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Research Note

Surveys of Anomalous Experience in Chinese, Japanese, and American Samples*

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Scholars often assume that religious preference, religiosity, and scientific training affect the incidence of anomalous experiences. Caucasian-American, African-American, Chinese, and Japanese college students were polled regarding déjà vu, night paralysis, extrasensory perception (ESP), contact with the dead, out-of-body experience (OBE), and belief in ESP. Although the incidence of reported episode varied cross-culturally, knowledge of a respondent's religious preference, self-reported religiosity, or scientific training provided little predictive capacity regarding frequency of anomalous experience or belief in ESP. These findings contradict prevalent assumptions regarding anomalous experience and occult belief.

Anomalous experiences, defined as events that seemingly violate established scientific principles, are often linked with folk belief in spirits, souls, and life after death. Such episodes have been portrayed as originating from religious needs and scientific ignorance (Schumaker, 1990; Singer and Benassi, 1981). Hufford (1982) labels the collection of suppositions supporting this assumption as the *cultural source* theory. Hypotheses derived from this theory are tested in the research reported upon here by analyzing survey data from Caucasian-American, African-American, Chinese, and Japanese college samples regarding déjà vu, night paralysis, extrasensory perception (ESP), contact with the dead, and out-of-body experience (OBE).

PREVIOUS SURVEYS

Greeley (1975) found that almost a fifth of the American population reported frequent paranormal episodes such as ESP, contact with the dead, clairvoyance, and mystical experience. His ESP question asked, "Have you thought you were in touch with someone when you knew that it was impossible?" "Contact with the dead" was measured by asking, "Have you thought you were really in touch with someone who had died?" During recent years, instruments using these same questions were administered to representative European and

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American national samples (Haraldsson, 1985; Greeley, 1987; Haraldsson and Houtkooper, 1991). Variations in frequency of reports among groups seemingly reflect cultural traits specific to each country (Haraldsson, 1985; McClenon, 1988).

Previous studies have found relationships between religion variables and the reporting of anomalous events (Greeley, 1975; Wuthnow, 1978) or that paranormal beliefs constitute a functional equivalent for organized religion (Emmons and Sobal, 1981; Bainbridge and Stark, 1980a, 1980b). Some studies found significant positive relationships between paranormal beliefs and religiosity (Tobacyk and Milford, 1983; Haraldsson, 1981; Thalbourne, 1984; Irwin, 1985; Emmons, 1982), while others found no significant correlations (Thalbourne, 1981; Murphy and Lester, 1976; Gallup and Newport, 1991).

Various studies determined that those with scientific training are less susceptible to occult experience and belief (Wagner and Monnet, 1979; Padgett *et al.*, 1981; Otis and Alcock, 1982; McClenon, 1982, 1984; Gallup, 1982). Yet the hypothesized negative correlation between scientific training and belief in psychic claims may be culturally specific. Jahoda (1968) found no significant relationship between scientific training and the persistence of traditional (paranormal) beliefs among students at the University of Ghana.

HYPOTHESES

The following hypotheses were developed from the cultural source theory, the supposition that anomalous experiences are cultural products:

(1) Anomalous experiences should occur more frequently among those claiming no religious belief or preference than among Catholics, Protestants, Jews, or Buddhists (the functional equivalence argument).

(2) Those reporting greater religiosity will claim more frequent anomalous experiences.

(3) Students majoring in scientific or technical curricula will report fewer anomalous experiences and less belief in ESP than those studying other fields. These relationships should be especially pronounced among junior and senior level students. Junior and senior level science students will demonstrate greater skepticism regarding ESP than lower level science students, since they have been more fully exposed to scientific training.

Because of variations in the research literature, two-tailed tests of significance are appropriate for hypotheses 1 and 2. Significant results in either direction support the cultural source theory. Hypotheses in the third category require one-tailed tests of significance.

METHODOLOGY

Data were gathered through administering questionnaires to randomly selected student samples at: (1) three colleges in Xi'an, People's Republic of China in 1986; (2) the University of Maryland, College Park, in 1987; (3) Elizabeth City State University, Elizabeth City, North Carolina in 1988; (4) Tsukuba University, Tsukuba, Japan in 1989; and (5) the University of North Carolina,

Greensboro, in 1990. Questionnaires had previously been sent to council members and selected section committee members of the American Association for the Advancement of Science in 1981 (McClenon, 1982, 1984).

The survey populations exemplify radically different cultural groups. The elite American scientists were mainly older male Caucasians (mean age: 55 years; 80% male). Over three quarters of University of Maryland and University of North Carolina at Greensboro (UNCG) students were Caucasian. UNCG, formerly a woman's college, furnished a sample with 67 percent females. Elizabeth City State University (ECSU) is a predominately black college in north-eastern North Carolina. The three Chinese colleges in Xi'an educate China's academically gifted students. Tsukuba University is an elite Japanese college within commuting distance of Tokyo.

