

## Creating and analysing a database of Australian ritual

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The ritual systems of Australian Indigenous people have been the subject of detailed ethnographic analysis over the past 200 years yet little of this material has been studied from a quantitative, comparative perspective. Complex rituals linked to initiation, mortuary and fertility have been, and in many cases still are, the mainstay of Indigenous Australian social life. The creation of a new database will enable ritual variation to be studied comparatively with the aim of including 50-60 societies and 250-300 ritual character traits. Importantly, all Australian groups are hunter-gatherers and it is anticipated that the data may be useful for answering questions related to the evolution of ritual in ancestral human society. For example, is the presence of costly physical rituals correlated with the need to sustain high levels of within group commitment? This could be measured by the presence of inter-group conflict or other cooperative need such as food sharing in desert environments. It is expected that analyses will employ phylogenetic comparative methods to allow for correlation due to shared ancestry and to provide powerful statistical capability. To test whether ritual traits had evidence of vertical ancestry a pilot study was conducted using an existing cross-cultural database (Binford 2001). Binary data for 18 ritual traits in 36 Australian groups was mapped to an Australian (Pama-Nyungan) language phylogeny (Bower & Atkinson 2012). 9 ritual traits had a statistically significant phylogenetic signal measured by D value (Fritz & Purvis 2010) suggesting that Australian ritual traditions are, at least to some extent, inherited through a pattern of vertical transmission. The creation of an Australian ritual database, combined with the application of modern phylogenetic techniques, is expected to provide an important new resource for addressing questions related to the evolution of ritual in human society.

### References

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