

Class 9: Madness of crowds

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Sociology 204: Social Networks
Princeton University

1/2 Interdependence of decision making



Review:

- ▶ basic model for the spread of disease

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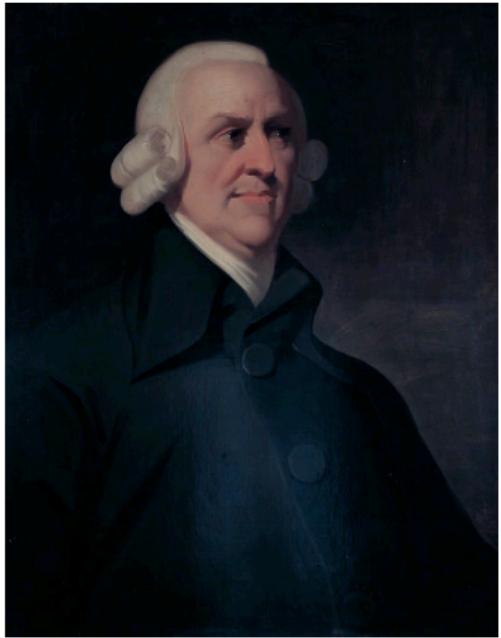
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- ▶ sometimes detailed complete network structure matters
- ▶ simple rules by individuals can aggregate to complex network patterns



(a) Adam Smith: Invisible Hand



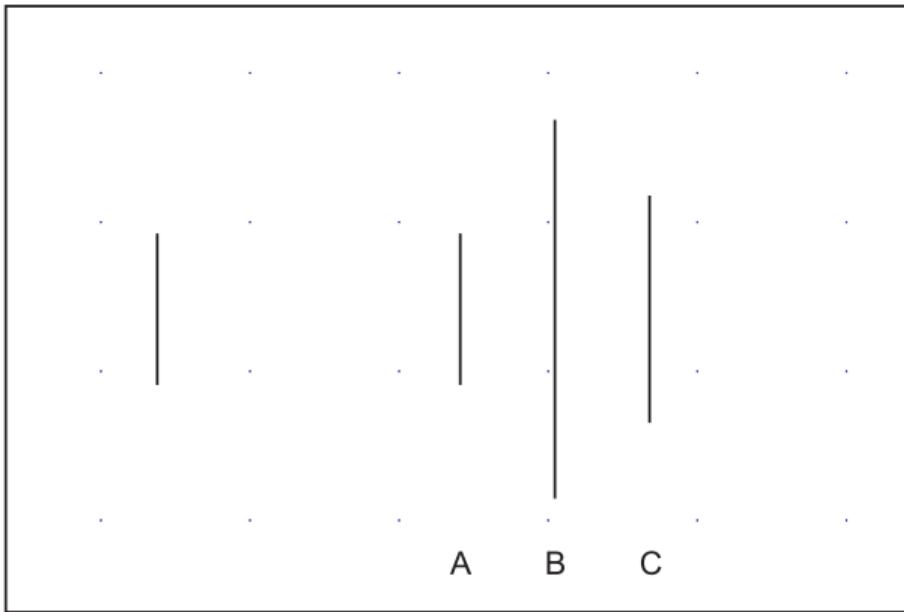
(b) Garrett Hardin: Tragedy of the Commons

http://commons.wikimedia.org/wiki/File:Adam_Smith_The_Muir_portrait.jpg
http://en.wikipedia.org/wiki/File:Garrett_Hardin.jpg

- ▶ interdependence of decision making
- ▶ consequences of interdependent decision making for collective outcomes