Students at three colleges in the People's Republic of China, Tsukuba University in Japan,¹ and the University of Maryland were surveyed by providing questionnaires to randomly selected dormitory rooms with self-addressed return envelopes (McClenon, 1988, 1990). Students at Elizabeth City State University and the University of North Carolina, Greensboro, were polled by selecting random samples of classrooms and administering the instrument during class.

The questionnaire used Greeley's (1975) *déjà vu*, ESP, and contact with the dead questions. Respondents were also asked to supply their sex, age, academic class and major, and answers to questions regarding frequency of night paralysis, OBE, belief in ESP, religious preference, and self-perceived religiosity (see McClenon, 1988, for exact format). The night paralysis question read "Have you woken in the night and found that you could not move?" The OBE question inquired "Have you thought you were out of your body?" The belief in ESP question asked "Do you think that it is possible that people have extrasensory perception?" and included choices: "It is a fact," "It is a likely possibility," "It is merely an unknown," "It is a remote possibility," "It is impossible." Respondents were asked, "How religious do you consider yourself?" and given the choices "extremely," "somewhat," "slightly," or "not at all."

Chinese students were asked about "sixth sense," rather than extrasensory perception, since they have no equivalent word for ESP. Chinese respondents were not polled regarding religiosity or religious preference since Xi'an students rarely admit to these attributes, and such questions would be deemed inappropriate (McClenon, 1990).

Checks built into the survey process indicated that replies generally reflected self-perceived experience. Analysis of responses gained from respondents requiring the stimulation of reminder postcards did not differ significantly from those returning mailed questionnaires within one week (McClenon, 1984, 1990). Selected respondents were interviewed and some videotaped, from all but the Chinese samples, to determine possible biases. Interviews indicated that virtually all respondents claiming experiences had clear episodes in mind. Interviews with nonrespondents, some of which were videotaped, provided

¹ The Tsukuba University questionnaire was translated into Japanese and administered under the supervision of Dr. Carl Becker.

equivalent reports. These findings suggest that the quantitative data probably reflect surveyed populations to a general degree.

RESULTS

Table 1 compares the percentages of those reporting one or more experiences. Chinese students generally demonstrated the highest percentages of anomalous experience and belief in ESP. The elite scientists tended to report the lowest levels of psychic episodes and belief.

As was found by Greeley (1975), the anomalous experience variables were highly correlated with each other. ESP, contact with the dead, and OBE were significantly intercorrelated in all samples ($p < .05$). Déjà vu and night paralysis correlated significantly with other experience variables in most samples.

TABLE 1

	Comparison of Sample Surveys							Belief in ESP*
	Percent Reporting Experience Once or More							
	N	Response Rate (%)	Déjà vu	Night Paral- ysis	ESP	Contact with Dead	OBE	
Elite American scientists ²	339	71	59	**	26	10	20**	20
University of Maryland ³	214	42	89	37	44	25	27	66
Univ. of NC, Greensboro	532	98	86	32	42	20	18	60
ECSU (Afr.-Am. students)	391	99	80	50	35	25	18	68
Chinese student samples (three colleges) ⁴	314	40	64	58	71	40	55	76
Tsukuba Univ., Japan	132	33	88	50	35	10	13	61

*percent considering ESP "a fact" or "a likely possibility"

**Elite scientists were not polled about night paralysis experiences. The OBE question for elite scientists was that used by Greeley (1975), which differed from that used on the other surveys.

² McClenon (1982, 1984).

³ McClenon (1990).

⁴ McClenon (1988, 1990).

A "psi index" was created by summing the values for ESP, contact with the dead, and OBE, since (a) these reports were significantly correlated with each other in all samples, (b) interviews indicated that respondents often attributed religious significance to these experiences, even among those claiming no religious preference, and (c) many parapsychologists believe that these reports often harbor paranormal qualities. Experience variables were scored "1" if the respondent reported no experiences, "2" for reporting an experience "once or twice," "3" for "several times," and "4" for "often," allowing the psi index to vary from 3 to 12.

Table 2 reveals significant variations in the distribution of the psi index across samples ($\chi^2 = 392$, $p < .001$). Between 31 percent and 47 percent of all groups scored a 4, 5, or 6 on the scale, making this low-to-moderate frequency of experience common.

