent prediction suggests that whatever variables facilitate these relationships between haunt experience and AEI and PB scales are artifacts not measured by the current study. Indeed, the general lack of direct relationships between the 12 possible PB and AEI subscales and our five haunting experience measures supports our hypothesis that haunt experiences may not directly relate to existing paranormal belief and experience measures.

However, people who experienced haunt phenomena did present significantly greater mean scores on several of these subscales compared

with individuals who did not experience haunting, which was contrary to our expectations. We interpret these findings to mean that the experience of haunt phenomena will lead to an overall increase in paranormal belief and experience as assessed by these measures. Assuming generalization of the current sample, we could expect individuals who report haunting experiences to have more belief in psi, witchcraft, spiritualism, and precognition, as well as higher scores on paranormal experience, ability, and beliefs.

What is troubling is that the current study cannot explain why these scores are higher, as there is no direct relationship between the majority of AEI and PB subscales and the number of haunt phenomena experienced. If taken from the perspective that correlations between variables indicate what factors might lead to a higher score, and therefore a greater average, then significantly higher means in the PB and AEI subsets cannot be accounted for by haunting experience alone. Thus, an important finding of the current research is that other unmeasured variables likely mediate the relationships between PB, AEI, and haunt phenomena, in turn producing greater mean overall scores on PB and AEI subsets.

Conceptually, it seems that haunt experiences by common definition should represent activity that individuals would perceive as paranormal. Although the current measure for assessing haunting experiences is not statistically perfect, it is conceptually correct in the sense that the categories roughly correspond to Lange et al.'s (1996) dichotomies of haunt experience. They also conform to Hufford's (1982) emphasis on experiences of participants. Thus, although our findings show little relationship to PB and AEI, it seems conceptually correct that they should be related.

However, potential mediating variables that might account for the predictive relationships between haunting and paranormal belief measures in the current study should be considered within the context of Hufford (1982) and McClennon (1994, 2002) and the experiential source hypothesis. The items from our haunting experience measure represent basic experiences that people have reported and interpreted as haunting events. Based on McClennon (1994), these would be considered primary and secondary experiences: the raw material in which meaning is derived for a person or group of people. However, both Hufford (1982) and McClennon (1994) have suggested that two additional processes are likely to occur in a haunting scenario before belief is determined. Before belief, a testing or evaluation period of experiences occurs, and similar to conformity effects found in social psychology (e.g., Asch, 1965; Sharif, 1937), a consensus of the meaning of the events also occurs before belief is generated.

In the context of this process, one could view the measures of the current study as existing on different levels of the meaning creation process. Whereas our measure contains simple experiences or events, most items in both the PB and AEI scales represent interpreted beliefs. An example from the AEI Poltergeist scale demonstrates this tendency: "I have seen elves or

fairies or other types of little people.” This item does not specify if a person witnessed small apparitions, blobs, mists, or small people. It clearly infers that whatever the individual witnessed was interpreted as a visit from fairies. Thus, our measure would most likely sit at the first stage of the meaning process, whereas PB and AEI represent the end process, the outcome of belief.

The problem with the experiential source hypothesis for our findings is that there are two stages of belief-processing between our measures and the PB and AEI. As such, the lack of relationship between these measures may imply mediating variables (which we discuss below), but may also represent differences in how haunting events are processed in comparison to the other types of paranormal belief that are represented in PB and AEI. Therefore, trait and personality influences may play different roles within either of these intermediate “meaning-making” stages between raw experience and the beliefs that result.

### **Personality Measures, Cognitive Measures, and Haunt Experiences**

Our case for hauntings not being represented by either PB or AEI scales is further supported when we examine personality and cognitive variables. Contrary to previous research with PB, cognitive functioning, personality measures, and psychopathology, haunting experiences as a whole were not predicted by either experiential tendency or ability (a.k.a. intuitive tendency; Epstein et al., 1996; Pacini & Epstein, 1999). In fact, the opposite seems evident. Feeling presences and movement of objects were associated with enjoying and engaging in analysis. This is in contrast to the finding that negatively relates PB and AEI to Rational Engagement in the current study. To our knowledge, this is a unique finding and contrary to the expectations of previous research (e.g., Epstein et al., 1996). It is interesting to note that rational engagement is significantly associated with the experience of witnessing the movement of objects. One interpretation of this finding is that hauntings who experience the extraordinary event of objects moving on their own begin to engage in cognitive analysis of how such an event could happen. Again, this interpretation follows the lines of Hufford (1982) and McClenon (1994, 2002), as participants attempt to find meaning and explanation for these difficult-to-explain events in the context of their cultural beliefs. As such, this finding suggests that individuals in our study who had haunting experiences are somehow different from those described by Irwin (2009) in his paranormal belief research supporting the cognitive deficiencies hypothesis.

