

Modeling and Analyzing Adolescent Morality

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Adolescent Morality

“Where do your moral views come from?”

Intuitive: “I trust my gut instinct”

Consequentialist: “I am abiding by the law”

Social: “I follow what my parents taught me”

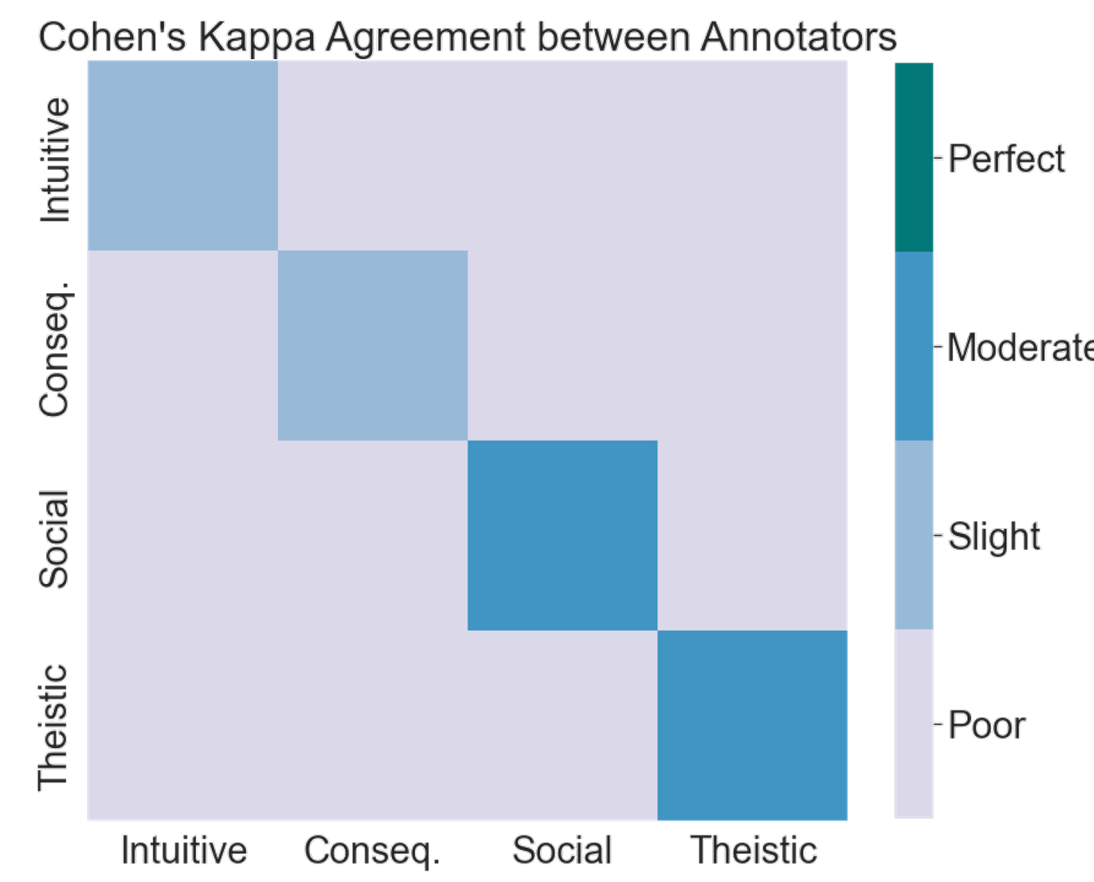
Theistic: “I listen to what God says”

Morality Sources

National Study of Youth and Religion

2 Waves of Telephone Surveys & In-Depth Personal Interviews on the religious, moral, and social formation of the American youth

