

Legends of Echoes Linked Through Acoustics to Prehistoric Art

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A new area for acoustic research has arisen from a previously unrecognized relationship between ancient legends of echoes, and prehistoric rock art. This art includes Ice Age deep cave paintings, and Native American petroglyphs typically found high on canyon walls. This acoustic connection is important since there has been no satisfactory explanation for the production of rock art (neither the unusual locations nor the subject matter the artists echoes). Yet producing rock art clearly was a major preoccupation for *Homo sapiens* over a span of tens of thousands of years. The concept of sound wave propagation and reflection is a modern paradigm, and is based on the abstraction of invisible pressure waves being diverted by boundaries between media of different densities. In ancient times, however, the causes for many natural phenomena were explained by personification or animism, including attributing echoes to the responses of spirits. Could echoes have motivated the ancient artists? Acoustic studies at rock art sites may be starting to answer this important question.