

Why is global success so unpredictable?

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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References

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@peterdodds

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Vermont Advanced Computing Center | University of Vermont



These slides brought to you by:

Why is global
success so
unpredictable?

**Sealie &
Lambie
Productions**



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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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Twelve . . .

The completely unpredicted fall of Eastern Europe:

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

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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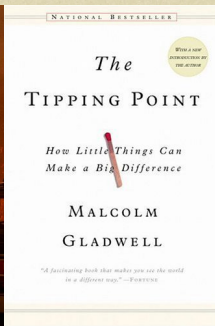
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We understand bushfire stories:

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



How we want to understand:

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



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



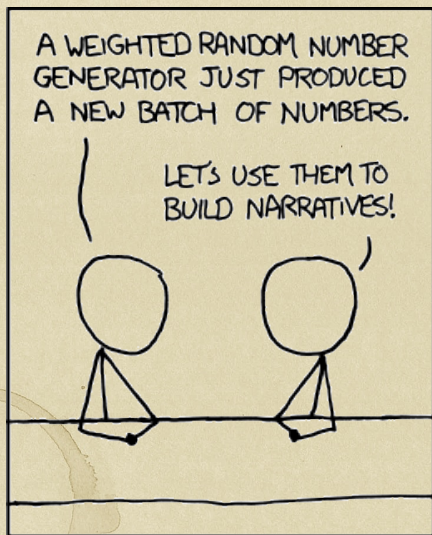
Reason 1—We are Homo Narrativus:

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ALL SPORTS COMMENTARY



Reason 2—“We are all individuals”:

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Reason 3—We are spectacular imitators:

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BBC/David Attenborough.



Mistake 1:

Success is due to intrinsic properties



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

Mistake 1: Success is due to intrinsic properties



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Mistake 1:

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Mistake 1: Success is due to intrinsic properties



it's disappointingly small

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



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48 songs
30k participants

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Exp 1— weak social

Title	Rank	Downloads
MIDWINTER	20	24
DEEP ENDIGATE TO DIE	17	23
THE SHIRT SINGERS	16	23
THE BROTHER PROMISE	15	22
THE NEW SONG	14	21
THE BROTHER PROMISE	13	20
THE BROTHER PROMISE	12	19
THE BROTHER PROMISE	11	18
THE BROTHER PROMISE	10	17
THE BROTHER PROMISE	9	16
THE BROTHER PROMISE	8	15
THE BROTHER PROMISE	7	14
THE BROTHER PROMISE	6	13
THE BROTHER PROMISE	5	12
THE BROTHER PROMISE	4	11
THE BROTHER PROMISE	3	10
THE BROTHER PROMISE	2	9
THE BROTHER PROMISE	1	8

Exp. 2—strong social

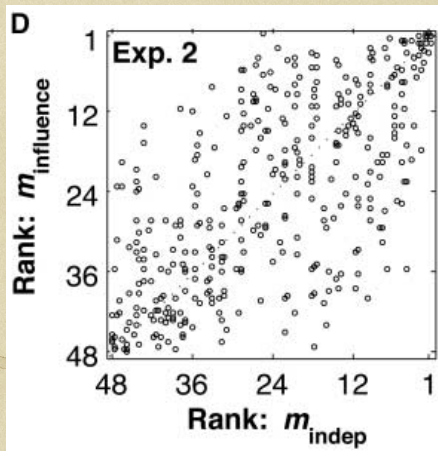
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THE BROTHER PROMISE	2	9
THE BROTHER PROMISE	1	8



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

Resolving the paradox:

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Increased social awareness:
Stronger inequality + Less predictability.



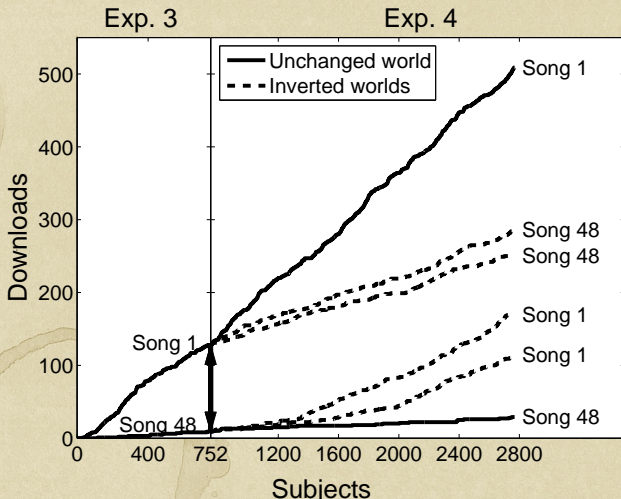
Payola/Deceptive advertising hurts us all:

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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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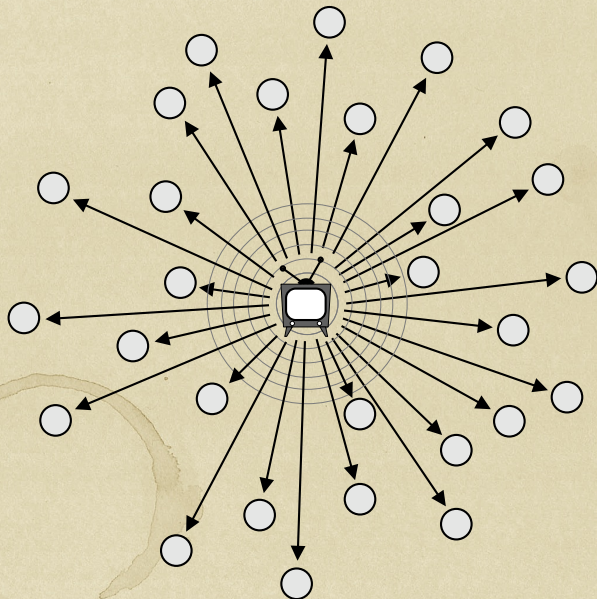
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The hypodermic model of influence:

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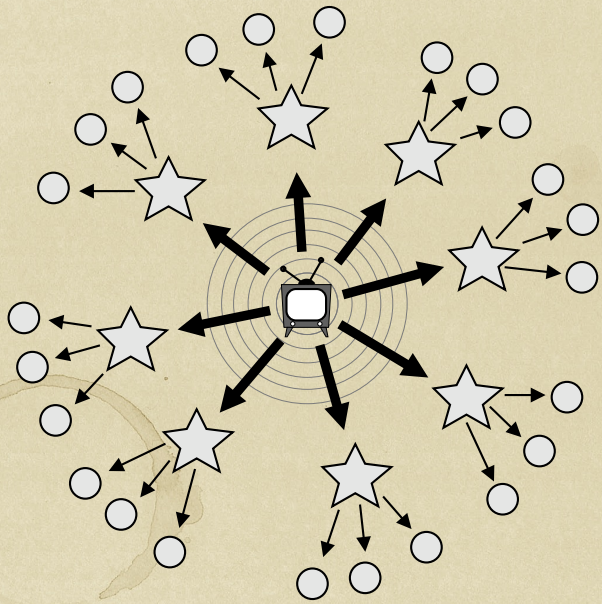
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The two step model of influence: [1]

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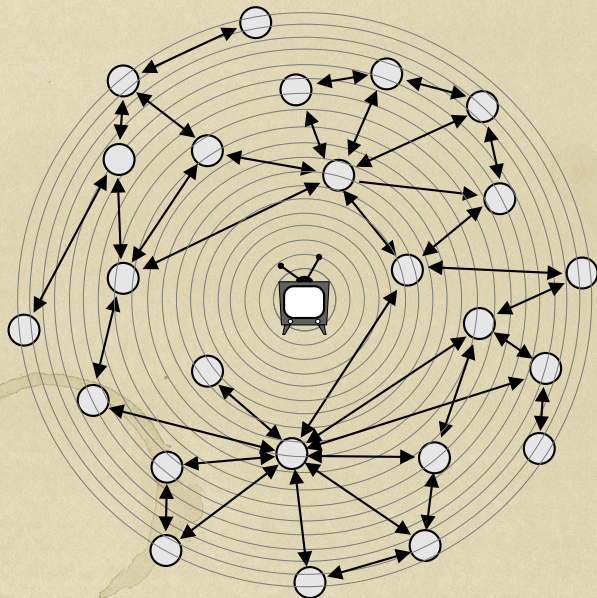


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The network model of influence:

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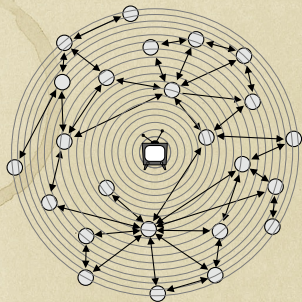
The network model of influence:

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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 (田):



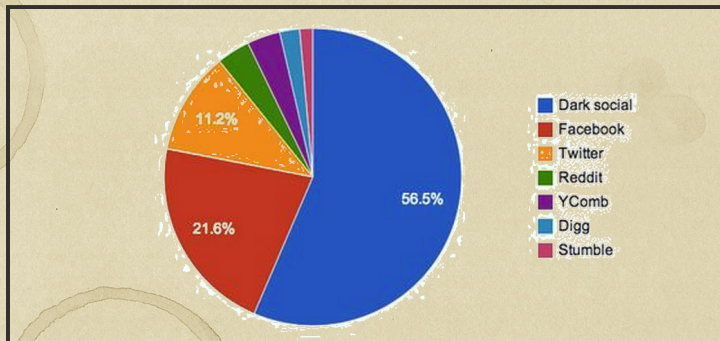
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The Dark Social Web

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



A completely made up pie chart:

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Real
Dark
Social



Measurable
Web
stuff



The Algorithm



References I

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World Politics, 44:7–48, 1991. [pdf](#) (田)
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Science, 311:854–856, 2006. [pdf](#) (田)
- [4] D. J. Watts and P. S. Dodds.
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