

Preregistered Predictions of Punishment Types by Socioecological Predictors



| Predictor | 2PP | 3PP | 3PP-General | 3PP-Partner | 3PP-Kin |
|----------------------------------------------|-----|-----|-------------|-------------|---------|
| Resource Intensification (RI) | ↓ | ↑ | ↑ | ↑ | — |
| Technological & Social Differentiation (TSD) | ↓ | ↑ | ↑ | ↑ | — |
| Kinship Intensity Index (KII) | ↑ | ↓ | — | — | ↑ |
| Community Size | ↓ | ↑ | ↑ | ↑ | — |

Legend:

- ↑ = Positive prediction
- ↓ = Negative prediction
- = Unspecified

Modeling Approach

Bayesian multilevel logistic regression models

Unit of analysis: Paragraph-coding (i.e., all codings by all coders included as rows, n=11,893)

Outcomes: evidence for 2PP and subtypes of 3PP (0=no evidence, 1 = evidence for)

Predictor variables:

- Resource Intensification (RI)
- Technological & Social Differentiation (TSD)
- Kinship Intensity Index (KII)
- Community Size

Random effects for:

- Paragraph ID (n=5,411)
- Coder ID (n=8)
- Document ID (n=643)
- Society ID (n=60)

Models implemented in brms