# What data can tell us about sex and relationships

Crowdsourcing and Human Computation Lecture 23

**Instructor: Chris Callison-Burch** 

**TA: Ellie Pavlick** 

Website: crowdsourcing-class.org

# Stanford Speed Dating Experiment

- Linguists at Stanford University got permission to record speed dates, and collect pre-date and post-date surveys
- Participants wore audio recorders on shoulder sashes
- Recorded 2 sides of the conversations for 1100 4-minute dates

### Pre-date survey

 Participants self-reported age, height and weight, hobbies and interests, dating background

(17) How interested are you in the following act	ivitie	es? (1	=very	uni	nteres	sted,	10=ve	ery inte
Playing sports/ athletics	1.	2	3	4	5	6	7	8
Watching sports	1	2	3	4	5	6	7	8
Body building/exercising	1	2	3	4	5	6	7	8
Dining out	1	2	3	4	5	6	7	8
Museums/galleries	1	2	3	4	5	6	7	8
Art	1	2	3	4	5	6	7	8
Hiking/camping	1	2	3	4	5	6	7	8
Video Gaming	1	2	3	4	5	6	7	8
Dancing/clubbing	1	2	3	4	5	6	7	8
Reading	1	2	3	4	5	6	7	8
Watching TV	1	2	3	4	5	6	7	8
Theater	1	2	3	4	5	6	7	8
Movies	1	2	3	4	5	6	7	8
Going to concerts	. 1	2	3	4	5	6	7	8

### Post-date survey

- Date perceptions and follow-up interest
- Conversational style and intention of their partners

(5) How often did the other person behave in the following ways on this "date"? (1=neve

They were <i>friendly</i>	never	1	2	3	4	5	6	7	8
They were flirtatious	never	1	2	3	4	5	6	7	8
They were awkward	never	1	2	3	4	5	6	7	8
They were assertive	never	1	2	3	4	5	6	7	8

### Speed date data

- 4-minute sound recording files from each recorder
- Each date was then transcribed
- Transcripts marked words, laughter, filled pauses, speaker overlap, and restarts
- Timestamped the beginning and end of each conversational turn
- Dates averaged 812 words (406 per speaker), taking an average of 93 turns

F: Well what about you, what are you passionate about?

M: Um, I am passionate about probably two things.

F: Uh-huh.

M: Well, many things, but two that come to mind straightaway. One is travel.

F: Okay.

M: I like see different parts of the world-

F: Uh-huh.

M: -experience lots of different things. And I also- recently, I've got into exercise, and, um, just different things, so riding a bike, and swimming, and running.

F: Oh, okay. Uh-huh.

M: I did my first track run on the weekend.

F: Oh, you did? How was it?

M: It was hard.

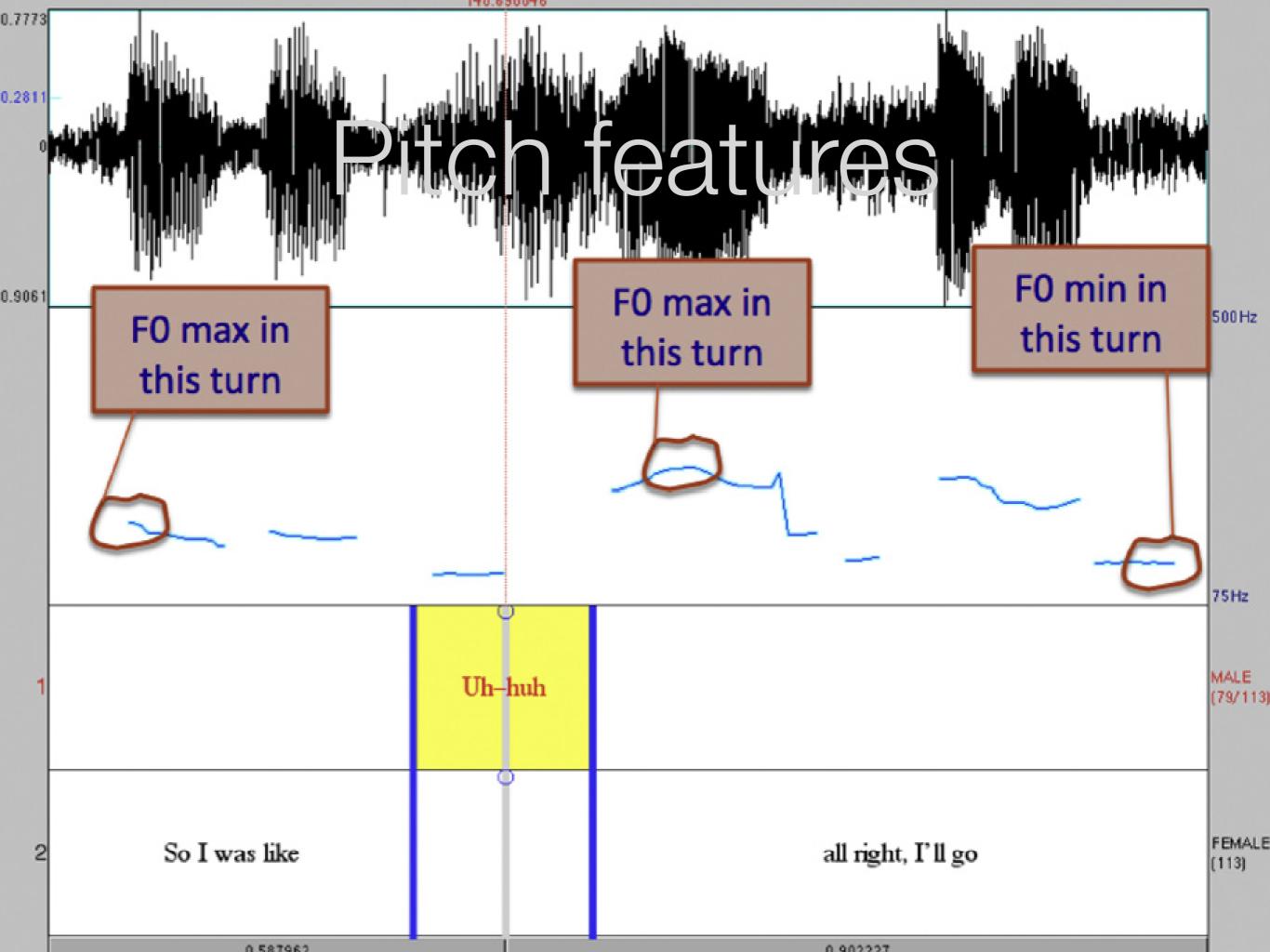
F: [laughter] Yeah, I heard it's really hard.

