

- Jahn, R. G. & Dunne, B. J. (2005). The PEAR proposition. *Journal of Scientific Exploration*, 19, 195–245.
- Jahn, R. G., Dunne, B. J., Nelson, R. D., Dobyms, Y. H., & Bradish, G. J. (1997). Correlations of random binary sequences with pre-stated operator intention: A review of a 12-year program. *Journal of Scientific Exploration*, 11, 345–367.
- Keen, M., Ellison, A., & Fontana, D. (1999). The Scole report: An account of an investigation into the genuineness of a range of physical phenomena associated with a mediumistic group in Norfolk, England. *Proceedings of the Society for Psychical Research*, 58 (Pt. 220), 149–392.
- Macy, M. (1996). *The Miracle of ITC: Electronic Communication across Dimensions* [Audio cassette]. Boulder, CO: Continuing Life Research.
- Pekala, R. J. (1991). *Quantifying Consciousness: An Empirical Approach*. Plenum.
- Radin, D. (2006). *Entangled Minds: Extrasensory Experiences in a Quantum Reality*. New York: Paraview.
- Skinner, B. F. (1936). The verbal summator and a method for the study of latent speech. *The Journal of Psychology*, 2, 71–107.
- Warren, R. M. (1968). Verbal transformation effect and auditory perceptual mechanisms. *Psychological Bulletin*, 70, 261–270.

## An Analysis of Contextual Variables and the Incidence of Photographic Anomalies at an Alleged Haunt and a Control Site

DEVIN BLAIR TERHUNE

*Department of Psychology, Lund University,  
Box 213, Lund 221 00, Sweden  
e-mail: devin.terhune@psychology.lu.se*

ANNALISA VENTOLA

*3709 Maize Rd.  
Columbus, OH 43224  
e-mail: ventola.4@osu.edu*

JAMES HOURAN

*Integrated Knowledge Systems, Inc.  
2561 Hall Johnson Rd., #1217  
Grapevine, TX 76051  
e-mail: jim\_houran@yahoo.com*

**Abstract**—This field study assessed whether areas in an alleged haunt and a control site, and active and inactive areas within the haunt site, differed with respect to the presence of contextual variables that might contribute to haunt experiences and exhibited differential incidences of photographic anomalies. Contextual (aesthetic, physical, and structural) variables were measured, and randomized photographic (black-and-white, color, digital, infrared, and Polaroid) data were recorded under blind conditions in fourteen representative areas of the two sites. The haunt site displayed lower ambient temperature and higher humidity levels than the control site, but only suggestive differences were found between the active and inactive areas of the haunt site. Ratings from experimentally-blind photographic consultants indicated that the haunt site exhibited a higher incidence of photographic anomalies than the control site, as did the active areas of the haunt site, relative to the inactive areas. Color prints exhibited a higher incidence of photographic anomalies than all other media types. The results are discussed within the context of contemporary theoretical accounts of hauntings and methodological protocols employed in haunt research.

**Keywords:** hauntings—apparitions—anomalous experiences—contextual variables—photographic anomalies

The term ‘haunting’ refers to recurrent culturally-sanctioned anomalous experiences that are confined to a particular site or locale. Such experiences may include, but are not limited to, visual apparitions, apparent movements of objects, and the sensing of an unseen presence. The traditional conception of

haunting phenomena, espoused by some contemporary researchers (e.g., Maher, 1999; Stevenson, 1972), is that they result from the parapsychological activity of deceased individuals. Much of the recent research in this area, however, has attempted to understand haunt experiences by recourse to recognized cognitive and social (Lange & Houran, 2001) and neuropsychological processes (Persinger & Koren, 2001). The present research sought to address multiple outstanding issues in the contemporary literature that fall within two different, though related, domains: the role of contextual variables in the mediation of haunt effects and the incidence of photographic anomalies in prints captured at haunt sites.

Contextual variables include a variety of stimuli available to an individual at the time of an anomalous experience or shortly thereafter that purportedly structure, or help structure, that experience. Such stimuli may include environmental cues such as suggestion or the aesthetic features of a locale, or endogenous stimuli such as one's beliefs and expectations about the respective site in particular and/or paranormal phenomena more generally. These and other contextual variables may come to influence the interpretation, incidence, and phenomenology of a variety of experiences. For instance, contextual information may lead one to anticipate certain events or outcomes and thereby inflate the probability of their occurrence, or to color ambiguities in a manner which is consistent with the respective cues. That is, contextual variables may prime an individual towards particular behavioral responses or perceptual experiences. Concurrently, by informing the content of ambiguous endogenous stimuli (e.g., shifts in arousal), contextual variables may function to reduce anxiety concerning the inexplicable nature of an anomalous experience (Zimbardo et al., 1993; see also Bentall, 2000; Houran, 2000).

