

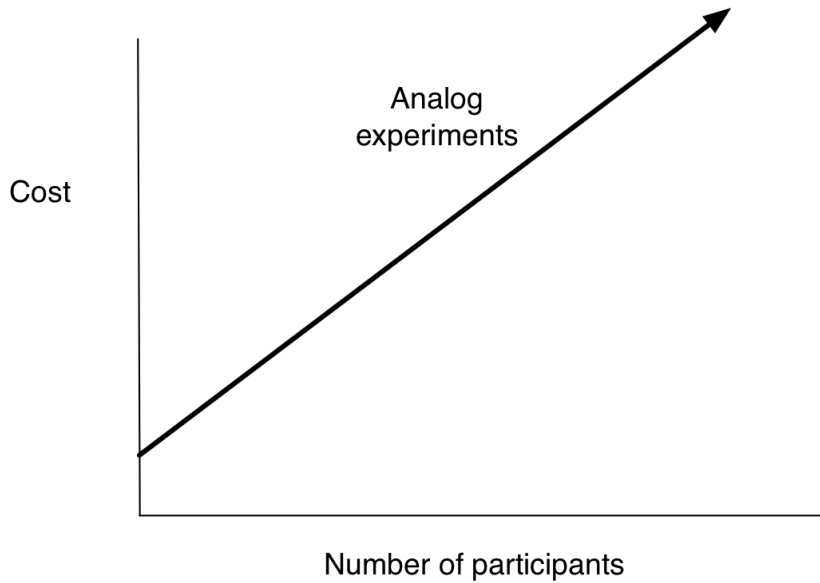
Zero variable cost (04-06)

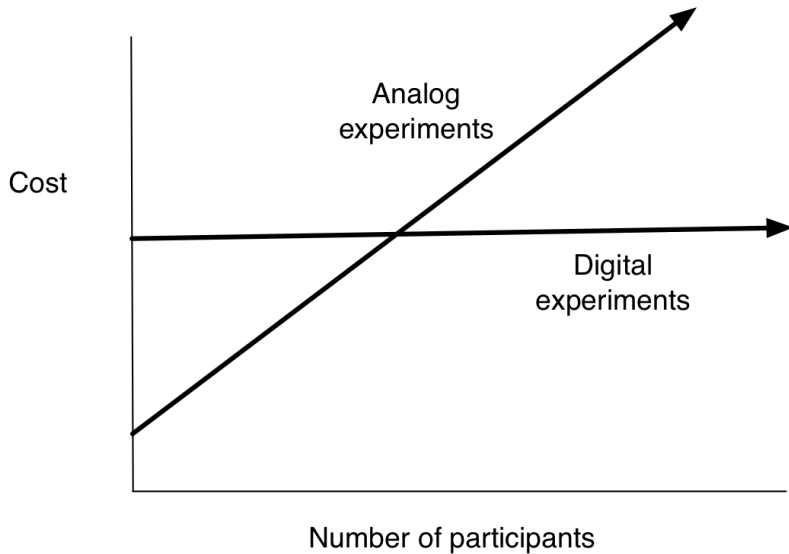
Matthew J. Salganik
Department of Sociology
Princeton University

Soc 596: Computational Social Science
Fall 2016



Experiments at scale





Main sources of variable costs:

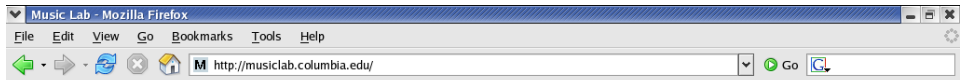
- ▶ staff time
- ▶ participant payment

Main sources of variable costs:

- ▶ staff time
- ▶ participant payment

Solutions:

- ▶ Automation (your experiments should run while you sleep)
- ▶ Design enjoyable experiments



Music Lab – Song Selection - Mozilla Firefox

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← → ↺ ⓧ 🏠 M http://www.musiclab.columbia.edu/me/songs

