

HOW THE LEGAL SYSTEM BENEFITS FROM SOCIAL SCIENCE

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<https://hdl.handle.net/2324/1498337>

出版情報 : 2015-04-09
バージョン :
権利関係 :

HOW THE LEGAL SYSTEM BENEFITS FROM SOCIAL SCIENCE

2015 4th International Conference on Social Science and Humanity
April 9-10, 2015 Kyoto, Japan

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What is the primary role of the lawyers?

- To design legislation (Today's topic).
- To utilize a law to solve (or, at least, alleviate the negative impact of) a problem in the society.



How to design legislation?

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A woman with long blonde hair is blindfolded with a white cloth. She is holding a pair of silver scales of justice in her right hand and a sword in her left hand. The background is a plain, light-colored wall.

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How to design legislation?

A woman with long blonde hair is blindfolded with a white cloth. She is holding a pair of silver scales of justice in her raised right hand and a sword in her left hand. The background is a plain, light-colored wall.

- The actual process is not simple or linear.
- The process of designing legislation may be complex, redundant, and require repeated trial and error.
- There are almost an infinite number of alternatives to describe the process depending on your perspective and emphasis.

One possible method of designing legislation

1.

2.

3.

4.

One possible method of designing legislation

1. Identify your goal.

2.

3.

4.

One possible method of designing legislation

1. Identify your goal.
2. Observe and describe the society from your own perspective.
- 3.
- 4.

One possible method of designing legislation

1. Identify your goal.
2. Observe and describe the society from your own perspective.
3. Identify the specific part of the society that can be adjusted in order to achieve your goal.
- 4.

One possible method of designing legislation

1. Identify your goal.
2. Observe and describe the society from your own perspective.
3. Identify the specific part of the society that can be adjusted in order to achieve your goal.
4. Design how to adjust such specific part of the society.

Religion

Philosophy

Sociology

Economy

The perspective (or, discipline) to observe and describe the society is one of the major key issues in designing legislation.



- We, lawyers, have to borrow perspectives (or, disciplines) from the outside world, study them, and apply them to design a law.

A social network can be one of the useful perspectives.



- From the perspective of a social network, the society is a network comprising of the nodes (corresponding to persons and entities) and their relationships.
- Society or a part of it can be described as a network (or, a graph) comprising of the nodes and ties connecting them.
- A problem in the society can be represented by the lack of a tie that should have existed, or the existence of a tie that should not have existed.
- A law designed to solve the said problem can be represented as the means to nudge* people to establish an favorable tie, or to cut off an unfavorable tie.

*THALER, RH and SUNSTEIN, C. (2009) Nudge: Improving Decisions about Health, Wealth, and Happiness. Penguin Books.