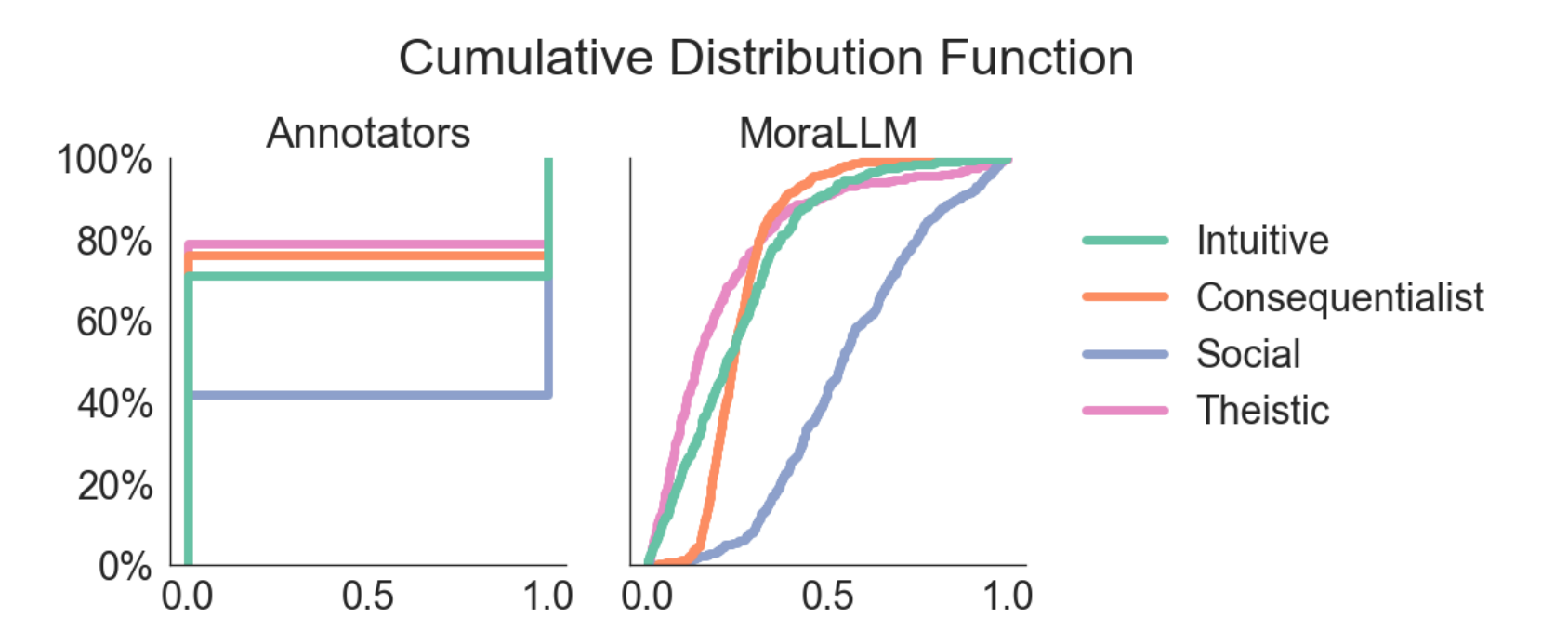
Computational Modeling



Well from what I've been, what I've ah, grown up, what I've learned growing up with in my household and what the Bible says. [...] what would ruin my spiritual walk, it would probably something I shouldn't be messing with. Well [...] if it's something kind of hard I turn to my parents and they usually help me.

	Annotators	MoraLLM
Intuitive	100%	2%
Consequentialist	0%	18%
Social	0%	84%
Theistic	100%	57%

Models	
SpaCy, BERT, BART	Static/Contextualized Embeddings
GPT-3.5	State-Of-The-Art LLM
MoraLLM	Premise + Hypothesis = Entailment Probability



Human annotators often judge in **binary**, **disagree**, and make **mistakes**, whereas MoraLLM judges in **continuum**, **consistently**, and uncovers additional **heterogeneity**