#### Prediction tasks

- Build a machine learning classifier to identify friendly, flirtatious, awkward, or assertive speakers
- Build separate classifiers for detecting when characteristics were self-reported or reported by partners
- Build separate classifiers for men and women
- 4 characteristics \* self-v-partner \* 2 sexes = 16 classifiers (e.g., male self-reported flirtation classifier)

#### Feature extraction

- Features of the speech files: pitch, intensity, turn duration and rate of speech (num words per second)
- Lexical features: how often they mentioned themselves or the other person, word categories like sex, love, hate, food, swearing
- Number of uh and ums, hedges, interruptions, laughters, agreements, questions, expressions of agreement, appreciation, sympathy
- Rate of accommodation (adopting the other person's word usage)



# Lexical Features

	I'd, I'll, I'm, I've, me, mine, my, myself
YOU	you, you'd, you'll, your, you're, yours, you've
SEX	sex, sexy, sexual, stripper, lover, kissed, kissing
LOVE	love, loved, loving, passion, passions, passionate
HATE	hate, hates, hated
SWEAR	suck*, hell*, crap*, shit*, screw*, damn*, heck,
NEG EMO	bad, weird, crazy, problem*, tough, awkward,
NEGATE	don't, not, no, didn't, never, haven't, can't,
FOOD	food, eat*, cook*, dinner, restaurant, coffee,
DRINK	party, bar*, drink*, wine*, beer*, drunk, alcohol*,
ACADEMIC	work*, program, PhD, research, professor*,

## Lexical Features

HEDGE	sort of, kind of, I guess, I think, a little, maybe, possibly, probably
META	speed date, flirt, event, dating, rating
LIKE	the discourse marker <b>like</b> (removing the verb like)
IMEAN	the discourse marker <b>I mean</b>
YOU KNOW	the discourse marker <b>you know</b>
UH	the filled pause <b>uh</b>
UM	the filled pause <b>um</b>