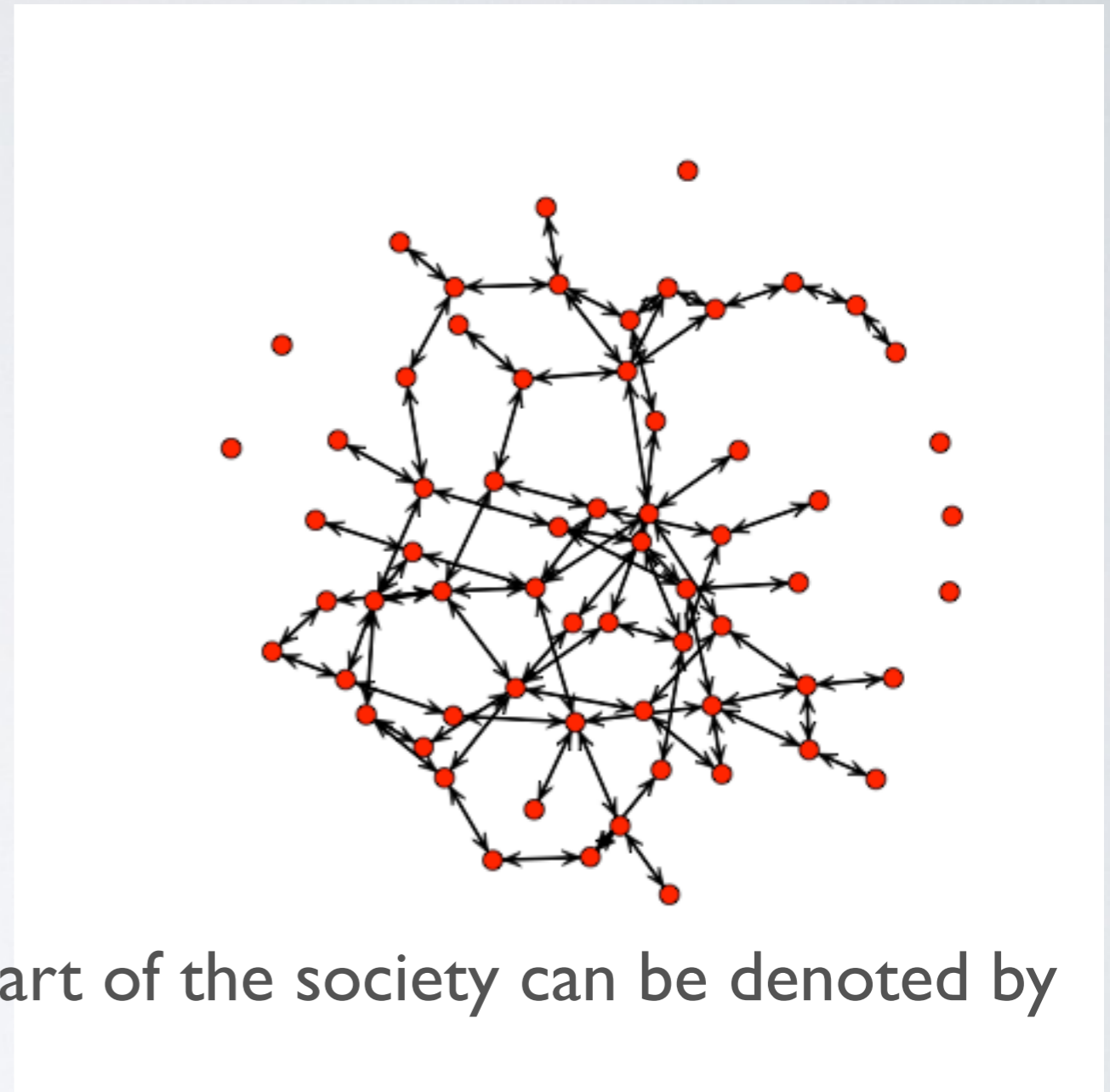
An example of a problem

- More and more people are disturbed by the diffusion of unfavorable information (or information that should have been updated) through the social network services or search engines.
- Assess the viability of the existing legal means (i.e., injunctive relief to order the communication service providers to stop displaying unfavorable information) to alleviate the negative impact of such diffusion of unfavorable information, by employing a social network perspective.
- Also, receive useful advice on how to design new legislation to effectively achieve the goal to minimize the negative impact of the diffusion of unfavorable information, by employing a social network perspective.

Example of assumptions employed to design a simple model used to solve the problem

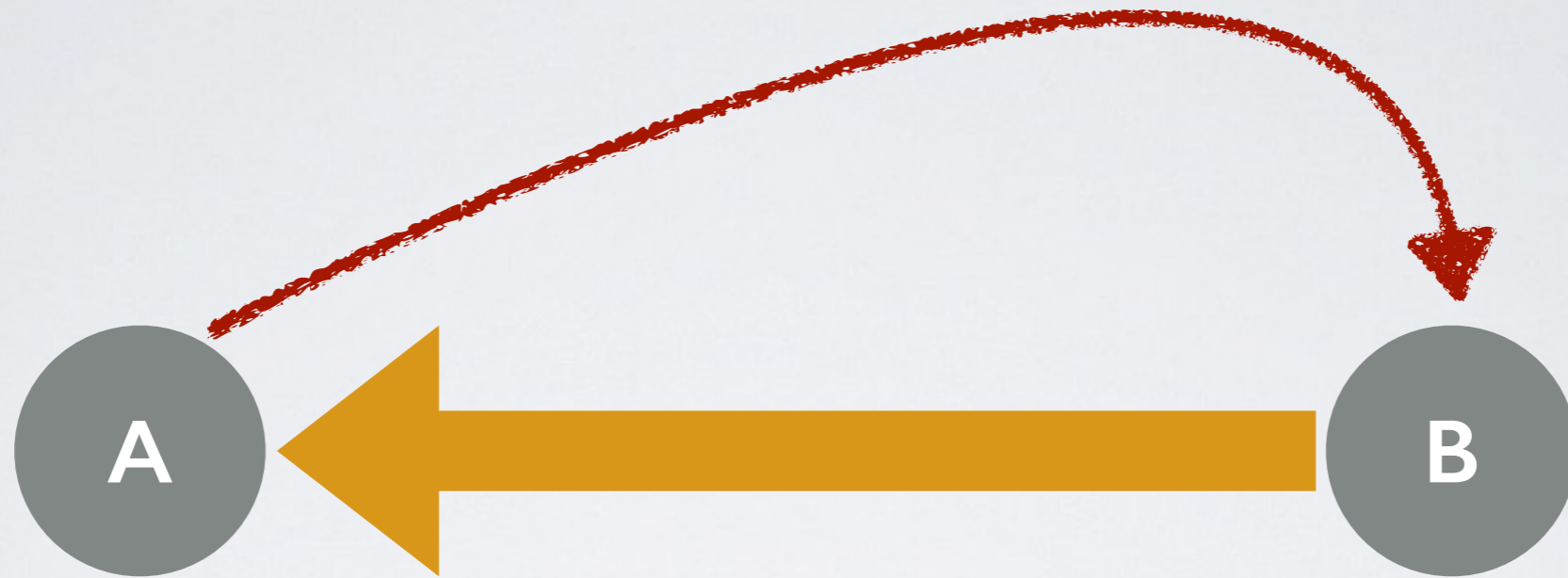
- We have to introduce several assumptions in order to design a simple model, although assumptions do not necessarily reflect the realities as they are.
- Only the major assumptions are explained here.

