

**Please cite the Published Version**

Dagnall, N , Drinkwater, K , Parker, A  and Clough, PJ  (2016) Paranormal Experience, Belief in the Paranormal and Anomalous Beliefs. *Paranthropology: journal of anthropological approaches to the paranormal*, 7 (1). pp. 4-15. ISSN 2044-9216

**Publisher:** Paranthropology

**Version:** Published Version

**Downloaded from:** <https://e-space.mmu.ac.uk/550/>

**Additional Information:** This is an Open Access article published in Paranthropology, copyright the Authors.

**Enquiries:**

If you have questions about this document, contact [openresearch@mmu.ac.uk](mailto:openresearch@mmu.ac.uk). Please include the URL of the record in e-space. If you believe that your, or a third party's rights have been compromised through this document please see our Take Down policy (available from <https://www.mmu.ac.uk/library/using-the-library/policies-and-guidelines>)

# Paranormal Experience, Belief in the Paranormal and Anomalous Beliefs

By Neil Dagnall, Kenneth Drinkwater, Andrew Parker & Peter Clough

Department of Psychology, Manchester Metropolitan University

## Abstract

Relatively few studies have investigated the nature and incidence of paranormal experience. Extending the work of Castro et al. (2014), this study investigated the prevalence of subjective paranormal experiences (SPEs) and examined relationships between SPEs and anomalous beliefs (paranormal, urban legends and conspiracism). The sample comprised 1215 adults, aged 16-70 years drawn predominantly from a UK University. Data analysis revealed important findings. Forty-two percent of respondents reported an SPE and incidence of multiple experiences was common within experiencers. Despite minor gender differences, across experience types, SPE incidence was largely unaffected by gender. Finally, SPEs correlated positively with belief in the paranormal and anomalous beliefs.

Keywords: *Sociology of the Paranormal, Subjective Paranormal Experiences, Anomalous Experiences, Multiple Experiences, Anomalous beliefs, Parapsychology.*

## Introduction

This paper reports the results of a 2015 survey (UK University based sample), which investigated prevalence of subjective paranormal experiences (SPEs). Noting inextricable links between perceived paranormal experiences and belief in the paranormal (see Drinkwater, Dagnall & Bate, 2013) the survey also examined relationships between SPEs, belief in the paranormal and potentially related anomalous beliefs (urban legends and conspiracism).

From a sociological perspective, it is important to note that self-report measures of paranormal experience index only percipients' willingness to attribute paranormal causation, rather than the manifestation of actual supernatural phenomena (Glicksohn, 1990). Typically, when individuals report paranormal experiences, accounts conflate two occurrences, the observation of an inexplicable incident and their interpretation of the event as paranormal (Irwin, Dagnall, & Drinkwater, 2013). This dichotomy builds on the work of Cardeña, Lynn and Krippner (2000), who delineated unusual experiences as encounters, experienced by a substantial proportion of the population that deviate from accepted explanations of reality.

In this context, phenomenological interpretation, via reflection/introspection, plays a central role in the labelling of experience(s) (Smithies & Stoljar, 2012). Sociological factors, such as social acceptability, gender and age are pivotal to this process because the acceptability and frequency of paranormal experiences generally, are likely to influence elucidation and the individual's willingness to label and report personal paranormal experiences (Markovsky, 2008; Northcote, 2013; Truzzi, 1971; Woods & Woffitt, 2014).

Within the present study, the term SPE denotes specifically an individual's conviction that they have had a 'paranormal' experience (Neppe, 1983). SPE was preferred over other demarcations because it encapsulates the personal, interpretative nature of paranormal experiences. In this context, SPEs represent exceptional experiences, beyond the comprehension of conventional science, attributed to paranormal phenomena (Neppe, 1990). Pertinently, Irwin demarcated the paranormal as, "apparent anomalies of

behavior and experience that exist apart from currently known explanatory mechanisms that account for organism–environment and organism–organism information and influence flow" (Irwin, 1999: 1). Particularly, an experience is paranormal if its causation references a non-scientific, common-sense explanation: a clarification not empirically attested to the satisfaction of the scientific establishment (Irwin, 2009).

Surveys report that SPEs are relatively common, a fact that, defines them as an essential part of human experience (Castro et al., 2014; Schmied-Knittel & Schetsche, 2005). Because experiencers represent a significant minority of the population, it is fair to say, from a social perspective, that SPEs represent relatively common atypical occurrences. Experiences viewed as exceptional by science are for many people an integral part of the everyday world (Schmied-Knittel & Schetsche, 2005). This view concurs with the seminal work of Greeley (1975), which evinced that the majority of the population claim to experience a paranormal occurrence and a substantial minority of experiencers report more than an occasional experience. Hence, societally, SPEs are important because of their prevalence, persistence and affect upon the individual. Within the literature, authors often misleadingly refer to paranormal experiences as anomalous. The term is inappropriate because it trivialises personal experiences. SPEs are more than unusual, irregular and atypical; they reflect the relatively common perception than an individual has had a genuine paranormal experience. Despite their social importance, several factors have limited sociological interest in SPEs (see Castro, Burrows, & Wooffitt, 2014). Principally, amongst these, lack of awareness about the social relevance of SPEs. Additionally, the paranormal is located typically within the psychological literature (cf. Irwin, 2009). Particularly work associated with individual differences and negative psychopathology. Furthermore, a significant and powerful sceptical movement tends to discredit work corroborating the existence of paranormal phenomena.

Noting these factors Castro et al. (2014) performed the first systematic sociological consideration of paranormal experiences in contemporary Britain. Castro et al. (2014)

analysed data collected by Ipsos MORI, who conducted face-to-face interviews with 4096 adults, aged 16 years and over. Weighting matched the sample to the profile of the British adult (16+) population. Within the sample, 37% claimed at least one paranormal experience. Interviews asked about five experience types and incidence varied: precognition (24.1%), ESP (12.8%), mystical experiences (12.4%), telepathy and ADC (10.4 %). Experiencers reported multiple experiences: 17.5% reported one type, 10% two, 5.1% three, 3% four and 1.3% five (all experiences Castro et al. (2014)). The finding that experiencers often report multiple SPEs concurred with several previous studies (Haraldsson & Houtkooper, 1991). A seminal example is the Charlottesville (Virginia) postal survey (Palmer, 1979). Response analysis identified two groups, respondents noting no/few psi experiences, and those indicating multiple experiences. Based on these findings, Castro et al. (2014) concluded that reporting of paranormal experiences is common within Great Britain; a sizeable minority of British adults claim to have had at least one paranormal experience and many experiencers report multiple experiences.