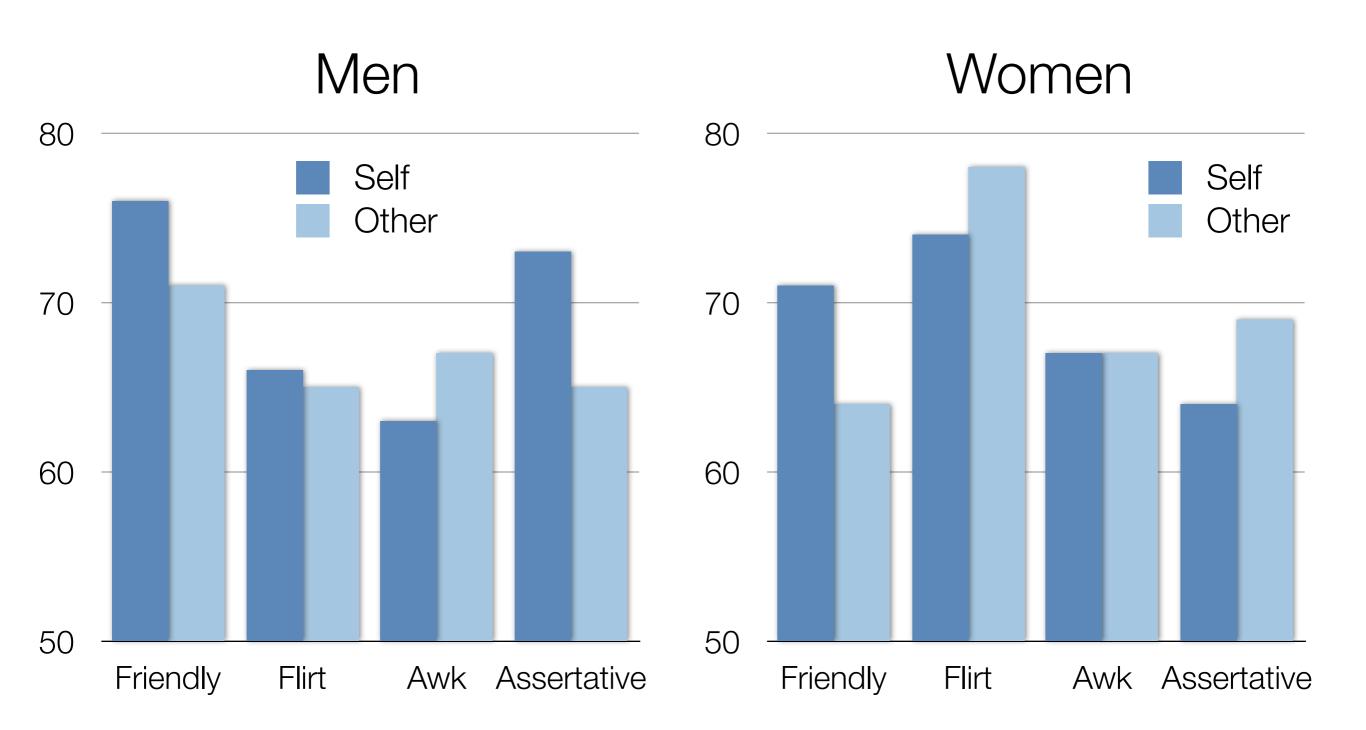
#### Discourse Features

TOTAL WORDS	total number of words in side
QUESTIONS	number of questions in side
CLARIFICATION	clarification question (Excuse me?)
INTERRUPTION	number turns one speaker interrupted the
LAUGH INITIAL	number of turn-initial or whole-turn laughter
LAUGH MEDIAL	number of turn-medial or turn-final laughter
RESTART	num disfluent restarts in conversation side
APPRECAITION	num appreciations (Wow, That's true, Great)
SYMPATHY	number of sympathetic negative assessments
AGREEMENT	num of agreements (That's true, For sure

#### Classification

- Trained a Support Vector Machine for each of the 16 experiments
- For training data, took top 10% of data as positive training examples and bottom 10% of data as negative data
- For example, for *self-reported male flirtation*, sort all 1000 dates by self-reported male flirtation score take top 100 and bottom 100
- Since training data was small, did 4 fold cross validation, 30x times w/random order

#### Classification Accuracy



FLIRT SELF		FLIRT OTHER	
s_academic	-0.00277	o_midlaugh	-0.00185
s_uh	-0.00237	o_question	-0.00165
o_academic	-0.00123	o_food	-0.00132
s_pitchvar	-0.00121	$s_a$ cademic	-0.00105
s_negate	-0.00111	o_imean	0.00109
o_uh	0.00117	o_negemo	0.00112
s_longturn	0.00121	s_you	0.00117
s_youknow	0.00125	o_meta	0.00124
o_sex	0.00141	o_drink	0.00134
s_varinten	0.00156	s_imean	0.00134
s_swear	0.00191	o_appr	0.00139
s_you	0.00195	<u>s_um</u>	0.00193
s_initlaugh	0.00200	$s_youknow$	0.00273
o_like	0.00206	s_question	0.00341
o_negemo	0.00213	o_longturn	0.00356
s_hate	0.00220		
o_love	0.00225		
s_imean	0.00231		
s_sympathy	0.00252		
<u>s_um</u>	0.00358		