However, the current study did not directly assess probability estimation or intelligence. Therefore, the current findings, while contrary to previous literature, do leave open the possibility that hauntings may still suffer from probability contingency effects (e.g., Blackmore & Troscianko, 1985; Brugger & Graves, 1997; Rogers, Davis, & Fisk, 2009 ) or

lower IQ scores (e.g., Smith, Foster, & Stovin, 1998; Watt & Wiseman, 2002). We can state that hauntededs are different with regard to general cognitive analysis and intuitive thinking tendencies compared to other paranormal belief samples. We are unable to draw conclusions about IQ and probability estimation, and we present these variables as areas for future research in haunt experiences and paranormal belief.

Examinations of mean score differences between those who experienced haunting phenomena versus those who did not are also contrary to the cognitive deficiencies hypothesis (Irwin, 2009). Hauntededs do not significantly differ on rational ability, rational engagement, or experiential ability compared with nonhauntededs. Yet, in support of general findings in previous research (Epstein et al., 1996), mean scores for experiential engagement (a desire and enjoyment of using intuitive cognitive styles) were significantly greater with the sample of individuals who did experience haunt phenomena. Since PB and AEI scores do not correlate as a whole with haunt experience, and hauntededs do not appear to suffer from significantly lower scores in analytical tendency and ability compared to nonhaunt samples, we tentatively conclude that previous findings concerning PB, AEI, analytical tendency, and intuitive tendency (e.g., Epstein et al., 1996) do not generally apply to individuals whose paranormal belief is rooted in haunting experiences.

Personality measures in the current study tell a mixed story about previous findings. Extraversion predicted experiencing physical phenomena, greater paranormal experiences, and overall sum scores of haunting experience. The small significant relationships between extraversion and paranormal experiences may lend indirect support for hauntededs having some sensation-seeking tendency. While not measured in the current study, extraversion does significantly relate to sensation seeking (e.g., Zuckerman, Bone, Neary, Manglesdorff, & Brustman, 1972). Thus, it seems possible that future research may find a relationship between sensation seeking and paranormal belief (e.g., Groth-Marnat & Pegden, 1998; Kennedy, 2005; Smith, Johnson, & Hathaway, 2009) within a haunting experience sample.

Openness to experience predicted hearing voices and approaches significance for physical experiences. No other relationships were significant, and mean differences between those who have experienced haunting phenomena and those who have not were not significantly different. Thus, whereas previous research would suggest that openness to experience (e.g., Groth-Marnat & Pegden, 1998; Kennedy, 2005; Smith et al., 2009) and neuroticism (e.g., Francis & Williams, 2009) would predict paranormal experience, it does not reliably do so for participants who have experienced haunting phenomena. However, the sparse relationships with openness to experience and reports of hearing voices in the current study do indirectly support the hypothesis that people who have experienced haunting phenomena may share tendencies toward openness to experience.

We would tentatively conclude that any relationship between openness to experience and haunting experience is small and not very predictive.

With respect to the above, there is another possibility regarding the findings of extraversion and openness to experience found in the current study. Previous research has examined paranormal belief in the general population but did not isolate those who have experienced haunting phenomena. It is possible that previous samples contained large numbers of individuals who actively believe in, are curious about, and seek various forms of paranormal encounters. However, in our experience with cases and reports of haunting, people are surprised and not necessarily seeking any relationship with a ghost or spirit. More often than not, people have experienced these events without their consent or a wish for such activity to occur. Therefore, one possible explanation of our findings with openness to experience and possibly sensation seeking is that the samples fundamentally differ in the current research and previous studies. Our sample may have more people who have experienced involuntary haunting, whereas other samples may be more confounded by sensation seekers. Simply put, it is hard to seek a stimulus, or desire to experience a new stimulus, when the person cannot reliably plan for it and is not aware that it is going to happen. Repeat experiences of haunting might be tempting to extraverts, sensation seekers, and open experiencers, but if haunting events are independent of people's control, it is unlikely that clusters of sensation seekers would be present in an involuntary haunting experience population.

