

# 2.1: Emergence and Systems Thinking

## Artificial Intelligence Policy

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### Think

*Is “intelligence” an emergent phenomenon? Or something different? What does it mean to be “intelligent”? What about consciousness? When do we start treating a system as more than the sum of its parts, and why?*

### Read

Boden, “Autonomy and Artificiality” from *The Philosophy of Artificial Life*

### Browse

- Roose, “A Conversation With Bing’s Chatbot Left Me Deeply Unsettled” NYTimes.
- Schultz, “Flocking together: Study shows how animal groups find their way”
- Krakauer, “What is Complexity?” *Santa Fe Institute Lecture*: <https://www.youtube.com/watch?v=JR93X7xK05o>

### Additional Resources

- Bedau, Mark. “Weak Emergence”
- Johnson, “Eliminating the mystery from the concept of emergence”
- Hofstadter, “Gödel, Escher, Bach: an Eternal Golden Braid”
- Holland, John. *Emergence*
- Wolfram, *A New Kind of Science*
- Simon, Herb. *Sciences of the Artificial*
- “Emergent Properties”, *Stanford Encyclopedia of Philosophy*