#### **FEMALE**

FLIRT SELF		FLIRT OTHER	
o_i	-0.00129	s_question	-0.00210
o_like	-0.00125	o_loud	-0.00178
o_academic	-0.00124	s_negemo	-0.00121
o_loud	-0.00114	s_maxpitch	0.00130
o_uh	-0.00105	s_negate	0.00143
s_rateaccom	0.00111	s_ntri	0.00152
s_love	0.00116	s_um	0.00161
s_midlaugh	0.00157	s_i	0.0016
o_ntri	0.00159	o_funcaccom	0.00180
s_hedge	0.00204	s_longturn	0.00186
o_appr	0.00251	s_varinten	0.00188
s_negate	0.00261	o_varinten	0.00189
s_like	0.00270	o_midlaugh	0.00194
o_funcaccom	0.00298	o_meta	0.00201
s_longturn	0.00327	o_appr	0.00201
o_interrupt	0.00330	s_rate	0.00311
<u>S_i</u>	0.00370	<u>s_like</u>	0.00411
o_rate	0.00547	o_interrupt	0.00459
		o_question	0.00549
		<u>o_rate</u>	0.00588

# Linguistic v. nonlinguistic features

- How good are the linguistic features compared to non-linguistic features?
- Can we predict how well two people will hit it off just based on their appearance or on their shared interests, without observing their interactions?

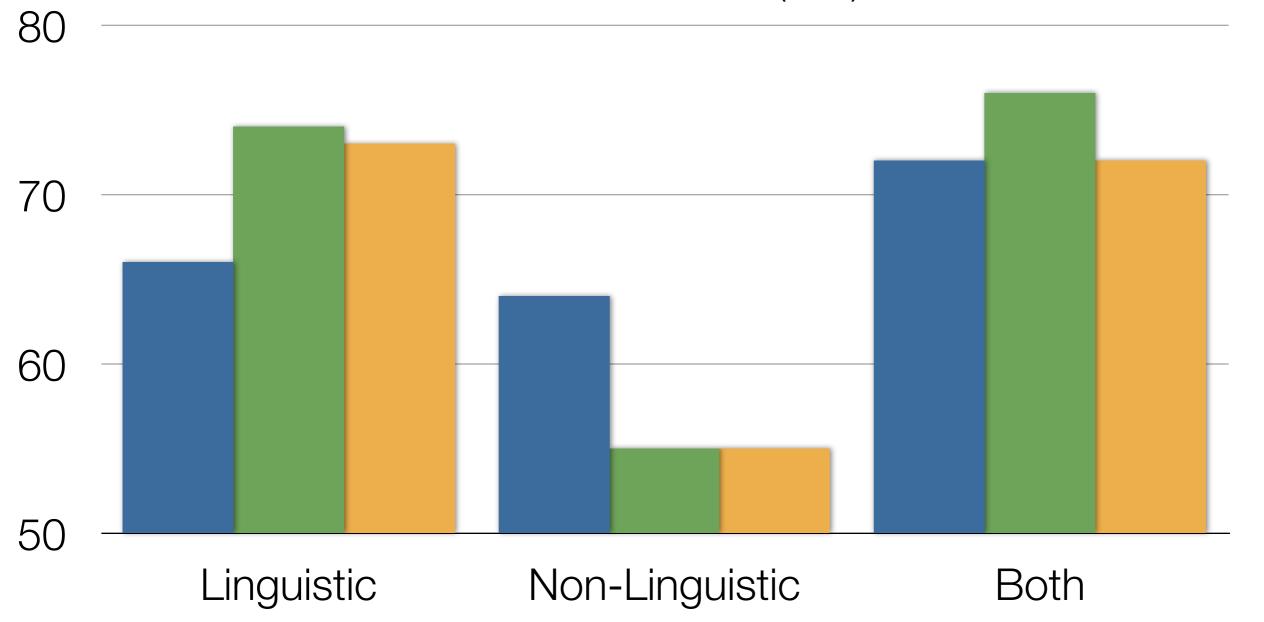
# Non-linguistic Features

ORDER	Order of the date (nth date the speaker ha participated in tonight)	
HEIGHT	The height of the speaker	
BMI	The body mass index of the speaker	
O-HEIGHT	The height of the interlocutor	
O-BMI	The BMI of the interlocutor	
AGE DIFF	The age difference between the pair	
INTEREST SIM	The interest similarity between the pair	

#### Classification Accuracy



- Female Flirt (self)
- Male Assert (self)



# What do you think?

- Do you think that the SVM's accuracy is better or worse than a person's accuracy at predicting whether someone is flirting with them?
- Do you think that 4 minutes of data is sufficient for making accurate predictions?
- Any methodological concerns?
- Could you use data to change your own dating strategies?

