Fame and fate: Why is global success so unpredictable?

Last updated: 2021/12/06, 23:16:58 EST

Principles of Complex Systems, Vols. 1 & 2 CSYS/MATH 300 and 303, 2021–2022 @pocsvox

Prof. Peter Sheridan Dodds | @peterdodds

Computational Story Lab | Vermont Complex Systems Center Vermont Advanced Computing Core | University of Vermont



Fame and fate: Why is global success so unpredictable? 1 of 31

The PoCSverse

Superstars

Superspreading

References



Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License.

These slides are brought to you by:

Sealie & Lambie Productions

The PoCSverse Fame and fate: Why is global success so unpredictable? 2 of 31 Superstars

Superspreading



These slides are also brought to you by:

Special Guest Executive Producer



On Instagram at pratchett_the_cat

The PoCSverse Fame and fate: Why is global success so unpredictable? 3 of 31

Superstars

Superspreading



Outline

Superstars

Superspreading

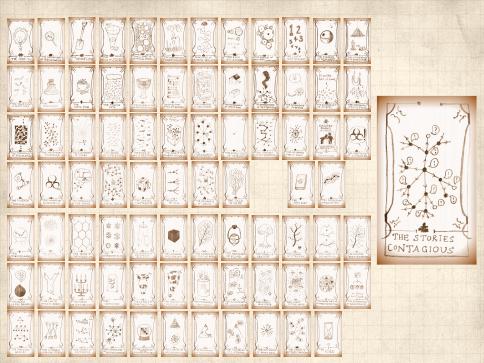
References

The PoCSverse Fame and fate: Why is global success so unpredictable? 4 of 31

Superstars

Superspreading





The most famous painting in the world:

The PoCSverse Fame and fate: Why is global success so unpredictable? 6 of 31

Superstars

Superspreading





The dismal predictive powers of editors

The PoCSverse Fame and fate: Why is global success so unpredictable? 7 of 31

Superstars

Superspreading



Twelve ...

The completely unpredicted fall of Eastern Europe:

iserer dagting with the analysis and the second secon

The PoCSverse Fame and fate: Why is global success so unpredictable? 8 of 31

Superstars

Superspreading

References



Timur Kuran: ^[3] "Now Out of Never: The Element of Surprise in the East European Revolution of 1989"



The PoCSverse Fame and fate: Why is global success so unpredictable? 9 of 31

Superstars

Superspreading

References

1. Sparks start fires.





The PoCSverse Fame and fate: Why is global success so unpredictable? 9 of 31

Superstars

Superspreading

- 1. Sparks start fires.
- 2. System properties control a fire's spread.





1. Sparks start fires.

2. System properties control a fire's spread.

3. But we make two mistakes about Social Fires...

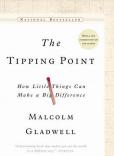


The PoCSverse Fame and fate: Why is global success so unpredictable? 9 of 31

Superstars

Superspreading





The PoCSverse Fame and fate: Why is global success so unpredictable? 9 of 31

Superstars

Superspreading

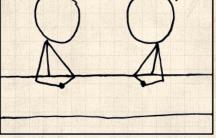
- 1. Sparks start fires.
- 2. System properties control a fire's spread.
- 3. But we make two mistakes about Social Fires...



Reason 1—We are Homo Narrativus.

A WEIGHTED RANDOM NUMBER GENERATOR JUST PRODUCED A NEW BATCH OF NUMBERS.

> LET'S USE THEM TO BUILD NARRATIVES!



10 of 31 Superstars Superspreading References

The PoCSverse

Fame and fate: Why is global success so unpredictable?



ALL SPORTS COMMENTARY

http://xkcd.com/904/C

Reason 2—"We are all individuals."

Archival footage:

The PoCSverse Fame and fate: Why is global success so unpredictable? 11 of 31

Superstars

Superspreading

References



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

Reason 3—We are spectacular imitators.

The PoCSverse Fame and fate: Why is global success so unpredictable? 12 of 31

Superstars

Superspreading

References



BBC/David Attenborough.



The PoCSverse Fame and fate: Why is global success so unpredictable? 13 of 31

Superstars

Superspreading

References



See "Becoming Mona Lisa" by David Sassoon 🖸



it's just so disappointingly small

The PoCSverse Fame and fate: Why is global success so unpredictable? 13 of 31

Superstars

Superspreading

References



See "Becoming Mona Lisa" by David Sassoon

The PoCSverse Fame and fate: Why is global success so unpredictable? 13 of 31

Superstars

Superspreading

References

Stolen in 1913, recovered in 1915.