## **Conclusion**

The current study's results strongly suggest that hauntings, when assessed by a dichotomy of experiences, do not seem to be directly associated to either PB or AEI, do not appear cognitively deficient, and do not conform to previous research regarding either openness to experience or neuroticism. They do, however, score significantly higher on several PB and AEI subscales compared to people who have not reported haunting experiences. We suggest the current evidence supports our earlier hypothesis that hauntings are either not being represented in paranormal research or are not being assessed, but they in some way indirectly drive or confound current research in paranormal belief.

If the current sample is representative, two-thirds reported some type of haunt experience, which suggests that these experiences are relatively common for college students, at least in rural communities with poor income levels. Even though these experiences are not directly assessed in other studies, the current research suggests that portions of other researchers' samples contain individuals who do experience haunting, and through some unknown set of variables have greater degrees of paranormal belief. It may be the case that researchers are currently assessing more extreme haunting experiences, such as apparitions, but neglecting to examine previous and

less fearful events and encounters that also contribute to paranormal belief. The current study cannot identify these sets of variables, but we believe it is important to further research haunt experiences. Because the current findings are so contrary to previous research, replication is a priority, as well as an examination of other variables such as transliminality (Lange et al., 2000). These additional variables in the context of research that further explores the experiences and interpretation of haunting, similar to Hufford (1982) or McClennon (1994, 2002), would provide a much better map for exploring how these haunting events relate to paranormal belief as a whole.

We do not consider this research conclusive, but suggestive, as some weaknesses exist. First, whereas the haunting experience measure appears to be accurate in terms of describing haunting experiences and has moderate relationships between its subscales, its internal reliability is low because of “either-or” item content. As such, results may differ if haunting experiences are approached from a more traditional intercorrelated direction, although this transition may come at the cost of measures that are less related to direct reports of haunting experience.

Second, Lange et al.’s (2000) transliminality measures were not included in the current study. The AEI has been used with transliminality measures in previous research (e.g., Lange et al., 2006), and it has been shown to strongly relate to items on the AEI (Thalbourne & Houran, 2000). A strong possibility exists that one of the variables that can tie haunting experience and paranormal belief is “a hypothesized tendency for psychological material to cross thresholds into or out of consciousness” (Lange et al., 2000, p. 591). As several psychopathological aspects have been melded into the measure of transliminality, it seems that future research should include it in order to fully assess individuals who have experienced haunt phenomena and have potential for mental illness.

Whereas neuroticism and openness to experience were examined in the current study, we used very short measures that lack the details of their larger predecessors. We would interpret the lack of relationships between openness to experience and neuroticism only as initial evidence, particularly with the significantly greater experiential engagement scores for hauntings that other research has shown to be related with openness to experience (i.e., Pacini & Epstein, 1999). We are currently replicating the current study with more detailed measures and narrative accounts of these haunting experiences to assess the relationships between hauntings and mental health in more detail. Thus, whereas the current study does show that hauntings are no more neurotic than nonhauntings, it is by no means a complete refutation of mental instability.

In conclusion, we submit these findings with the hope that they serve as a spur for other researchers to further examine haunt experiences. It seems that these individuals represent a neglected subset of paranormal participants that does not fit with current findings and, as such, they offer

opportunities for further understanding paranormal belief and how it relates to personal experiences.

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### **Abstracts in Other Languages**

#### *Spanish*

#### **CREENCIA PARANORMAL Y EL EXTRAÑO CASO DE EXPERIENCIAS DE CASAS ENCANTADAS: EVIDENCIA DE UNA POBLACIÓN IGNORADA**

RESUMEN: Este estudio examina las experiencias específicas de personas que han mencionado experiencias de casas encantadas (“haunt,” ECE) en el contexto de las medidas comunes de creencias paranormales. Estudiantes universitarios (N = 169) llenaron encuestas en computadora para evaluar los rasgos de personalidad, funcionamiento cognitivo, la Medida de Creencias Paranormales de Tobacyk (2004), el Inventario de Experiencias Anómalas de Gallagher, Kumar, y Pekala (1994), y una medida diseñada para el presente estudio para evaluar ECE. Los resultados, basados en correlaciones de Spearman, arrojaron relaciones ocasionales y pequeñas entre las medidas de creencias paranormales y ECE. A diferencia de la literatura existente, los resultados de las pruebas t muestran que medidas analíticas y de personalidad no difieren significativamente entre aquellos que han experimentado fenómenos de casas encantadas y aquellos que no. Llegamos a la conclusión de que la investigación anterior sobre la creencia paranormal tal vez no sea relevante para individuos con ECE debido a la falta de contenido sobre ECE en las medidas de creencias paranormales.