Assumptions regarding the form of the society



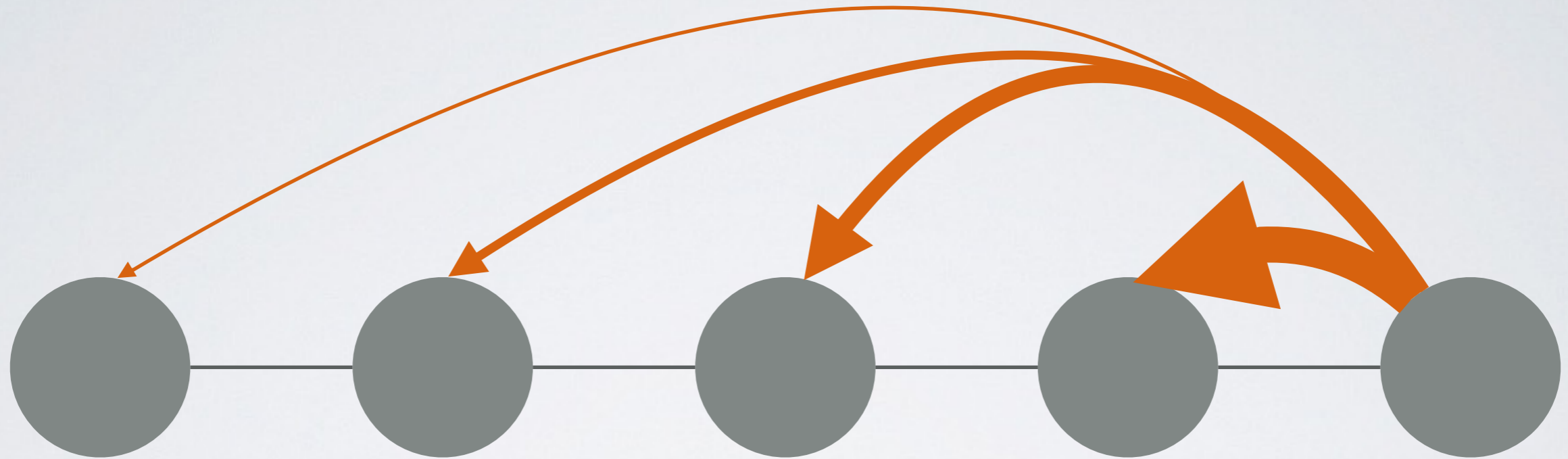
- **We may assume that** the relevant part of the society can be denoted by a random graph.
 - For example, we may construct a random graph having 64 nodes, each pair of which is connected at the probability of 5%.

Assumptions regarding the transmission of information



- **We may assume that** the information held by the node A is transmitted to the node B, when the node B sends an arc to the node A and the node A receives this arc.

