

# Class 11: Cascades and fads in cultural markets

Matthew J. Salganik

Sociology 204: Social Networks  
Princeton University

Monday, October 11, 2021

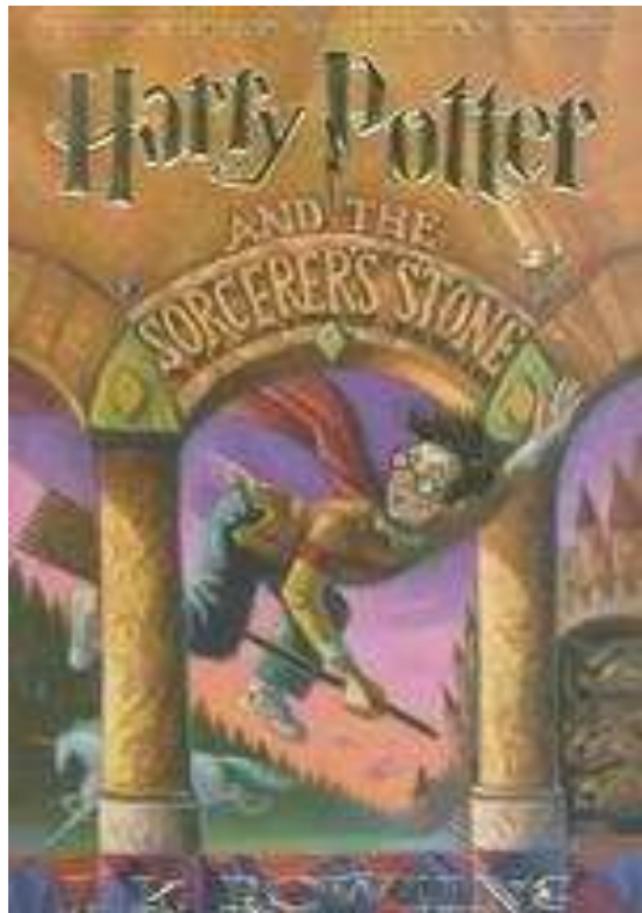


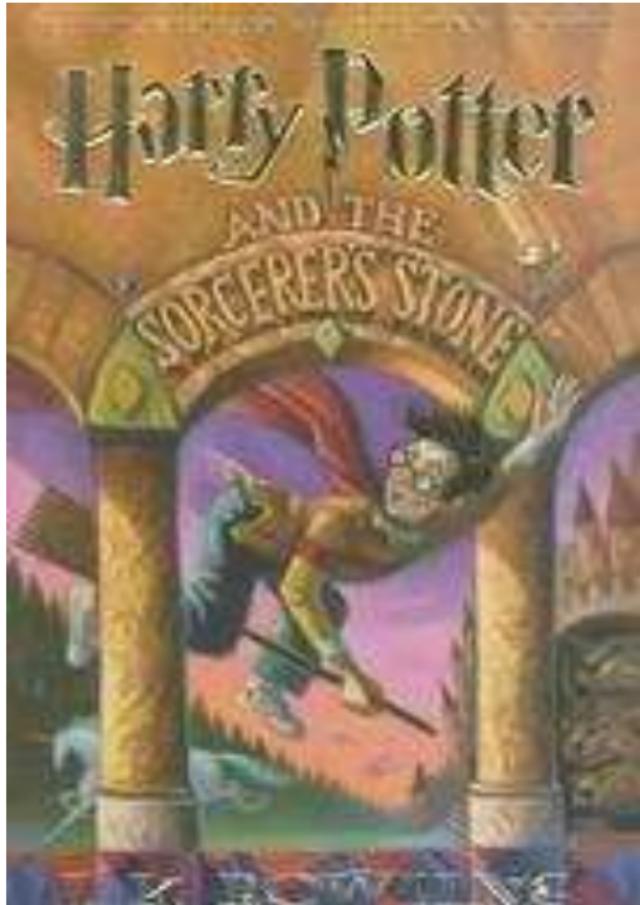
Review:

- ▶ sometimes small shocks get big and sometimes they don't

Review:

- ▶ sometimes small shocks get big and sometimes they don't
- ▶ sequential behavior can lead to unexpected outcomes





- ▶ Wild success
- ▶ Rejected by eight publishers

This seems like a strange combination.



- ▶ Set box office records, won 6 Oscars, and launched a multi-billion dollar franchise
- ▶ Rejected by United Artists and Universal before being made by Fox



- ▶ One of the most popular shows of the decade
- ▶ Rejected by ABC, CBS, and NBC before being picked up by Fox

Puzzling nature of success for cultural objects (books, movies, piece of art, music)

- ▶ extreme inequality in the success of objects

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- ▶ extreme inequality in the success of objects
- ▶ unpredictability in the success of objects

## **Psychological explanation:**

People agree on what's good, but people are hard to predict

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**Sociological explanation:**

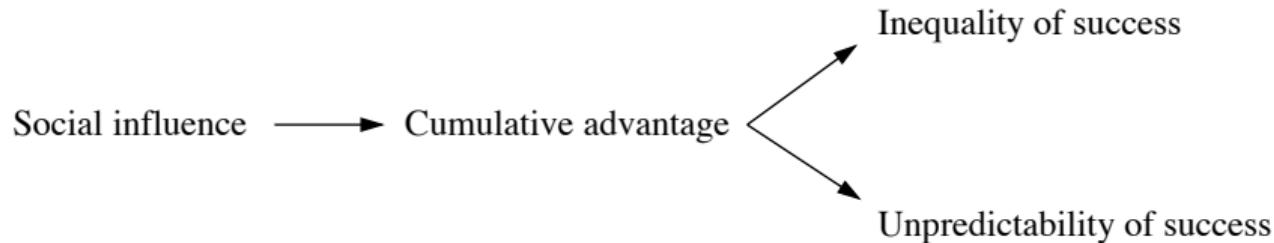
The collective outcomes of inequality and unpredictability of success both arise from an individual-level process of social influence

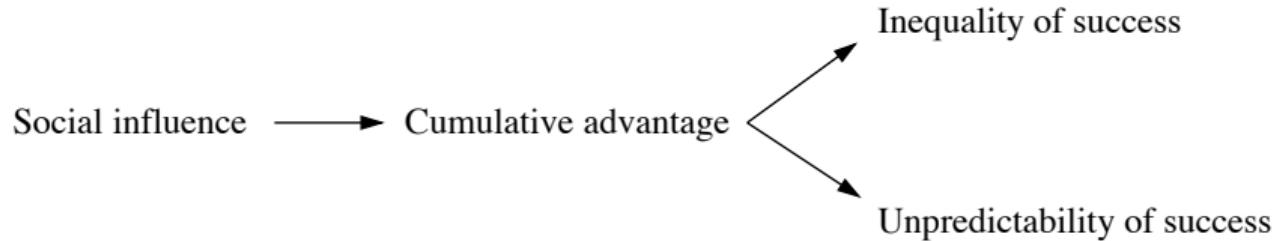
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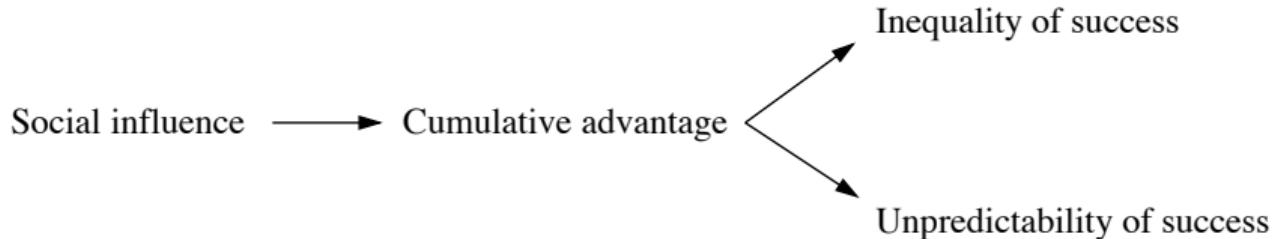
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Problems with observational data:

