

Structured Disagreement Analysis Framework (SDAF)

$$Y_{ij} = \mu + \alpha_i + \beta_j + \varepsilon_{ij}$$

σ^2_{model}
(Bias)
17.2%

*Correctable
systematic bias*

Theorem 2:
Reliability Ceiling
 $\Delta\kappa_{max} \leq D_{bias} + D_{ambi}$

σ^2_{node}
(Ambiguity)
9.1%

*Task
difficulty*

Implications

ARB Range:
11.5% - 56.4%
across fields

σ^2_{resid}
(Residual)
73.6%

*Irreducible
interaction*

Proposition 3:
Counter-Bias
Signal Amplification