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## **Exploring the relationship between paranormal belief, the propensity to make the type I error and the detection of paranormal and weak signals amid visual and auditory noise – 169/06**

### **Results:**

95 participants (believers and skeptics) took part in a study comprising a series of 4 visual noise and 4 auditory noise (pink noise) trials. Each participant was exposed to 2 degraded stimuli, 1 ESP stimulus and 1 random trial for each sense. Believers and skeptics did not differ in the number of guesses made regarding target identity. However, believers' guesses were generally more elaborate and complex; their reaction times to decide that something was present (for the auditory condition) were faster, they were more confident about their first guesses and made more misidentifications than skeptics. Overall, more guesses and misidentifications were made for the visual condition.

Believers and skeptics did not differ in their overt detection of weak visual or auditory stimuli. Overall, reaction times were faster when a degraded stimulus was present compared to the random condition. For judge 1, there was a trend toward a significant ESP effect for the auditory condition ( $z= 1.93, p =.053$ ) and a suggestive effect for the visual condition ( $z= 1.65, p =.099$ ). For judge 2, there were no significant effects for either sense. For the auditory sense, more guesses were made for the psi than the random conditions. Believers did not differ significantly from skeptics in terms of ESP scoring.

By exploring schizotypy, this study also found evidence for different types of believer and disbeliever; a healthy and less healthy believer and an equivalent healthy and less healthy skeptic. There were no differences between the two different types of believer on ESP scoring.

Overall, the Magical Ideation scale did not correlate with ESP scoring. However among skeptics, there was a significant negative correlation with auditory ESP.

### **Published work:**

### **Area(s) of interest:**

The psychology of paranormal belief and disbelief; schizotypy and anomaly-proneness; perceptual biases (the propensity to make the type I and type II errors when faced with randomness); individual differences in perceptual biases, the detection of degraded stimuli and ESP performance; differences between perceptual biases and detection of weak and paranormal stimuli between visual and auditory sensory conditions.

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