- ▶ don't know what would have happened without social influence



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- ▶ can't see multiple "histories" to observe unpredictability

Instead of using observational data we are going to run an experiment because

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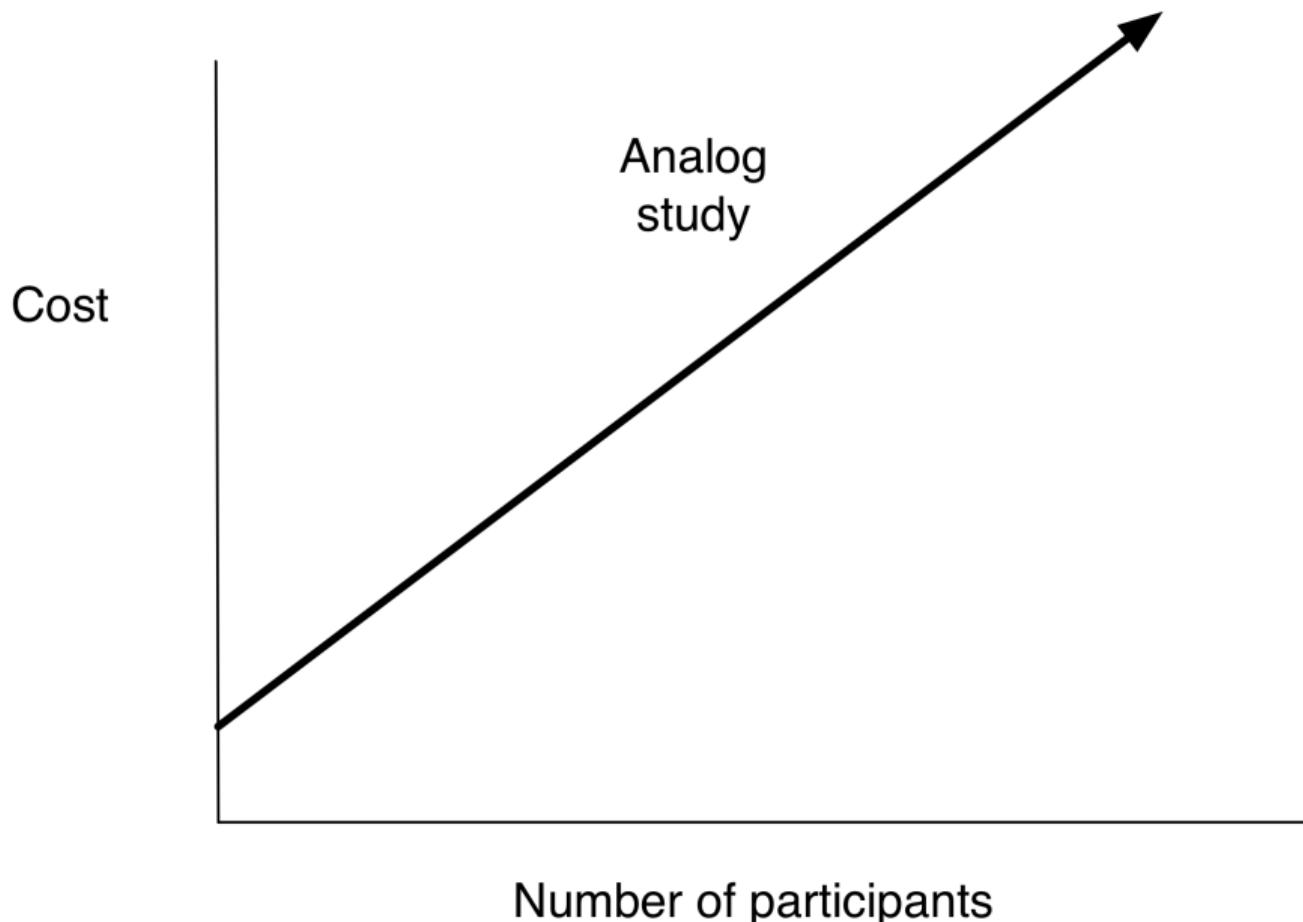
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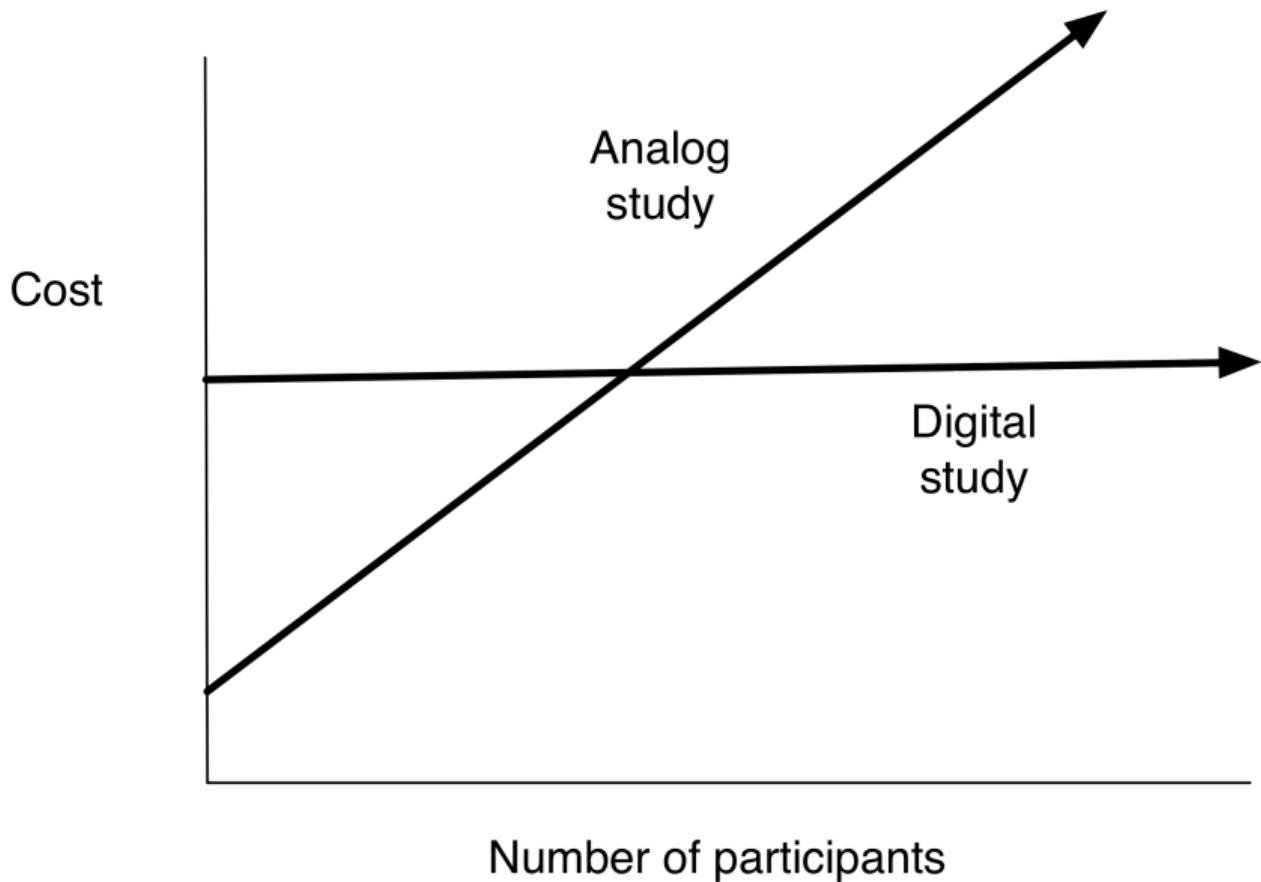
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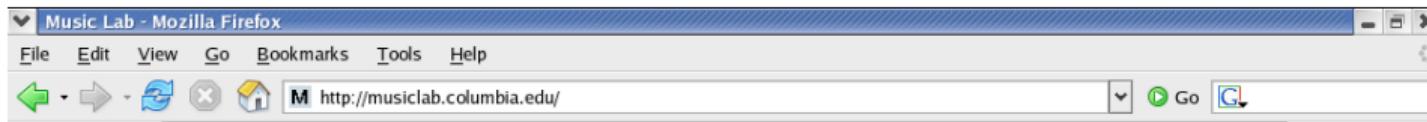
But, this experiment is different from most,