Linguistic Style

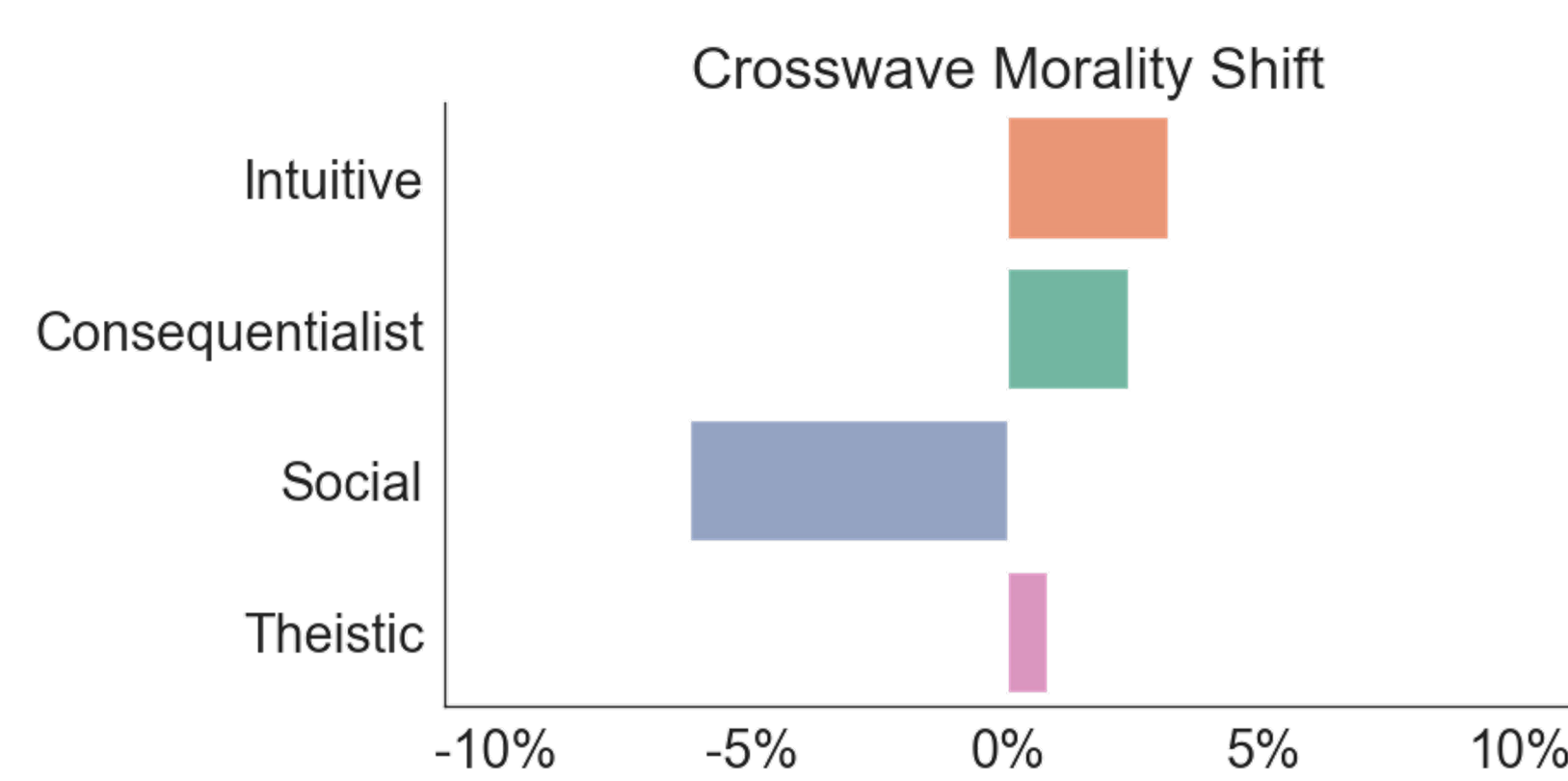
	Intuitive	Conseq.	Social	Theistic
Verbosity (Log of Word Count)	.0545***	-.0062	-.073***	.0355***
Uncertainty (Ratio of Vague Words)	.0741	.1554	-.318	-.4244
Readability (Vocabulary Complexity)	.0006	.0005	-.0	-.0003
Sentiment (Emotional Tone)	-.0075	-.0359*	.0368	.0037

Regression with Robust Linear Model (intercepts omitted)