Additionally, Castro et al. (2014) described findings related to key sociological variables (gender, age and region). Women in comparison to men were significantly more likely to report a paranormal experience. This difference was consistent across experience types and concurred with previous work (Rice, 2003). Regarding age, similar patterns emerged across experience types. There was an increased likelihood of reporting experiences in the middle age groups (35-64 years), with the exception of telepathy, which showed a statistically significant increase between 45-74 years. There was a decreased reporting likelihood in older respondents (75 years and over) and a general dip in likelihood in younger age groups (16-34 years). Castro et al. (2014) found that certain age groups were significantly more likely to report particular experiences. For example, compared to the entire sample (12.8%), 16.1% of 35-44yr olds and 16.7% of 45-54yr olds reported ESP.

In terms of age groups least likely to report particular experiences, there were similar patterns across experiences. Lowest levels of reporting were observed generally within younger (16-24 and 25-34) and the oldest group (75yrs and over). Participants with the greatest likelihood of reporting paranormal experiences were those in the mid-aged groups. This supported Greeley's (1975) previous finding that people in their 50s reported most experiences. Region produced consistent effects. Generally, reporting of experiences was highest in the South West followed by the South East. The North West typically produced the lowest levels of reported experiences. Collectively consideration of regional findings revealed significant variations.

These results are difficult to contextualise because social phenomena are difficult to quantify. Principally because occurrence varies as a function of time and survey (cf. Gergen 1973). Hence, reported incidence of paranormal experience fluctuates across studies. In this context, Castro et al.'s (2014) findings were consistent with academic work citing high levels of SPE. For example, Hay and Morisy's (1978) survey of exceptional and transcendent experiences found

that 36 % of the UK population reported paranormal phenomena. Schmied-Knittel and Schetsche (2005) outlined similar results in a large-scale study conducted in Germany. This study is pertinent because of its recentness, scale and social orientation.

Schmied-Knittel and Schetsche (2005) surveyed a representative sample of 1510 people and then interviewed 220 respondents reporting exceptional experiences. Seventy three percent of respondents experienced at least one of the set phenomena (ESP-dreams, strange coincidence, crisis-ESP, Animal psi, apparition, déjà vu, haunting and Other/Miscellaneous extraordinary experiences). Multiple experiences were common. The mean number of experiences was 2.8, and 25.7% of respondents personally experienced four or more experiences.

Whilst the high experience figures were partially attributable to the breadth of questions asked, consideration of items related to traditional paranormal experiences (ESP dream, apparition, crisis-ESP and haunting) revealed that 52% of the interviewees experienced at least one of these extraordinary phenomena. Overall, women reported more experiences than men did. As age increased, the percentage reporting exceptional experiences decreased; life experiences offered increasing ordinary possibilities for explaining phenomena (Schmied-Knittel & Schetsche, 2005). The Schmied-Knittel and Schetsche (2005) report is illustrative of the fact that studies, across a range of populations, have demonstrated the prevalence of SPEs (e.g. America, McCready & Greeley, 1976; Latin American, Montanelli & Parra, 2002-2005; and multicultural, Haraldsson & Houtkooper, 1991).

The present paper extended the work of Castro et al. (2014) by asking respondents to report on a broad range of paranormal phenomena. Castro et al. (2014) focused on core experiences related to traditional paranormal beliefs (ESP and life after death). Indeed, of the five featured categories, three related specifically to aspects of ESP (telepathy, precognition, ESP). Although these are fundamental paranormal experiences, they fail to represent the full range of paranormal experiences (psychokinesis, witchcraft, out-of-body experience, haunting, extra-terrestrials, astrology, etc.) delimited by Irwin's definitions (Irwin, 1999; 2009). The inclusion of additional experience types furthered sociological understanding of the nature, breadth and prevalence of experiences. Delineations used within the present study were precise and more fully represented the range of potential paranormal experiences.

Additionally, the current study examined relationships between SPEs, belief in the paranormal and anomalous beliefs (urban legends and conspiracism). To date few academic studies have considered the degree to which these variables are related. Consideration of anomalous beliefs alongside belief in the paranormal is important because these represent different non-conventional belief sets, which share important common features (Brotherton & French, 2014). Particularly, they defy conventional understanding of reality (French & Stone, 2014) and draw upon explanations not empirically attested to the satisfaction of the scientific establishment (Irwin, 2009). Indeed, recent work revealed

associations between paranormal belief and anomalistic beliefs (conspiracist ideation and urban legends) (Drinkwater, Dagnall, & Parker, 2012). In this context, the present paper determined whether SPEs were associated with openness to anomalous beliefs generally.

Paranormal experiences play a potentially important role in the development and maintenance of paranormal beliefs. Particularly, Glicksohn (1990) advanced the notion that belief in the paranormal arises, in part, from direct personal paranormal experiences. Indeed, Individuals frequently refer to personal experience as the reason for belief, and a positive correlation between number of subjective paranormal experiences and strength of paranormal belief has been reported (Glicksohn, 1990; Musch & Ehrenberg, 2002). Collectively, studies imply an experiential basis for belief in the paranormal. For example, Rattet and Bursik (2001) found respondents, who reported precognitive experience, possessed higher paranormal belief scores. Additionally, as Hergovich and Arendasy (2005) point out, research demonstrates that paranormal experiences are a justification for belief in psi (Irwin, 1991). Whilst a body of research supports the experiential basis of belief hypothesis, there have been less positive findings (Castro et al., 2014). These inconsistencies may arise from methodological issues such as, the conflating of belief with experience and the use of different measures of paranormal belief (Castro et al., 2014).

Alternatively, belief may produce or influence the perception of paranormal experiences. In this context, folklore research delineates two important explanations of supernatural belief, the cultural source (Hufford, 1982; McClenon, 1994) and experiential source hypotheses (Hufford, 1982). The cultural source hypothesis proposes that paranormal experiences are products of tradition, or imaginary subjective experiences caused/shaped by tradition. Thus, paranormal belief creates or shapes experience and cultural traditions influence interpretation of bizarre experiences.

Contrastingly, the experiential source hypothesis (Hufford, 1982) proposes that certain phenomena are universal, occur across different cultures and represent real experiences. Such experiences are instrumental in changing beliefs (McClenon, 1994). For example, The Old Hag tradition contains elements of experience that are independent of culture (Hufford, 1982). The Old Hag syndrome refers to a perception of waking from sleep feeling immobilized by a malevolent presence. The inclusion of belief measures alongside SPEs extended sociological understanding of how paranormal experience affect individuals' beliefs.

In summary, the study of subjective paranormal experience is important for several reasons. Particularly, because a substantial minority of the population experience SPEs, individuals often define SPEs as important historical autobiographical events, and SPEs possess the potential to affect profoundly experiencers. These characteristics have persisted throughout history and across cultures (Daniels, 1998). Considering the prevalence of SPEs, Ross and Joshi (1992) note that paranormal experiences are difficult to ignore. For these reasons, it is essential that researchers

investigate the nature, origin and social context of paranormal experiences. In this context, this paper makes a valuable contribution to the extant literature.

