



Validating the Continuum Mysteriosum

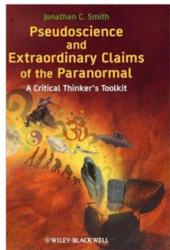


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INTRODUCTION

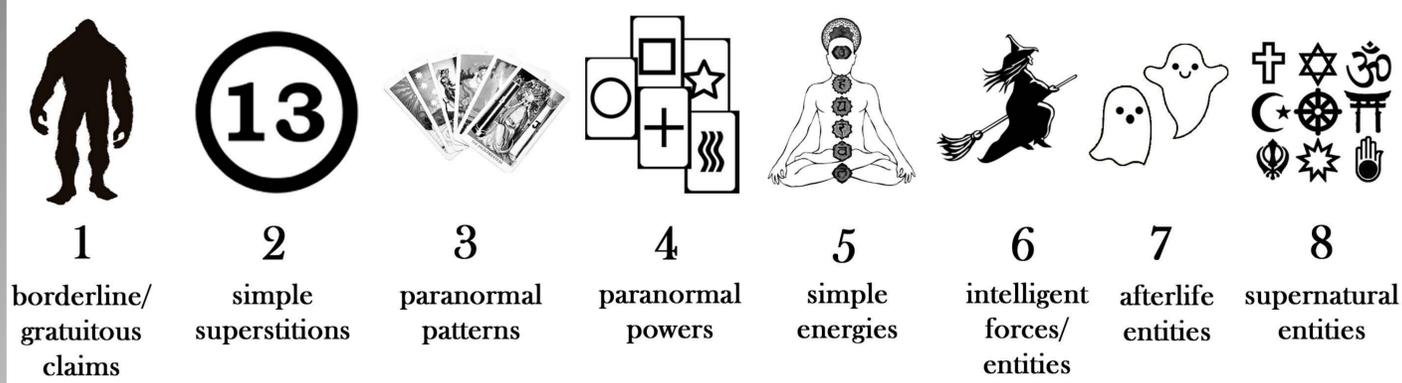
- Evaluations currently based on individual beliefs (Tobacyk, 2004; Williams, Francis, & Lewis 2009)
- Objective scale needed classify claims
- We propose use of a physics-based spectrum for use in future studies on paranormal claims



- Smith's (2009) "Continuum Mysteriosum" (ranging from lower- to higher-level paranormal claims) was evaluated for use as an objective measure of paranormal claims

BACKGROUND

- Few alternative metrics to Tobacyk's (2004) "Revised Paranormal Belief Scale" which evaluates belief only. Offers little insight into reasoning underlying beliefs
- Rice (2003) identified different patterns for beliefs:
 - Belief in religion and paranormal
 - Belief in only one claim
 - Belief in neither claim
- Williams, Francis & Lewis (2009) found:
 - positive correlation between religiosity and religious-based paranormal beliefs
 - no relationship between religiosity and paranormal beliefs
- No consistent results have been found (Emmons & Sobal, 1982; Orenstein, 2002; Rice, 2003; Williams, Francis, & Lewis, 2009; Shiah, Wu, & Chang, 2010)
- Focus has been on correlations between religiosity and belief in the paranormal
- Lack of research into multi-variable approach.
- Goal: examine psychometric properties of the "Continuum Mysteriosum" using a factor analytic approach
- Hypothesis: participants will classify paranormal claims according to their deviation from physics



RESULTS

Obliquely rotated component loadings for 46 survey items*

Component	1	2	3	4			
Stepping on a crack	.756	Ghosts	.790	Modern Acupuncture	.723	UFO	.678
Rabbit's Foot	.705	Spirits of Inanimate	.745	Modern Tai Chi	.721	Bigfoot	.643
Tooth Fairy	.679	Communicate w/Dead	.726	Traditional Tai Chi	.656	LochNess Monster	.634
Haruspex	.673	Karma	.622	Meditation/Yoga	.654	UFO Cults	.612
Santa Claus	.657	Fate	.589	Traditional Acupuncture	.653	Giant Squid	.452
Number 13	.644	ESP	.581	Magnet Therapy	.552	Fire Walking	.422
Tasseography	.640	Astral Projection/OOBE	.572	Early Chiropractic	.527	Lunacy	.311
Tarot Cards	.630	Healing Touch	.534	Homeopathy	.516		
Palmistry	.599	Chi	.502	Oxygen	.344		
Magic Charms	.586	Faith Healing	.477				
Fortune-Telling	.572	Witches	.471				
Werewolves	.505	Yin-Yang	.463				
Numerology	.464	Psychokinesis	.433				
Astrology	.457	Org. Religion	.349				
Dowsing	.394						
Bible Code	.343						

Notes. Factor loadings $\geq .40$ are in boldface.

*Loadings $\geq .30$

- Individual mean scores for each of the 46 claims were calculated to determine the claim's relative position on the natural/supernatural scale
- Factor analysis was performed on the data to determine which claims would load onto similar factors, and if these patterns were consistent with Smith's scale. Using a cutoff value of 0.3, the data loaded onto four distinct factors which accounted for 45% of the variance (see table)
- Results were inconsistent with Smith's "Continuum Mysteriosum"

SELECTED REFERENCES

- Orenstein, A. (2002). Religion and paranormal belief. *Journal For The Scientific Study Of Religion*, 41(2), 301-311. doi:10.1111/1468-5906.00118.
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- Williams, E., Francis, L., & Lewis, C. A. (2009). Introducing the modified paranormal belief scale: Distinguishing between classic paranormal beliefs, religious paranormal beliefs and conventional religiosity among undergraduates in Northern Ireland and Wales. *Archiv Für Religionspsychologie / Archive For The Psychology Of Religions*, 31(3), 345-356. doi:10.1163/008467209X12499946199605.

METHOD

- 874 Participants
 - 566 female, 308 male
 - Mean age = 21.75 years
- 46 paranormal claims (spanning eight categories conceptualized in Smith's "Continuum Mysteriosum") were rated on a 8-point Likert scale ranging between :
 - Natural = could be proven with current science
 - Supernatural = cannot be proven with current science
- Survey
 - Emotional inclusion/exclusion questions
 - Demographic questions
 - Religiosity scale (Abdel-Khalek, 2006)

DISCUSSION

- Factor analysis yielded four distinct factors (see Results table).
 - Factor 1 = Magical Thinking
 - Factor2 = External Influential Agent
 - Factor 3 = Complementary Alternative Medicine
 - Factor4 = Unproven yet Plausible Claims
- Future research efforts are needed to:
 - Examine relationship between available paranormal scales
 - Test and validate current scales based on paranormal claims
 - Develop objective measure via psychometric principles and standardized definitions (as developed by the Society of Psychical Research) (Thalbourne, 2009)
- Present findings support that many paranormal claims derive from magical thinking.
 - However, results = inconsistent
- Future research needed to analyze factors further to include other variables/claims

