

Fame and fate: Why is global success so unpredictable?

Principles of Complex Systems | @pocsvox
CSYS/MATH 300, Fall, 2015 | #FallPoCS2015

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References

Prof. Peter Dodds | @peterdodds

Dept. of Mathematics & Statistics | Vermont Complex Systems Center
Vermont Advanced Computing Core | University of Vermont



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Fame and fate:
Why is global
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Sealie & Lambie
Productions



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Outline

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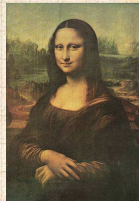
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References

References

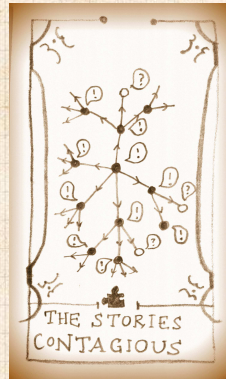


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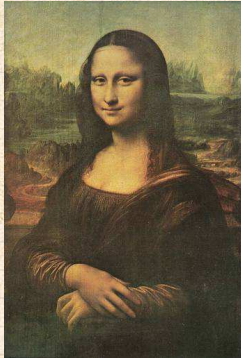
References



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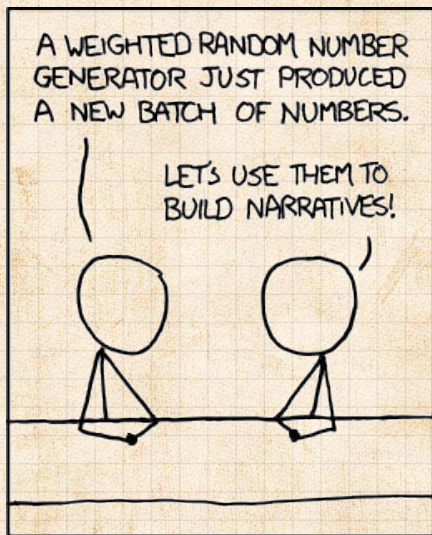
1. Sparks start fires.
2. System properties control a fire's spread.
3. But we make two mistakes about **Social Fires**...



Reason 1—We are Homo Narrativus.

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ALL SPORTS COMMENTARY



<http://xkcd.com/904/>

Reason 2—"We are all individuals."

Archival footage:

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- ▶ Individual narratives are not enough to understand distributed, networked minds.



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 [↗](#)



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48 songs
30k participants

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Exp 1— weak social

| | Rank | Artist | Rankoff | Rank | Rankoff |
|----|------|----------------------|---------|------|---------|
| 1 | 1 | THE WEEKND | 1 | 1 | 0 |
| 2 | 2 | DRAGON BALL | 2 | 2 | 0 |
| 3 | 3 | THE NOTORIOUS B.I.G. | 3 | 3 | 0 |
| 4 | 4 | THE NOTORIOUS B.I.G. | 4 | 4 | 0 |
| 5 | 5 | THE NOTORIOUS B.I.G. | 5 | 5 | 0 |
| 6 | 6 | THE NOTORIOUS B.I.G. | 6 | 6 | 0 |
| 7 | 7 | THE NOTORIOUS B.I.G. | 7 | 7 | 0 |
| 8 | 8 | THE NOTORIOUS B.I.G. | 8 | 8 | 0 |
| 9 | 9 | THE NOTORIOUS B.I.G. | 9 | 9 | 0 |
| 10 | 10 | THE NOTORIOUS B.I.G. | 10 | 10 | 0 |
| 11 | 11 | THE NOTORIOUS B.I.G. | 11 | 11 | 0 |
| 12 | 12 | THE NOTORIOUS B.I.G. | 12 | 12 | 0 |
| 13 | 13 | THE NOTORIOUS B.I.G. | 13 | 13 | 0 |
| 14 | 14 | THE NOTORIOUS B.I.G. | 14 | 14 | 0 |
| 15 | 15 | THE NOTORIOUS B.I.G. | 15 | 15 | 0 |
| 16 | 16 | THE NOTORIOUS B.I.G. | 16 | 16 | 0 |
| 17 | 17 | THE NOTORIOUS B.I.G. | 17 | 17 | 0 |
| 18 | 18 | THE NOTORIOUS B.I.G. | 18 | 18 | 0 |
| 19 | 19 | THE NOTORIOUS B.I.G. | 19 | 19 | 0 |
| 20 | 20 | THE NOTORIOUS B.I.G. | 20 | 20 | 0 |
| 21 | 21 | THE NOTORIOUS B.I.G. | 21 | 21 | 0 |
| 22 | 22 | THE NOTORIOUS B.I.G. | 22 | 22 | 0 |
| 23 | 23 | THE NOTORIOUS B.I.G. | 23 | 23 | 0 |
| 24 | 24 | THE NOTORIOUS B.I.G. | 24 | 24 | 0 |
| 25 | 25 | THE NOTORIOUS B.I.G. | 25 | 25 | 0 |
| 26 | 26 | THE NOTORIOUS B.I.G. | 26 | 26 | 0 |
| 27 | 27 | THE NOTORIOUS B.I.G. | 27 | 27 | 0 |
| 28 | 28 | THE NOTORIOUS B.I.G. | 28 | 28 | 0 |
| 29 | 29 | THE NOTORIOUS B.I.G. | 29 | 29 | 0 |
| 30 | 30 | THE NOTORIOUS B.I.G. | 30 | 30 | 0 |

