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The effect of paranormal belief and positive schizotypy on response bias in an auditory EVP task

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Electronic Voice Phenomena, or EVP, is a phenomenon that was first fully described in the 1950's (Irwin, 1999), and describes the apparent presence of anomalous voices appearing on magnetic tape recordings (Barušs, 2001). The phenomenon was described in detail by Raudive, and as well as technical details of how to obtain these voices, he describes how the voices obtained on tape by this method apparently belong to deceased persons (Raudive, 1971).

Raudive's techniques have drawn criticism, as on investigation the techniques appear to be flawed. The role of suggestion involved in Raudive's method could be quite significant – Young et al (1987) showed that participants with a predisposition to hallucinate were more likely to report hearing sounds that had been suggested to them than control participants.

Research in this field has continued over the years, expanding to include communication via other electronic means, the phenomenon now more commonly being called Instrumental Transcommunication. However, in the last couple of years, EVP has been seized upon by amateur paranormal investigators, and no "ghost hunt" appears complete without at least one attempt to communicate via EVP. Modern ghosthunters however do not use the traditionally prescribed methods for obtaining EVP, and now use such gadgets such as "Ghost boxes", which simply consist of a radio set on a permanent channel sweep.

It has been shown that people who display high levels of paranormal belief show a higher level of misperception of events, and during signal detection theory experiments, they display a significantly different response bias than non-believers. This also appears to be linked to the personality construct of positive schizotypy, with positive schizotypes being more likely to report hallucinatory experiences and unusual cognitive and perceptual experiences (Fisher et al, 2004). Correlations have been found between belief in paranormal phenomena and positive schizotypy (Hergovich, Schott & Arendasy, 2008).

This study was set up to examine any differences in response bias between paranormal believers and non-believers (ie whether believers would be more likely to say they heard something when listening to researcher generated EVP sound files). The experiment was constructed as an EVP listening task, with participants being played a number of sound files which consisted of either white noise, or white noise with a signal (a male voice) overlaid on top. Half the participants were told the task was an EVP task, and were given a brief overview of what EVP is, and the other half were told that it was simply a listening task. Participants also completed paranormal belief and schizotypy scales.

It was hypothesised that paranormal believers who were told the task was an EVP task would adopt

a liberal response bias and report hearing voices within the white noise, whether voices were present or not, and additionally that non-believers would adopt a conservative criterion and not reports voices within the white noise, even when there was a voice present.

Believers showed a greater sensitivity to discriminating between signal and noise trials, which suggests that the believers were more accurate at identifying signals than non-believers. There was a significant effect of belief on response bias, with the least conservative criterion being shown by the believers in the EVP group. However no group of participants showed a true liberal criterion.

A factorial analysis of variance suggested that being told that the experiment involved a possibly paranormal phenomenon seemed to increase the accuracy of response in participants, whether they were believers or not. This could be due to participants being more concerned about accuracy in the test when the possibility of the task being paranormal was introduced.

The expected effects were not displayed in this task, but the participant sample was from a fairly narrow section of the population (undergraduate students), and from work by other researchers different results might be obtained if participants are specifically selected to be strong believers or strong non-believers. The demographic that anecdotally appears to be reporting EVP is paranormal investigators, who obtain recordings in allegedly haunted buildings. The suggestion effect in the experiment may need to be less subtle than simply explaining to participants the concept of EVP. If the belief condition participants are selected to be EVP believers and told that the clips contain EVP voices recorded in an allegedly haunted building, the combination of belief and suggestion may be strong enough to produce the hypothesised effect.

Believers showed a higher mean hit rate than non-believers – this could just be an artifact of the population sampled, but may also point to a more unusual conclusion. Musch & Ehrenberg (2002) showed that paranormal beliefs may be correlated with lowered cognitive ability, however the results of this study may suggest that moderate believers possess greater cognitive skills than non-believers. Rather than paranormal belief being a trait regarded as incompatible with scientific cognition, it may be that only extremes of belief have this extreme trait, and milder belief is actually a cognitive advantage.

References

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