## Methods

### Respondents

The study sample comprised 1215 respondents. Ages ranged from 16 to 70 years, with a mean (M) of 25.13 and a standard deviation (SD) of 9.41; 75.7% (920) were female and 24.3% (295) were male. Female ages ranged from 16 – 67 years, M = 24.43, SD = 8.87; males ages ranged from 17 – 70 years, M = 27.33 years, SD = 10.64. Respondent recruitment occurred via emails to: staff, students, alumni, local colleges, and the wider population (businesses and leisure clubs). Participation was voluntary and respondents could terminate their participation at any time during the study.

### Materials and Procedure

Respondents completed the following counter-balanced measures:

#### Subjective Paranormal Experience (SPEs)

An 18-item measure assessed incidence of subjective paranormal experiences (SPEs). Respondents (using yes or no) indicated whether they believed they had had a 'genuine' paranormal experience. If they responded yes, they indicated the type of experience and its frequency of occurrence. Listed experiences were ESP (extrasensory perception), PK (psychokinesis), witchcraft, OBE/NDE, haunting, contact/communication with dead, UFO visitation, UFO sighting, astrological prediction, or other (indicate). For each experience category, respondents indicated yes or no. Respondents reporting a particular paranormal experience were asked to specify frequency of occurrence (1 = single incident, 2 = occurred between 2 & 5 times and 3 = occurred more than 5 times). The final question asked respondents to rate the degree to which they believed in the paranormal because of paranormal experience(s) (1 = definitely not, 2 = probably not, 3 = unsure, 4 = probably, and 5 = definitely).

Respondents reporting no experiences moved to the next section of the self-report measure.

#### Belief in the Paranormal

Two established measures assessed belief in the paranormal, the Revised Paranormal Belief Scale (RPBS) (Lange, Irwin, & Houran, 2000); Tobacyk & Milford, 1983) and the Australian Sheep-Goat Scale (ASGS) (Thalbourne & Delin, 1993). The RPBS has construct breadth, but is based on an imprecise definition of paranormality (Lawrence, 1995), whereas the ASGS assesses only a restrictive, core range of beliefs (ESP, PK & life after death). Using both measures in tandem ensured that results were robust and immune to criticisms arising from conceptual debates about the definition and nature of paranormal belief.

The RPBS is a self-report measure, containing 26 questions assessing seven facets of belief: traditional religious

belief, psi, witchcraft, spiritualism, superstition, extraordinary life forms, and precognition. RPBS items appear as statements (e.g. “I believe in God” and “black magic really exists”), which are scored on a seven point Likert scale ranging (1 = strongly disagree to 7 = strongly agree). Preceding analysis item scores were recoded (0-6) in line with Irwin (2009). Hence, final scores ranged from 0 to 156, with higher scores reflecting greater belief in the paranormal. Within the present study, two-factor solution, comprising New Age Philosophy (NAP) and Traditional Paranormal Belief (TPB), was also calculated (Lange et al., 2000). NAP contains 11 items measuring belief in psi, reincarnation, altered states, and astrology, whereas TPB assesses belief in concepts, such as the devil and witchcraft (Irwin, 2004). This factorial solution arose from a purification of the scale to correct for differential item functioning (age and gender bias). The Rasch scaling procedure (Andrich, 1988) produces scores ranging from 6.85 to 47.72 on NAP and 11.16 to 43.24 on TPB. The RPBS is conceptually and psychometrically satisfactory; it possesses adequate validity and good test-retest reliability (Tobacyk, 2004).

The ASGS measures belief in, and alleged experience of, the paranormal by focusing on the subset of core beliefs studied by parapsychology: extrasensory perception, psychokinesis, and life after death (Wiseman & Watt, 2006). The ASGS contains 18 items and participants are asked to respond in one of three ways: “False” (scored as zero), “?” (Don’t know: scored as 1), and “True” (scored as 2). The ASGS has been Rasch scaled (Lange & Thalbourne, 2002) and possesses established reliability and validity (Thalbourne, 1995).

### **Anomalous Beliefs (Urban Legends and Conspiracist Beliefs)**

Five items, derived from previous research (Dagnall, Drinkwater, Parker, & Munley, 2010; Fox Tree & Weldon, 2007), assessed belief in urban legends. Questions employed the same 7-point Likert scale as the RPBS. To prevent response bias, two items were reverse scored (e.g. “when I hear urban legends I feel that they are untrue”). Urban legend items previously have demonstrated good internal reliability (Dagnall et al., 2010).

### **Conspiracist Beliefs (Drinkwater et al., 2012)**

Five items assessed general belief in the veracity of conspiracy theories. Items measured the degree to which respondents believe that conspiracy theories accurately depict real-life events and contain truthful information. Responses were measured on a 7-point Likert scale (1 indicated “strongly disagree” and 7 “strongly agree”). Two reversed items control for response bias. The measure has previously shown acceptable internal reliability (Drinkwater et al., 2012).

Scores on both anomalous measures range from 5 to 35 and high scores were indicative of conspiracist ideation.

## **Procedure**

Instructions at the beginning of the self-report booklet informed respondents that the study was concerned with anomalous experiences and beliefs, and that there was no time limit for completing the measures. Once participants agreed to participate, instructions asked them to provide demographic details (age and gender). On completion of the questionnaire, respondents were debriefed. All aspects of the study adhered to University ethical guidelines.

## **Results**

### *Paranormal Experience (SPEs)*

#### *Incidence*

Within the study sample, 42% (n = 506) of respondents reported a paranormal experience (SPE). The most frequently reported experience was ESP 23%, and the least frequently reported was UFO visitation 1% (see table 1).

The majority of respondents reporting ESP (73%), Haunting (69%) and Witchcraft (67%) related experiences, recalled more than one experience. Whilst incidence of PK (46% vs. 54%), Contact with the Dead (46% vs. 54%), Astrology (44% vs. 56%), were more balanced with roughly equal proportions reporting single vs. multiple experiences. The majority of respondents reporting NDE/OBE (63%), UFO visitation (62%) and UFO sightings (75%) reported only a single incidence.

Of the respondents claiming to have had an SPE, 43% reported one of the experience types (n = 218), whilst 57% (n = 288) reported experiencing different types of SPEs. Within the multiple experience group, 94% (n = 270) identified between 2-5 experience types. Only 6% (n = 18) reported more than 5 experience types. This indicated experiencers typically believed they had encountered different types of paranormal phenomena.

#### *Gender*

A similar proportion of males and females believed they had a paranormal experience (41% vs. 42%); chi-square test revealed no significant association between the reporting of SPEs and gender,  $\chi^2 = 0.150$ ,  $df = 1$ ,  $p = .698$ . Correspondingly, males (M = 0.92, SD = 1.48) and females (M = 0.93, SD = 1.44) reported similar numbers of SPEs,  $t(1213) = -0.112$ ,  $p = .911$ ,  $d = .01$ . Further analysis within experiencers only, revealed also no gender difference (male M = 2.25, SD = 1.54 vs. female (M = 2.21, SD = 1.46),  $t(504) = 0.277$ ,  $p = .782$ ,  $d = .03$ ).