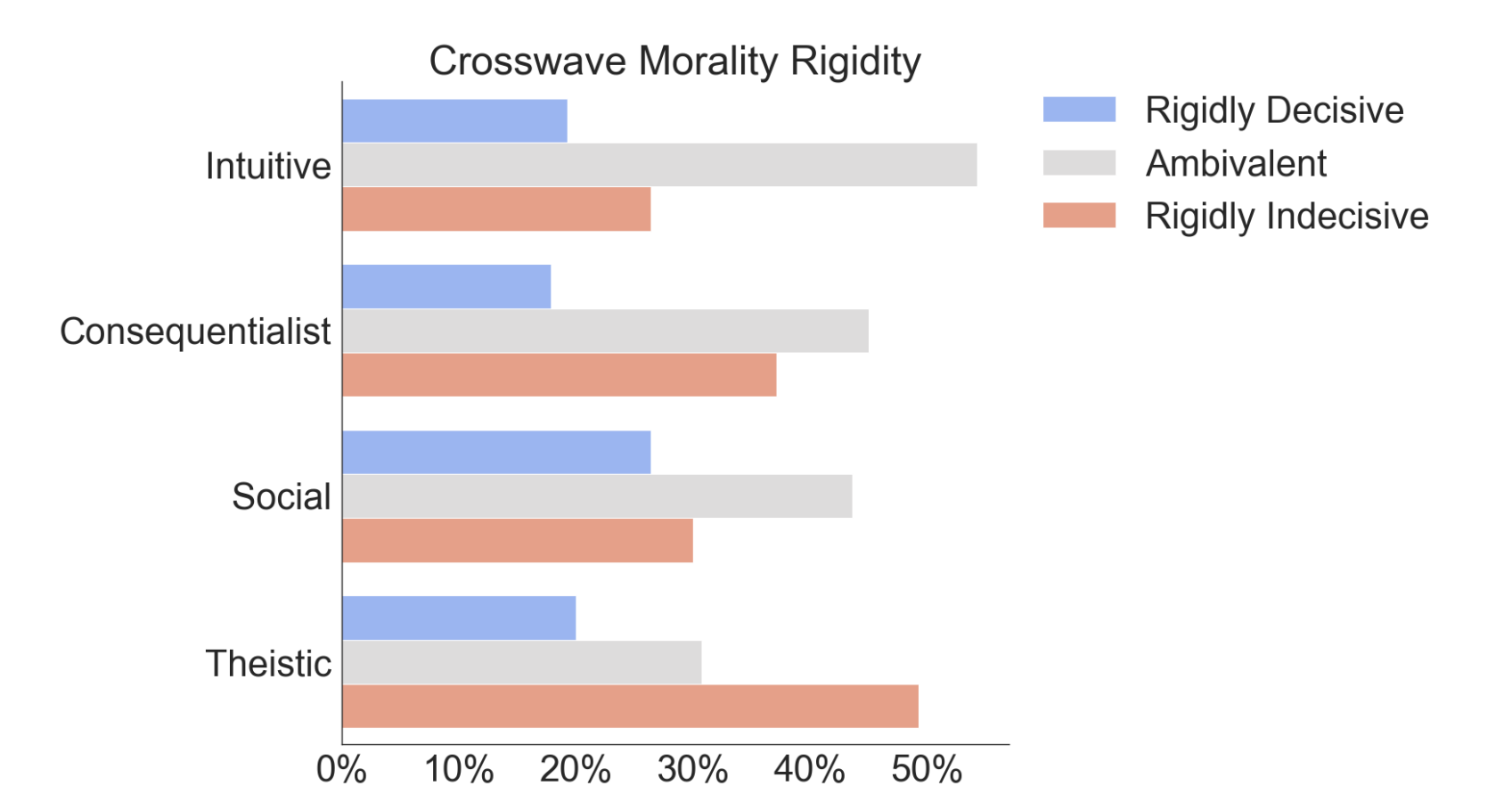
Linguistic style unveils distinctive characteristics of **morality sources**

Evolution across Interview Waves

$$\text{Shift} = \text{Outgoing Percentage} \cdot \text{Incoming Coefficients} + \text{diag}(\text{Remaining Percentage})$$

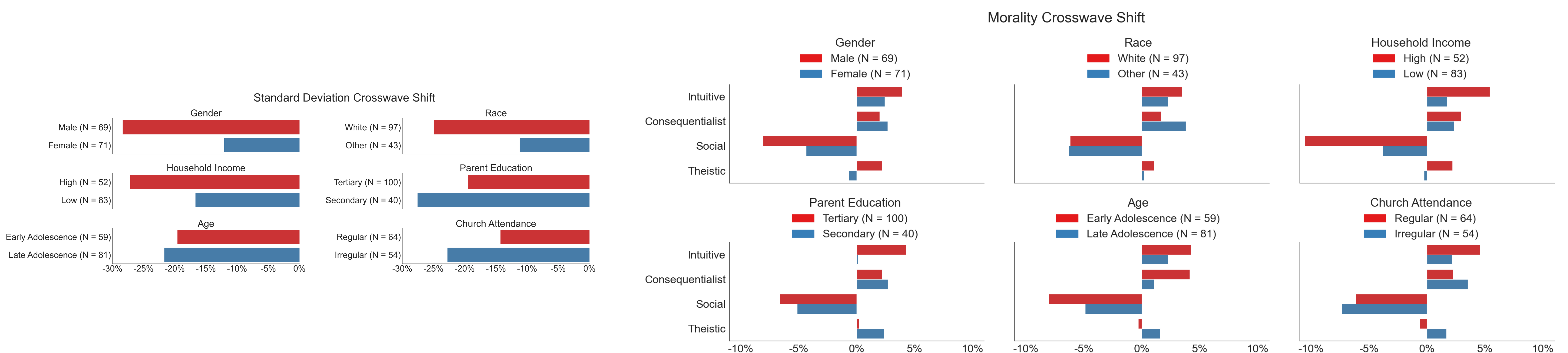


Rigidly Decisive	Above the mean in both waves
Rigidly Indecisive	Below the mean in both waves
Ambivalent	From Decisive to Indecisive (or vice versa)



Adolescents showcase distinct patterns of **morality shift** and **morality rigidity** across interview waves

Evolution across Interview Waves by Social Categories



Social categories highlight notable profiles of **social change**: **Rich-White-Male** adolescents become **less deviant**, **less social**, and **more intuitive** as they age