# Data-driven Sociological Studies

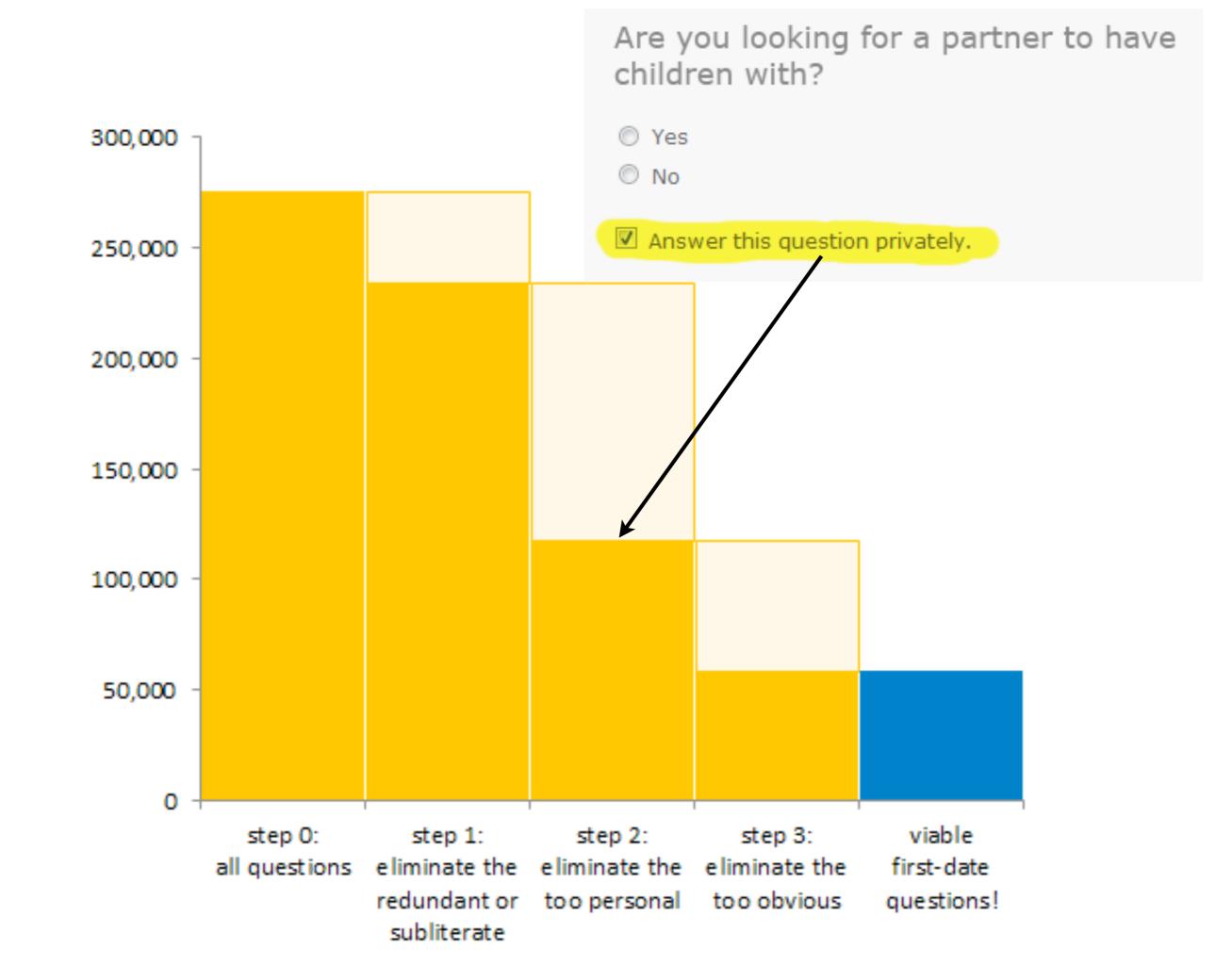
- 3.2 million OKCupid users
- Profile information: age, gender, sexual orientation, location, ethnicity, religion, level of education, income level, height, body type, whether you like kids/pets/ drinking/drugs, essays, profile pictures plus attractiveness ratings
- Database of 275,294 match questions
- 776 million answers to those questions

- What's more interesting to you right now? Love or Sex
- How willing are you to meet someone from OkCupid in person?
- Have you smoked a cigarette in the last 6 months?
- Could you date someone who does drugs?
- Would you strongly prefer to go out with someone of your own skin color / racial background?
- About how long do you want your next relationship to last?
- Would you consider sleeping with someone on the first date?
- Are you happy with your life?
- Rate your self-confidence
- How important is religion/God in your life?
- Would you prefer good things happened, or interesting things?
- Do you like horror movies?

