

A new [article](#) by [Dan Fessler](#), [Anne Pisor](#), & [David Navarrete](#), highly relevant to cultural epidemiology in [PLoS ONE 9\(4\): e95167. doi:10.1371](#)

**Abstract:** The functions of cultural beliefs are often opaque to those who hold them. Accordingly, to benefit from cultural evolution's ability to solve complex adaptive problems, learners must be credulous. However, credulity entails costs, including susceptibility to exploitation, and effort wasted due to false beliefs. One determinant of the optimal level of credulity is the ratio between the costs of two types of errors: erroneous incredulity (failing to believe information that is true) and erroneous credulity (believing information that is false). This ratio can be expected to be asymmetric when information concerns hazards, as the costs of erroneous incredulity will, on average, exceed the costs of erroneous credulity; no equivalent asymmetry characterizes information concerning benefits. Natural selection can therefore be expected to have crafted learners' minds so as to be more credulous toward information concerning hazards. This negatively-biased credulity extends general negativity bias, the adaptive tendency for negative events to be more salient than positive events. Together, these biases constitute attractors that should shape cultural evolution via the aggregated effects of learners' differential retention and transmission of information. In two studies in the U.S., we demonstrate the existence of negatively-biased credulity, and show that it is most pronounced in those who believe the world to be dangerous, individuals who may constitute important nodes in cultural transmission networks. We then document the predicted imbalance in cultural content using a sample of urban legends collected from the Internet and a sample of supernatural beliefs obtained from ethnographies of a representative collection of the world's cultures, showing that beliefs about hazards predominate in both.