Exp. 2—strong social

| | Rank | Artist | Rankoff | Rank | Rankoff |
|----|------|----------------------|---------|------|---------|
| 1 | 1 | THE NOTORIOUS B.I.G. | 1 | 1 | 0 |
| 2 | 2 | THE NOTORIOUS B.I.G. | 2 | 2 | 0 |
| 3 | 3 | THE NOTORIOUS B.I.G. | 3 | 3 | 0 |
| 4 | 4 | THE NOTORIOUS B.I.G. | 4 | 4 | 0 |
| 5 | 5 | THE NOTORIOUS B.I.G. | 5 | 5 | 0 |
| 6 | 6 | THE NOTORIOUS B.I.G. | 6 | 6 | 0 |
| 7 | 7 | THE NOTORIOUS B.I.G. | 7 | 7 | 0 |
| 8 | 8 | THE NOTORIOUS B.I.G. | 8 | 8 | 0 |
| 9 | 9 | THE NOTORIOUS B.I.G. | 9 | 9 | 0 |
| 10 | 10 | THE NOTORIOUS B.I.G. | 10 | 10 | 0 |
| 11 | 11 | THE NOTORIOUS B.I.G. | 11 | 11 | 0 |
| 12 | 12 | THE NOTORIOUS B.I.G. | 12 | 12 | 0 |
| 13 | 13 | THE NOTORIOUS B.I.G. | 13 | 13 | 0 |
| 14 | 14 | THE NOTORIOUS B.I.G. | 14 | 14 | 0 |
| 15 | 15 | THE NOTORIOUS B.I.G. | 15 | 15 | 0 |
| 16 | 16 | THE NOTORIOUS B.I.G. | 16 | 16 | 0 |
| 17 | 17 | THE NOTORIOUS B.I.G. | 17 | 17 | 0 |
| 18 | 18 | THE NOTORIOUS B.I.G. | 18 | 18 | 0 |
| 19 | 19 | THE NOTORIOUS B.I.G. | 19 | 19 | 0 |
| 20 | 20 | THE NOTORIOUS B.I.G. | 20 | 20 | 0 |
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| 23 | 23 | THE NOTORIOUS B.I.G. | 23 | 23 | 0 |
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| 27 | 27 | THE NOTORIOUS B.I.G. | 27 | 27 | 0 |
| 28 | 28 | THE NOTORIOUS B.I.G. | 28 | 28 | 0 |
| 29 | 29 | THE NOTORIOUS B.I.G. | 29 | 29 | 0 |
| 30 | 30 | THE NOTORIOUS B.I.G. | 30 | 30 | 0 |



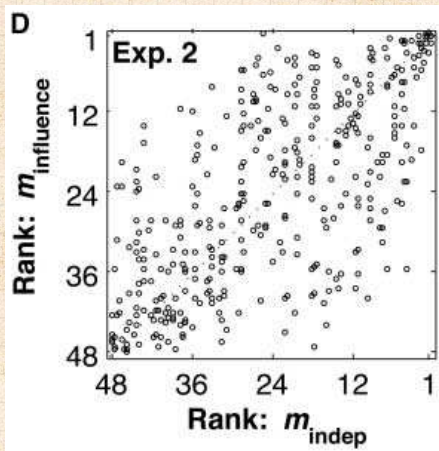
“An experimental study of inequality and unpredictability in an artificial cultural market” ↗

Salganik, Dodds, and Watts,
Science, **311**, 854–856, 2006. [3]



Resolving the paradox:

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Increased social awareness leads to
Stronger inequality + Less predictability.