Regardless of future plans, what's more interesting to you right now?	New
Sex	
○ Love	
Answer I'll accept	
Sex	
Love	
This question is	
○ Irrelevant	
A little important	
Somewhat important	
Very important	
Mandatory	
Answer this question privately.	
Explain your answer (optional)	

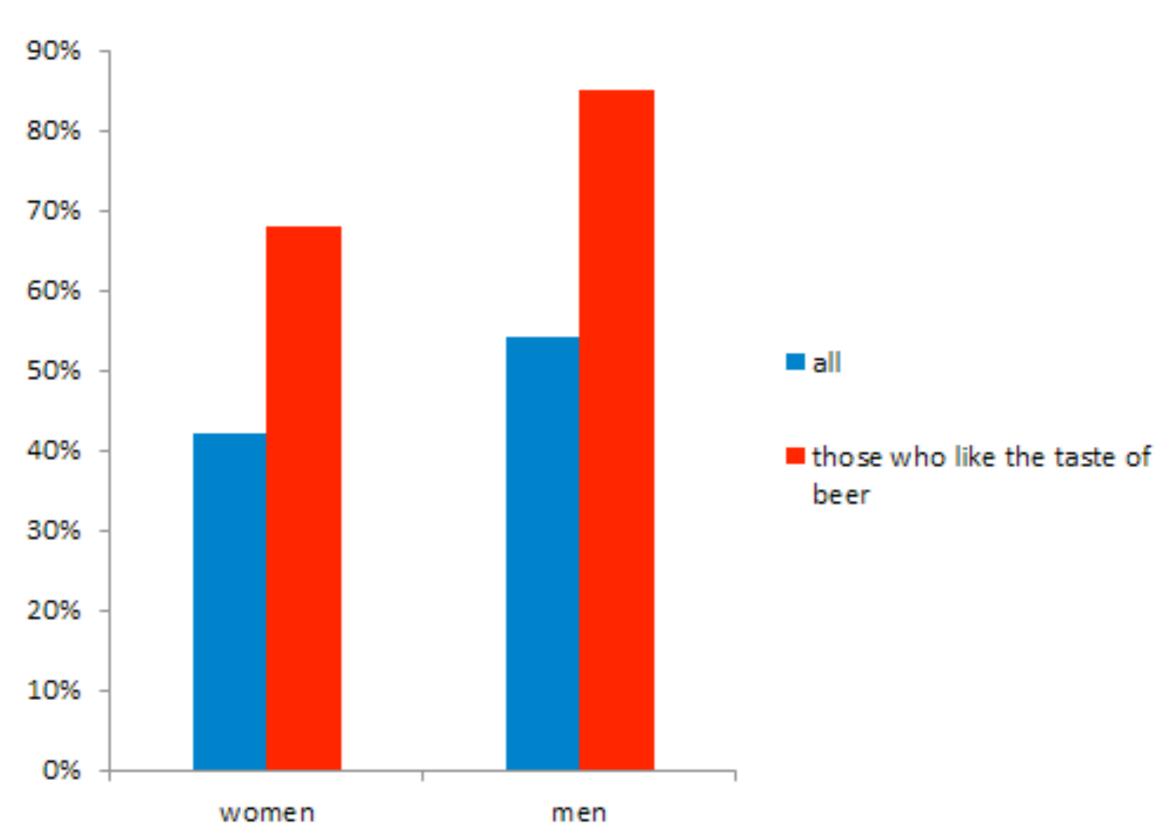
# The Best Questions on a First Date

- You would like to learn about your date, some important things that you would like to know are awkward to ask directly
- Find questions that correlate with what you want to know, but which people are more free about answering publicly