#### *French*

#### **LA CROYANCE PARANORMALE ET L’ETRANGE CAS DES EXPERIENCES DE HANTISE : ELEMENTS PROUVANT L’EXISTANTE D’UNE POPULATION NEGLIGEE**

Résumé : La présente étude examine les expériences spécifiques d’individus qui ont relaté des phénomènes de hantise dans le contexte des mesures

habituelles des croyances paranormales. Cent soixante étudiants ont complété des sondages en ligne évaluant leurs traits de personnalité, leur fonctionnement cognitif, l'échelle de la croyance au paranormal de Tobacyk (2004), l'Inventaire des Expériences Anomales de Gallagher, Kumar et Pekala (1994), et une mesure conçue pour la présente étude afin d'évaluer les expériences de hantise. Les résultats, en utilisant les corrélations de Spearman, montre des relations petites et occasionnelles entre les mesures de croyance paranormale et les expériences de hantise. Contrairement à la littérature existante, les résultats au test t montrent des mesures analytiques et de personnalité qui ne diffèrent pas significativement entre ceux qui ont fait l'expérience de phénomènes de hantise et ceux qui ne l'ont pas fait. Nous concluons que la recherche antérieure sur la croyance paranormale pourrait ne pas s'appliquer aux individus qui ont fait l'expérience de phénomènes de hantise du fait de mesures de croyances paranormales manquant de contenus relatifs aux expériences de hantise.

*German*

#### PARANORMALES BELIEFSYSTEM UND DER MERKWÜRDIGE FALL SPUKHAFTER ERFAHRUNGEN: HINWEISE AUF EINE VERNACHLÄSSIGTE POPULATION

Die vorliegende Studie untersucht die besonderen Erfahrungen von Menschen, die über ortsgebundene spukhafte Phänomene im Zusammenhang mit der Messung von allgemeinen paranormalen Beliefssystemen berichten. 169 ländliche Collegestudenten füllten Onlinefragebögen aus, zu denen die Erfassung von Persönlichkeitsmerkmalen, kognitivem Funktionieren, Tobacyks (2004) Paranormale Belief-Skala, Gallagher, Kumar und Pekalas (1994) Anomalous Experiences Inventory und ein für die vorliegende Studie entwickelter Fragebogen gehörten, um ortsgebundene spukhafte Erfahrungen zu erfragen. Ergebnisse unter Verwendung von Korrelationen nach Spearman ergaben vereinzelte und schwache Zusammenhänge zwischen paranormalen Glaubenseinstellungen und spukhaften Erfahrungen. Im Widerspruch zur bisherigen Forschungsliteratur zeigten sich aufgrund von t-Testergebnissen keine signifikanten Unterschiede in analytischen und Persönlichkeitsmerkmalen zwischen solchen Personen, die über ortsgebundene Spukphänomene berichteten und solchen, die das nicht taten. Man kann schlussfolgern, dass die bisherige Erforschung paranormaler Glaubenseinstellungen nicht auf solche Personen zutrifft, die spukhafte Phänomene erlebt haben, da solche Erfahrungen nicht Bestandteil paranormaler Beliefssysteme und ihrer Erfassung gewesen sind.

## APPENDIX

**Haunting Experience****Feeling Presence (2 items)**

I felt a positive presence (L)

I felt a negative presence (L)

**Auditory Experience (6 items)**

I heard a bump or knock (L)

I heard several bumps or knocks (L)

I heard moaning/laughter/voices (G)

I heard a voice say something to me (G)

I heard a voice say my name (G)

**Visual Experiences (7 items)**

I saw a floating light or darkness (L)

I saw some form of mist or smoke (L)

I saw a streak of light or darkness (L)

I saw the outline of a human shape (G)

I saw a detailed human shape (G)

I saw the outline of a non-human shape (G)

I saw a detailed non-human shape (G)

**Physical Experiences (7 items)**

My hair was tugged or pulled (L)

I was touched or poked (L)

I was scratched (G)

I was pushed or hit (G)

I felt a weight on my chest (L)

I had trouble breathing (L)

Other physical phenomena (L)

**Movement (6 items)**

An object(s) disappeared and reappeared later (G)

I saw movement of an object (G)

I saw a small object(s) float (G)

I saw a small object(s) fly across the room (G)

I saw furniture move (G)

I saw some other heavy object move (G)

Note: L = Lesser Haunt Experience, G = Greater Haunt Experience