Assumptions regarding the effect of the distance between a pair of nodes to the probability that one of the pair successfully transmits an information to the other of the pair



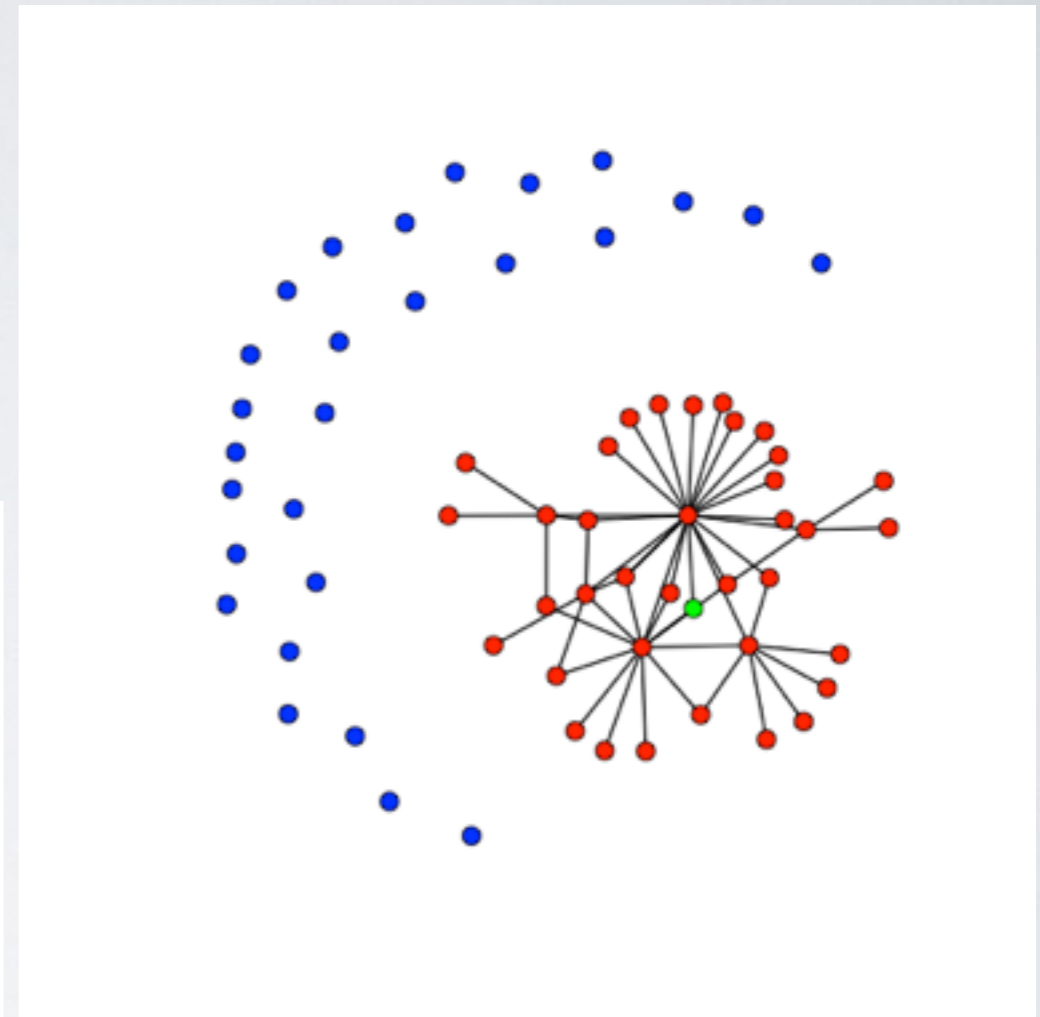
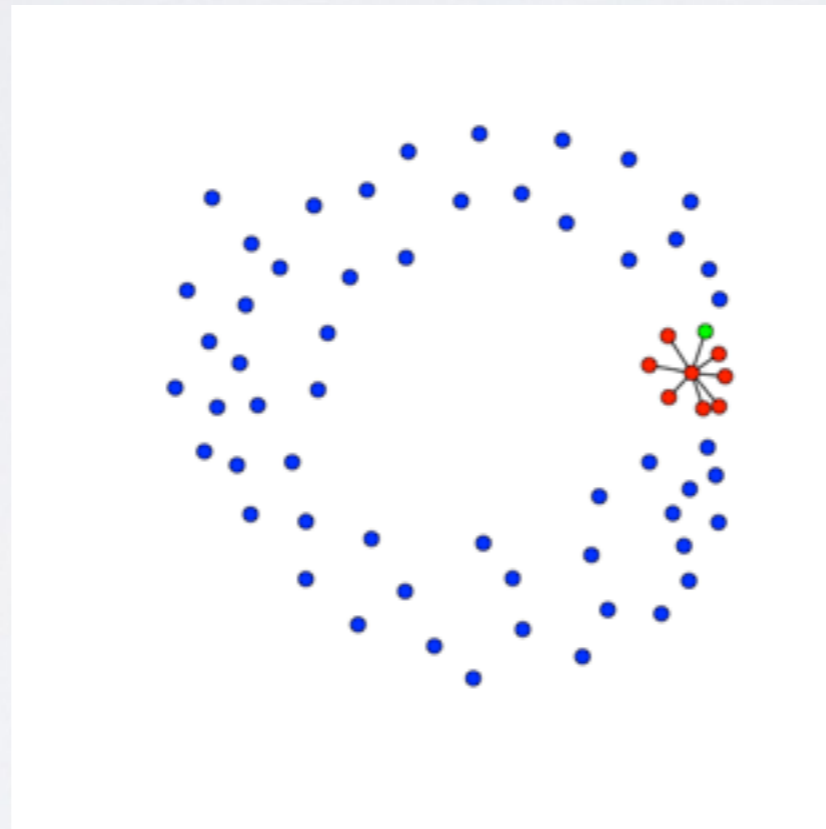
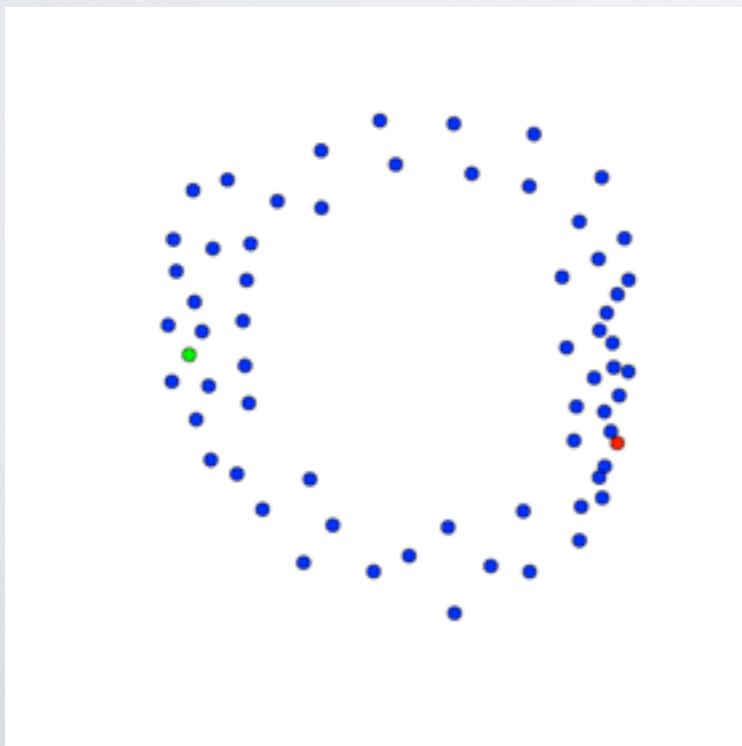
- **We may assume that** the probability gradually decreases when the distance between the possible sender of the arc (i.e., the possible receiver of information) and the possible receiver of the arc (i.e., the possible transmitter of information) becomes longer.