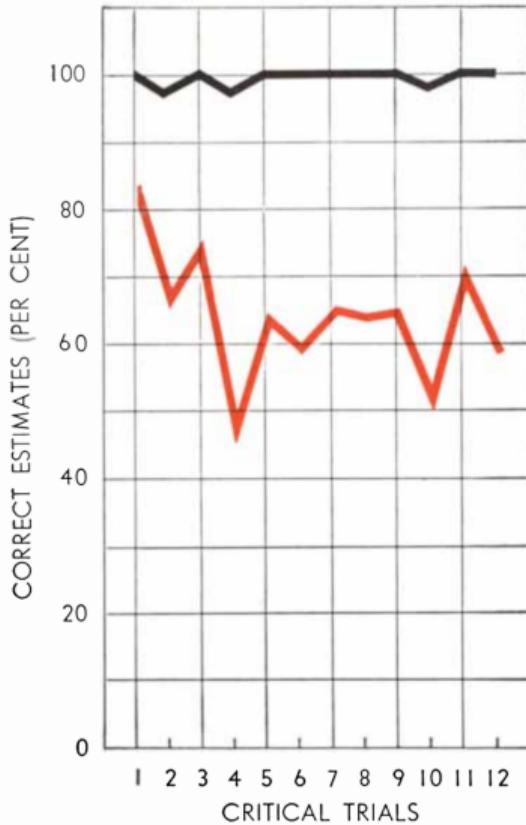
Interdependent individual decisions

7.1

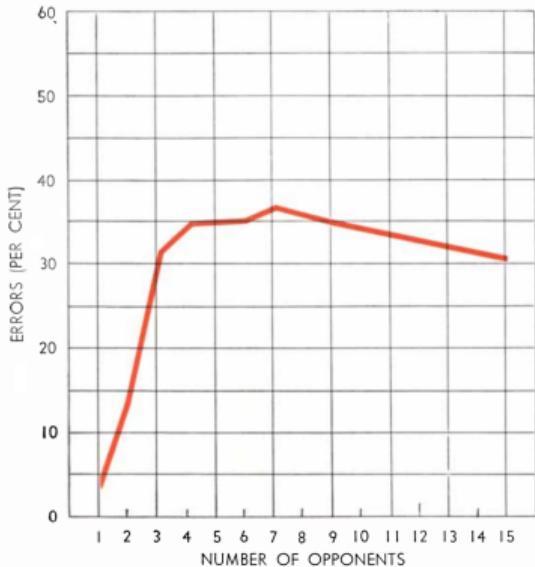




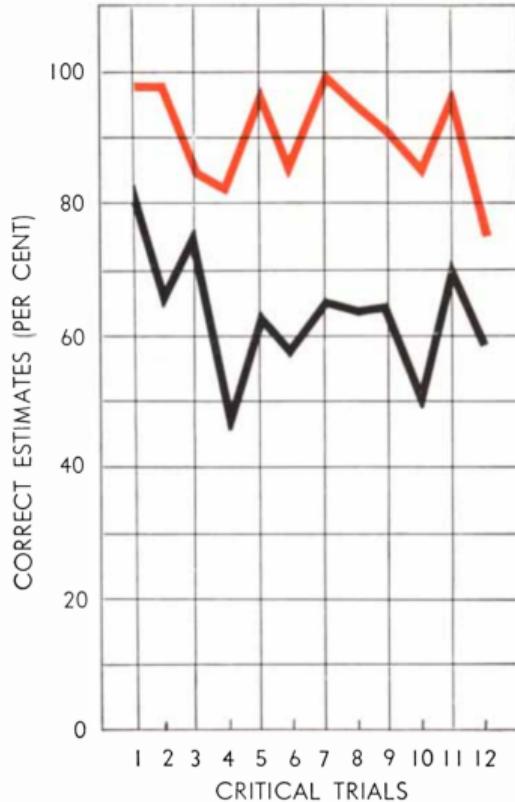
<https://www.youtube.com/watch?v=TYIh4MkcfJA>



ERROR of 123 subjects, each of whom compared lines in the presence of six to eight opponents, is plotted in the colored curve. The accuracy of judgments not under pressure is indicated in black.



SIZE OF MAJORITY which opposed them had an effect on the subjects. With a single opponent the subject erred only 3.6 per cent of the time; with two opponents he erred 13.6 per cent; three, 31.8 per cent; four, 35.1 per cent; six, 35.2 per cent; seven, 37.1 per cent; nine, 35.1 per cent; 15, 31.2 per cent.



TWO SUBJECTS supporting each other against a majority made fewer errors (*colored curve*) than one subject did against a majority (*black curve*).

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AUTHOR OF *A Jane Austen Education*

~~X~~ EXCELLENT
SHEEP

THE MISEDUCATION OF
THE
AMERICAN ELITE

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• • • THE WAY TO A • • •
MEANINGFUL LIFE

Which kinds of externalities were present in the Asch experiment?

1. information externalities
2. coercive externalities
3. market externalities
4. coordination externalities*

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Information externalities and coercive externalities

What happens if we have a bunch of people who are all being influenced by each other?