	# of down loads	[Help]	[Log off]	# of down loads	# of down loads
HARTSFIELD: "enough is enough"	20	GO MOREDCAI: "it does what its told"	12	UNDO: "while the world passes"	24
DEEP ENOUGH TO DIE: "for the sky"	17	PARKER THEORY: "she said"	47	UP FOR NOTHING: "in sight of"	13
THE THRIFT SYNDICATE: "2003 a tragedy"	20	MISS OCTOBER: "pink agression"	27	SILVERFOX: "gnaw"	17
THE BROKEN PROMISE: "the end in friend"	19	POST BREAK TRAGEDY: "florence"	14	STRANGER: "one drop"	10
THIS NEW DAWN: "the belief above the answer"	12	FORTHFADING: "fear"	24	FAR FROM KNOWN: "route 9"	18
NOONER AT NINE: "walk away"	6	THE CALEFACTION: "trapped in an orange peel"	20	STUNT MONKEY: "inside out"	46
MORAL HAZARD: "waste of my life"	8	52METRO: "lockdown"	17	DANTE: "lifes mystery"	14
NOT FOR SCHOLARS: "as seasons change"	27	SIMPLY WAITING: "went with the count"	16	FADING THROUGH: "wish me luck"	10
SECRETARY: "keep your eyes on the ballistics"	5	STAR CLIMBER: "tell me"	38	UNKNOWN CITIZENS: "falling over"	34
ART OF KANLY: "seductive intro, melodic breakdown"	10	THE FASTLANE: "til death do us part (i dont)"	31	BY NOVEMBER: "if i could take you"	20
HYDRAULIC SANDWICH: "separation anxiety"	20	A BLINDING SILENCE: "miseries and miracles"	17	DRAWN IN THE SKY: "tap the ride"	12
EMBER SKY: "this upcoming winter"	25	SUM RANA: "the bolshevik boogie"	15	SELSIUS: "stars of the city"	22
SALUTE THE DAWN: "i am error"	13	CAPE RENEWAL: "baseball warlock v1"	12	SIBRIAN: "eye patch"	14
RYAN ESSMAKER: "detour_(be still)"	14	UP FALLS DOWN: "a brighter burning star"	11	EVAN GOLD: "robert downey jr"	10
BEERBONG: "father to son"	12	SUMMERSWASTED: "a plan behind destruction"	17	BENEFIT OF A DOUBT: "run away"	38
HALL OF FAME: "best mistakes"	19	SILENT FILM: "all i have to say"	61	SHIPWRECK UNION: "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

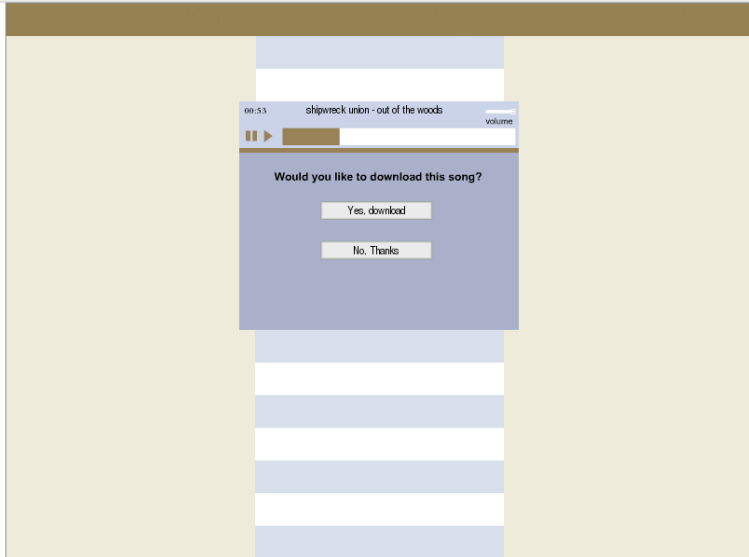
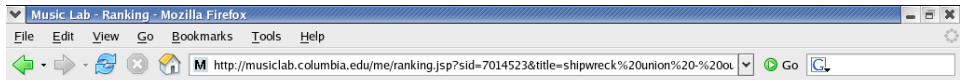
☐ ★ ★ ★ ★ i like it

☐ ★ ★ ★ it's OK

☐ ★ ★ i don't like it

☐ ★ i hate it

Rate It!

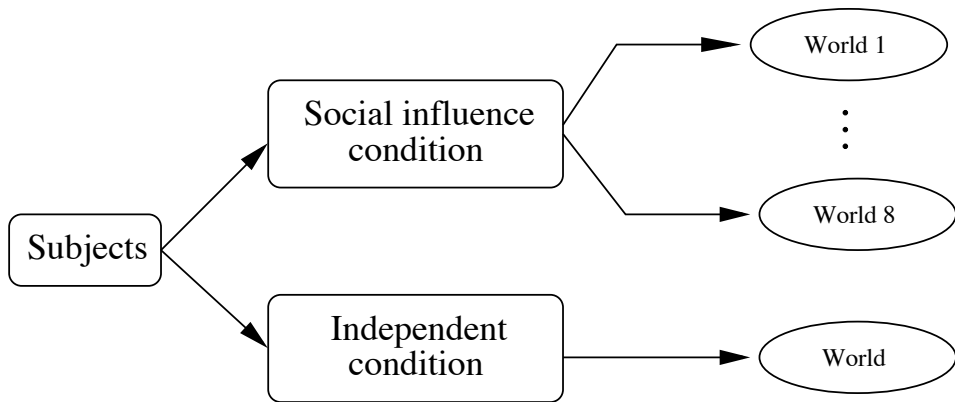


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http://www.musiclab.columbia.edu/me/songs