Across experience types, gender differences manifested for PK, contact with the dead, UFO sightings and astrology. A higher proportion of males reported PK experiences (6% vs. 3%) and UFO sighting (9% vs. 4%), whilst females reported a higher proportion of contact with dead (14% vs. 10%). and astrological experiences (17% vs. 10%). Comparisons for ESP, Witchcraft, NDE/OBE, Haunting, Contact with Dead, UFO visitation and Other revealed no gender differences (see table 2).

**Table 1. Number and per cent reporting different experience types and SPE incidence.**

Experience Type	Reported Experience		SPE Incidence			
			Experience Frequency		Multiple Experiences	
	Yes (n %)	No (n %)	Single (n %)	Multiple (n %)	Between 2-5 (n %)	More Than 5 (n %)
ESP	281 (23%)	934 (77%)	77 (27%)	204 (73%)	131 (47%)	73 (26%)
PK	46 (4%)	1169 (96%)	21 (46%)	25 (54%)	13 (28%)	12 (26%)
Witchcraft	46 (4%)	1169 (96%)	15 (33%)	31 (67%)	18 (39%)	13 (28%)
NDE/OBE	111 (9%)	1104 (91%)	70 (63%)	41 (37%)	30 (27%)	11 (10%)
Haunting	167 (14%)	1048 (86%)	52 (31%)	115 (69%)	83 (50%)	32 (19%)
Contact with the Dead	156 (13%)	1059 (87%)	71 (46%)	85 (54%)	61 (39%)	24 (15%)
UFO Visitation	16 (1%)	1199 (99%)	10 (62%)	6 (38%)	3 (19%)	3 (19%)
UFO Sighting	60 (5%)	1155 (95%)	45 (75%)	15 (25%)	10 (17%)	5 (8%)
Astrology	185 (15%)	1030 (85%)	82 (44%)	103 (56%)	67 (36%)	36 (20%)
Other	54 (4%)	1161 (96%)	25 (46%)	29 (54%)	16 (30%)	13 (24%)

**Table 2. Number and per cent reporting paranormal experience(s) by**

Experience Type	Gender			df	$\chi^2$	p	
	Male	Female	Overall				
	n = 120 (n %)	n = 386 (n %)	n = 506 (n %)				
ESP	72 (24%)	209 (23%)	281 (23%)	1	0.36	.549	NS
PK	18 (6%)	28 (3%)	46 (4%)	1	5.74	.017	Sig
Witchcraft	10 (3%)	36 (4%)	46 (4%)	1	0.17	.682	NS
NDE/OBE	29 (10%)	82 (9%)	111 (9%)	1	0.23	.634	NS
Haunting	39 (13%)	128 (14%)	167 (14%)	1	0.90	.764	NS
Contact with the Dead	28 (10%)	128 (14%)	156 (13%)	1	3.90	.048	Sig
UFO Visitation	6 (2%)	10 (1%)	16 (1%)	1	1.54	.214	NS
UFO Sighting	25 (9%)	35 (4%)	60 (5%)	1	10.38	.001	Sig
Astrology	29 (10%)	156 (17%)	185 (15%)	1	8.79	.003	Sig
Other	14 (5%)	40 (4%)	54 (4%)	1	0.83	.773	NS

Sig = Significant; NS = Not Significant

No major associations were evident between gender and experience frequency (single vs. multiple) (see tables 3 and 4). The only gender difference was a marginally significant tendency within males to report multiple UFO sightings. Overall, the proportion of single vs. multiple experiencers was similar for male (42.5% vs. 57.5%) and female respondents (43% vs. 57%),  $\chi^2 = 0.22$ ,  $df = 1$ ,  $p = .966$ .

**SPEs and Belief in the Paranormal**

*Scale Reliability*

The paranormal (ASGS, RPBS and RPBS subscales; NAP and TPB) and anomalous belief (conspiracy and urban legends) measures demonstrated good to excellent internal reliability (George & Malley, 2003). Belief in the paranormal measures correlated moderately with anomalous beliefs (conspiracism and urban legends) (see table 5)

**Table 3. Number and per cent reporting paranormal multiple experience.**

Experience Type	Gender									
	Male					Female				
	N	Single (n %)	Multiple (n %)	Bewteen 2-5 (n %)	More Than 5 (n %)	N	Single (n %)	Multiple (n %)	Bewteen 2-5 (n %)	More Than 5 (n %)
ESP	72	19 (26%)	53 (74%)	31 (43%)	22 (31%)	209	58 (28%)	151 (72%)	100 (48%)	51 (24%)
PK	18	6 (33%)	12 (67%)	8 (44%)	4 (22%)	28	15 (54%)	13 (46%)	5 (18%)	8 (29%)
Witchcraft	10	1 (10%)	9 (90%)	6 (60%)	3 (30%)	36	14 (39%)	22 (61%)	12 (33%)	10 (28%)
NDE/OBE	29	15 (52%)	14 (48%)	10 (34%)	4 (14%)	82	55 (67%)	27 (33%)	20 (24%)	7 (9%)
Haunting	39	14 (36%)	25 (64%)	19 (49%)	6 (15%)	128	38 (30%)	90 (70%)	64 (50%)	26 (20%)
Contact with the Dead	28	16 (57%)	12 (43%)	10 (36%)	2 (7%)	128	55 (43%)	73 (57%)	51 (41%)	22 (17%)
UFO Visitation	6	2 (33%)	4 (67%)	2 (33%)	2 (33%)	10	8 (80%)	2 (20%)	1 (10%)	1 (10%)
UFO Sighting	25	15 (60%)	10 (40%)	7 (28%)	3 (12%)	35	30 (86%)	5 (14%)	3 (9%)	2 (6%)
Astrology	29	12 (41%)	17 (59%)	12 (41%)	5 (17%)	156	70 (45%)	86 (55%)	55 (35%)	31 (20%)
Other	14	10 (71%)	4 (29%)	1 (7%)	3 (21%)	40	15 (38%)	25 (63%)	15 (38%)	10 (25%)

**Table 4. Multiple experience(s) by Gender cross-tabulation values.**

Experience Type	df	$\chi^2$	p	
ESP	1	0.05	.823	NS
PK	1	1.81	.179	NS
Witchcraft	1	2.97	.085	NS
NDE/OBE	1	2.17	.141	NS
Haunting	1	0.54	.463	NS
Contact with the Dead	1	1.86	.172	NS
UFO Visitation	1	3.48	.062	NS
UFO Sighting	1	5.14	.023	Sig
Astrology	1	0.12	.728	NS
Other	1	4.80	.028	NS

Sig = Significant; NS = Not Significant

Correlations examined relationships between SPEs, belief in the paranormal and anomalous beliefs (conspiracism and urban legends) (see table 6).