See "Becoming Mona Lisa" by David Sassoon



Hidden during WWII.

The PoCSverse Fame and fate: Why is global success so unpredictable? 13 of 31

Superstars

Superspreading

References



See "Becoming Mona Lisa" by David Sassoon 🖸



Repeatedly vandalised and attacked.

See "Becoming Mona Lisa" by David Sassoon

The PoCSverse Fame and fate: Why is global success so unpredictable? 13 of 31

Superstars

Superspreading





48 songs 30k participants

The PoCSverse Fame and fate: Why is global success so unpredictable? 14 of 31

Superstars

Superspreading

References

Exp 1— weak social

🔗 😳 😭 Mittative	ww.musiclab.colambia.edu/mej5ongs				× 10.
		(Help) (Log off)	E		ź
AARTSFELD. 'smooph's seconds'	30	00 HORLDON. 'Y deen arbeit fe held'	11	1900) 'while the model paramet'	
DEEP ENDUCH TO DE- "for the sky"	17	PARLER THEORY	e	ar for to total. 'n spear	1
THE THRFT EPHDICATE "2000 a mapping"	30	MEE OCTOBER 'pink agencian'	27	BLVERROX "gran"	×.
THE BROKEN PROMISE The end in Next	22	POST BREAK TRACEDY 'Newco'	14	STRANGER: 'societa'	,
This sea caase "the bead above the preven"	12	TORTHONOUS NUM	34	EAR FROM ENDINE Note 21	,
NOONER AT NORE		THE CALEFACTION: "Managed in an unanys part?	31	STURTMORIES: Tends out	
MDRAL HADARD "manase of exp Be"		UM NO. Techner	IJ	DATE. "Boorganay"	
NOTION SCHOLING	27	SHIPLY INATING "searcraits the count"	ж	FROME THREES	1
SECRETARY New your even the tolerics'	5	STAR CLAMER Set No"	34	INCOME OT JUST	,
ART OF RANLY. "solution with making boundarys"	30	THE RESTLEME: "If death do us part below?"	31	BY NOVEMED: "If honeld false year"	
NYTROULE SANDARCE	30	A BLACKO SILENCE Selected and relation?	17	DRAMA IN THE SKY	1
ENERY SKY	38	U.M. Selan "Na Tanàharak Isongki"	п	MEANING STREET,	
CALLETE THE DAMA	- 11	CAPE NEXEWAL: Treached andres of	13	Colorado Tepe part 61	
Error ECONO EN 'OCCULTO INE'	34	IP FALLS DOME 's trajectoring yor'		EVAN GOLD Indust downey y	,
BEEFBONG	11	SLAME ROWNSTED	p	RENDITOR A DOUBT	,

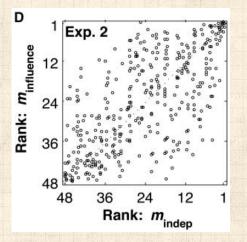
Exp. 2—strong social

- 🕸 - 🔗 🖸 🗰 🖬	I the standard state of the		
	(Help) (Log.off)		
	THERE SECTORY	208	
	THE PASTLANE: "Education do un part 6 dent?"	30	
	LELEVIL Trans of the sity"	10	
	Clash Minkey Teste and	94	
	OF HEVEREER: "Fixed blackson"	55	
	COLUMN ADDR		
	HOMAILS BARNED	e a	
	SALENT FRAM		
	UNDO: "While the work" power/	ж	
	SEMESTOF A DOUBT.	м	
	A BURDING MULTICE Determine and intender	<i>v</i>	
	WEAL OCTOBER.	8	
	CONT. CLIMERY	ы	
	TAR /TROM CROWN	20	
	HALL OF FAME	a	
	EMILIA SKY		



"An experimental study of inequality and unpredictability in an artificial cultural market" Salganik, Dodds, and Watts, Science, **311**, 854–856, 2006. ^[4]

Resolving the paradox:



The PoCSverse Fame and fate: Why is global success so unpredictable? 15 of 31

Superstars

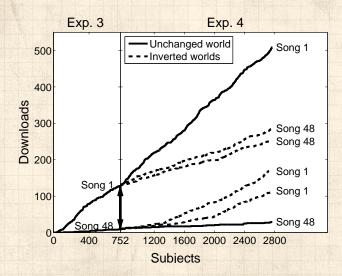
Superspreading

References



Increased social awareness leads to Stronger inequality + Less predictability.

