

# Networks, Values and Public Policy in the 21<sup>st</sup> Century

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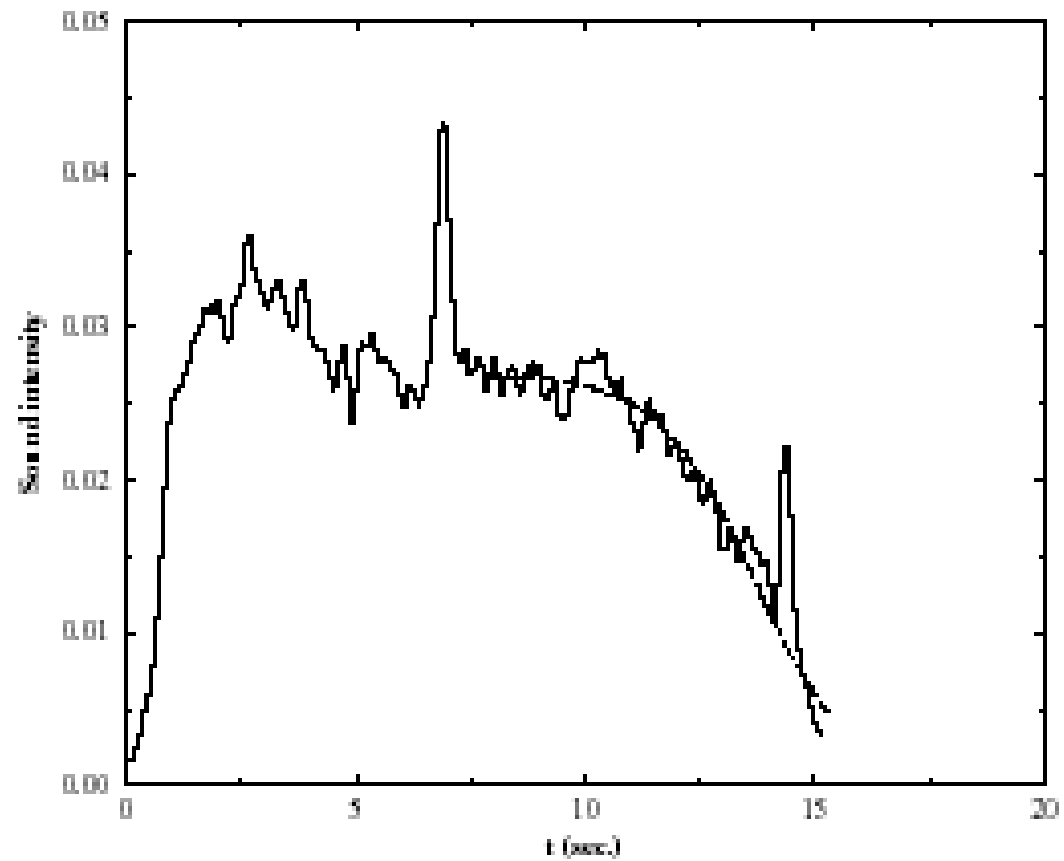
## What do we mean by 'social networks'?

- *Can* mean on-line networks
- But is much more general
- 'Real world' networks of friends, families, colleagues, interest groups

# How does clapping evolve at the end of a performance?

- people differ in their degree of enthusiasm for the performance
- but we all hear what others are doing
- may look bad to stop when everyone else is still clapping
- but few people want to be the last one to stop
- A very complex phenomenon

## Typical time path of sound intensity of applause (concerts on French radio)



# How does volatility in financial markets increase (or reduce )?

- traders differ in their enthusiasm for the prospects of a company's stock or currency
- but they all see what others are doing
- it may be bad to stop buying when everyone else is
- but it may be just as bad to stop selling when everyone else is
- irrational waves of enthusiasm

# Economic and social policy since 1945

- Essentially based on a view that decisions are made rationally by people, firms, planners etc . ['agents']
- Agents respond to incentives, and incentives are in turn mainly based on price
- Examples:
  - energy consumption
  - corporation tax
  - interest rates
- A mechanistic view of the world
- Not without some success, but limited in what it can actually achieve