Payola/Deceptive advertising hurts us all:

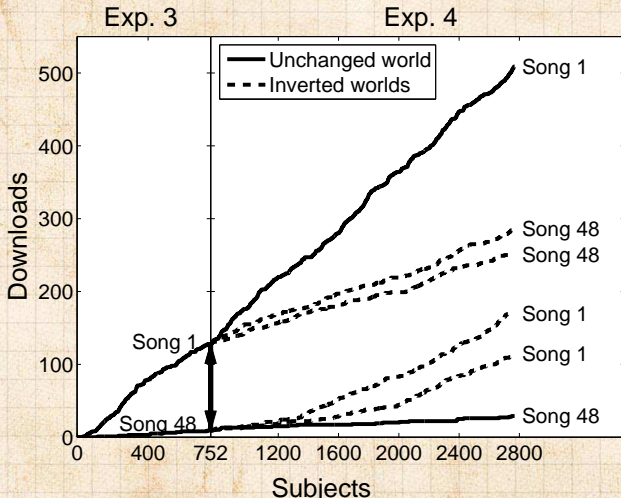
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Mistake 2:

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

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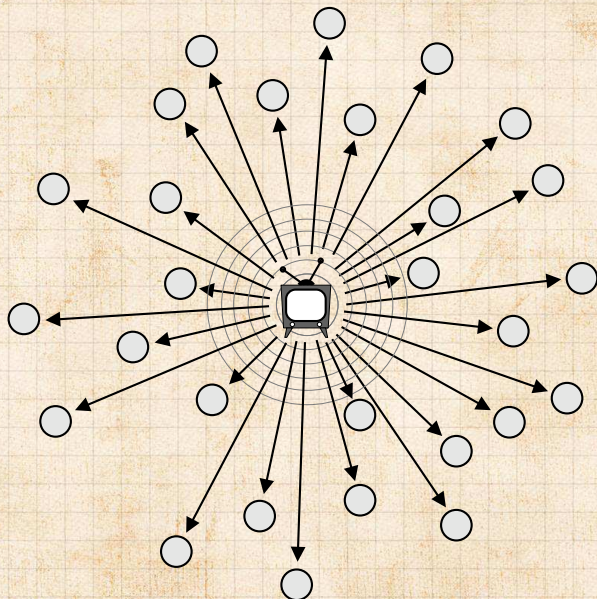
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The hypodermic model of influence:

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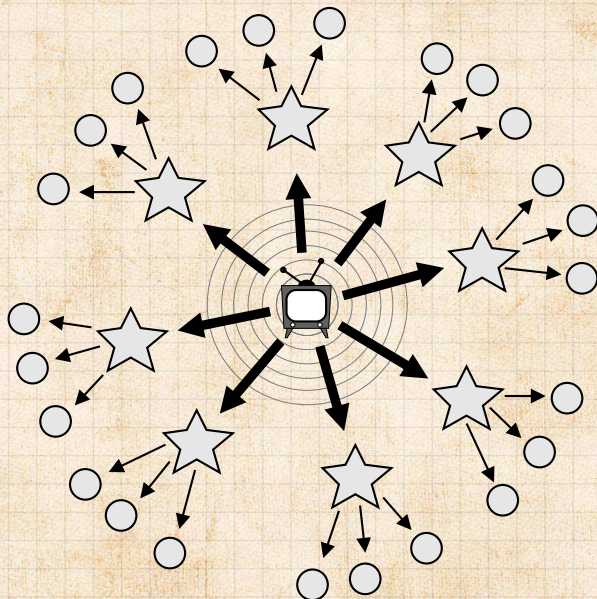
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The two step model of influence: [1]

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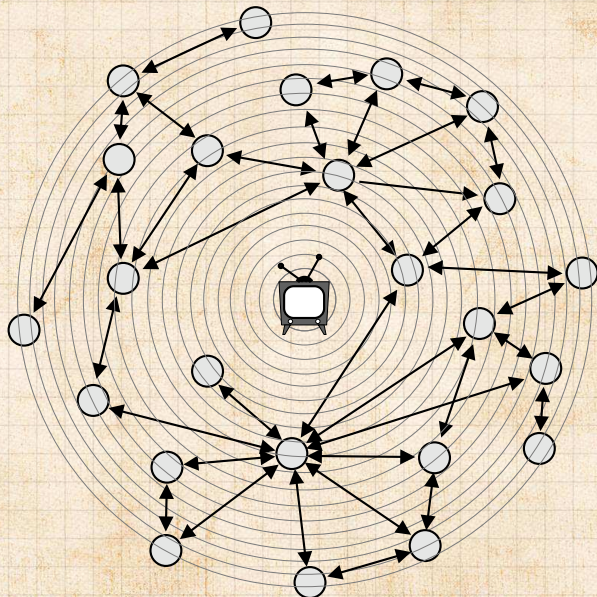
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The network model of influence:

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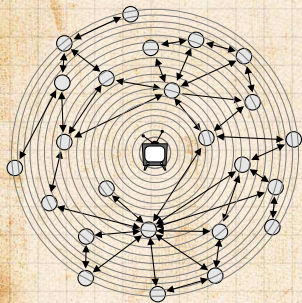
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The network model of influence:

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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.

