Class 9: Madness of crowds

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Sociology 204: Social Networks Princeton University

2/2 Consequences of interdependent individual decisions: Information cascades



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

Alice Private Signal Public Action

Alice Private Signal shot bad Public Action

	Alice
	Alice
Private Signal	shot bad
Public Action	no chot
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	Alice	Bob
Private Signal	shot bad	shot bad
	no shot	

	Alice	Bob	Clarence
Private Signal	shot bad	shot bad	shot good
Public Action	no shot	no shot	

	Alice	Bob	Clarence	
Private Signal	shot bad	shot bad	shot good	
Public Action	no shot	no shot	no shot	

	Alice	Bob	Clarence	David
Private Signal	shot bad	shot bad	shot good	shot good
Public Action	no shot	no shot	no shot	

	Alice	Bob	Clarence	David
Private Signal	shot bad	shot bad	shot good	shot good
Public Action	no shot	no shot	no shot	no shot

	Alice	Bob	Clarence	David	Edgar
Private Signal	shot bad	shot bad	shot good	shot good	shot good
Public Action	no shot	no shot	no shot	no shot	

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This example highlights some important points about information cascades:
1. cascades can occur pretty easily

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2. cascades can lead to non-optimal outcomes

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- 1. cascades can occur pretty easily
- 2. cascades can lead to non-optimal outcomes
- 3. can be fragile (if someone is willing to break them)

- This example highlights some important points about information cascades:
- 1. cascades can occur pretty easily
- 2. cascades can lead to non-optimal outcomes
- 3. can be fragile (if someone is willing to break them)
- 4. cascades depend on the difference between private signal and public behavior

Could something like this really happen?



Summary:

many decisions are interdependent

Summary:

- many decisions are interdependent
- when there are interdependent decisions, individual rationality can lead to collective irrationality

Next class:

math)

- ► Gladwell, M. (1996). The tipping point. The New Yorker.
- Watts, Chapter 8.
- ► Watts, D.J. (2002). A simple model of global cascades on random networks.

 Proceedings of the National Academy of Sciences. (Warning: this paper has hard