NSF Frontier: Towards Effective Web Privacy Notice and Choice
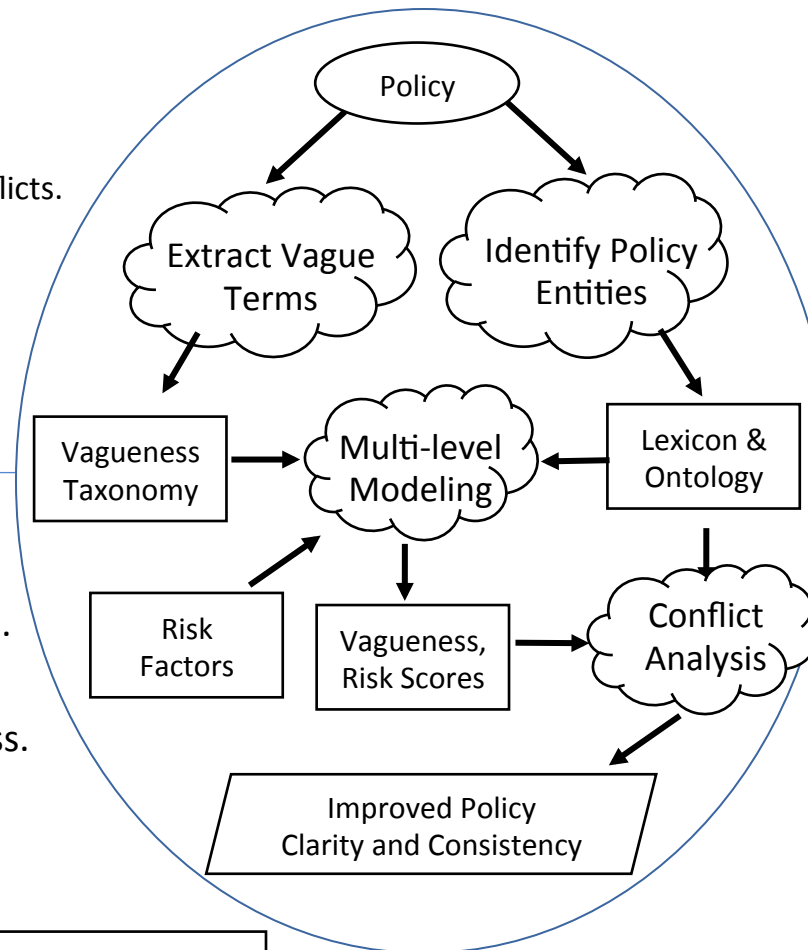## Privacy Policy Ambiguity and Privacy Risk

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Challenge:

- Identify privacy policy conflicts.
- Identify effects of policy vagueness on privacy risk.

Scientific Impact:

- New theory to predict and explain policy vagueness' effect on privacy risk and system design flexibility
- Prioritize risky, uncertain practices for increased privacy assurance

Policy → Extract Vague Terms → Vagueness Taxonomy → Multi-level Modeling

Policy → Identify Policy Entities → Lexicon & Ontology → Multi-level Modeling

Risk Factors → Multi-level Modeling → Vagueness, Risk Scores → Conflict Analysis → Improved Policy Clarity and Consistency

Lexicon & Ontology → Conflict Analysis

Solution:

- Annotate policy entities.
- Model data flows.
- Score risk and vagueness.

Broader Impact:

- Recommendations to regulators on model policy language
- Risk scoring integrated with security incident sharing
- Policy models used to check mobile apps for policy violations