SPE occurrence (reporting a paranormal experience) correlated positively with belief in the paranormal (ASGS and RPBS). Correlations were within the moderate range (Cohen, 1988). Anomalous beliefs also correlated positively with SPE occurrence; however, correlation sizes were weaker. A similar pattern emerged for SPE total (the overall number

of paranormal experience types reported). Finally, for believers level of paranormal belief and SPE influence (the perception that experience(s) informed belief in the paranormal) correlated moderately.

**Discussion**

Within the present study, 42% of respondents reported an SPE. This figure was commensurate with other equivalent

**Table 5. Belief scale descriptives and inter-scale correlations.**

Measure	$\alpha$	Mean	SD	1	2	3	4	5	6
1. ASGS	.89	19.68	6.51						
2. RPBS	.93	55.16	28.48	.70**					
3. NAP	.90	21.59	5.17	.69**	.87**				
4. TPB	.78	22.49	5.15	.58**	.84**	.72**			
5. Conspiracy	.81	18.69	5.52	.39**	.44**	.44**	.39**		
6. Urban legends	.86	20.94	6.30	.37**	.43**	.39**	.37**	.37**	

**Table 6. Correlations between SPE measures and beliefs (paranormal and anomalous).**

Measure	SPE Occurrence	SPE Total	SPE Influence
ASGS	.46**	.50**	.25**
RPBS	.33**	.39**	.37**
NAP	.31**	.34**	.36**
TPB	.28**	.31**	.24**
Conspiracy	.17**	.21**	
Urban legends	.17**	.21**	

surveys and illustrated respondents' willingness to report SPEs (Castro et al., 2014; Greeley, 1975; Schmied-Knittel & Schetsche, 2005). However, these data require consideration and careful interpretation. Comparisons between specific figures generated within this and other similar studies are of limited value because surveys sample diverse populations, define experiences differently, and perceptions of paranormal experience vary across time and between cultures. For these reasons, prevalence patterns are more revealing than SPE endorsement figures. In this context, conclusions drawn at the macro-level provide useful insights into the broad nature and social importance of paranormal experiences, whilst tacitly acknowledging the personal and profound nature of SPEs.

Analysis of experience types revealed that the most frequently reported SPEs were ESP (23%), astrology (15%), haunting (14%), and contact with dead (13%). The high incidence of ESP-related experiences, such as telepathy and precognitive dreams, accords with comparable paranormal experience surveys (Blackmore & Troscianko, 1985; Castro et al., 2014; Zusne & Jones, 1982). Considering the relatively high incidence of ESP-related experiences, a number of theories attempt to explain the origin of ESP-related phenomena. These are comprised mainly of psychological

accounts, which focus on cognitive and perceptual processes (cognitive and interpretative bias). Prominent examples are lack of critical thinking (French & Wilson, 2007), probability misjudgment (Blackmore & Troscianko, 1985) and faulty attributions (Wiseman and Watt 2010). Whilst these notions offer potential justifications for ESP-related experiences, they fail to explain why individuals inclined towards cognitive and perceptual bias express this predominantly as ESP specific SPEs.

The interpretative nature of SPEs, particularly the tendency to favour certain phenomena and justification, is explicable from a sociological perspective, where societal processes and institutions guide construction of meaning. For example, Gilovich (1991) evinces that complimentary, accepting media coverage has served historically to promote the credibility of ESP-related beliefs (see also Shermer, 2002). Singer and Benassi (1991) propose similarly, that uncritical media coverage in the 1960s facilitated belief in the occult by increasing its general cognitive "availability" as a culturally acceptable explanatory category. Thus, positive societal depictions of paranormal phenomena frame comprehension of puzzling events/experiences, legitimise the plausibility of paranormal elucidations, and skew people away from more

plausible alternatives (scientific and mundane explanations). Indeed, the famous skeptic James Randi, using a series of media orchestrated claims (e.g. UFO sightings, astrology, biorhythms), demonstrated that significant numbers of people will endorse paranormal testimony regardless of its veracity (Stanovich, 2010).

Hence, affirming societal representations provide meanings and labels for understanding unusual experiences. Gilovich (1991) argues that they channel transcendental temptation (people's deep-rooted tendency toward magical thinking and desire to believe in powers and abilities). Furthermore, once adopted paranormal explanations prove hard to refute because sceptics propose only alternative possibilities rather than definitive explanations (Gilovich, 1991; Presley, 1997). This is especially true, when experiences are located within paranormal domains, where other members of society express and share similar experiences.

Experimental work demonstrates also that social pressure effects endorsement of paranormal beliefs/ experiences. For example, Markovsky and Thye (2001) found participants were more likely to believe they had witnessed a paranormal phenomenon, when a confederate expressed the belief, that the phenomenon was true. Ridolfo et al. (2010) advise that the presence of normative influences (rather than informational) amplify this effect. Indeed, Ridolfo et al. (2010) observed that individuals were more likely to accept ESP when they believed ESP claims had popular support. The presentation of scientific evidence influenced also endorsement. Believing that science rejected ESP, resulted in participants being more likely to accept ESP as true. When participants believed that ESP had widespread support, they indicated generally high belief, irrespective of information on the views of science. Finally, when participants believed ESP had less popular support, they were more likely to believe in ESP, when informed that science rejected ESP. It is evident from these and other related studies that social/societal factors influence belief in the paranormal, and often shape perceptions of unusual occurrences (Markovsky & Thye, 2001).

Close inspection of frequently reported SPEs revealed that they reflected major social themes, concerns and anxieties (communication, community, religion, the future, death, etc.). For instance, contacting the dead (and to a degree haunting) reference major religious (life after death) and family/community (bereavement/loss) tenets. Thematically, higher prevalence SPEs linked with paranormal phenomena that were socially acceptable, reported often by others, reflective of major social concerns and difficult to refute. This contrasted with less frequently reported experiences (UFO-related, sightings and visitation; witchcraft; and PK), which generally lack social acceptance, are not reported frequently, prove less resistant to criticism and represent socially marginal themes.

These observations suggest that reporting of SPEs exists within a social feedback system, where the social relevance and standing of paranormal phenomena influences interpretation and reporting of subsequent experiences. Clearly, this may result in a reporting bias, where most frequently reported experiences facilitate the generation of

related SPEs. Conversely, individuals are less likely to report infrequently cited, socially unacceptable experiences because of doubt, disbelief and fear of potential ridicule. For these reasons, self-report survey data may not accurately reflect the incidence of SPE types, but index merely people's willingness to report particularly experiences.

Looking at experience incidence, 57% of experiencers reported multiple experiences (median = 2). Similarly, within SPE types, a significant percentage of experiencers reported multiple SPEs. In the case of ESP, hauntings and witchcraft the majority of experiencers indicated multiple instances. Approximately equal percentages of respondents referenced single vs. multiple experiences for PK, contact with dead, and astrology. With regard to UFO-related phenomena (sightings and visitation) and NDE/OBE experiencers generally noted single SPEs. Considering multiple experiences, only 6% of experiencers recorded more than five experiences. These findings are in line with previous studies, which have indicated experiencers' tendency to report multiple experiences (Castro et al., 2014; Haraldsson & Houtkooper, 1991). This concurred also with Palmer (1979), who noted that respondents typically represented two categories, those who reported either no/few psi experiences and those delineating multiple experiences.