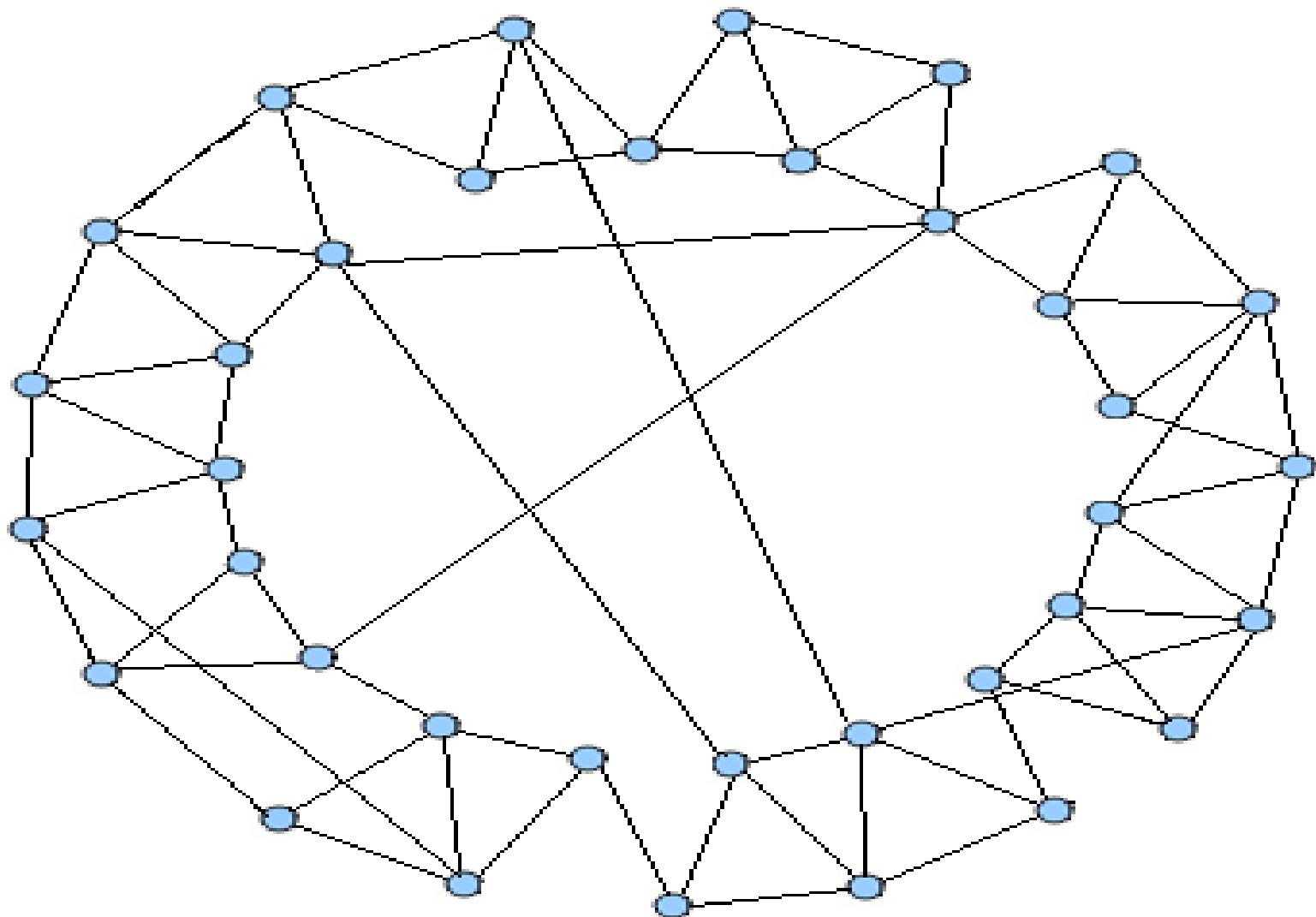
# Behavioural Economics and Networks

- Behavioural economics is essentially a smarter and broader way of thinking about incentives
- But it is still based on the idea of ‘agents’ deciding *in isolation*
- Networks recognise that agents can be influenced *directly* by what others do
- A wide variety of behavioural motives for this, but for shorthand description, call this ‘copying’

