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

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# The most famous painting in the world:



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# The dismal predictive powers of editors ......

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References





Twelve ...



# 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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1. Sparks start fires.

System properties control a fire's spread

But we make two mistakes about Social Fires

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References







- 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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- 1. Sparks start fires.
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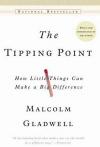
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- 3. But we make two mistakes about Social Fires...

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### How we want to understand:

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



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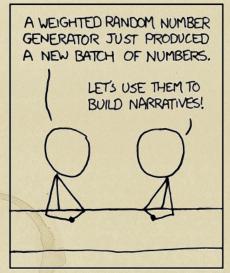


"... Leogrande's doping sparked a series of events ..."



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### Reason 1—We are Homo Narrativus:



ALL SPORTS COMMENTARY

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### Reason 2—"We are all individuals":



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# Reason 3—We are spectacular imitators:



BBC/David Attenborough.

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



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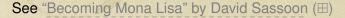
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it's disappointingly small

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48 songs 30k participants Why is global success so unpredictable?

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### Exp 1— weak social

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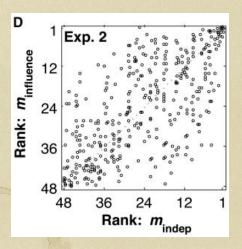
### Exp. 2—strong social

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



# Resolving the paradox:



Increased social awareness: Stronger inequality + Less predictability. Why is global success so unpredictable?

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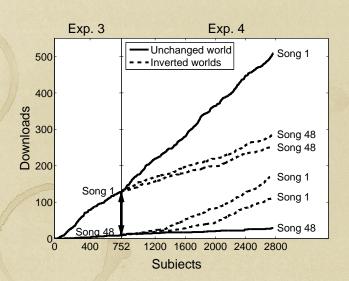
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# Payola/Deceptive advertising hurts us all:



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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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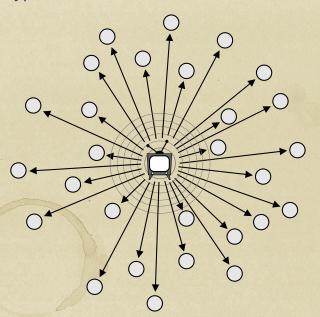
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### The hypodermic model of influence:



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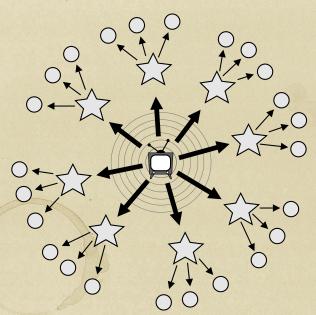
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# The two step model of influence: [1]



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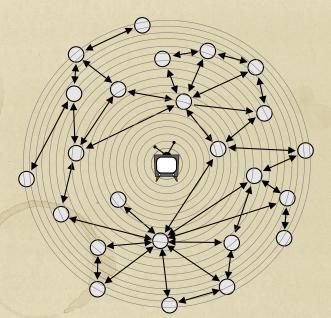
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### The network model of influence:



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### The network model of influence:

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# 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.







# Things that spread quickly:







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+ News ...

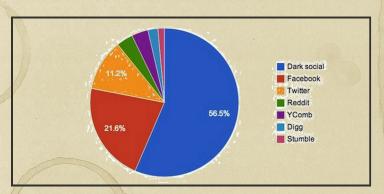
buzzfeed.com (⊞):





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#### The Dark Social Web



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

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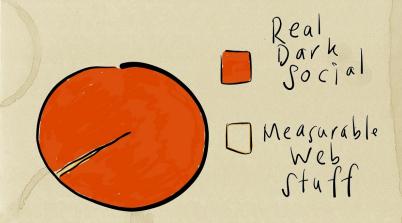
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# A completely made up pie chart:



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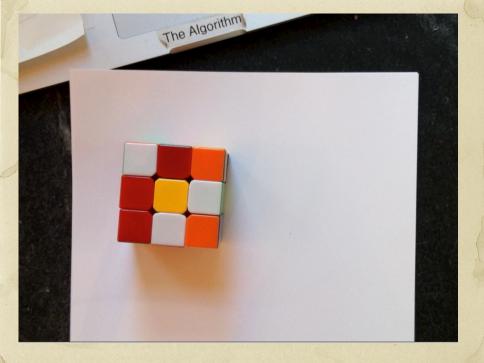
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[3] M. J. Salganik, P. S. Dodds, and D. J. Watts. An experimental study of inequality and unpredictability in an artificial cultural market.

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[4] D. J. Watts and P. S. Dodds. Influentials, networks, and public opinion formation. Journal of Consumer Research, 34:441-458, 2007. pdf (⊞)

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