	# of own songs	[Help] [Log off]	# of own songs	# of own songs	
HARTSFIELD "Enough is enough"	20	GO MORDOCA "I don't want to talk"	12	UNDO: "while the world passes"	24
DEEP ENOUGH TO DIE: "for the city"	17	PARKER THEORY: "the last"	47	UP FOR NOTHING: "in sight of"	13
THE "THIRTY" SYNDICATE: "2001 is magical"	20	MISS OCTOBER: "pink aggression"	27	SILVERFOX: "I want"	17
THE BROKEN PROMISE: "the end is here"	19	ROST BREAK TRAGEDY: "Nobles"	14	STRANGER: "tune down"	10
THIS NEW DAWN: "the best above the answer"	12	PORTHADING: "the"	24	FAIR FROM KNOWN: "tune it"	18
NOOBER AT NINE: "with away"	0	THE CLEFATION: "I signed in an orange post"	20	STUNT MONKEY: "tune it"	46
MORAL HAZARD: "waste of my life"	8	LOWESTRO: "lockdown"	17	DANTE: "the mystery"	14
HOT FOR SCHOLARS: "in mission change"	27	SIMPLY WAITING: "tune with the sound"	16	PACING THROUGH: "tune the last"	10
SECRETARY: "keep your eyes on the ballroom"	5	STAR CLIMBER: "tune it"	36	UNKNOWN CITIZENS: "tune it"	34
ART OF KAILY: "in the new into, melody breakdown"	30	THE PASTLARE: "I could take you"	31	BY NOVEMBER: "I could take you"	20
HYDRAULIC SANDWICH: "in passion anxiety"	20	A BLINDING SILENCE: "memories and mistakes"	17	DRAWN BY THE SKY: "top the sky"	12
EMBER SKY: "in opening wings"	25	SEIRANA: "the blackrock image"	15	SELSUS: "tune of the city"	22
SALUTE THE DAWN: "tune it"	13	CAPS BERNARD: "baseball notebook v1"	12	SOBRAN: "eye patch"	14
RYAN'S SABBATH: "tune, the old"	14	IF FALLS DOWN: "in lightening during war"	11	RYAN GOLD: "tune down you"	10
REEDERSONG: "before to see"	12	CLIMBERAWASTED: "a plan behind deviants"	17	BENEFIT OF A DOUBT: "tune away"	36
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(a) Less social influence

Music Lab - Song Selection - Mozilla Firefox

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http://www.musiclab.columbia.edu/me/control/

	[Help] [Log off]	# of own songs
PARKER THEORY: "the last"		159
THE PASTLARE: "I'd death do as part (I don't)"		103
SELSUS: "tune of the city"		62
STUNT MONKEY: "tune out"		56
BY NOVEMBER: "I could take you"		55
FORTHWARDING: "tune"		49
HYDRAULIC SANDWICH: "in passion anxiety"		43
SILENT FILM: "all have to say"		40
UNDO: "While the world passes"		36
BENEFIT OF A DOUBT: "tune away"		32
A BLINDING SILENCE: "memories and mistakes"		27
MISS OCTOBER: "pink aggression"		26
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Date