## Impact of networks

- Can *magnify* the effect of any initial change caused by incentives/nudge
- *Network structure* becomes an additional policy instrument; different types of structure are more/less resistant to 'cascades' of value change
- But can also *offset* the effect of any initial change caused by incentives/nudge
- And may increase the *uncertainty* of any change in policy

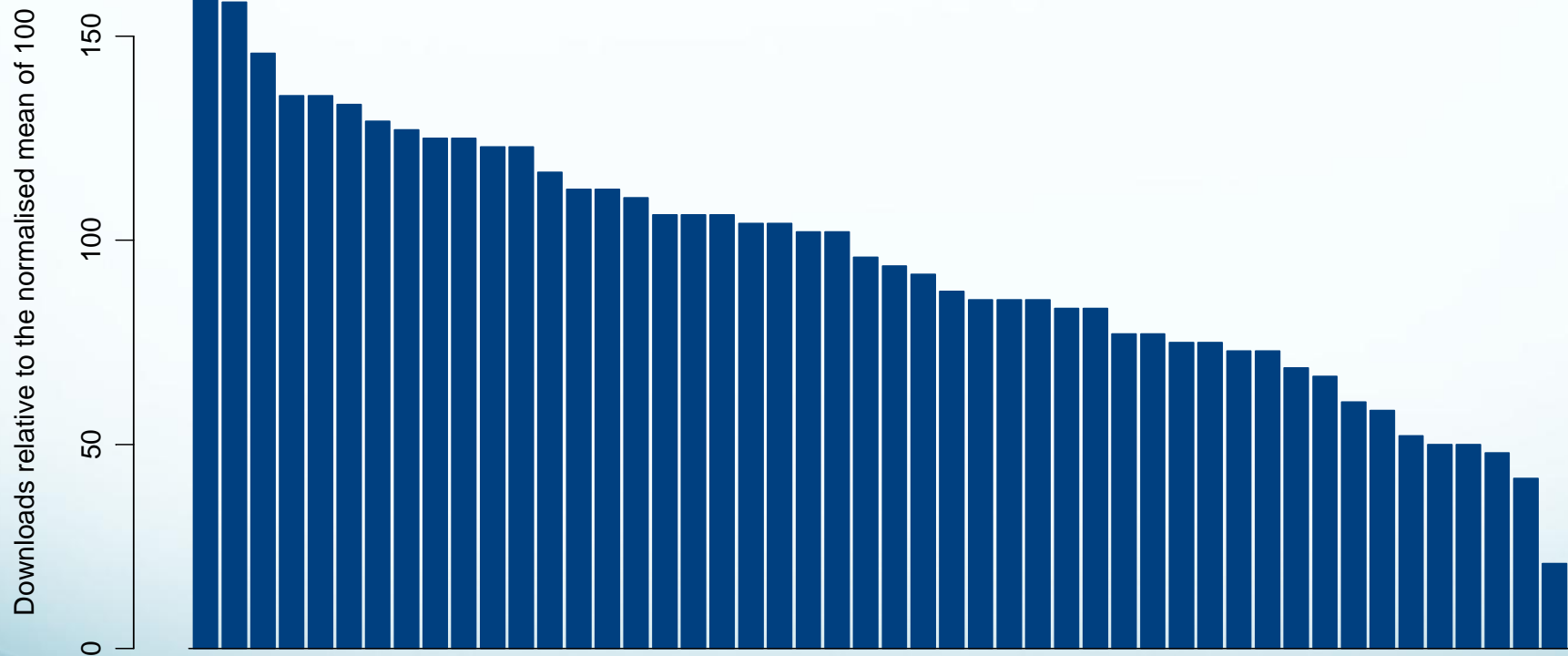




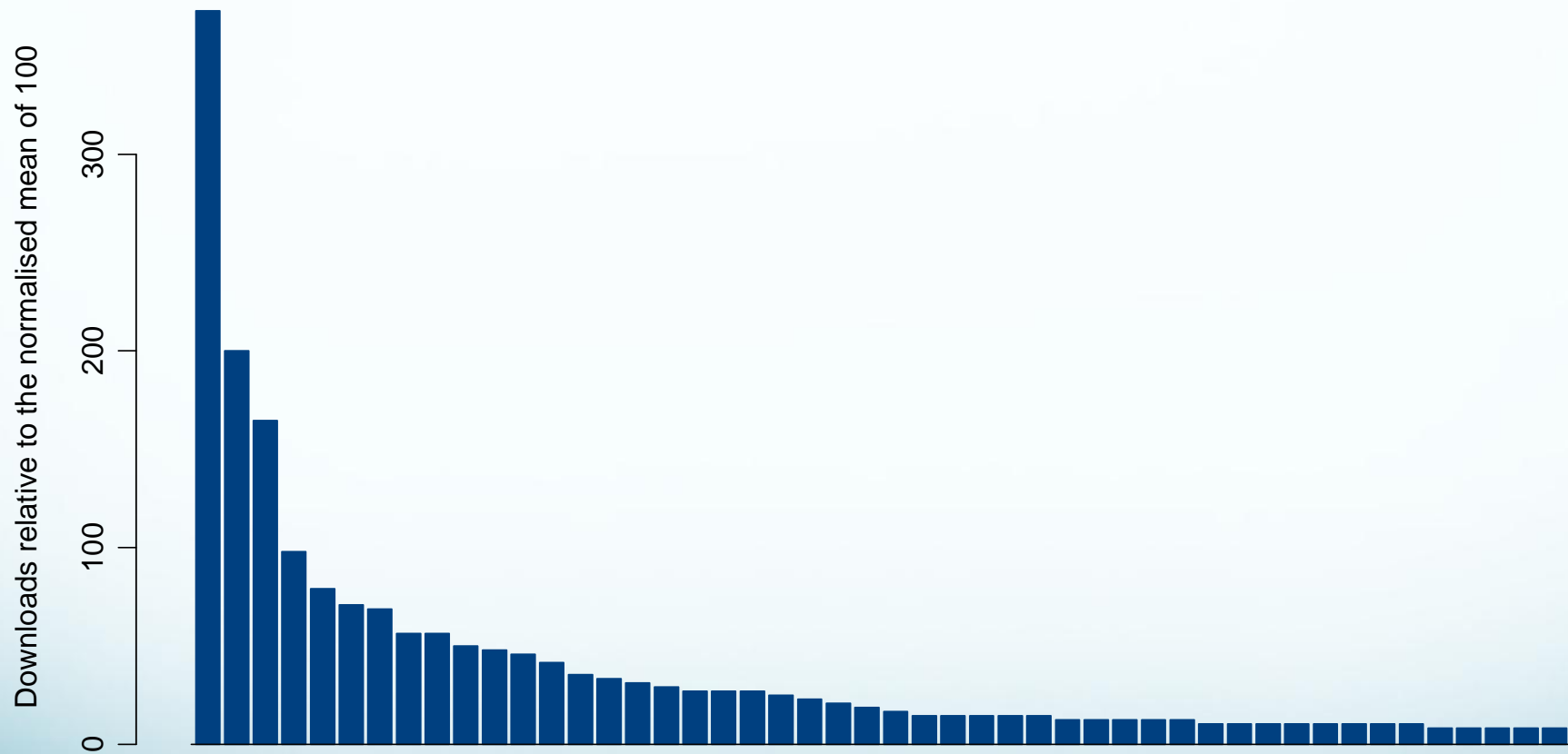
## The music download experiment

- Salganik, Dodds, Watts, 'Experimental study of inequality and unpredictability in an artificial cultural market', *Science*, 2006
- Students downloaded previously unknown songs either with or without knowledge of previous participants' choices

Number of downloads of each of the 48 songs  
No social influence



## Number of downloads of each of the 48 songs Strong social influence



# Networks, Policy and Values

- Examples: - financial market regulation
  - executive pay
  - environment
- Successful policy making is very difficult
- The first step to better policy making is better understanding
- A key reason for many failures is the failure to recognise that networks, values, are a key driving factor