Generally, these outcomes are consistent with work, evidencing relationships between attention, attribution (the search for and attachment of meaning) and the perception of paranormal experiences. Whilst the original work (see Houran & Lange, 2001 for a summary of relevant research) defines attention in the dynamic, cognitive sense, the notion of focus generalises well to the social level. Everyday life presents people with a continuous flow of potentially anomalous, unusual occurrences, which normally pass unnoticed because they lack consequence or relevance (personal or social). Periodically, an event will come to attention and require explanation. This then facilitates a search for and detection of additional events, which are consistent with earlier ones. Thus, the act of interpreting an event as paranormal can stimulate the perception of additional paranormal events (Houran & Lange, 1996a, 1996b). In the case of experiencers, the SPE provides a context for labelling ensuing events as paranormal.

Overall, a similar proportion of males and females believed they had a paranormal experience (41% vs. 42%). Across experience types, gender differences manifested for PK, contact with the dead, UFO sightings and astrology. A higher proportion of males reported PK experiences and UFO sighting, whilst females recorded a higher proportion of contact with dead and astrological experiences. The percentage of single vs. multiple experiencers was similar for male and female respondents (approximately 43% vs. 57%). The only gender difference was a marginally significant tendency within males to report multiple UFO sightings.

These outcomes did not concur with Castro et al. (2014), who reported that women compared to men were more likely to report paranormal experiences. This finding requires consideration. It may be that there is no causal association between gender and propensity to report paranormal experience, and SPE reporting varies as a function of other

factors (Castro et al., 2014). Particularly, the complex interaction between social and cultural factors (lifestyle, educational level, educational orientation, etc.). For instance, skepticism is associated with higher levels of education and the study of the natural sciences (Aarnio & Lindeman, 2005; Vyse, 1998). In this context, the present study drew extensively on participants connected with a university. Such a sample is likely to comprise individuals, who possess high levels of academic potential and a preference towards analytical thinking. Thus, environment rather than gender differences may determine reporting of SPEs. This is a tentative proposal and further research is required to understand more fully the interplay of social and cultural factors.

Within the present study, experience of an SPE and number of SPEs reported correlated positively with level of paranormal belief and endorsement of anomalous beliefs (conspiracies and urban legends). Additionally, perceived influence of SPE was associated positively with level of paranormal belief. These findings were consistent with Blackmore (1984), who noted that the most common reason for belief in the paranormal was individual experience of a phenomenon. Similarly, it supports the finding that strength of belief in the paranormal correlates with perceived number of subjective paranormal experiences (Glicksohn, 1990).

It is worth noting that these associations are correlational and that the relationship between belief and experience is complex. Particularly, it is unclear whether beliefs stimulate experiences, or vice versa. The Lange and Houran (1998) model of haunting or poltergeist phenomena illustrates the complex relationship between belief and experience. Lange and Houran (1998) found that fear of the paranormal induced belief, belief in the paranormal promoted paranormal experience and paranormal experiences produced a reduction in fear of the paranormal. In low fear conditions, this represented a negative feedback loop. In high fear conditions, however, Lange & Houran (1999b) observed a positive feedback loop, where highly fearful individuals were unable to explain fear-inducing ambiguities by labelling them paranormal; existing fears generated additional fears.

Whereas previous research suggests possible cause and effect relationships between belief and experience, findings within this paper are correlational. Hence, the authors suggest parallels with preceding work, rather than advocating explanations. The establishment of cause and effect requires systematic variable manipulation and the implementation of long-term research projects. Hence, whilst this article contributes to the cultural versus experiential source debate (Hufford, 1982; McClenon, 1994) it provides no definitive solutions. Whether culture creates/shapes experiences, or experiences represent rational perceptions of real phenomena remains unresolved.

Finally, it is useful to report positive correlations between paranormal and anomalous belief measures. Pertinently, conspiracism and endorsement of urban legends were associated similarly with paranormal belief measures. In addition, conspiracism correlated positively with endorsement of urban legends. Collectively, these findings indicated that openness to unorthodox beliefs extends beyond

the paranormal to encompass anomalous beliefs. Overlap may arise from a worldview based on a preference for subjective rather than objective evidence (Dagnall, Drinkwater, Parker, Denovan, & Parton, 2015). This view is consistent with Irwin, Dagnall, & Drinkwater (2012), who proposed that preoccupation with paranormal beliefs may be found within New Age believers, who create a worldview around which, their daily perceptions are structured. Correspondingly, new age thinking reflects the tendency to embrace alternative beliefs, philosophies and practices (Sjöberg & Wählberg, 2002), and embodies mistrust of science, realism, objectivity (Sebold, 1984).

The current work indicated that significant numbers of respondents claim paranormal experience (SPEs) and as such, that these experiences are an important feature of people's lives. Subsequent studies may wish to extend further/develop more sophisticated measures of paranormal experiences. One potential problem is that endorsement of self-report items indexed experience types. Thus, interpretation may have varied across individuals and been open to semantic confusion. Schmied-Knittel and Schetsche (2005) noted this problem previously when they reported that respondents incorrectly referred to ESP-dreams as *déjà vu*.

The present survey considered only the frequency of experiences. Although this was a useful and valid measure, incidence provides only limited information. Respondents were essentially agreeing to a standardized given item, which references only if they believe they have encountered a specific type of SPE. Whilst frequency of event is noted, there is no reference to important information on the phenomenological aspects of the experience. The use of semi-structured interviews would partially obviate problems associated with survey type measures and facilitate a deeper, richer understanding of personal paranormal experiences. However, interviews would be time consuming and resource intensive in comparison to self-report.

Other dimensions of experience, such as impact, intensity and significance, may play an important role with regard to the development and reinforcement of belief in the paranormal (and anomalous beliefs). Certainly, previous research has typically failed to consider how SPEs affect individuals (e.g. emotionally, cognitively and socially) and influence their behaviour. Extant work within this area provides mixed results (i.e. evidences negative and positive effects). For example, Montanelli and Parra (2002-2005) noted that 13.8% of their sample perceived ESP dreams to be very disturbing. In contrast, near-death experiences (NDEs) frequently induce positive changes in people (Ring, 1984). Furthermore, associations between paranormal experiences and an increased sense of well-being have been reported (Kennedy & Kanthamani, 1995). Despite these examples, comparatively few studies have examined the effects of psychic experiences on peoples' lives (McClenon, 1994). Siegel (1986) identified common reaction patterns in individuals experiencing the paranormal: fear, sense of responsibility toward another, feeling divine, specially gifted, and the desire to develop abilities. These provide a potential framework for future studies examining the impact of SPEs on individuals.

