

Does Memorability Increase Believability?



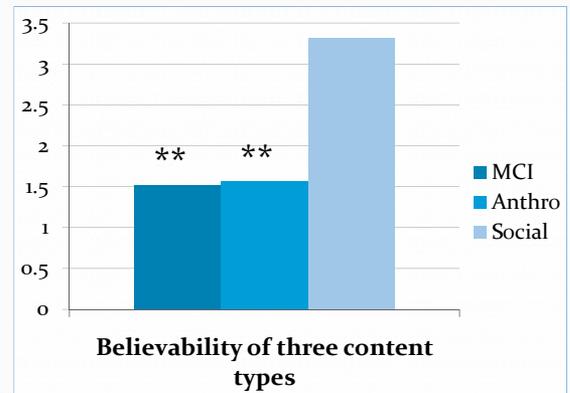
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Is Minimally Counter-Intuitive (MCI) and Anthropomorphic information less believable than Intuitive information?

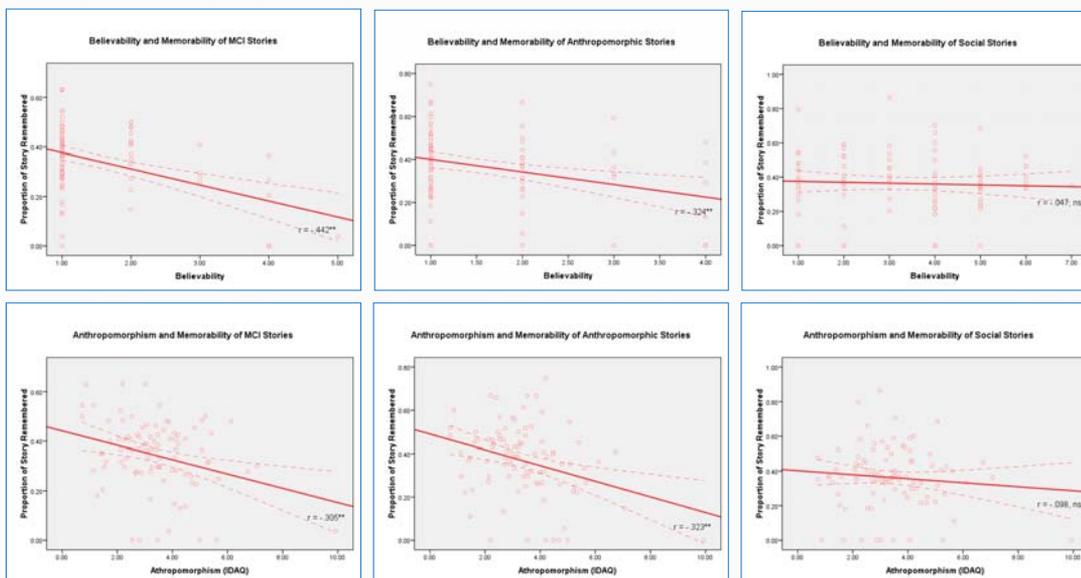
Abstract: Evolutionary approaches to the origins of religion have focused heavily on how aspects of our evolved psychology shape the epidemiology of religious representations in an effort to explain the prominent place of religions in human societies. Though these approaches help explain why religion representations spread, they do not differentiate religion from other phenomena, such as folktales, that share these biases. Previous studies have shown that minimally counter-intuitive (MCI) content makes stimuli more memorable, but have not looked at the believability of this content. Our study shows that both minimally counterintuitive and anthropomorphic content in stories make them *less* believable than a fully intuitive story. These findings suggest that a broader theoretical approach is needed, perhaps one taking account of the modeling or context biases that have been shown to be so important in other domains of cultural evolution.

Procedure: 95 participants, 79 female.

Participants were given 3 short stories to read: an anthropomorphic, a minimally counter-intuitive, and a social story. After the participants read the stories they were given a short distraction. They were then asked to recall the stories as well as asked to rate how believable the story was on a 7 point scale. Participants were given an anthropomorphizing scale (the IDAQ) to evaluate how much they anthropomorphise the world around them.



Social stories were significantly more believable than either MCI stories (Mdiff= 1.80, $t(94)= 10.14$, $p<.001$) or anthropomorphic stories (Mdiff= 1.75, $t(94)= 10.09$, $p<.001$). There was no significant difference in believability between MCI and anthropomorphic stories (Mean diff= .05, $t(94)= .25$, $p=.59$). Inter-rater reliability: Krippendorff's α : Anthropomorphic: .95, 95%CI(.91, .98); MCI: .93, 95%CI(.90, .96); Social: .97 95%CI(.96, .99).



There was a significant negative relationship between the believability and memorability for MCI stories, and anthropomorphic stories. This was not the case for social stories (see above). Similarly, participant's scores on an anthropomorphism scale showed a negative relationship with memorability for MCI stories and anthropomorphic stories, but not social stories. The anthropomorphism scale had a significant positive correlation with believability for MCI ($r= .272$, $p= .008$) and anthropomorphic stories ($r= .223$, $p= .03$) but not social stories ($r= .129$, $p= .21$). ** $p<.001$

Discussion: Our data suggests that MCI and anthropomorphic information is less believable than intuitive information. Moreover, people who find this type of information less believable remember more of it. This is not true of intuitive information. People who anthropomorphize more also find MCI and anthropomorphic stories less memorable. We interpret this as being due to high scorers finding this information more intuitive than people who score lower on the scale. Cognitive theories of religion suggest that belief in religion should track religion's memorability. Our data suggests this is not the case for MCI or anthropomorphic content. Future studies should look at cultural learning theories, such as context biases, as a potential way to bridge the current theoretical gap between memorability and believability in the evolutionary origins of religion.