In the present context of haunt experiences, two highly salient priming variables include prior suggestion that a site is haunted and prior paranormal belief (Lange & Houran, 2001). To the extent that a particular item of contextual information suggests an interpretation of an event or series of events, or exacerbates pre-existing tendencies toward certain experiences or responses, the occurrence of a congruent action or experience may be said to be mediated by the respective contextual cue. Previous research suggests that haunting phenomena are contextually mediated (Lange et al., 1996). Although it is well recognized that hallucinations can be induced in laboratory settings via suggestion (e.g., Barber, 1969), this effect has not been examined in the field until quite recently. Lange and Houran (1997a) found that of two cohorts of individuals touring an abandoned theater, those who were told that the site was haunted reported more anomalous experiences than those who were informed that the site was undergoing renovation. During participants' tours of an alleged haunt, Wiseman and colleagues extended this finding by documenting that the reporting of unusual experiences was related to participants' self-reported paranormal belief and whether or not they had been informed that the site had recently witnessed an increase in parapsychological phenomena (Wiseman et al.,

2002). Other aesthetic and structural variables, such as the presence of reflective surfaces (Kelly & Locke, 1981) and the spatial dimensions of a room (Wiseman et al., 2003), have been found to be associated with the reporting of haunting-type experiences. Furthermore, although few studies have examined the influence of contextual variables upon the *content* of anomalous experience, available evidence is consistent with a contextual mediation hypothesis (Houran, 2000; Skirrow et al., 2002). Given such findings, the relationship between the occurrence of anomalous experiences and the presence of contextual variables requires continued study.

Other physical factors, which may or may not be cognitively registered, yet may play a role in the mediation of haunt perceptions through their tendency to induce various ambiguous experiences, are also worthy of consideration. Nickell (2001) has suggested that haunted locations may be inherently, yet naturally, cold or draughty. Similarly, Wiseman et al. (2003) found that the reporting of anomalous experiences in areas of an alleged haunt positively correlated with the lightings levels of the particular areas in which experiences occurred. Lange and Houran (2001) have argued that ambiguous stimuli such as these may be misinterpreted as haunt effects given cognitive and motivational biases favoring paranormal explanations for inexplicable events (see also Zimbardo et al., 1993).

A considerable amount of attention has been afforded to the causal or mediatory role of contextual physical factors in the induction of haunting-type experiences. While numerous physical variables have been found to be associated with anomalous experiences (e.g., Braithwaite & Townsend, 2006; Radin & Roll, 1994; Tandy, 2000), the influence of magnetic fields upon the incidence of haunt phenomena has received the greatest empirical scrutiny. Persinger and colleagues have hypothesized that haunt experiences result from the interaction of electromagnetic and/or geomagnetic fields with the neuro-electromagnetic patterns within an individual's brain (for a review, see Persinger & Koren, 2001). Support for this account has been provided in field settings, where high peak strength geomagnetic or highly variable electromagnetic (EM) fields have been consistently documented in haunted locales (see Roll and Persinger 2001 and Persinger and Koren 2001 for reviews). In many of these studies, however, the measurement of magnetic fields has not been conducted under blind conditions, formal control areas within a site have been inconsistently utilized, and no study of which the authors are aware has included a second, independent control site (cf. Houran & Brugger, 2000). Although two studies (Maher, 2000; Maher & Hansen, 1997) failed to replicate these effects, both only measured local ambient electromagnetic field magnitudes, which are less likely to demonstrate the hypothesized variability required for the induction of haunt experiences than transient magnetic fields, whose fluctuations can be more sensitively measured over extended periods of time (e.g., Persinger & Cameron, 1986). Multiple experiments have purported to induce the experience of a sensed presence and other anomalous experiences in the laboratory by applying weak (i.e., 500 to 1000 nanoTesla [nT]), complex magnetic fields in a burst-firing

pattern to the temporal and temporal-parietal regions of the cerebral cortex of human participants (Cook & Persinger, 1997, 2001; Persinger & Healey, 2002; Persinger et al., 2000). Conversely, the only study which has attempted to independently replicate this research failed to discern an effect (Granqvist et al., 2005). This experiment was double-blind and its experimenters allege that it adhered to Persinger's protocol specifications. However, the reason(s) for this failure to replicate remain the source of debate (Larsson et al., 2005; Persinger & Koren, 2005).