- ▶ experiments in psychology and economics have **individual** as unit of analysis, require **hundreds** of participants
- ▶ these sociological experiments have **collective outcome** as unit of analysis, require **thousands** of participants

Web-based experiment allow for such large sample sizes because each additional participant has no cost (total  $n = 27,267$ )







MUSIC LAB

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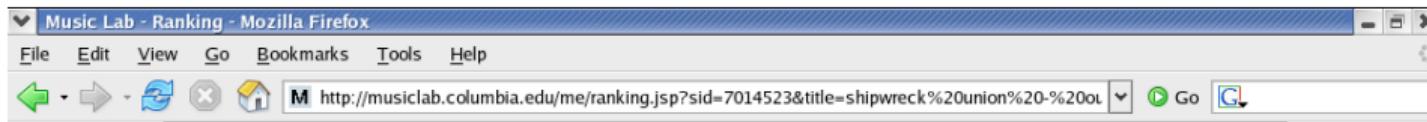
CLICK  
HERE TO  
START

FREE MUSIC DOWNLOADS

A photograph of a four-piece drum set (bass drum, snare, and two toms) against a plain, light-colored wall. The bass drum's drumhead features the text "CLICK HERE TO START" in white capital letters. The top left corner of the image contains the "MUSIC LAB" logo, which includes a stylized silhouette of a person playing a guitar or bass. The top right corner contains the "COLUMBIA UNIVERSITY" logo, which includes the university's name and a small 'C' icon. At the bottom of the image, a light blue horizontal bar contains the text "FREE MUSIC DOWNLOADS".



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| HARTSFIELD:<br>"enough is enough"                     | 20              | GO MOREDAI:<br>"it does what its told"           | 12        | UNDO:<br>"while the world passes"      | 24              |
| DEEP ENOUGH TO DIE:<br>"for the sky"                  | 17              | PARKER THEORY:<br>"she said"                     | 47        | UP FOR NOTHING:<br>"in sight of"       | 13              |
| THE THRIFT SYNDICATE:<br>"2003 a tragedy"             | 20              | MISS OCTOBER:<br>"pink aggression"               | 27        | SILVERFOX:<br>"gnaw"                   | 17              |
| THE BROKEN PROMISE:<br>"the end in friend"            | 19              | POST BREAK TRAGEDY:<br>"florence"                | 14        | STRANGER:<br>"one drop"                | 10              |
| THIS NEW DAWN:<br>"the belief above the answer"       | 12              | FORTHFADING:<br>"fear"                           | 24        | FAR FROM KNOWN:<br>"route 9"           | 18              |
| NOONER AT NINE:<br>"walk away"                        | 6               | THE CALEFACTION:<br>"trapped in an orange peel"  | 20        | STUNT MONKEY:<br>"inside out"          | 46              |
| MORAL HAZARD:<br>"waste of my life"                   | 8               | 52METRO:<br>"lockdown"                           | 17        | DANTE:<br>"lifes mystery"              | 14              |
| NOT FOR SCHOLARS:<br>"as seasons change"              | 27              | SIMPLY WAITING:<br>"went with the count"         | 16        | FADING THROUGH:<br>"wish me luck"      | 10              |
| SECRETARY:<br>"keep your eyes on the ballistics"      | 5               | STAR CLIMBER:<br>"tell me"                       | 38        | UNKNOWN CITIZENS:<br>"falling over"    | 34              |
| ART OF KANLY:<br>"seductive intro, melodic breakdown" | 10              | THE FASTLANE:<br>"til death do us part (i dont)" | 31        | BY NOVEMBER:<br>"if i could take you"  | 20              |
| HYDRAULIC SANDWICH:<br>"separation anxiety"           | 20              | A BLINDING SILENCE:<br>"miseries and miracles"   | 17        | DRAWN IN THE SKY:<br>"tap the ride"    | 12              |
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| SALUTE THE DAWN:<br>"i am ero"                        | 13              | CAPE RENEWAL:<br>"baseball warlock v1"           | 12        | SIBRIAN:<br>"eye patch"                | 14              |
| RYAN ESSMAKER:<br>"detour_(be still)"                 | 14              | UP FALLS DOWN:<br>"a brighter burning star"      | 11        | EVAN GOLD:<br>"robert downey jr"       | 10              |
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| HALL OF FAME:<br>"best mistakes"                      | 19              | SILENT FILM:<br>"all i have to say"              | 61        | SHIPWRECK UNION:<br>"out of the woods" | 16              |

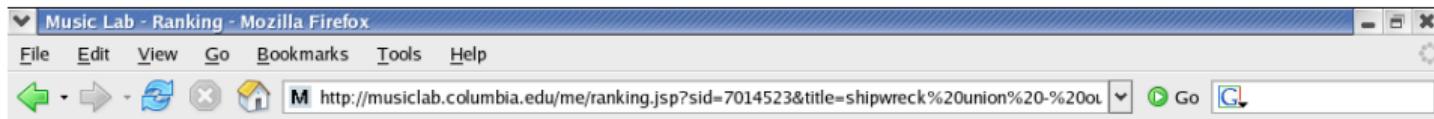


00:21 shipwreck union - out of the woods volume

Please rate this song.  
You don't need to wait until it's finished

★★★★★ i love it  
 ★★★★ i like it  
 ★★★ it's OK  
 ★★ i don't like it  
 ★ i hate it

Rate It!



00:53 shipwreck union - out of the woods volume

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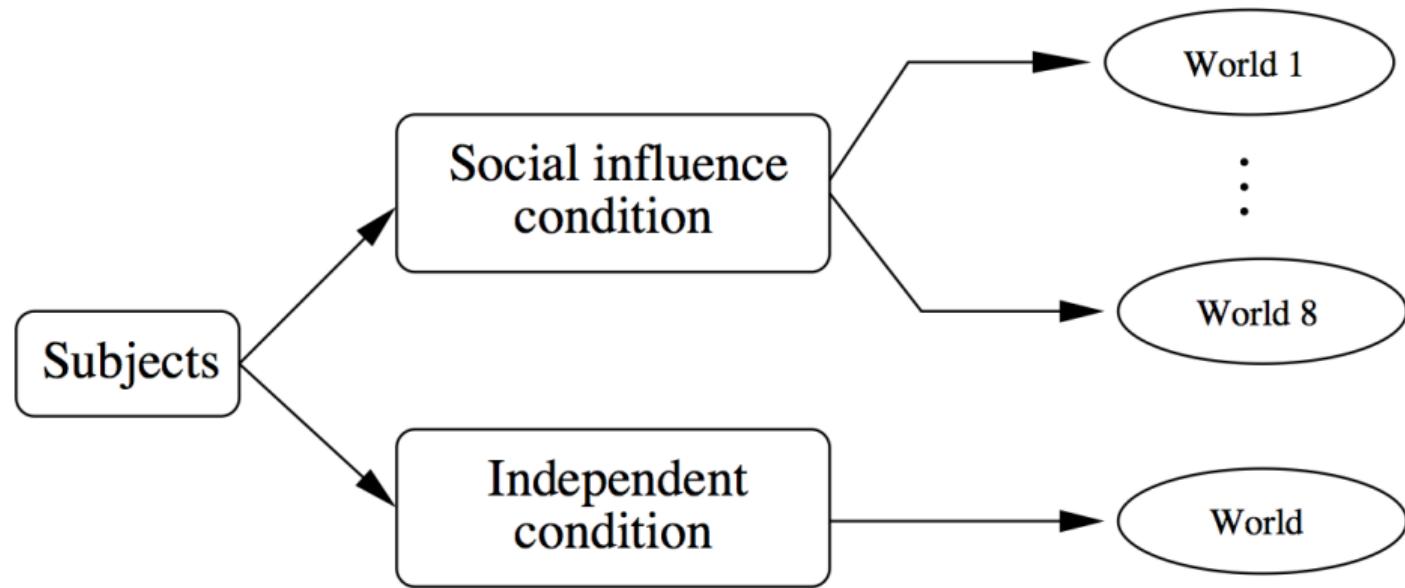
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- ▶ <https://www.dropbox.com/s/k02iy1hcw0g3xir/165444-hi.mp3?dl=0>
- ▶ <https://www.dropbox.com/s/j0wpjg379xuhe7n/331122-hi.mp3?dl=0>
- ▶ <https://www.dropbox.com/s/tobqqk4ar9qzc01/846626-hi.mp3?dl=0>