Assumptions based on the Echo hypothesis

- “[T]hird parties do not enhance ego’s information on alter so much as they create an echo that reinforces ego’s predisposition toward alter.”
 - Burt, RS 2001, 'Bandwidth and echo: trust, information, and gossip in social networks', in Rauch, JE & Casella, A (eds.), Network and markets, Russell Sage Foundation, New York, pp. 30-74, at p.41

- For example, **we may assume that:**
 - After a person transmits a piece of information, his/her readiness to receive the same or similar information affirmatively becomes higher.
 - After a person transmits the information, his/her readiness to dispatch another piece of information conflicting with the said information becomes lower.

A node (called as “*ireul*” in the model) begins transmitting a (presumably unfavorable) information, which becomes disseminated through the network.

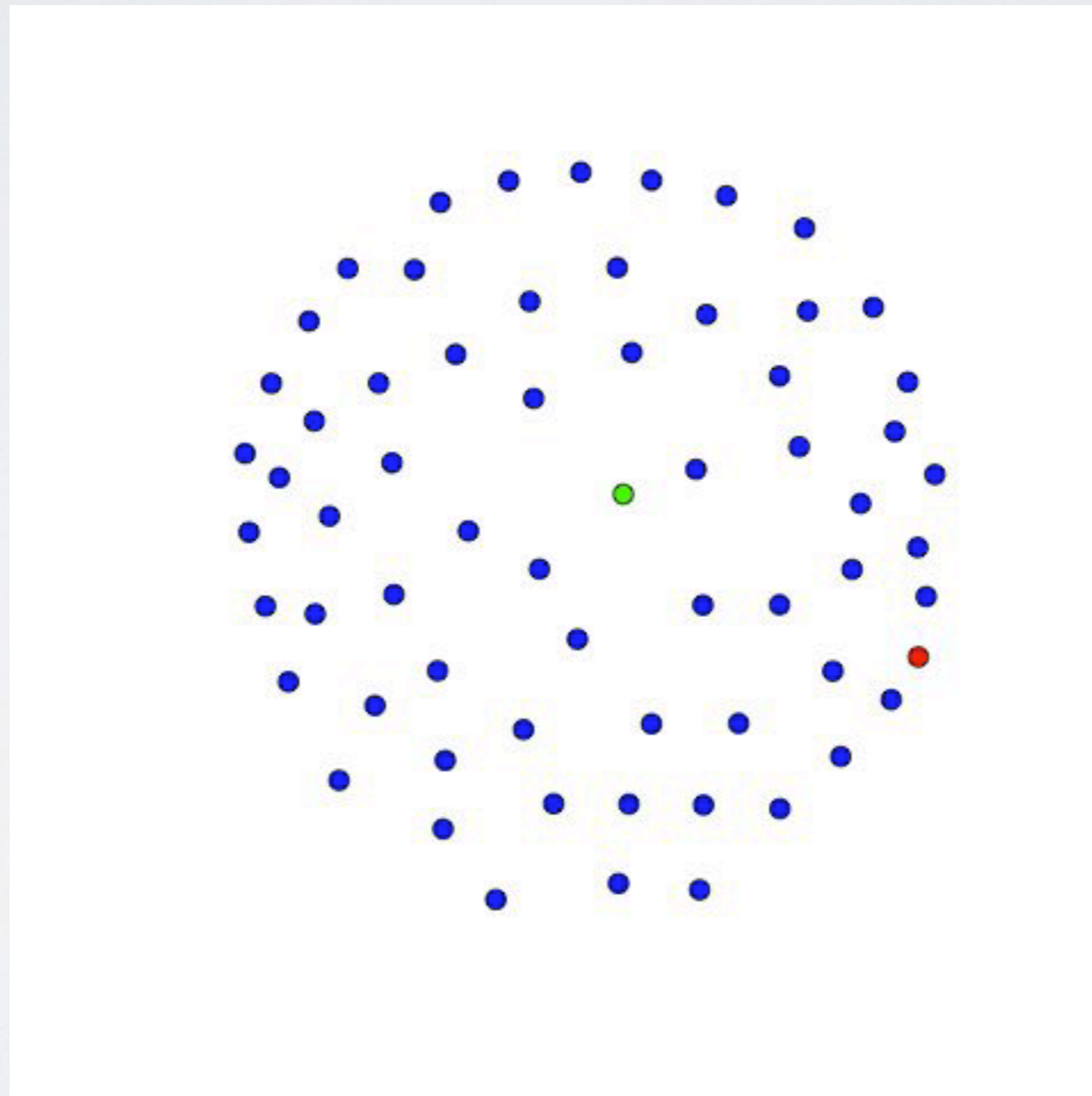


- The increasing number of **red** nodes show that more and more nodes are infected by the information initially transmitted by *ireul* .

