

# 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