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|---|-----------------|--|-----------|-----------------|--|-----------|
| HARTFIELD<br>"though & through"                     | 20              | GO HARRISOCAL<br>"it does what it did"           |           | 12              | UNICO<br>"telle the world passes"      | 24        |
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| THE BROKEN PROMISE:<br>"the end is here"            | 19              | POST BREAK TRAGEDY:<br>"reverse"                 |           | 14              | STRANGERS:<br>"one day"                | 18        |
| THIS NEW DAWN:<br>"you let feel above the arrows"   | 12              | PORTHOLEONG:                                     |           | 24              | FAIR FROM UNKNOWN:<br>"you are"        | 18        |
| HOUSER AT HOME:<br>"work makes me"                  | 6               | THE CALLEFACTION:<br>"stepped in an orange peal" |           | 20              | STUTT MONKEY:<br>"wide eye"            | 46        |
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| RYAN ESSAMAKER:<br>"minus the sun"                  | 14              | ZIP FALLS DOWN:<br>"i am not a ray"              |           | 11              | IVAN GOLD:<br>"i am not a ray j"       | 19        |
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(a) Experiment 1, Weaker signal

**Music Lab - Song Selection - Mozilla Firefox**

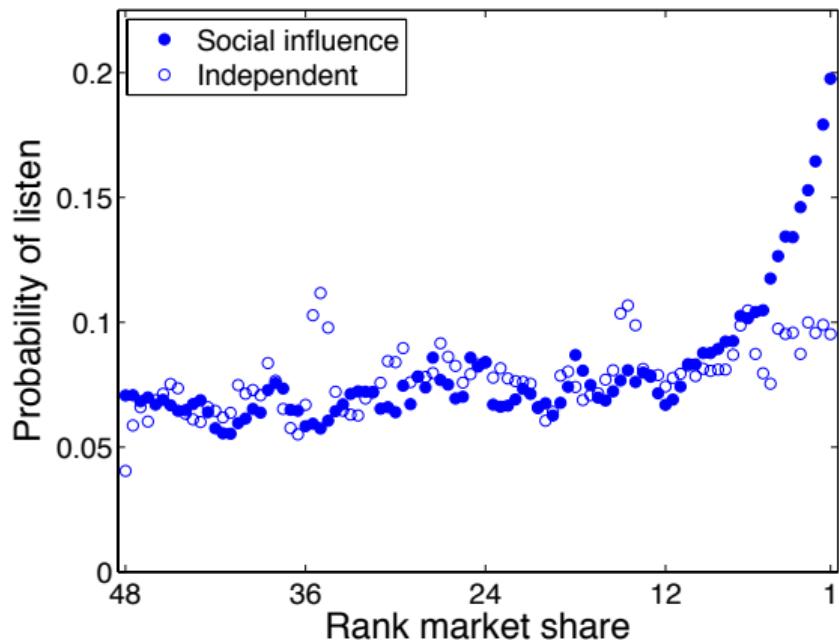
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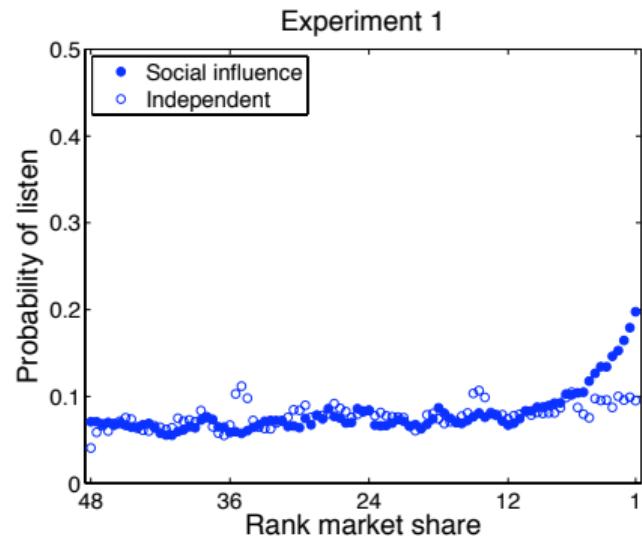
M http://www.musiclab.columbia.edu/me/cont1/

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|---|-----------------|--------|-----------|
| PARKER THEORY:<br>"she said"                    | 139             |        |           |
| THE FASTLANE:<br>"i think do do as pain (dose)" | 181             |        |           |
| SELSSUS:<br>"size of the city"                  | 62              |        |           |
| STUTT MONKEY:<br>"wide eye"                     | 56              |        |           |
| BY NOVEMBER:<br>"i could take you"              | 55              |        |           |
| PORTHOLEONG:<br>"true"                          | 49              |        |           |
| HYDRAULIC SANDWICH:<br>"separated anxiety"      | 43              |        |           |
| SILENT FILM:<br>"i have to say"                 | 40              |        |           |
| SLIM RAMA:<br>"like baba khan bhang"            | 36              |        |           |
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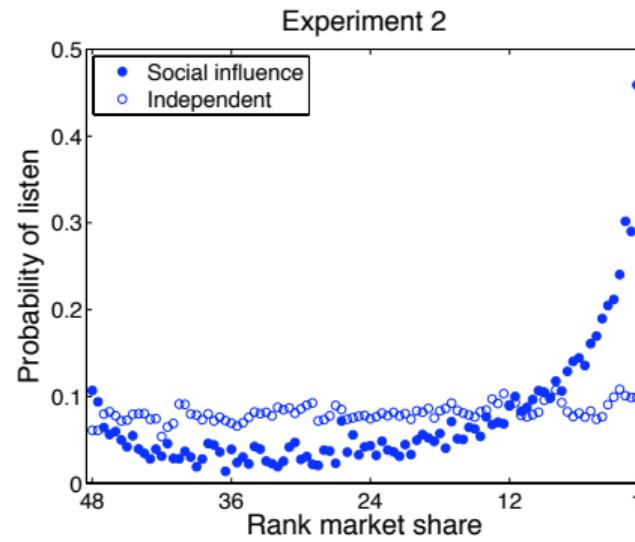
(b) Experiment 2, Stronger signal