Despite the utility of conventional psychological explanations, the contention that haunts result from paranormal agency remains ubiquitous. Many findings have been interpreted as supportive of this hypothesis, but the most pervasive by far is the observation that photographic anomalies repeatedly appear in photographs taken at haunted locales (see Lange & Houran, 1997b; Maher, 1999; Nickell, 2001). Reports of the capturing of low-grade anomalies, such as density spots (orbs) or fogging, at sites that have previously played host to haunt effects are rampant in the popular press and on the world-wide-web (Potts, 2004) and are commonly attended by attributions of paranormal agency. High-grade anomalies, such as apparent apparitions or unequivocally paranormal objects, are often compelling enough to invoke either belief in the phenomenon or accusations of fraud. Despite the attention that reports of photographic anomalies draw, these reports are ultimately anecdotal, as there have only been a few empirical studies that have examined and presented evidence for these purported effects.

The most compelling evidence for photographic anomalies thus far was reported by Maher and Hansen (1997). They instructed a 'sensitive' (i.e., someone who professed to have the ability to detect ghosts) to take photographs inside of an alleged haunt site. The sensitive was blind to the identity of the areas in which the photographs were taken. Moreover, his earlier markings on a floor-plan and reports on a checklist did not significantly correspond to the locations of haunt effects, as reported by the inhabitants of the site, or the features of the apparitional experiences, respectively. Approximately one third of the prints exhibited photographic anomalies, described as "translucent, cloud-like aberration(s) of a pinkish cast" (Maher, & Hansen, 1997, p. 197). Those with anomalies were found to have been significantly more likely to have been captured in areas in which previous haunt effects had been reported.

Although this study is to be applauded for its ingenuity and its incorporation of statistical analyses, it suffers from numerous methodological limitations, which temper the conclusions that can be drawn from it. First, the photographs were not taken in a randomized fashion, nor were the same number of photographs taken across areas. The incorporation of such methodological features would have allowed the exclusion of potential confounding variables. Second, the individual who assumed the role of the photographer lacked professional training and may have been unaware of various means of preventing inadvertent artifacts.<sup>1</sup> Third, the photographer was not blind to the context of the

investigation and the hypothesis under test and may have thereby unwittingly caused the occurrence of more anomalies by his conduct. Finally, two other sets of photographs were taken at the site by professional photographers, but excluded from the analysis because of a lack of apparent anomalies. The inclusion of such photographs might have diminished the significance of the results. Given the shortcomings of this study, there are no compelling reasons to believe that Maher and Hansen's (1997) reported anomalies did not result from the inclusion of a novice photographer in the experimental protocol or other methodological limitations of the study. Furthermore, in another study of an alleged haunt, Maher (2000) reported that a photographic consultant was able to provide a conventional explanation for apparent photographic anomalies captured during the course of the investigation.

Although few experiments have tackled the issue of photographic anomalies in a suitable fashion, two other studies are worthy of brief mention. In an analysis of previously published prints documenting photographic anomalies in Fortean contexts, Lange and Houran (1997b) found that the type of photographic effect (light streak, fogging, density spot [orb], amorphous form, shadow, defined image, or other) is artifactual of the type of photographic medium used, that is, certain types of anomalies appear to be unique to, or more commonly found with, certain media types. In a study investigating the possible mechanisms of 'anomalous orbic images' captured with digital cameras, Schwartz and Creath (2005) presented evidence to suggest that anomalous images are commonly caused by stray reflections or diffraction of the flash reflecting off of dust or dirt particles.

### *The Present Study*

This study concerns a residential site, which was home to a male and female occupant in their mid-forties who gave consent to allow an investigation into the phenomena occurring at their home. The couple, and at least one guest who was unaware of the previous reports, reported various anomalous experiences on the grounds of the site over the course of multiple years and attributed these events to a discarnate agent. Experiences included auditory and visual apparitions, a sensed presence, ostensibly precognitive nightmares, object movements, and the display of aberrant behaviors by the couple's pet dog. This set of experiences conforms to the classic symptomatology of haunt or poltergeist-like episodes (e.g., Roll, 1977).