Payola/Deceptive advertising hurts us all:



The PoCSverse Fame and fate: Why is global success so unpredictable? 16 of 31

Superstars

Superspreading



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

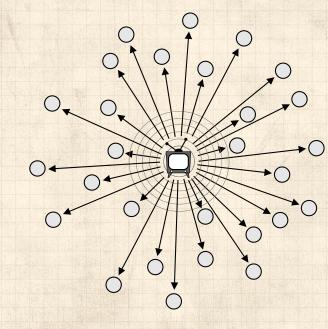
The PoCSverse Fame and fate: Why is global success so unpredictable? 17 of 31

Superstars

Superspreading References



The hypodermic model of influence:



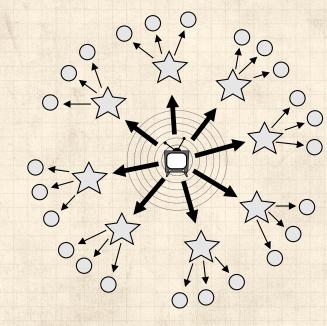
The PoCSverse Fame and fate: Why is global success so unpredictable? 18 of 31

Superstars

Superspreading



The two step model of influence: [2]



The PoCSverse Fame and fate: Why is global success so unpredictable? 19 of 31

Superstars

Superspreading



The network model of influence:

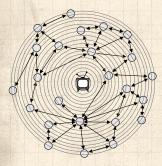
The PoCSverse Fame and fate: Why is global success so unpredictable? 20 of 31

Superstars

Superspreading



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.



Superstars

Superspreading

References



"Influentials, Networks, and Public Opinion Formation" Watts and Dodds, J. Consum. Res., **34**, 441–458, 2007. ^[5]



Things that spread quickly:







The PoCSverse Fame and fate: Why is global success so unpredictable? 22 of 31

Superstars

Superspreading References

cute geeky trashy fail

+ News ...



buzzfeed.com 🗹:

The PoCSverse Fame and fate: Why is global success so unpredictable? 23 of 31

Superstars Superspreading

References



"The social construction of reality: A treatise in the sociology of knowledge" **3**, **2** by Berger and Luckmann (1991). ^[1]

Reality is socially constructed to some hard-to-measure degree.



The PoCSverse Fame and fate: Why is global success so unpredictable? 23 of 31



"The social construction of reality: A treatise in the sociology of knowledge" **3**, **2** by Berger and Luckmann (1991).^[1] Superstars Superspreading

References

Reality is socially constructed C, to some hard-to-measure degree.

🗞 People do and don't see this: Fate versus Fortune.



The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars

Superspreading



Fate—from the Latin *fatus*: meaning "spoken".
Fate is talk that has been done.
"It is written", fore-tell, pre-dict.

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars

Superspreading



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."

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars

Superspreading References



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 probablistic.

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars

Superspreading References

THE STORTES

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 probablistic.

Fame—from the Latin fāma: meaning "to talk."

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars

Superspreading References

THE STORIES CENTA GIOUS

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 probablistic.
- Fame—from the Latin fāma: meaning "to talk."
- Fame is inherently the social discussion about the thing, not the thing itself.

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars

Superspreading References

THE STORTES

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 probablistic.
- Fame—from the Latin fāma: meaning "to talk."
- Fame is inherently the social discussion about the thing, not the thing itself.
- Renown C: Repeatedly named, talked about. Old French renon, from re- + non ("name").

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars



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 probablistic.
- Fame—from the Latin fāma: meaning "to talk."
- Fame is inherently the social discussion about the thing, not the thing itself.
- Renown C: Repeatedly named, talked about. Old French renon, from re- + non ("name").
- Réclame C. "Clamo"—Proto-Indo-European: "to shout" (again).

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars



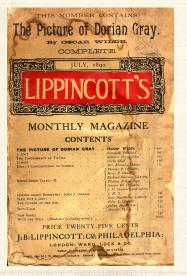
Fate—from the Latin fatus: meaning "spoken".