Experiment 1



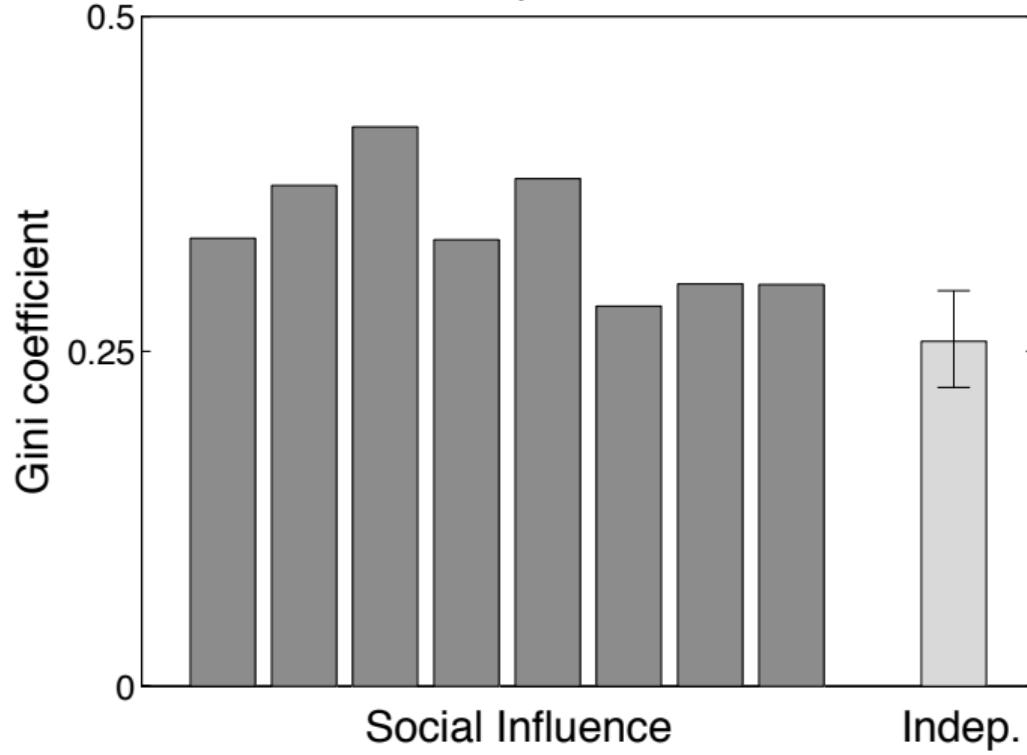


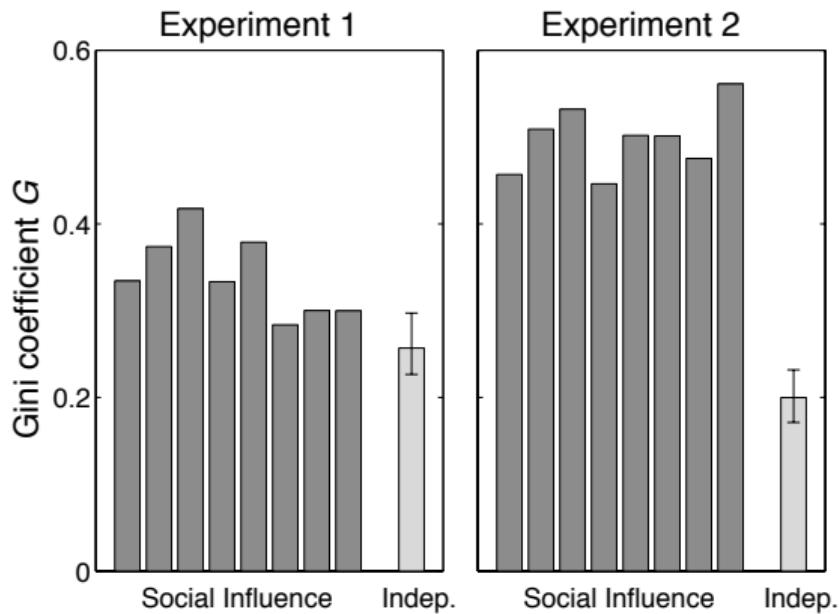
(a) Experiment 1, weaker signal



(b) Experiment 2, stronger signal

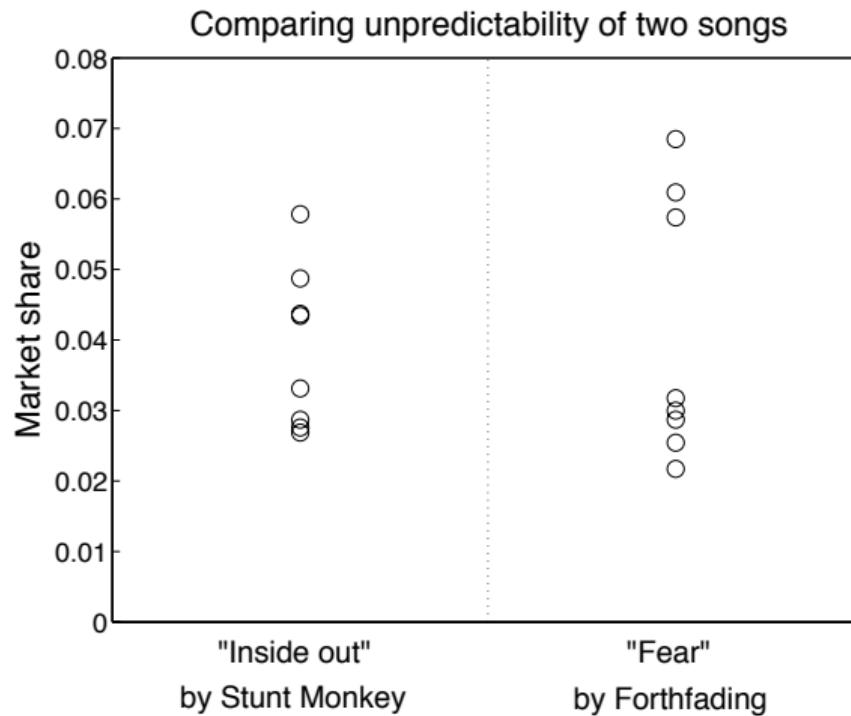
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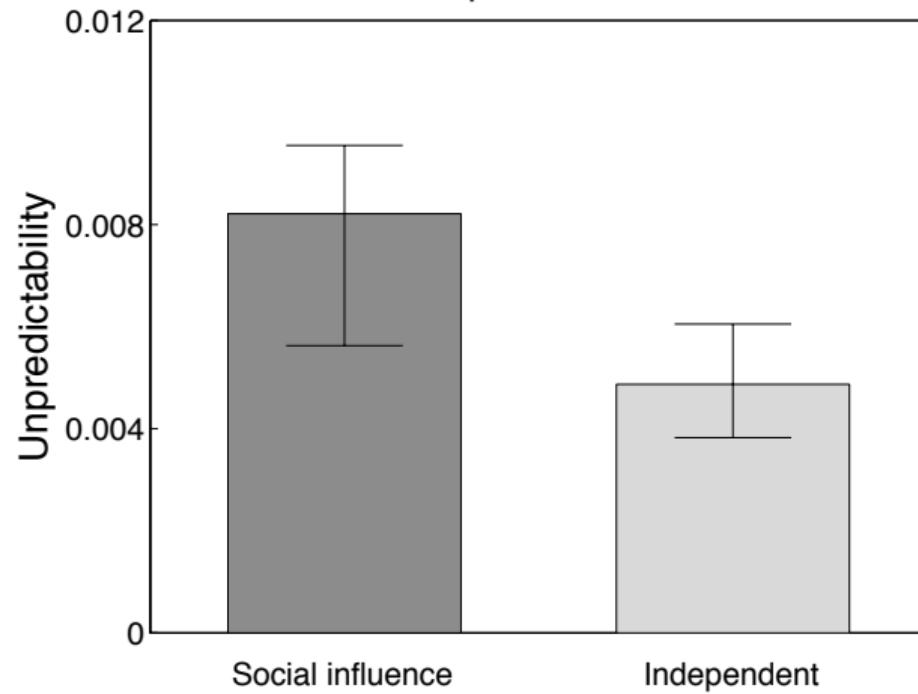