#### Would you consider sleeping with someone on the first date?

- % answering yes -

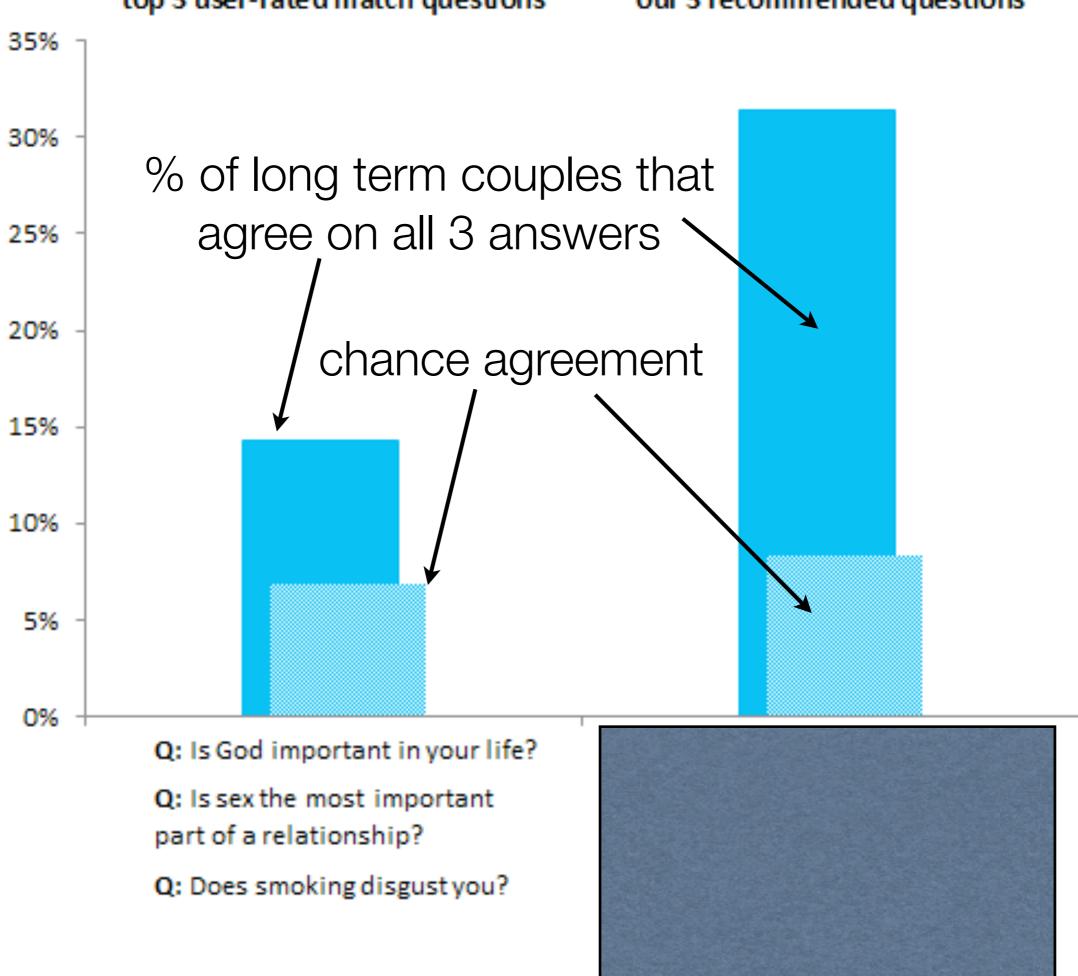


# Other questions to ask

predictive question	implied odds of first-date sex
Q: In a certain light, wouldn't nuclear war be exciting?	yes -> 83%
Q: Assuming you were in the position to do so, would you launch nuclear weapons under any circumstances?	yes -> 82%
Q: Could you imagine yourself killing someone?	yes -> 82%

#### LTRs

- If you're interested in a long term relationship, you can use this methodology too
- When someone deletes their OkCupid account, the option of giving a reason
- One is 'I met somebody on OkCupid,' they can report their significant other's username
- 34,000 such pairs exist



#### Politics

- If you want to know: Do my date and I have the same politics?
- Ask: Do you prefer the people in your life to be simple or complex?

2:1

likely to be
Liberal

people who prefer Simplicity are

people who prefer Simplicity are

2:1

likely to be
Conservative

#### Politics

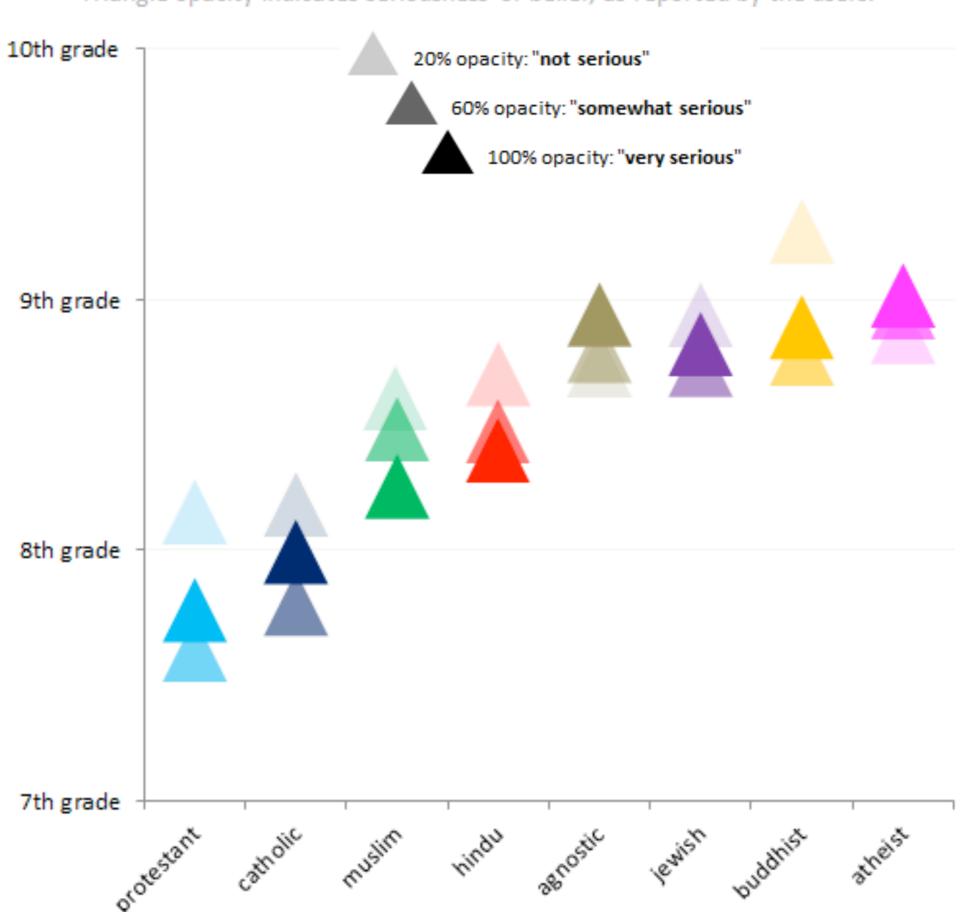
- People who prefer complexity are 65-70% likely to give the Liberal answer. Those who prefer simplicity in others are 65-70% likely to give the Conservative one:
- Should burning your country's flag be illegal?
- Should the death penalty be abolished?
- Should gay marriage be legal?
- Should Evolution and Creationism be taught side-by-side in schools?