TABLE 2

Distribution Of Psi Index

Psi Index= ESP + contact with dead + OBE	Percentage in Category of Psi Index					Elite Scient- tists*
	Univ. of MD	UNCG	ECSU	Chinese	Japanese	
3 = no experience	44	46	50	14	60	64
4 = once or twice of one type of experience	18	26	23	15	15	16
5 = once or twice of two types or several times of one type	16	14	14	16	9	9
6 = once or twice of all three types, several times of two types, or many times of one type	12	7	6	13	8	6
7 or higher = many times and several times of at least two types	10	6	7	41	8	5
coefficient alpha:	.62	.52	.63	.46	.66	.57

$\chi^2 = 392$

df = 20

$p < .001$

*OBE question on elite scientist poll was that used by Greeley (1975), differing from that used on the other surveys.

TESTS OF HYPOTHESES

Religious Preference

American religious preferences were categorized as Protestant, Fundamentalist-type Protestant, Catholic, Jewish, other, or none. Japanese responses were classified as Buddhist, Catholic, other, or none. No χ^2 tests regarding religious preference and anomalous experience achieved statistical significance at the .05 level within American or Japanese groups.

Religiosity

The average level of self-perceived religiosity varied among samples. Seventy-eight percent of the ECSU students, 74 percent at UNCG, 47 percent of the Maryland students, and 15 percent of the Tsukuba Japanese claimed to be "extremely" or "somewhat" religious.

Self-reported religiosity was associated significantly with forms of anomalous experience in two samples. A significantly higher percentage of the less religious UNCG students reported OBEs than those claiming to be "extremely" or "somewhat" religious (25 vs. 15%, $p < .01$, 2-tail difference of proportions test). A significantly higher percentage of the more religious Japanese students reported night paralysis episodes (70 vs. 45%, $p < .05$, 2-tail test). P values were not corrected for multiple analysis. These cases were encountered within the context of 20 tests of significance. The relationship between religiosity and frequency of experience appears weak and sporadic. (The UNCG OBE/religiosity $\chi^2 = 7.25$, $df = 1$, $p < .01$; $R = 0.09$, $N = 511$, $p = .06$, two-tailed test. The Japanese night paralysis/ religiosity $\chi^2 = 4.95$, $df = 1$, $p < .05$; $R = 0.24$, $N = 130$; $p = .011$, two-tailed test.)

Scientific Training

Data from the University of Maryland, UNCG, ECSU, and Tsukuba University demonstrated no significant differences between those majoring in fields associated with science (social, natural, computer sciences, math, engineering, and architecture) and those majoring in fields less related to scientific studies (liberal arts, education, business, and others) with regard to night paralysis, ESP, OBE, and contact with the dead. The only significant correlation occurred with regard to *déjà vu* among ECSU students (84% among nonscience majors vs. 75% among science related majors reported this experience, $p < .05$, one-tailed test, uncorrected for multiple testing), an unremarkable finding since 24 tests of significance were conducted.

Analysis comparing junior and senior science-related majors to equivalent nonscience majors with regard to the experience variables and belief in ESP revealed no significant differences.

Significant variations existed among the Chinese colleges with regard to reporting of anomalous experiences. These findings have less bearing on the hypothesized relationship since all the Chinese students attended colleges specializ-

ing in physical, medical, or social-scientific training. Students from the technical college tended to report anomalous experiences less frequently yet claimed higher levels of belief in a sixth sense than did those at the medical or economic colleges (McClenon, 1990).

Lower-level science majors were predicted to harbor greater belief in ESP than more advanced science majors, since upperclass students had been exposed to more scientific training. Analysis revealed that, among University of Maryland and University of North Carolina, Greensboro, samples, belief in ESP was *greater* among the more advanced than less advanced science students (in both cases an 18% difference, $p < .05$, one-tailed tests). The direction of these relationships were opposite of what was predicted. Other academic groups revealed no significant differences between lower- and upper-level science students.

Self-reported religiosity, academic major, age, and sex of respondent provided little predictive capacity for the psi index. Multiple regression analysis with the psi index as dependent variable revealed small multiple correlation coefficients: 0.136 (Univ. of MD), 0.137 (Univ. of NC, Greensboro), 0.105 (ECSU), 0.181 (Tsukuba Univ.).⁵

CONCLUSION

Hypotheses regarding a relationship between religious preference or scientific training and frequency of anomalous experience were not supported. The effects of self-perceived religiosity were sporadic. Knowledge of a respondent's religious preference, religiosity, or scientific training does not contribute greatly to the ability to predict frequency of anomalous experience. Scientific training, particularly within the Caucasian-American groups, did not reduce belief in extrasensory perception. The finding that moderate levels of anomalous experience exist within all surveyed groups suggests that the capacity to perceive anomalous episodes is universal in some sense.

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⁵ For a more complete analysis, see McClenon (forth.).

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