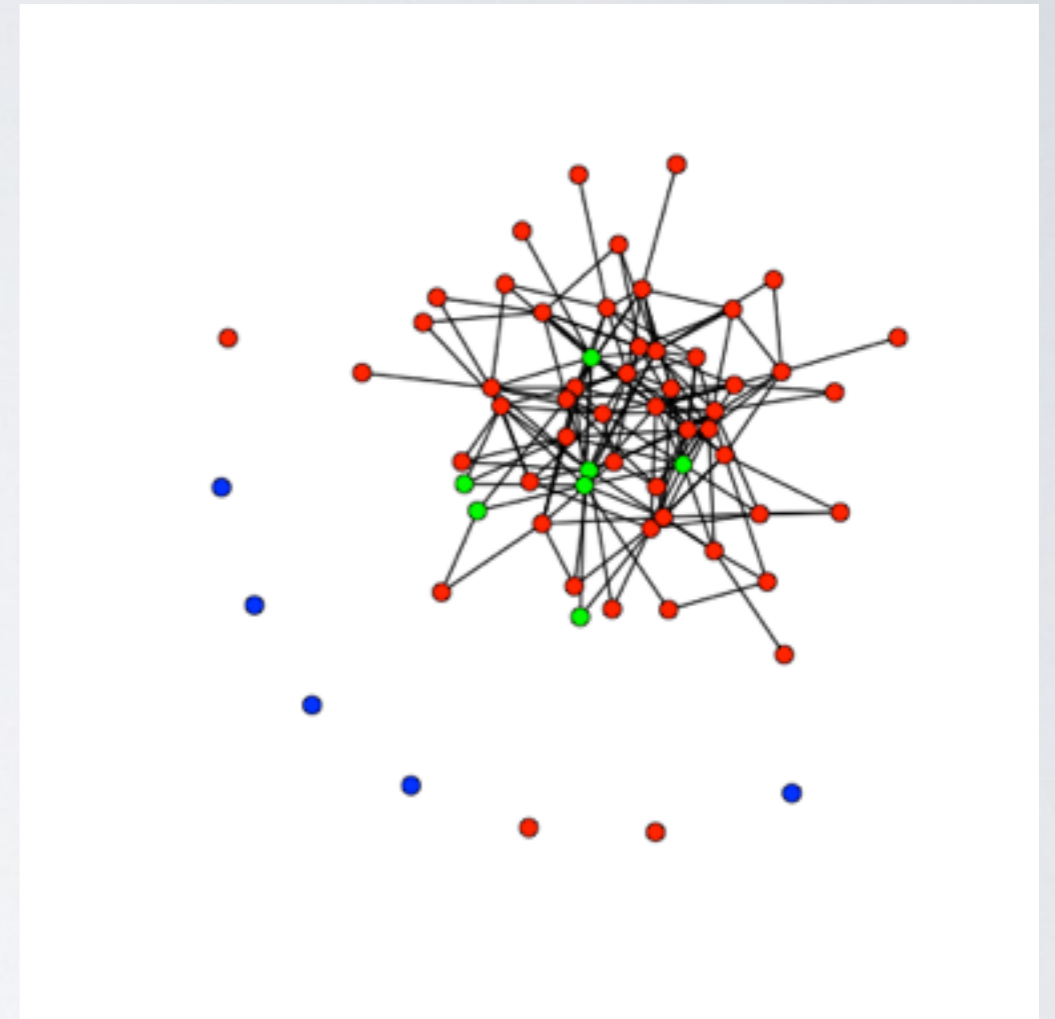
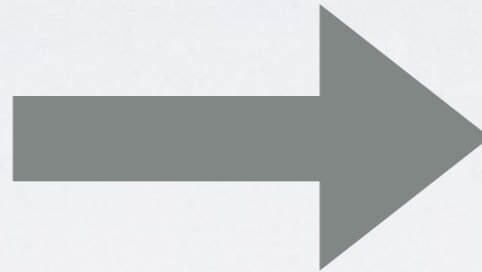
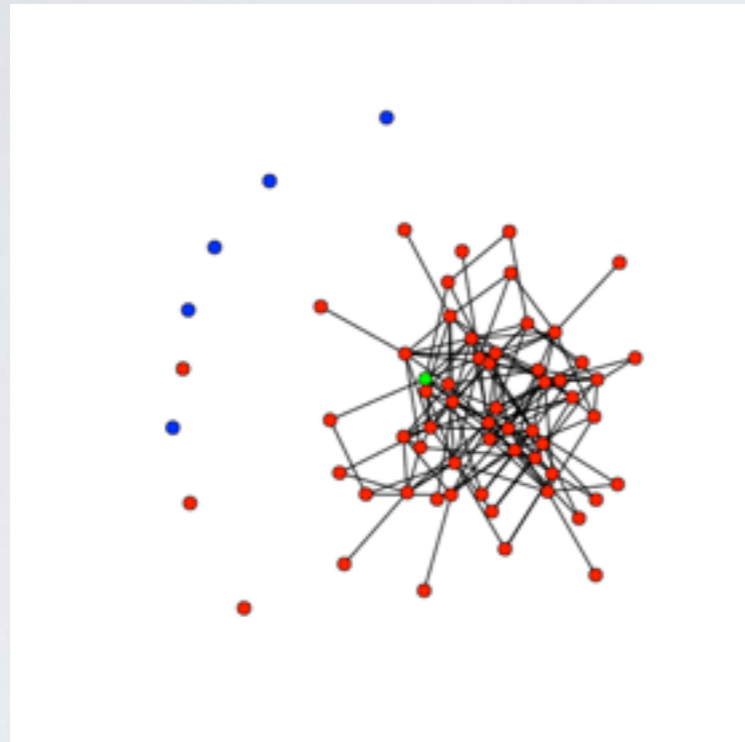
A model that denotes the diffusion of information under the conditions that:

- i) *ireul* and infected nodes disseminate unfavorable information; and
- ii) injunctions to stop the dissemination of unfavorable information are ordered against those nodes that transmitted such information to 10 or more nodes.