Additionally, succeeding work could explore the degree to which personal paranormal and anomalous experiences relate to belief in the paranormal and anomalous beliefs. This would test Rattet and Bursik's (2001) contention that belief in the paranormal, based on personal experiences, diverges from belief without confirmatory subjective experience. Clearly, impactful, personal experiences and belief should profoundly interact with each other.

## References

- Andrich, D. (1988). *Rasch Models for Measurement*: SAGE Publications (Vol. 68). Sage Publications.
- Aarnio, K. and Lindeman, M. (2005). Paranormal beliefs, education, and thinking styles. *Personality and Individual Differences*, 39, 1227-1236. [doi:10.1016/j.paid.2005.04.009]
- Blackmore, S. J. (1984). A postal survey of OBEs and other experiences. *Journal of the Society for Psychical Research*, 52, 225-244.
- Blackmore, S. and Trościanko, T. (1985). Belief in the paranormal: Probability judgements, illusory control, and the 'chance baseline shift.' *British Journal of Psychology*, 76, 459-468. [doi:10.1111/j.2044-8295.1985.tb01969.x]
- Brotherton, R. and French, C. C. (2014). Belief in conspiracy theories and susceptibility to the conjunction fallacy. *Applied Cognitive Psychology*, 28, 238-248. [doi:10.1002/acp.2995]
- Cardeña, E., Lynn, S. J. and Krippner, S. (Eds.) (2000). *Varieties of anomalous experience: Examining the scientific evidence*. Washington, DC: American Psychological Association.
- Castro, M. A., Burrows, R. and Wooffitt, R. (2014). The paranormal is (still) normal: The sociological implications of a survey of paranormal experiences in Great Britain. *Sociological Research Online*, 19, Issue 3: <http://www.socresonline.org.uk/19/3/16.html>
- Cohen, J. (1988). *Statistical power analysis: A computer program*. Routledge.
- Dagnall, N., Drinkwater, K., Parker, A. and Munley, G. (2010). Reality Testing, Belief in the Paranormal, and Urban Legends. *European Journal of Parapsychology*, 25, 25-55.
- Dagnall, N., Drinkwater, K., Parker, A., Denovan, A. and Parton, M. (2015). Conspiracy theory and cognitive style: a worldview. *Frontiers in Psychology*, 6:206. [doi:10.3389/fpsyg.2015.00206]
- Daniels, M. (1998). Transpersonal psychology and the paranormal. *Transpersonal Psychology Review*, 2, 17-31.
- Drinkwater, K., Dagnall, N. and Bate, L. (2013). Into the unknown: using interpretative phenomenological analysis to explore personal accounts of paranormal experiences. *The Journal of Parapsychology*, 77, 281-294
- Drinkwater, K., Dagnall, N. and Parker, A. (2012). Reality testing, conspiracy theories, and paranormal beliefs. *Journal of Parapsychology*, 76, 57-78.
- French, C. C. and Wilson, K. (2007). Cognitive factors underlying paranormal beliefs and experiences. In S. Della Sala (Ed.), *Tall tales: Popular myths about the mind and brain* (pp. 3-22). Oxford: Oxford University Press. [doi:10.1093/acprof:oso/9780198568773.003.0002]
- Fox Tree, J. E. and Weldon, M. S. (2007). Retelling urban legends. *American Journal of Psychology*, 120, 459-476. [doi:10.2307/20445414]
- French, C. C. and Stone, A. (2013). *Anomalistic psychology: Exploring paranormal belief and experience*. Palgrave Macmillan.
- George, D. and Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. 11.0 update (4th ed.). Boston: Allyn & Bacon.
- Gergen, K. J. (1973). Social psychology as history. *Journal of Personality and Social Psychology*, 26, 309-320. [doi:10.1037/h0034436]
- Gilovich, T. (1991). *How we know what isn't so: The fallibility of reason in everyday life*. Free Press.
- Glicksohn, J. (1990). Belief in the paranormal and subjective paranormal experience. *Personality and Individual Differences*, 11, 675-683. [doi:10.1016/0191-8869(90)90252-M]
- Greeley, A. (1975). *The Sociology of the Paranormal: A Reconnaissance*. London: Sage.
- Haraldsson, E. and Houtkooper, J. M. (1991). Psychic experiences in the Multinational Human Values Study: Who reports them? *Journal of the American Society for Psychical Research*, 85, 145-165.
- Hay, D. and Morisy, A. (1978). Reports of Ecstatic, Paranormal, or Religious Experience in Great Britain and the United States: A Comparison of Trends. *Journal for the Scientific Study of Religion*, 17, 255-268.
- Hergovich, A. and Arendasy, M. (2005). Critical thinking ability and belief in the paranormal. *Personality and Individual Differences*, 38, 1805-1812. [doi:10.1016/j.paid.2004.11.008]
- Houran, J. and Lange, R. (1996a). Diary of events in a thoroughly unhaunted house. *Perceptual and Motor Skills*, 83, 499-502. [doi:10.2466/pms.1996.83.2.499]
- Houran, J. and Lange, R. (1996b). Hauntings and poltergeist-like episodes as a confluence of conventional phenomena: A general hypothesis. *Perceptual and Motor Skills*, 83, 1307-1316. [doi:10.2466/pms.1996.83.3f.1307]
- Houran, J. and Lange, R. (2001). *Hauntings and poltergeists: Multidisciplinary perspectives*. McFarland.
- Hufford, D. J. (1982). *The terror that comes in the night: An experience-centered study of supernatural assault traditions*. Philadelphia, PA: University of Pennsylvania Press.
- Irwin, H. J. (1991). A study of paranormal belief, psychological adjustment, and fantasy proneness. *Journal of the American Society for Psychical Research*, 85, 317-331.
- Irwin, H. J. (1999). *An introduction to parapsychology* (3rd ed.). Jefferson, N.C.: McFarland.
- Irwin, H. J. (2004). Reality testing and the formation of paranormal beliefs: A constructive replication. *Journal of the Society for Psychical Research*, 68, 143-152.
- Irwin, H. J. (2009). *The Psychology of Paranormal Belief: A Researcher's Handbook*. Publisher. University of Hertfordshire Press.
- Irwin, H. J., Dagnall, N. and Drinkwater, K. (2012). Paranormal beliefs and cognitive processes underlying the formation of delusions. *Australian Journal of Parapsychology*, 12, 107-126.
- Irwin, H. J., Dagnall, N. and Drinkwater, K. (2013). Parapsychological experience as anomalous experience plus paranormal attribution: A questionnaire based on a new approach to measurement. *The Journal of Parapsychology*, 77, 39-53.
- Kennedy, J. E. and Kanthamani, H. (1995). Association between anomalous experiences and artistic creativity and spirituality. *Journal of the American Society for Psychical Research*, 89, 333-343.
- Lange, R. and Houran, J. (1998). Delusions of the paranormal: A haunting question of perception. *The Journal of Nervous and Mental Disease*, 186, 637-645. [doi:10.1097/00005053-199810000-00008]
- Lange, R. and Houran, J. (1999b). The role of fear in delusions of the paranormal. *The Journal of Nervous and Mental Disease*, 187, 159-166. [doi:10.1097/00005053-199903000-00005]
- Lange, R., Irwin, H. J. and Houran, J. (2000). Top-down purification of Tobacyk's Revised Paranormal Belief Scale. *Personality and Individual Differences*, 29, 131-156. [doi:10.1016/S0191-8869(99)00183-X]
- Lange, R. and Thalbourne, M. A. (2002). Rasch scaling paranormal belief and experience: The structure and semantics of Thalbourne's Australian Sheep-Goat Scale. *Psychological Reports*, 91, 1065-1073. [doi:10.2466/pr0.2002.91.3f.1065]
- Lawrence, T. R. (1995). How many factors of paranormal belief are there? A critique of the paranormal belief scale. *Journal of Parapsychology*, 59, 3-25.
- Markovsky, B. (2008). The Paranormal and the Politics of Truth: A Sociological Account. *Contemporary Sociology: A Journal of Reviews*, 37, 451-452. [doi:10.1177/009430610803700529]
- Markovsky, B. and Thye, S. R. (2001). Social influence on paranormal beliefs. *Sociological Perspectives*, 44, 21-44. [doi:10.2307/1389807]
- McClenon, J. (1994). *Wondrous events: Foundations of religious beliefs*. Philadelphia: University of Pennsylvania Press.
- McCready, W. C. and Greeley, A. M. (1976). *The Ultimate Values of the American Population*. Beverly Hills, CA Sage Publications.
- Montanelli, D. E. G. and Parra, A. (2002-2005). Are spontaneous anomalous/paranormal experiences disturbing? A survey among undergraduate students. *International Journal of Parapsychology*, 13, 1-14
- Musch, J. and Ehrenberg, K. (2002). Probability misjudgment, cognitive ability, and belief in the paranormal. *British Journal of Psychology*, 93, 169-178. [doi:10.1348/000712602162517]
- Neppe, V. M. (1983). Temporal lobe symptomatology in subjective paranormal experiants. *Journal of the American Society for Psychical Research*, 77, 1-29.
- Neppe, V. M. (1990). Subjective paranormal experiences: A decade later. *Exceptional Human Experience*, 8, 37-39.
- Northcote, J. (2013). *The Paranormal and the politics of truth: A sociological account*. Andrews UK Limited.
- Palmer, J. (1979). A community mail survey of psychic experiences. *Journal of the American Society for Psychical Research*, 73, 221-251.
- Presley, S. (1997). Why people believe in ESP for the wrong reasons. *Independent Thinking Review*, 2, 2. <<http://www.rit.org/essays/esp.php>>
- Rattet, S. L. and Bursik, K. (2001). Investigating the personality correlates of paranormal belief and precognitive experience. *Personality and Individual Differences*, 31, 433-444. [doi:10.1016/S0191-8869(00)00148-3]
- Rice, T. W. (2003). Believe it or not: Religious and other paranormal beliefs in the United States. *Journal for the Scientific Study of Religion*, 42, 95-106. [doi:10.1111/1468-5906.00163]
- Ridolfo, H., Baxter, A. and Lucas, J. W. (2010). Social influences on paranormal belief: Popular versus scientific support. *Current Research in Social Psychology*, 15, 33-41.

