

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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These slides brought to you by:

Why is global
success so
unpredictable?

**Sealie &
Lambie
Productions**



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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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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:

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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 ..."

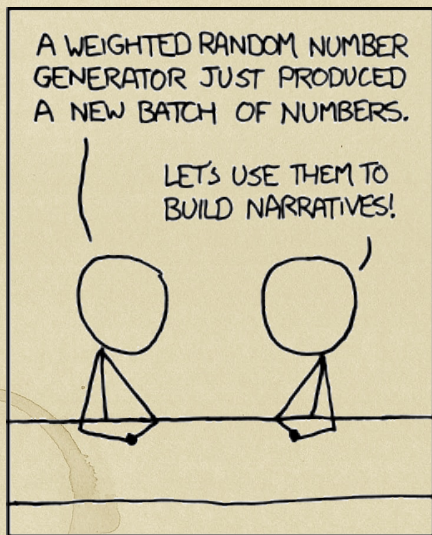
Reason 1—We are Homo Narrativus:

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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)



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48 songs
30k participants

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Exp 1— weak social

	Rank	Title	Rank diff
1	1	ROCK ON!	0
2	2	ROCK ON!	0
3	3	ROCK ON!	0
4	4	ROCK ON!	0
5	5	ROCK ON!	0
6	6	ROCK ON!	0
7	7	ROCK ON!	0
8	8	ROCK ON!	0
9	9	ROCK ON!	0
10	10	ROCK ON!	0
11	11	ROCK ON!	0
12	12	ROCK ON!	0
13	13	ROCK ON!	0
14	14	ROCK ON!	0
15	15	ROCK ON!	0
16	16	ROCK ON!	0
17	17	ROCK ON!	0
18	18	ROCK ON!	0
19	19	ROCK ON!	0
20	20	ROCK ON!	0
21	21	ROCK ON!	0
22	22	ROCK ON!	0
23	23	ROCK ON!	0
24	24	ROCK ON!	0
25	25	ROCK ON!	0
26	26	ROCK ON!	0
27	27	ROCK ON!	0
28	28	ROCK ON!	0
29	29	ROCK ON!	0
30	30	ROCK ON!	0
31	31	ROCK ON!	0
32	32	ROCK ON!	0
33	33	ROCK ON!	0
34	34	ROCK ON!	0
35	35	ROCK ON!	0
36	36	ROCK ON!	0
37	37	ROCK ON!	0
38	38	ROCK ON!	0
39	39	ROCK ON!	0
40	40	ROCK ON!	0
41	41	ROCK ON!	0
42	42	ROCK ON!	0
43	43	ROCK ON!	0
44	44	ROCK ON!	0
45	45	ROCK ON!	0
46	46	ROCK ON!	0
47	47	ROCK ON!	0
48	48	ROCK ON!	0

Exp. 2—strong social

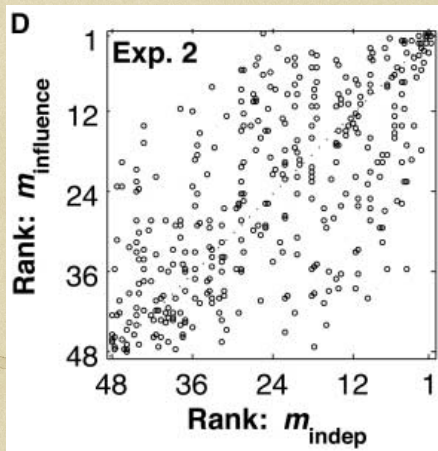
	Rank	Title	Rank diff
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2	2	ROCK ON!	0
3	3	ROCK ON!	0
4	4	ROCK ON!	0
5	5	ROCK ON!	0
6	6	ROCK ON!	0
7	7	ROCK ON!	0
8	8	ROCK ON!	0
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28	28	ROCK ON!	0
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36	36	ROCK ON!	0
37	37	ROCK ON!	0
38	38	ROCK ON!	0
39	39	ROCK ON!	0
40	40	ROCK ON!	0
41	41	ROCK ON!	0
42	42	ROCK ON!	0
43	43	ROCK ON!	0
44	44	ROCK ON!	0
45	45	ROCK ON!	0
46	46	ROCK ON!	0
47	47	ROCK ON!	0
48	48	ROCK ON!	0



“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.



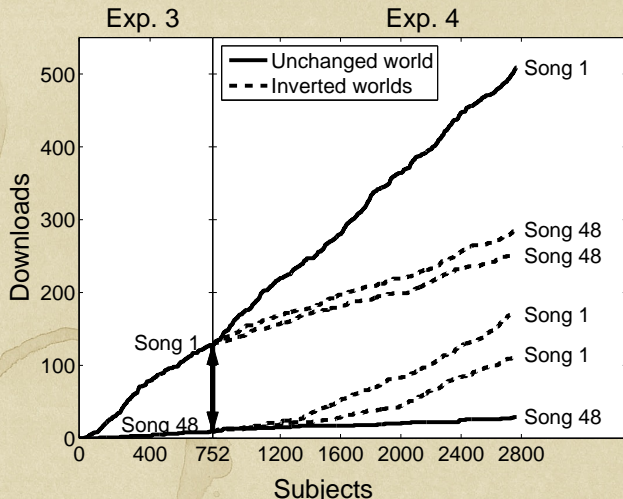
Payola/Deceptive advertising hurts us all:

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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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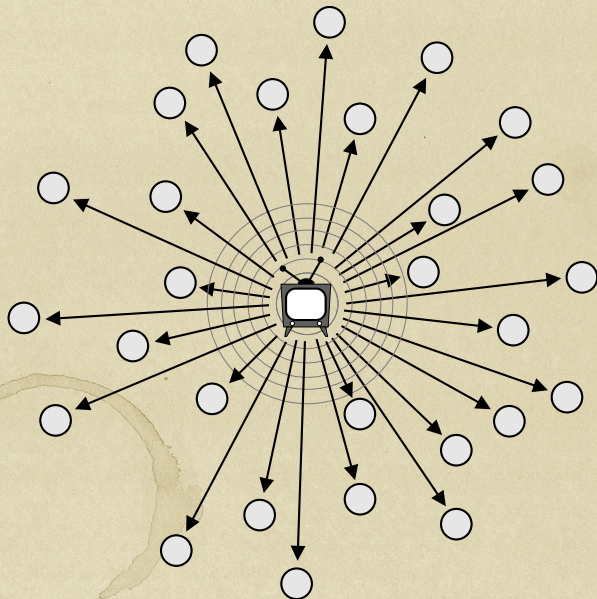
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The hypodermic model of influence:

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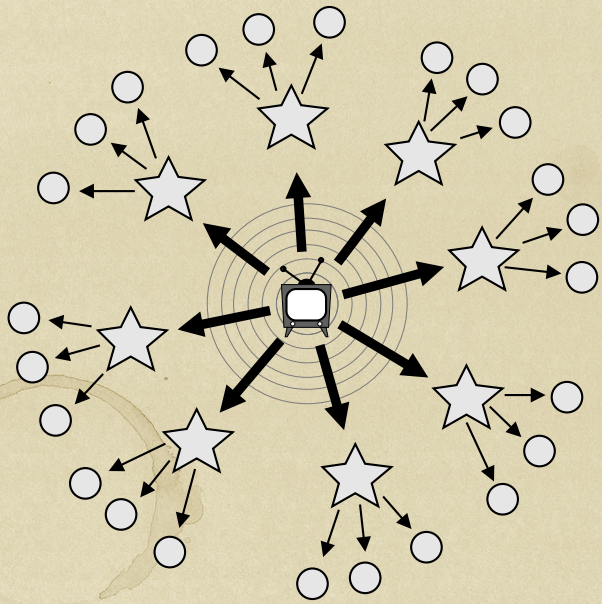
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The two step model of influence: [1]

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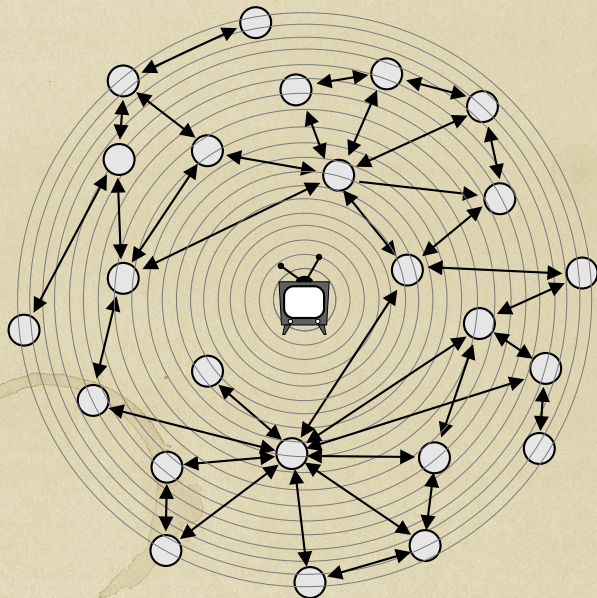


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The network model of influence:

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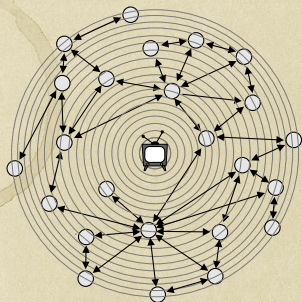
The network model of influence:

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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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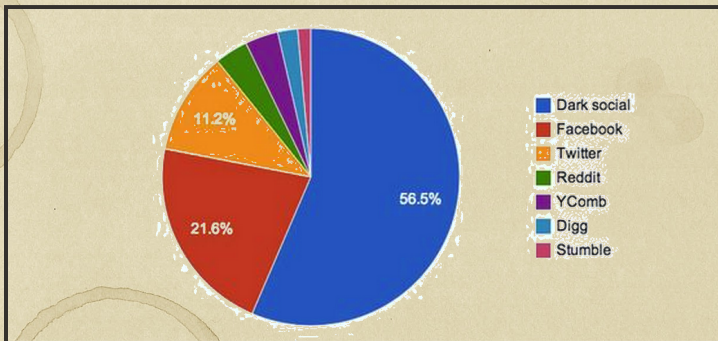
+ News ...

buzzfeed.com (🗃):



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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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Now out of never: The element of surprise in the east
european revolution of 1989.

World Politics, 44:7–48, 1991. pdf (田)

- [3] M. J. Salganik, P. S. Dodds, and D. J. Watts.

An experimental study of inequality and
unpredictability in an artificial cultural market.

Science, 311:854–856, 2006. pdf (田)

- [4] D. J. Watts and P. S. Dodds.

Influentials, networks, and public opinion formation.

Journal of Consumer Research, 34:441–458, 2007.

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