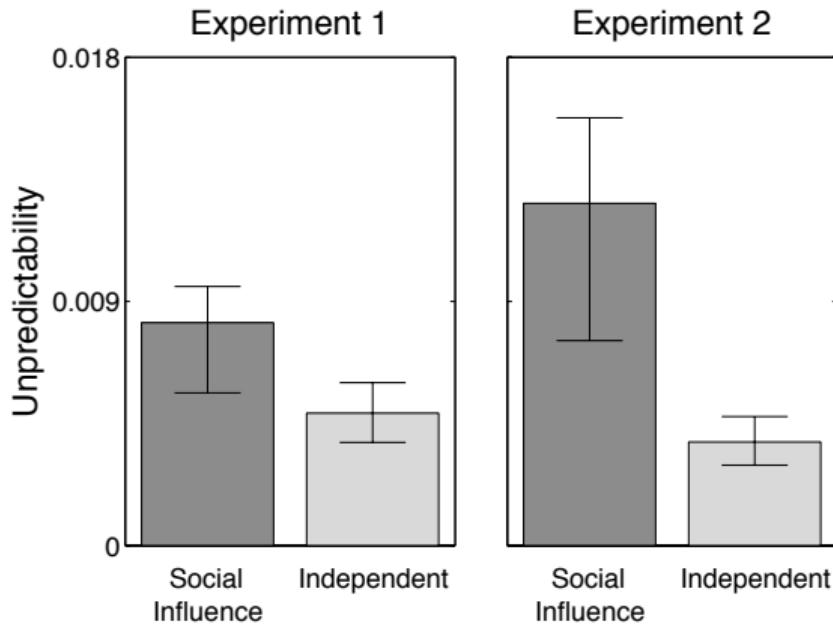
Median Gini coefficient increases from 0.34 (France) to 0.50 (Nigeria)

$U$  = mean difference in market share across all pairs of realizations



Experiment 1



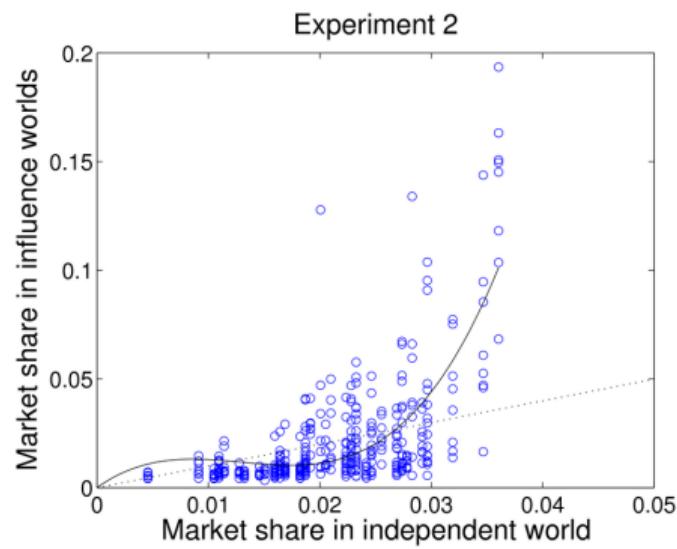
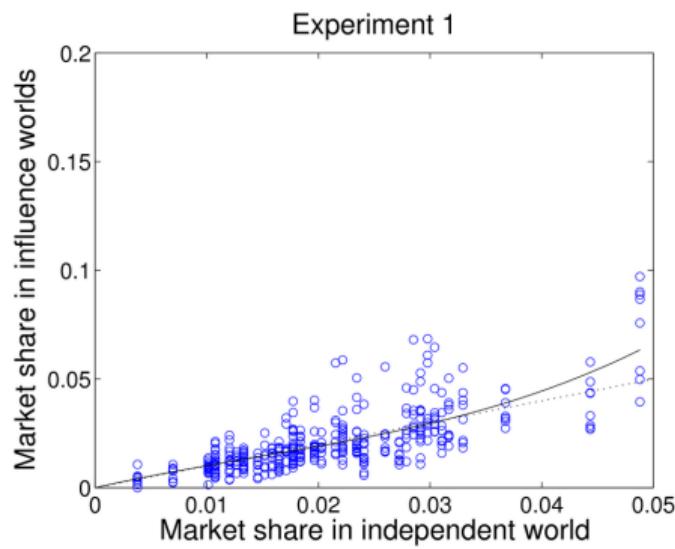


Unpredictability increases by about 50%

Experiments 1 and 2 show a dose-response relationship. Increasing the strength of social influence leads to

- ▶ increased inequality of success
- ▶ increased unpredictability of success

What is the relationship between “quality” and success?



If real success can lead to more success, can fake success lead to real success?

# THE BUREAU AND THE MOLE



THE UNMASKING OF ROBERT PHILIP HANSEN,  
THE MOST DANGEROUS DOUBLE AGENT IN FBI HISTORY

DAVID A. VISE  
PULITZER PRIZE-WINNING AUTHOR

Someone bought and returned 17,000 copies of this book.

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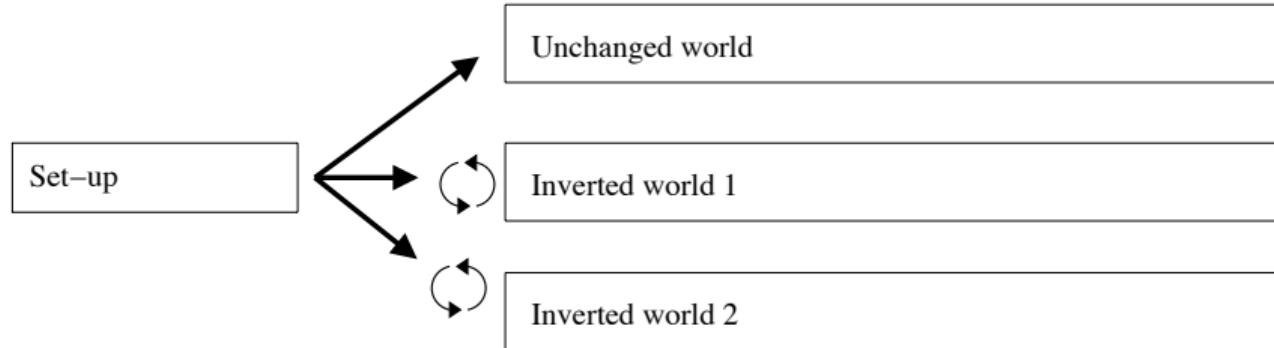
## Self-fulfilling prophecies

"[a] self-fulfilling prophecy is, in the beginning, a *false* definition of the situation evoking a new behavior which make the originally false conception come *true*." Robert Merton (1948)

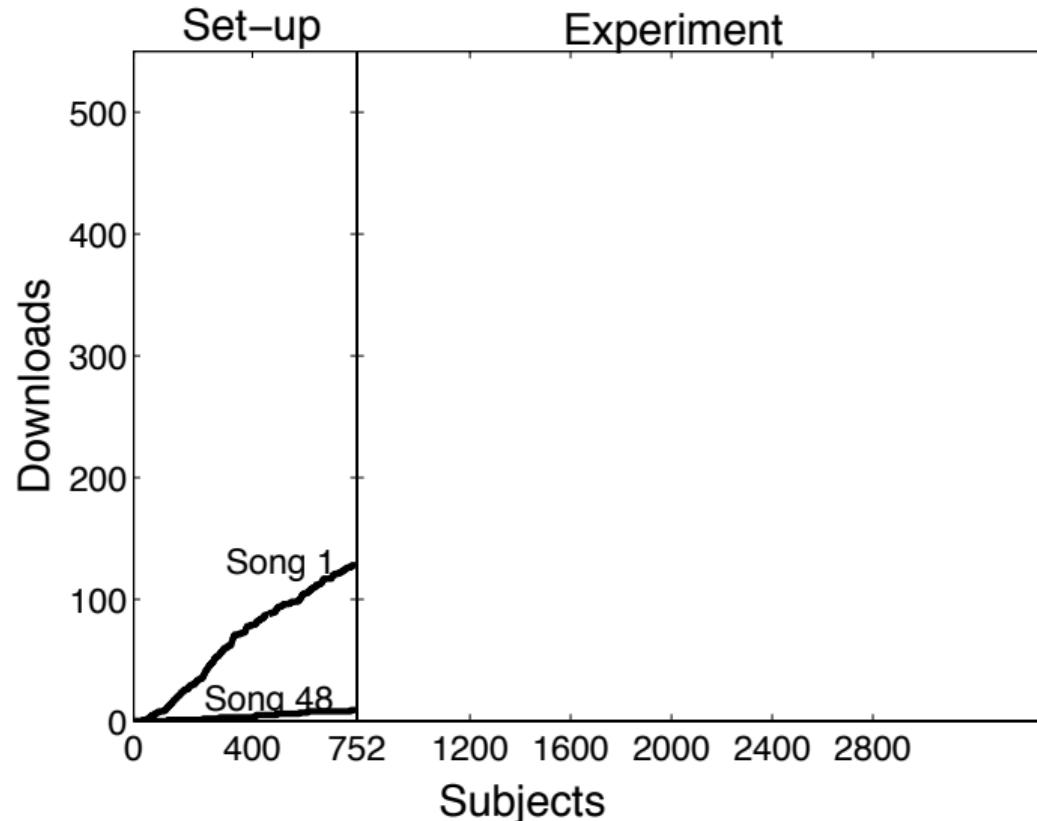
Vise's book sold more than 180,000 copies. How much of this was due to a self-fulfilling prophecy? Hard to say.