- Ring, K. (1984). Further Studies of the Near-Death Experience, B. Greyson and C. Flynn (Eds), *The Near-Death Experience, Problems, Prospects, Perspectives*, p. 30-36. Springfield, IL: Charles C. Thomas.
- Ross, C. A. and Joshi, S. (1992). Paranormal experiences in the general population. *The Journal of Nervous and Mental Disease*, 180, 357–361.
- Schmied-Knittel, I. and Schetsche, M. T. (2005) Everyday miracles: results of a representative survey in Germany. *European Journal of Parapsychology*, 20, 3-21.
- Sebald, H. (1984) New-age romanticism: The quest for an alternative lifestyle as a force of social change. *Humboldt Journal of Social Relations*, 11, 106-127.
- Shermer, M. (2002). *Why people believe weird things: Pseudoscience, superstition, and other confusions of our time*. Macmillan.
- Siegel, C. (1986). Parapsychological counseling: Six patterns of response to spontaneous psychic experiences (abstract). In W.G. Roll (Ed.), *Research in Parapsychology 1985*, pp. 172-174. Metuchen, NJ: Scarecrow Press.
- Singer, B. and Benassi, V. A. (1981). Occult beliefs: Media distortions, social uncertainty, and deficiencies of human reasoning seem to be at the basis of occult beliefs. *American Scientist*, 69, 49-55.
- Smithies, D. and Stoljar, E. (2012). *Introspection and consciousness: an overview. Introspection and Consciousness*. Oxford University Press, New York, p. 3-26. [doi:10.1093/acprof:oso/9780199744794.003.0000]
- Sjöberg, L. and Wählberg, A. (2002). Risk perception and new age beliefs. *Risk Analysis*, 22, 751-764. [doi:10.1111/0272-4332.00066]
- Stanovich, K. E. (2010). *How to think straight about psychology*. Allyn & Bacon Boston, MA.
- Thalbourne, M. A. (1995). Further studies of the measurement and correlates of belief in the paranormal. *Journal of the American Society for Psychical Research*, 89, 233-247.
- Thalbourne, M. A. and Delin, P. S. (1993). A new instrument for measuring the sheepgoat variable: Its psychometric properties and factor structure. *Journal of the Society for Psychical Research*, 59, 172-186.
- Tobacyk, J. J. (2004). A revised paranormal belief scale. *The International Journal of Transpersonal Studies*, 23, 94-99.
- Tobacyk, J. J. and Milford, G. (1983). Belief in paranormal phenomena: Assessment instrument development and implications for personality functioning. *Journal of Personality and Social Psychology*, 44, 1029-1037. [doi: 10.1037/0022-3514.44.5.1029]
- Truzzi, M. (1971). Definition and dimensions of the occult: towards a sociological perspective. *The Journal of Popular Culture*, 5, 635-646. [doi:10.1111/j.0022-3840.1971.0503\_635.x]
- Vyse, S. A. (1998). *Believing in Magic: The Psychology of Superstition*. New York: Oxford University Press.
- Wiseman, R. and Watt, C. (2006) Belief in psychic ability and the misattribution hypothesis: A qualitative review. *British Journal of Psychology*, 97, 323-338. [doi: 10.1348/000712605X72523]
- Woods, C. and Wooffitt, R. (2014). Telling the moment: Seeing a UFO. *Narrative Inquiry*, 24, 239-258. [doi:10.1075/ni.24.2.04woo]
- Zusne, L. and Jones, W. H. (1982). *Anomalistic psychology. A study of extraordinary phenomena and experience*. Hillsdale, NJ: Erlbaum.