- 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 probablistic.
- Fame—from the Latin fāma: meaning "to talk."
- Fame is inherently the social discussion about the thing, not the thing itself.
- Renown C: Repeatedly named, talked about. Old French renon, from re- + non ("name").
- Réclame C. "Clamo"—Proto-Indo-European: "to shout" (again). Connected to "lowing".

The PoCSverse Fame and fate: Why is global success so unpredictable? 24 of 31

Superstars



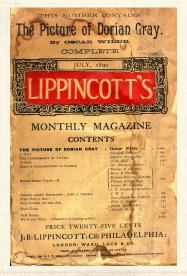


The PoCSverse Fame and fate: Why is global success so unpredictable? 25 of 31

Superstars

Superspreading





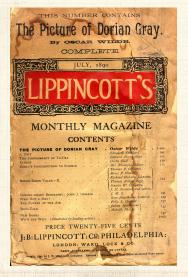
"There is only one thing in the world



Superstars

Superspreading





"There is only one thing in the world

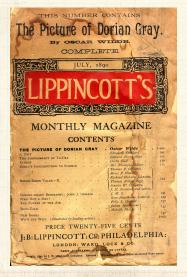
worse than being talked about,

The PoCSverse Fame and fate: Why is global success so unpredictable? 25 of 31

Superstars

Superspreading





"There is only one thing in the world

worse than being talked about,

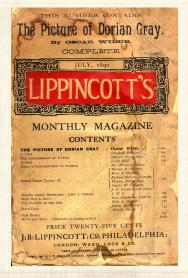
and that is

The PoCSverse Fame and fate: Why is global success so unpredictable? 25 of 31

Superstars

Superspreading





"There is only one thing in the world

worse than being talked about,

and that is

not being talked about." The PoCSverse Fame and fate: Why is global success so unpredictable? 25 of 31

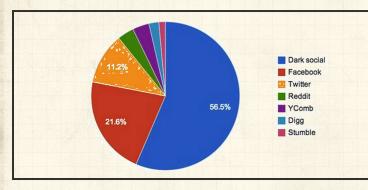
Superstars

Superspreading



Spreading in the social wild:

The Dark Social Web



"The only real way to optimize for social spread is in the nature of the content itself. There's no way to game email or people's instant messages. There's no power users you can contact. There's no algorithms to understand. This is pure social, uncut. [sic]"

🗞 Dark Social: We Have the Whole History of the Web

The PoCSverse Fame and fate: Why is global success so unpredictable? 26 of 31

Superstars



A completely made up pie chart:

The PoCSverse Fame and fate: Why is global success so unpredictable? 27 of 31

Superstars

Superspreading References

32

Measurable Web Stuff

Zeal Dark Social



How to make things spread (maybe):

The PoCSverse Fame and fate: Why is global success so unpredictable? 28 of 31

Superstars

Superspreading



The PoCSverse Fame and fate: Why is global success so unpredictable? 29 of 31

Superstars

Superspreading

References

Shareworthy Content is King:

1. Build entities/messages/stories that have intrinsic and social value out in the Social Wild.



The PoCSverse Fame and fate: Why is global success so unpredictable? 29 of 31

Superstars

Superspreading

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.



The PoCSverse Fame and fate: Why is global success so unpredictable? 29 of 31

Superstars

Superspreading

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] P. L. Berger and T. Luckmann. The social construction of reality: A treatise in the sociology of knowledge. Penguin UK, 1991.
- [2] E. Katz and P. F. Lazarsfeld. Personal Influence. The Free Press, New York, 1955.

[3] T. Kuran.

Now out of never: The element of surprise in the east european revolution of 1989. World Politics, 44:7–48, 1991. pdf

[4] M. J. Salganik, P. S. Dodds, and D. J. Watts. An experimental study of inequality and unpredictability in an artificial cultural market. <u>Science</u>, 311:854–856, 2006. pdf C The PoCSverse Fame and fate: Why is global success so unpredictable? 30 of 31

Superstars

Superspreading



References II

The PoCSverse Fame and fate: Why is global success so unpredictable? 31 of 31

Superstars

Superspreading

References

[5] D. J. Watts and P. S. Dodds. Influentials, networks, and public opinion formation. Journal of Consumer Research, 34:441–458, 2007. pdf