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References



"Influentials, Networks, and Public Opinion
Formation" 

Watts and Dodds,

J. Consum. Res., **34**, 441–458, 2007. ^[4]



Things that spread quickly:

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+ News ...

buzzfeed.com 



Etymological clarity:

- ▶ **Fate**—from the Latin *fatus*: meaning “spoken”.
- ▶ Fate is talk that has been done.
“It is written”, fore-tell, pre-dict.
- ▶ “There is no such thing as fate, only the story of fate.” ↗
- ▶ Destiny is probabilistic.
- ▶ **Fame**—from the Latin *fāma*: meaning “to talk.”
- ▶ Fame is inherently the social discussion about the thing, not the thing itself.
- ▶ Renown ↗: Repeatedly named, talked about. Old French *renon*, from re- + non (“name”).
- ▶ Réclame ↗. “Clamo”—Proto-Indo-European: “to shout” (again). Connected to “lowing”.

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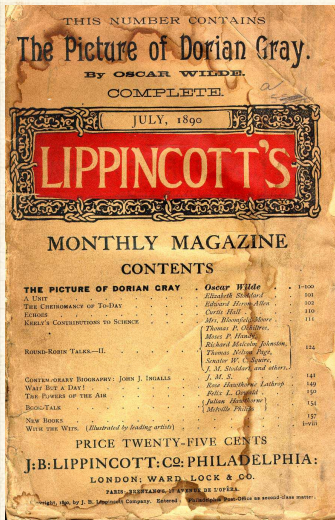
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Oscar Wilde, The Picture of Dorian Gray



“There is only one
thing in the world

worse than being
talked about,

and that is

not being talked
about.”



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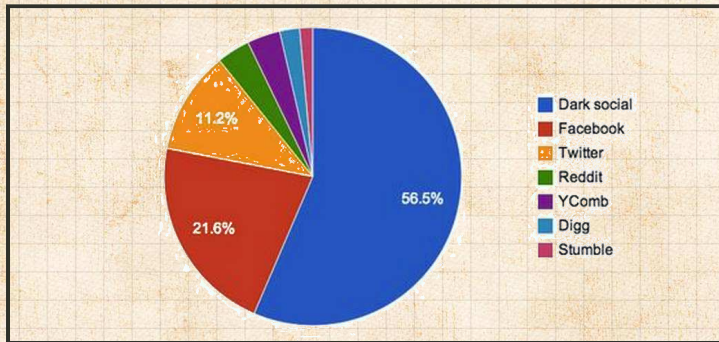
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Spreading in the social wild:

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The Dark Social Web



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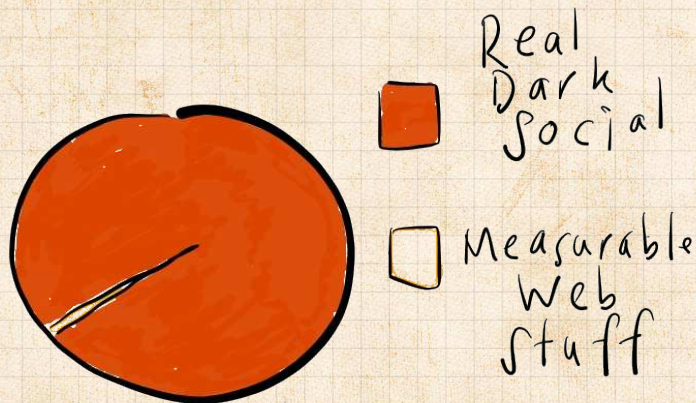
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Dark Social: We Have the Whole History of the Web
Wrong  [The Atlantic]



A completely made up pie chart:

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How to make things spread (maybe):

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References



Shareworthy Content is King:

1. Build entities/messages/stories that have intrinsic and social value out in the **Social Wild**.
2. Advertise but lay off the social interactions.
3. Just keep trying.



References I

- [1] E. Katz and P. F. Lazarsfeld.

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References

Personal Influence.

The Free Press, New York, 1955.

- [2] T. Kuran.

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

World Politics, 44:7-48, 1991. pdf ↗

- [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 ↗



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

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