

Why is global success so unpredictable? Making sense of influence, social contagion, marketing, and stories.

Principles of Complex Systems
CSYS/MATH 300, Spring, 2013 | #SpringPoCS2013

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Outline

Superstars

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References

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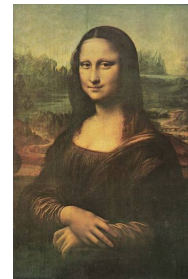
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The most famous painting in the world:



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The dismal predictive powers of editors



Twelve . . .

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The completely unpredicted fall of Eastern Europe:



Timur Kuran:^[2] "Now Out of Never: The Element of Surprise in the East European Revolution of 1989"

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We understand bushfire stories:

1. Sparks start fires.
2. System properties control a fire's spread.
3. But we make two mistakes about Social Fires...

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Reason 2—"We are all individuals":



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How we want to understand:

'Tattooed Guy' Was Pivotal in Armstrong Case
[nytimes] (田)



- "... Leogrande's doping sparked a series of events ..."

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Reason 3—We are spectacular imitators:



BBC/David Attenborough.

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Reason 1—We are Homo Narrativus:



<http://xkcd.com/904/> (田)

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Mistake 1: Success is due to intrinsic properties

See "Becoming Mona Lisa" by David Sassoon (田)

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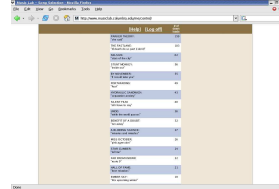


48 songs
30k participants

Exp 1— weak social



Exp. 2—strong social



"An experimental study of inequality and unpredictability in an artificial cultural market," [3] Salganik et al., Science, 2006.

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Mistake 2:
Seeing success is 'due to social' and wanting to say 'all your interactions are belong to us'

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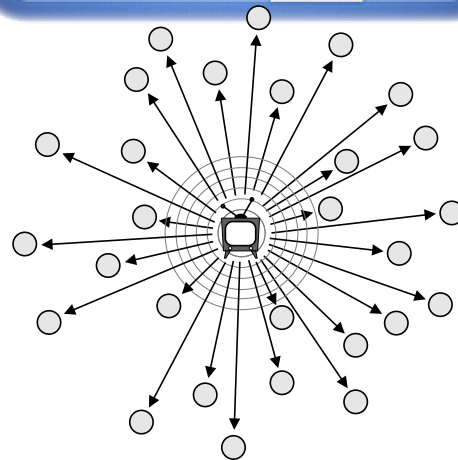
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The hypodermic model of influence:



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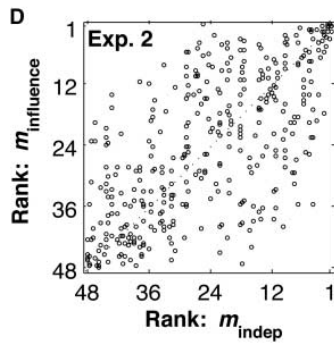
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Resolving the paradox:



Increased social awareness:
Stronger inequality + Less predictability.

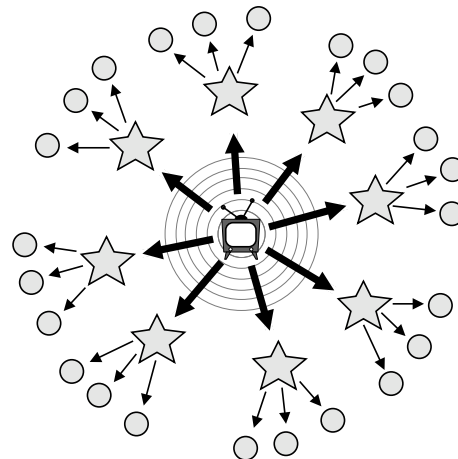
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The two step model of influence: [1]



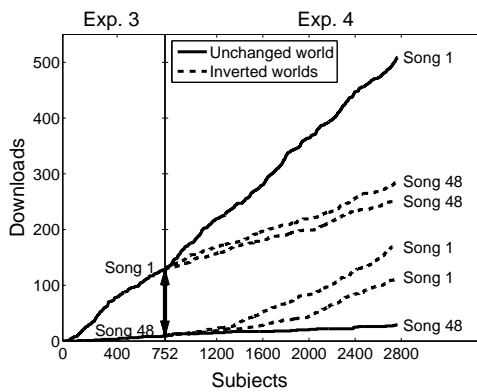
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Payola/Deceptive advertising hurts us all:



