

Trusted AI and AI Trust

An Opportunity for Synthesis

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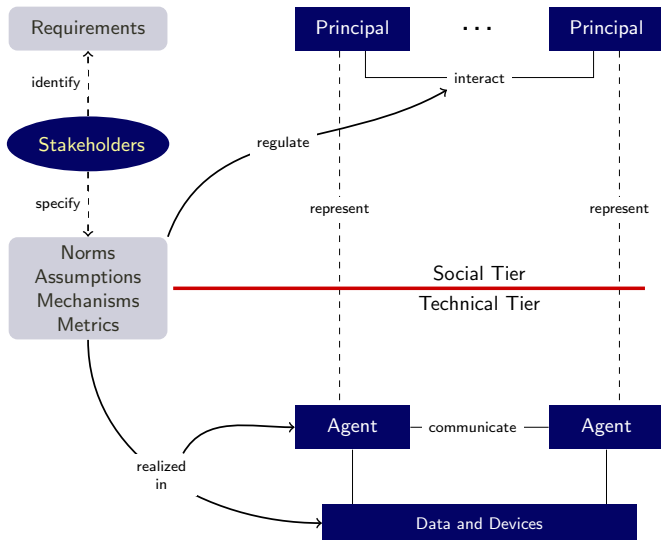
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Sociotechnical Systems

Current AI research: atomistic, single-agent decision-making and ethical dilemmas

Current social sciences research: Not computational in outlook



Comparison

Requirements

Scope

Aspect

Autonomy

Nature

Fairness

Research Focus

Comparison

Trusted AI

Of agents to people

Trustworthiness

Instrumental:
agents are tools

Intelligence
and complexity

Transparency

Statistical wrt
protected groups

Individual dilemmas

Requirements

Scope

Aspect

Autonomy

Nature

Fairness

Research Focus

Comparison

Trusted AI

AI Trust

Requirements

Of agents to people

By agents of others

Scope

Trustworthiness

Trust

Aspect

Instrumental:
agents are tools

Sociocognitive: agents
are socially intelligent

Autonomy

Intelligence
and complexity

Decision making wrt
social relationships

Nature

Transparency

Accountability

Fairness

Statistical wrt
protected groups

Individual wrt
vulnerability

Research Focus

Individual dilemmas

Systemic properties

Conclusion

Going back to sociotechnical systems

- ▶ Build on sociocognitive modeling
- ▶ Incorporate human considerations of interpretability and understanding
- ▶ Incorporate reasoning about incentives
- ▶ Support composition
 - ▶ Systems of systems with . . .
 - ▶ Systems that appear as agents
 - ▶ Systems that appear as tools
- ▶ Toward a theory of ethics