- The diffusion of unfavorable information (or, infection by *ireul*) may resumes again and again even after repeated injunctions (cut off of ties).



A node (called as “*ritsuko*” in the model) begins transmitting a (presumably favorable) information, which becomes disseminated through the network.

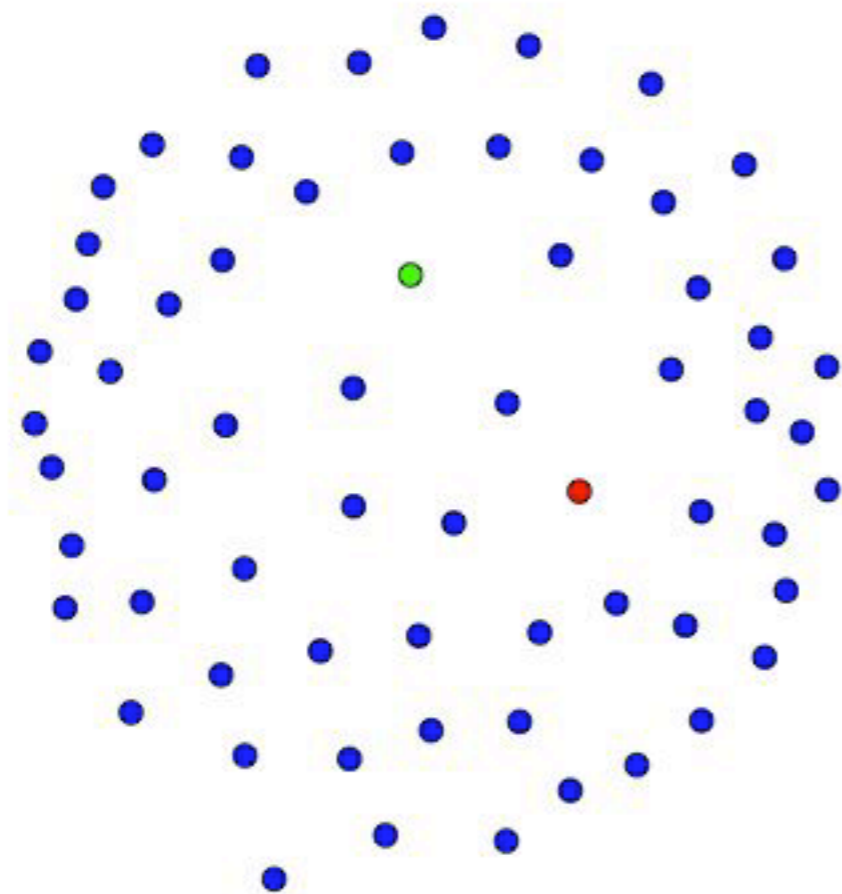


- The increasing number of **green** nodes show that more and more nodes are infected (or, sanitized) by the information initially transmitted by *ritsuko*.

A model that denotes the diffusion of information under the conditions that:

- i) *ireul* and infected nodes disseminate unfavorable information;
- ii) injunctions to stop the dissemination of unfavorable information are ordered against those nodes that transmitted such information to 10 or more nodes;
- iii) *ritsuko* and sanitized nodes disseminate favorable information; and
- iv) *ritsuko* is very robust and will not re-transmit unfavorable information even after it receives such information.

- Dissemination of counter (or, favorable) information may effectively regulate the dissemination of unfavorable information.



- **Blue nodes** are connected with neither *ireul* nor *ritsuko*.
- **Red nodes** are connected only with *ireul*.
- **Green nodes** are connected only with *ritsuko*.
- **Yellow nodes** are connected with both of *ireul* and *ritsuko*.

- Using this methodology, we can suggest a possible legal strategy that will possibly complement the existing legal means (in this case, an injunction to order the persons not to disseminate unfavorable information).
- We, lawyers and law students, always depend on the products of other fields in order to solve the legal problems.
- We should endeavor to observe the progress of social science to learn and employ useful perspectives from it.

Thank you.