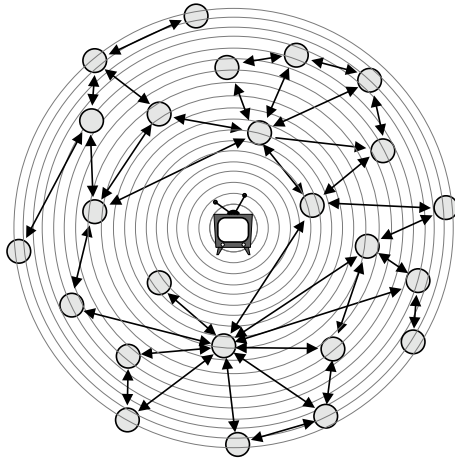
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The network model of influence:



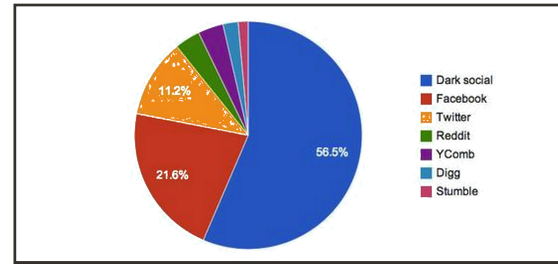
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The Dark Social Web



Dark Social: We Have the Whole History of the Web Wrong (田) [The Atlantic]

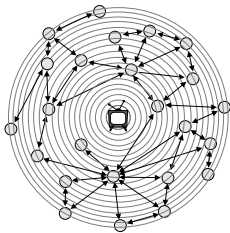
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The network model of influence:



How superspreading works:

Many interconnected, average, trusting people must benefit from both **receiving** and **sharing** a message far from its source.

"Influentials, Networks, and Public Opinion Formation"^[4]
Watts and Dodds, J. Cons. Res., 2007.

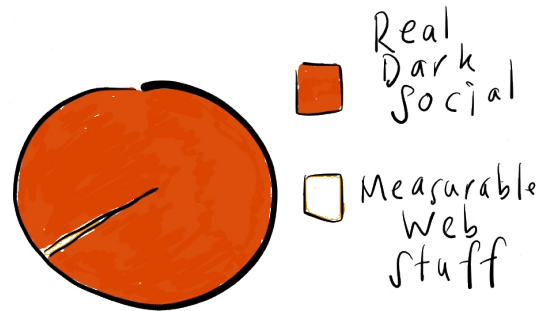
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A completely made up pie chart:



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Things that spread quickly:



+ News ...

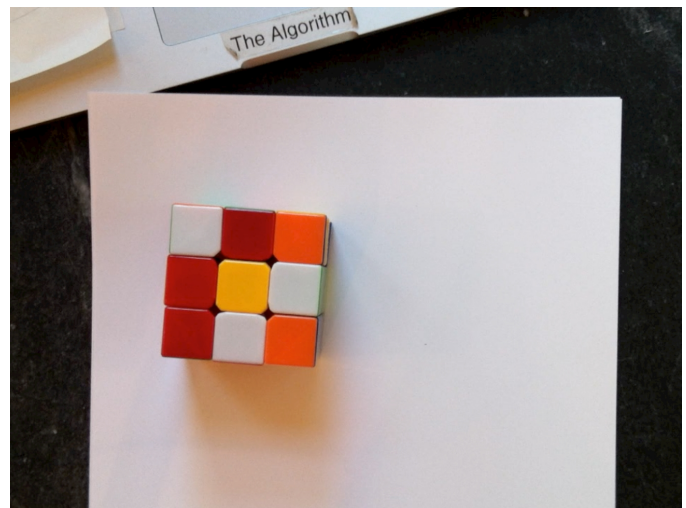
buzzfeed.com (田):

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The Free Press, New York, 1955.
- [2] T. Kuran.
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- [3] M. J. Salganik, P. S. Dodds, and D. J. Watts.
An experimental study of inequality and
unpredictability in an artificial cultural market.
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- [4] D. J. Watts and P. S. Dodds.
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pdf (田)

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