ONTIOLOGICAL DISTINCTIONS
IN SUPERNATURAL CONCEPTS

Erika Salomon, Spring 2011
How we divide the world into basic categories (Keil, 1979):
AGENTS AND NON-AGENTS
• Intentional agents have intentions, desires, goals, etc.

• Agents and non-agents alike are responsible for effects in causal chains.

• Evidence of basic ontological distinction in infants, who look longer when an event is caused by a non-agent (Saxe, Tenenbaum, & Carey, 2005)

• Gelman & Kremer (1991) found that children as young as 4 distinguish between self-generated motion of agents and non-agents.
EMERGENCE OF THE COGNITIVE SCIENCE OF RELIGION

- Anthropomorphization (Guthrie, 1980)
- Ritual agents and patients (Lawson & McCauley, 1990)
- Optimally counter-intuitive agents (Boyer, 1994)
- Hyperactive agency detection device (Barrett, 2000)
- Automatic violation detection & punishment (Bering & Johnson, 2005)
But what about supernatural concepts lacking intentional agency?

- Holy water
- Sorcerer’s stone
- The Force
- Luck
- Psychic energy

WHAT ABOUT NON-AGENTS?

- Healing crystals
- Qi
- Karma
- Quintessence
- Substance dualism
Do people make the same ontological distinction between agents and non-agents in both the supernatural and natural domains?

Can we find evidence for supernatural concepts that are:

- Non-intentional
- Causally involved in the world
Laura was having breathing problems and felt sick all of the time. She wanted to feel better and decided to go to a doctor. She asked the doctor to help her feel healthy. After a few days, she felt much better.
Aid varied on two factors:

- **Naturalness (natural, supernatural)**
- **Ontological category (substance, agent)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Soil</td>
<td>Doctor</td>
</tr>
<tr>
<td>Supernatural Fountain of youth water</td>
<td>God</td>
</tr>
</tbody>
</table>
Supernatural Properties:

• The aid has **special powers**, such as magical or other supernatural powers.

Intentional Agency:

• The aid **worked really hard** to achieve the goal.
• The aid **wanted** the character to achieve the goal.
• The aid **intended** for the character to achieve goal.

Causal Involvement:

• The aid was **responsible** for the character’s achieving the goal.
RESULTS: SPECIAL POWERS

Main effect of Naturalness: $F = 150.72; p = .00$
RESULTS: AGENCY

Sum of Agency Items (worked really hard, wanted, intended)

Alphas: .84 - .91

Interaction: $F = 5.64; p = .03$
RESULTS: CAUSAL RESPONSIBILITY

Aid is responsible for goal achievement

Main effect of Ontological: $F = 13.84; p = .00$
Main effect of Naturalness: $F = 14.99; p = .00$
• Distinction between agents and non-agents is clear in both natural and supernatural domains.

• Non-intentional substances may both have supernatural properties and be causally involved in the world.

• There may be diminished causal or intentional agency for supernatural agents.
What are moderators of perceived causal role for supernatural agents?

- Properties of supernatural agent (e.g., creator)
- Properties of event (e.g., natural disaster)

What are the consequences of invoking agentic versus non-agentic supernatural concepts?

- Perceived Randomness (Caruso, Waytz, & Epley, 2010)

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