Abstractions for Programming Agents and Multiagent Systems

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Historical Perspective

Sociotechnical system configurations
Autonomy: does the technical tier prevent anything a user (in the social tier) would like to do?

Before computers.

Current: machine oriented. Violates autonomy

Interaction oriented. Autonomy is a social construct; autonomy mirrors accountability

Before computers.

Current: machine oriented.

Interaction oriented.
## Benefits of Interaction Orientation

Addressing challenges in Hendler and Berners-Lee (2010)

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<th>Benefits</th>
<th>H&amp;BL Challenges</th>
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<td>Enhanced autonomy</td>
<td>Creativity</td>
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<td>Enhanced accountability</td>
<td>Trust and information accountability</td>
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<td>Enhanced modularity</td>
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<td>High-level abstractions, middleware</td>
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<td>Expectations-based interoperation</td>
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When It Comes to Enabling Decentralization . . .