

The Sheep-Goat effect as a matter of compliance vs. Noncompliance: The effect of reactance in a forced-choice ball selection test

Results:

According to Reactance Theory (Brehm & Brehm, 1981), when an individual's freedom is threatened through some form of coercion, *reactance* usually sets in. Reactance is “a motivational state aimed at restoring the threatened freedom” (Silvia, 2005, p. 277), which may explain the sheep-goat effect—i.e., the tendency for believers ('sheep') to psi-hit and non-believers ('goats') to psi-miss. In this study, the effects of reactance on psi performance are investigated in Ertel's (2005b,c) Ball Selection Test. It was hypothesized that goats are more reactant than sheep in psi tests because goats are predisposed to *disproving* the psi hypothesis which requires noncompliance. The sheep-goat measure used in the study was the Australian Sheep-Goat Scale (Thalbourne, 1995). In a laboratory setting, participants completed up to four runs (60 trials/run) of paranormal target-seeking (trying to predict the numbers on ping-pong balls). Hit rate for the whole sample ($N = 82$) was significant, 21.06% ($p = .002$), where $P_{MCE} = 20\%$. Participants were randomly assigned to a control condition ($n = 42$) or treatment ($n = 40$) condition requiring them to read an opinionated statement that induces reactance. The opinionated communication was an adapted text used successfully by Silvia (2005). There was a significant reactance effect, with 'reactants' (mean percentage = 20.26%) scoring significantly lower than 'controls' (mean percentage = 21.74%), but no significant sheep-goat effect, though hit rates were in the direction hypothesized—the significant sheep hit rate (21.51%) was *higher* than the hit rate for goats (20.82%), but not significantly. When simple effects were tested, reactant sheep, with a 19.95% hit rate, scored significantly lower than control sheep with their hit rate of 23.09%. Reactant goats (19.92%) also scored lower than control goats (20.74%), but not significantly. Note that reactant goats scored the lowest of all four sub-groups, and this was expected according to reactance theory about goats, but they were not significantly lower than any other group. Post hoc, it was surmised that high reactance at the start of psi-testing may be a 'trait' in goats (but not sheep; i.e., there may be a ceiling effect for goats on 'state' reactance), so that sheep may be more vulnerable to reactance than goats, and this might explain the significant simple effect for sheep. Future studies on sheep-goat effects should include a measure of trait reactance so that pre-experimental reactance can be controlled.

Published works:

Storm, L., Ertel, S., & Rock, A. J. (2013). Paranormal effects and behavioural characteristics of participants in a forced-choice psi task: Ertel's Ball Selection Test under scrutiny. *Australian Journal of Parapsychology*, 13, 111-131.

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Areas of interest:

ESP, PK, reactance, psi, sheep-goat effect

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