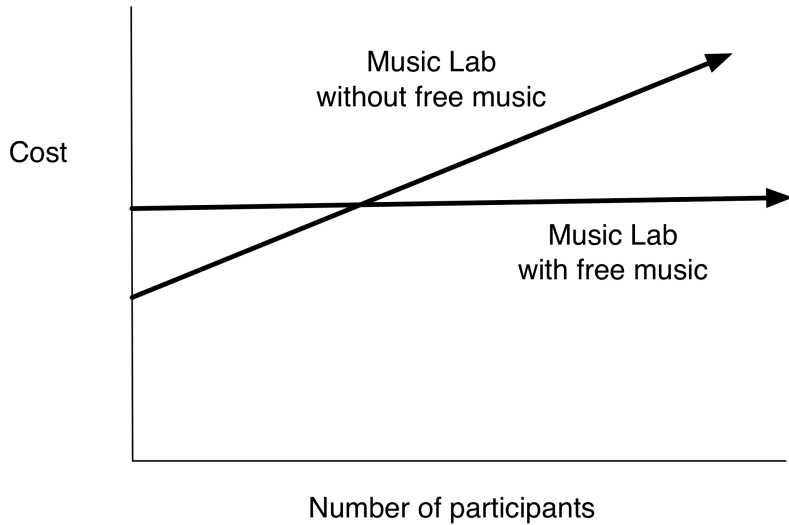
(b) More social influence

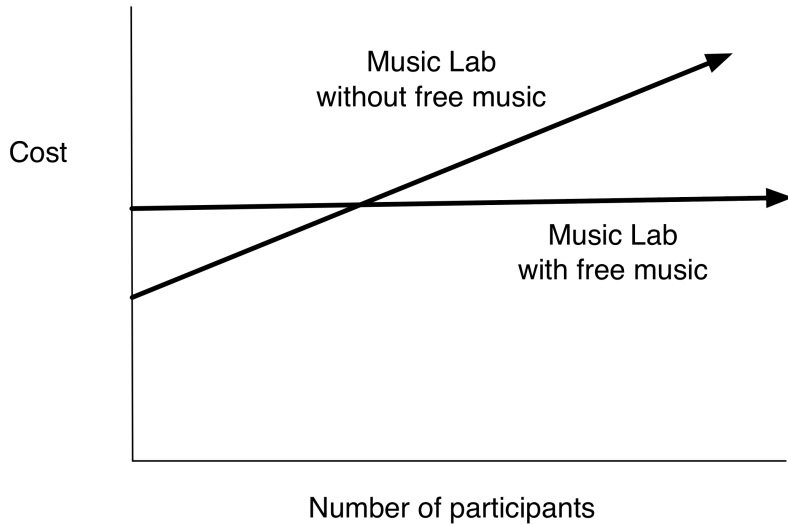
Results:

- ▶ More social influence leads to more unpredictability

Results:

- ▶ More social influence leads to more unpredictability
- ▶ You can predict failure but you can't predict success





Zero variable cost is a means not an end.

Behind the MusicLab?

Temporal Distance and Discrimination: An Audit Study in Academia

Katherine L. Milkman¹, Modupe Akinola², and Dolly Chugh³

¹The Wharton School, University of Pennsylvania; ²Columbia Business School, Columbia University; and

³Stern School of Business, New York University

<http://dx.doi.org/10.1177/0956797611434539>

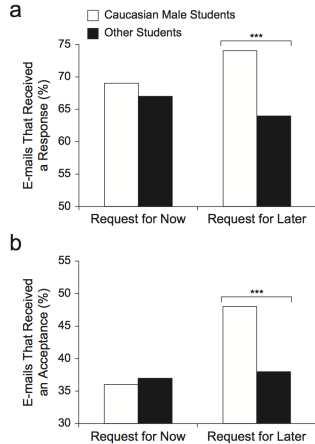
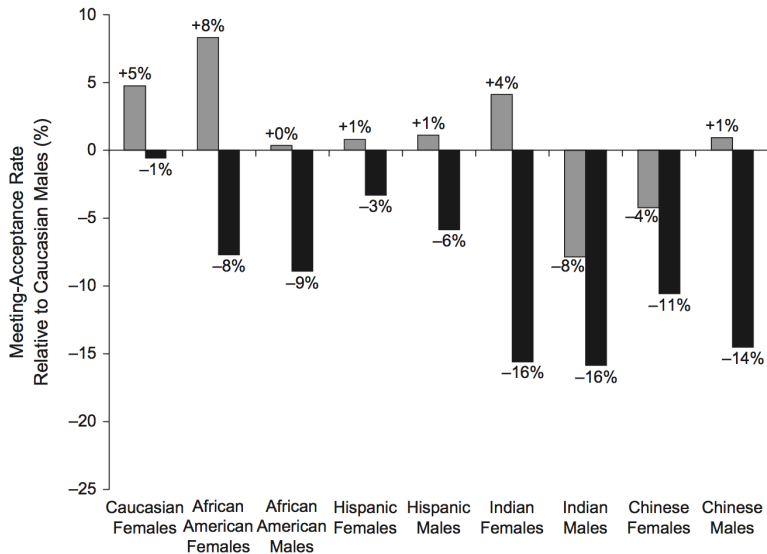


Fig. 1. Percentage of faculty members who (a) responded to and (b) agreed to meet with Caucasian male students and other (i.e., female and minority) students as a function of condition (now vs. later). All percentages are sample weighted. Asterisks indicate significant differences between the two groups of students (***) ($p < .001$).

b



What are the fixed and variable costs for this experiment?

Important difference between:
zero variable cost and zero variable cost to you