The site (and case) possessed a number of attributes that made it optimal for a field experiment. The two inhabitants were both mental health professionals and thus it was deemed likely that they had considerable psychological knowledge germane to haunt phenomena and that their reports did not result from naïveté or the failure to consider obvious, mundane explanations. The site had received no media attention, thereby allowing the experimenters to ensure that experimental blinds (for experimenters and participants) could be maintained

unlike in investigations of more famous sites in which this is relatively impossible (e.g., Wiseman et al., 2003), nor did it appear that such attention was sought by the inhabitants. Finally, the house next-door to the haunt site was available for use as a control site with the full consent of both families. Given their close proximity to one another, the two sites did not differ in terms of location or other possible mediating variables which may be responsible for haunt phenomena, such as the presence of underground faults or water (Persinger & Cameron, 1986), geomagnetic flux, or proximity to power stations, airports, and other sources of transient electromagnetic fields (Persinger & Koren, 2001), or overt contextual variables in the surrounding neighborhood (e.g., the presence of a graveyard) (see, e.g., Houran, 2000).

The investigation of this haunt site was intended to be exhaustive. It was planned that the investigation would incorporate and improve upon methodological features previously used in both psychological and parapsychological field and experimental studies. In addition, the investigation was to have the rigor of a controlled field experiment while maintaining a case study approach through the collection of interview data from percipients. For reasons discussed below, these intentions were unable to be fully realized.

The present study of this alleged haunting attempted to circumvent confounds which have plagued previous parapsychological field studies (Houran & Brugger, 2000) by incorporating a second (control) site in which no phenomena had been reported. In addition, all experimenters were blind to the identity of the sites and all personnel were blind to the identity of the sites and the nature of the study. Data from a variety of aesthetic, physical, and structural variables were collected at the two sites, and a professional photographer was hired to capture photographs with multiple media types in a randomized fashion. Multiple independent professional photographers volunteered their services and evaluated photographic prints captured at the sites for the presence of potential anomalies and proffered plausible explanations for any that were identified. Groups of participants were to complete a battery of psychological measures, which have been previously used in haunt research (Houran et al., 2002), and an online task of extrasensory perception. Subsequently, participants were scheduled to tour both of the sites while recording any anomalous experiences on an experiential checklist (Houran, 2002). Finally, following the completion of the experimental stage, we intended to conduct interviews with the couple residing at the haunt site about the location, type, and phenomenology of their experiences and have them, and the family residing at the control site, complete the aforementioned battery of psychological instruments.

Contextual variable and photographic data were collected, but the experiment abruptly ended on the first day of the experiment involving participant tours. On this day, one of the residents of the site entered the house and displayed alarmingly aggressive behavior toward the participants and experimenters, which led to the immediate termination of this stage of the experiment. Through brief discussions with the other resident of the site, it was found that haunt effects at

the site had gone into remission in the months leading up to the investigation. However, in the days preceding and during data collection, the two inhabitants of the site had begun to experience a plethora of distressing haunting-type perceptions following the period of quiescence. The inhabitants apparently came to believe that the investigation had directly caused this recrudescence of haunt effects. It is evident that the return of such effects triggered fear and anxiety in the resident culminating in his aggressive outburst. He subsequently claimed amnesia for the event and stated that he believed that he had been possessed by the agencies which he believed were haunting the site. Other than a few brief communications, the inhabitants discontinued all contact with the investigators, seemingly out of fear of further 'reprisals' from these discarnate entities. Given this turn of events, the investigation of this site, as it is presented here, is fragmentary and is not as thorough as initially intended. Despite this caveat, it is worth noting that the occupants of the site were reporting haunting phenomena during the course of the data collection. Therefore, unlike many previous investigations which have concerned historically haunted sites, this site was undoubtedly 'active' at the time of this investigation.

Based on the foregoing and the data available to us, the following hypotheses were generated: (1) the control and haunt sites will differ in terms of the presence of aesthetic, physical, and structural variables; (2) within the haunt site, active and inactive areas will differ in the presence of contextual variables; (3) photographic prints from the haunt site will exhibit a greater number of anomalies relative to the control site; and (4) of the haunt site prints, those taken in active areas will exhibit more anomalies than those taken in inactive areas. Given the germane findings of Lange and Houran (1997b), it was further conjectured that (5) the incidence of photographic anomalies would vary by media type. The direction of this relationship (i.e., which media type(s) would exhibit the greatest incidence(s) of photographic anomalies) was not specified in advance.

## Method

The experiment had two stages. The first consisted of the measurement of multiple contextual variables and the completion of randomized photography sessions at an alleged haunting and a control site under blind conditions. The second stage involved the assessment of the catalogued prints for the presence of photographic anomalies by experimentally-blind professional photographers.

### Sites

An alleged haunting (henceforth 'target site') and a control site were identified by a colleague of the third author. The sites are located in a middle-class neighborhood of a small city in Illinois, and both were constructed in the mid-twentieth century. Seven matched rooms at each of the two sites were established as experimental areas. Each cohort of representative areas included