Again, this is difficult with observational data, but possible with a multiple-realization experiment

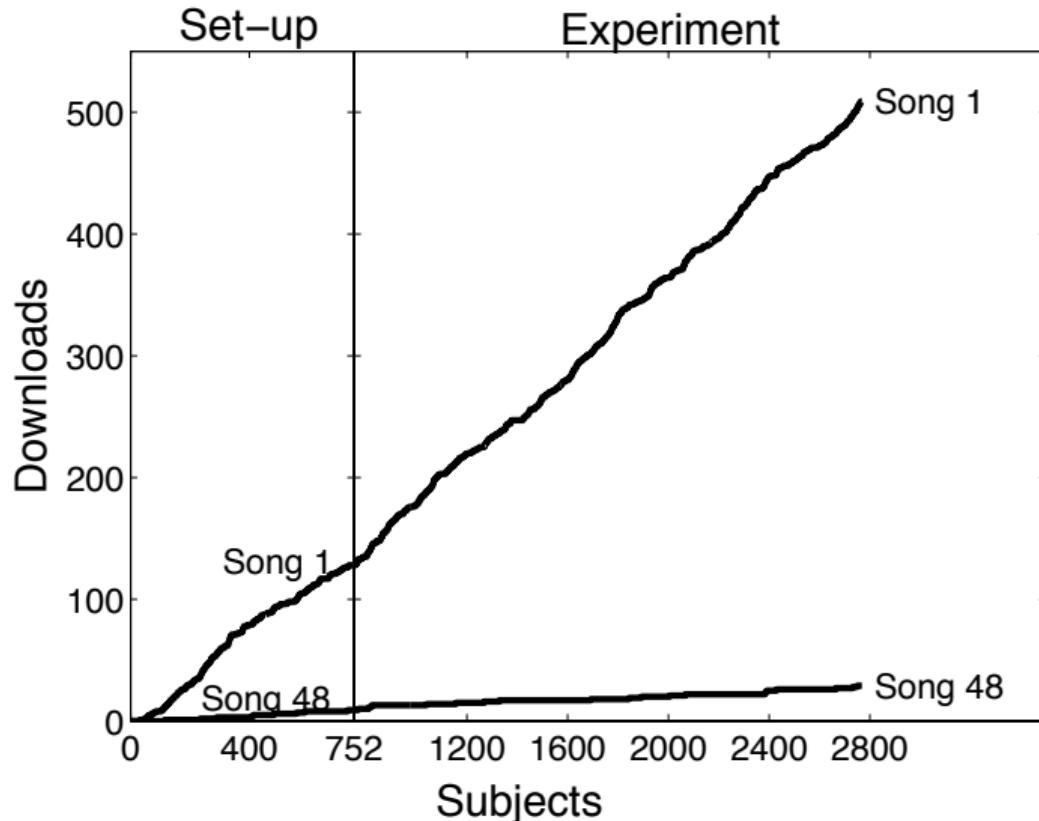
# Experimental design



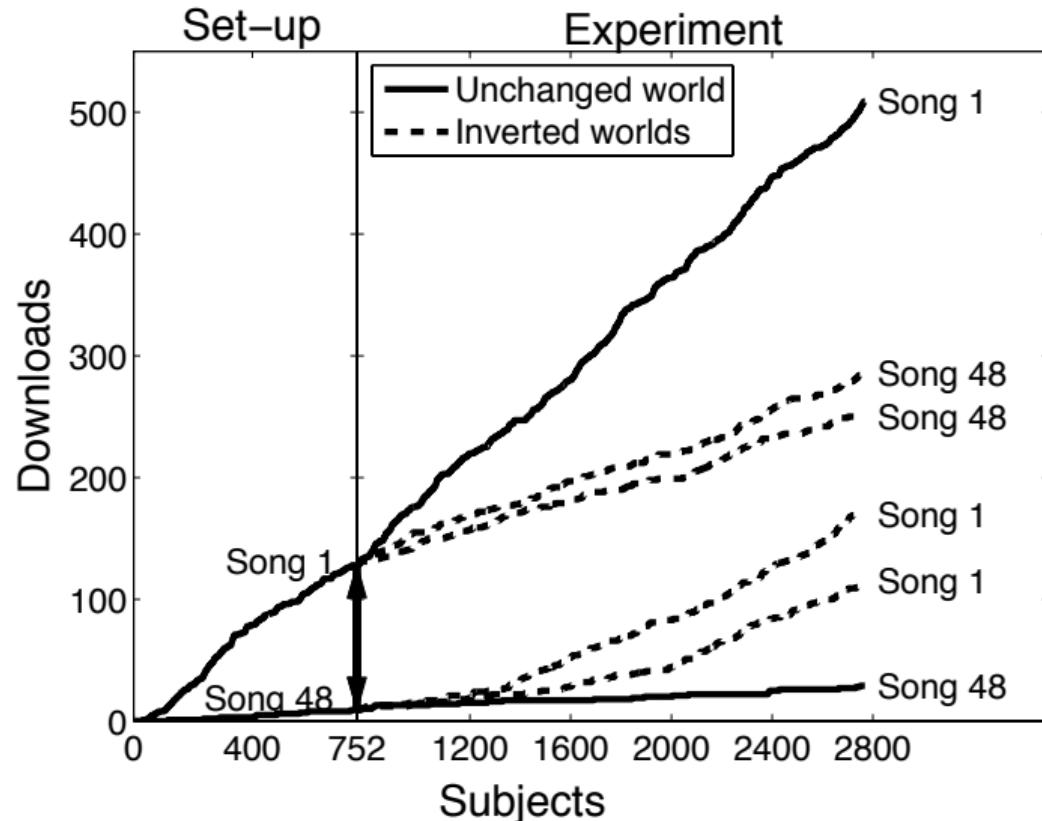
## Tracking song 1 and song 48



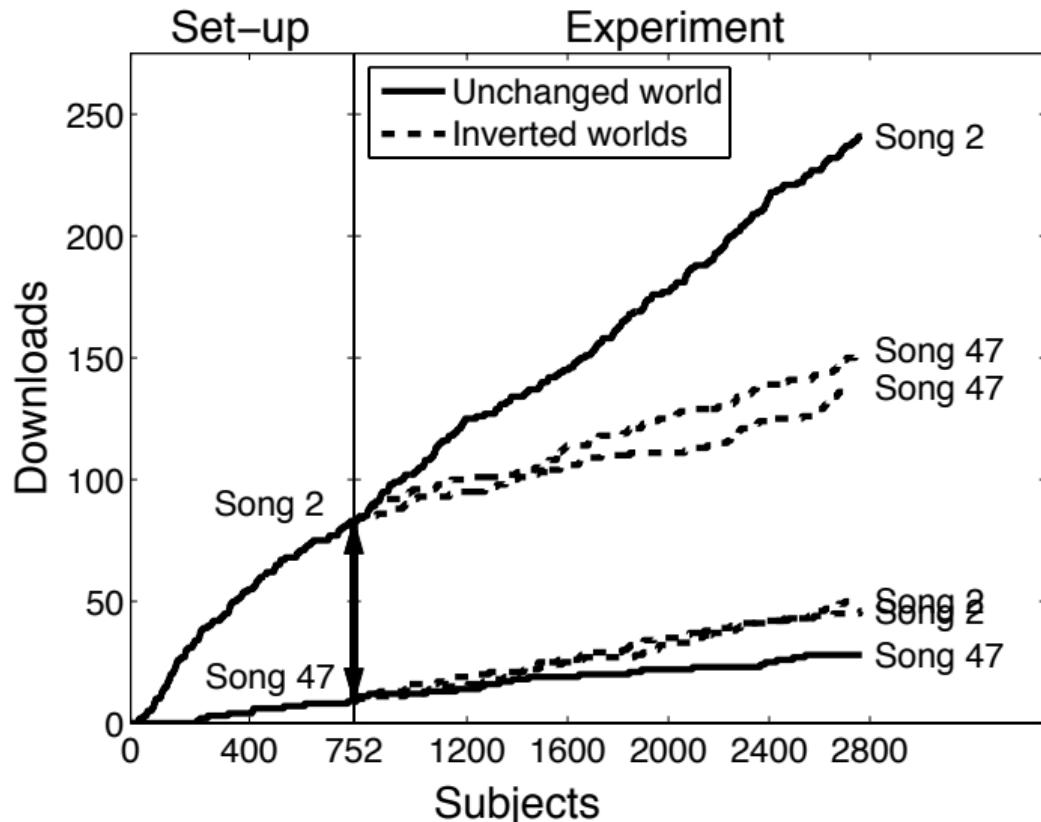
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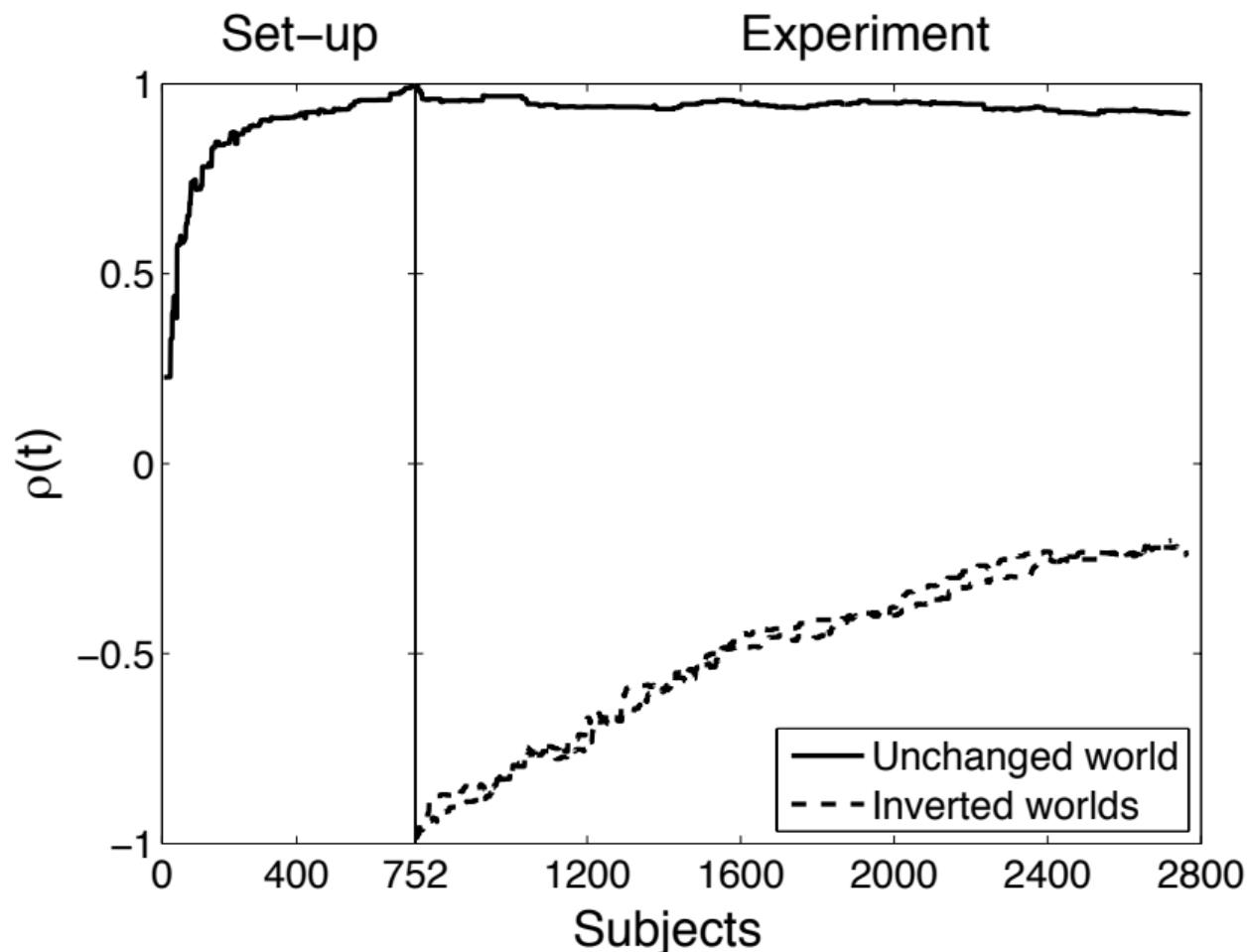


## Tracking song 1 and song 48



## Tracking song 2 and song 47









(Duchamp, 1919)



(Duchamp, 1919)



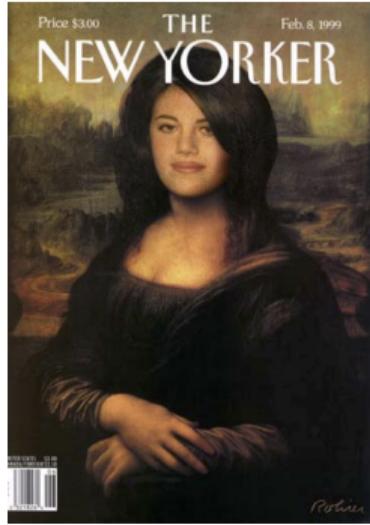
(Warhol, 1963)



(Duchamp, 1919)



(Warhol, 1963)



(Roher, 1999)



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## Summary:

- ▶ social influence can lead to inequality and unpredictability of success
- ▶ social influences weakens the relationship between appeal and success
- ▶ you can predict failure but you can't predict success
- ▶ the perception of success can become a self-fulfilling prophecy

Download all the data from these experiments:

<http://opr.princeton.edu/archive/cm/>

Looking backward and looking forward:

[https://www.princeton.edu/~mjs3/soc204\\_f2021/](https://www.princeton.edu/~mjs3/soc204_f2021/)

Rest of this week:

- ▶ Midterm is available now.

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- ▶ Open book and 1 hour. Full details here: [https://princeton.instructure.com/courses/4801/discussion\\_topics/43845](https://princeton.instructure.com/courses/4801/discussion_topics/43845)

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- ▶ No class on Wednesday.

Rest of this week:

- ▶ Midterm is available now.
- ▶ Open book and 1 hour. Full details here: [https://princeton.instructure.com/courses/4801/discussion\\_topics/43845](https://princeton.instructure.com/courses/4801/discussion_topics/43845)
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Good luck on the midterm, and have a wonderful fall break!