# Religion

- If you want to know: Is my date religious?
- Ask: Do spelling and grammar mistakes annoy you?
- If your date is okay with bad grammar and spelling then the odds of him or her being at least moderately religious is slightly better than 2:1

#### Religion & Writing Proficiency Level

Triangle opacity indicates seriousness of belief, as reported by the users.



# Ethnicity

- What is it that makes a culture unique? How are whites, blacks, Asians, or whoever different from everybody else? What tastes, interests, and concepts define an ethnic group?
- Analyzed 500,000+ profiles with self reported race, looking at 280M words worth of profile essays
- Analyze words that are statistically distinct from other racial groups (everyone likes sushi, only Asians list sashimi).

#### White people

men

women

tom clancy van halen golfing harley davidson ghostbusters phish the big lebowski soundgarden brew boating nofx groundhog day hockey jeep blazing saddles the red sox the dropkick murphys megadeth grilling ccr robert heinlein boats skiing zappa nascar motorcycles software dark tower the hitchhiker's guide to the galaxy breaking bad band of brothers burn notice coen brothers michael crichton bad religion tenacious d mostly rock i'm a country boy building things queens of the stone age mountain biking i can fix anything the offspring a few beers apocalypse now lock, stock, and two smoking barrels hunting and fishing world war z most sports

the red sox jodi picoult boating nascar mascara ireland nicholas sparks horseback riding **bonfires** flea markets a country girl nora ephron waitress ray lamontagne i'm blond yankees kenny chesney decorating getting dressed up skiing when harry met sally baths my red hair horses summertime wine dmb historical fiction cookbooks flip-flops my girlfriends the time traveler's wife country music diet coke dirty dancing coffee thunderstorms midwest tim mcgraw new recipes patricia cornwell mom carrie underwood nursing school eat pray love yoga pilates my toes animal lover baking

### Black people

men soul food i am cool **espn** playing basketball menace to society tall, dark, and handsome god-fearing mos def rapping lupe fiasco nas gucci mane calm the roots kanye west basketball boondocks holla **u are** nfl **tryna** trey songz ladies alicia keys a tribe called quest jay z outkast african wwe chillin' more money denzel if ur god and family xbox 360 playstation jamaican making music tryin' to a good woman my god talib kweli **busta rhymes** football **bible** no kids hitch stationed laid-back guy 2pac

women soul food the color purple god-fearing gospel alicia keys neo soul **lip gloss** the coldest winter ever zane the lord soca my god tyler perry the bluest eye god's plan african musiq hip-hop r&b maya angelou my church coming to america bible jamaican maxwell basketball luther vandross christ india arie sexv god and family trey songz my man pretty woman god's love self-help justin timberlake church shopping romance novels i attend in nursing singing and dancing writing poetry to church faith in god very down law & order blessings

#### Asians

men taiwan i'm a simple guy korea asians singapore pho korean software developer mandarin playing basketball **noodle** vietnam cricket freakonomics mechanical engineer the rock trying out new things a foodie an engineer tom clancy calvin & hobbes bay area muay thai surfing the net tennis badminton gadgets entourage asian food the bay sashimi l.a. confidential entrepreneur analyst snowboarding swingers malcolm gladwell finance china accountant vancouver pursuing my investing gladiator electrical engineering cantonese investment currently studying different cultures computer games

women **COZ** chocolates i'm a simple girl a foodie **surfing the net** love story alicia keys serendipity asian food romantic comedy **different places** the xx tuesday's with morrie the time traveler's wife bossa nova sashimi jolly different cultures china music jason mraz noodle food network cheerful good heart trying out new things **petite** michael buble my cellphone r & b my passport malcolm gladwell **norah jones** anthony bourdain a walk to remember gossip girl badminton slumdog millionaire pop rock food new recipes asian cooking and baking sleepless in seattle lip balm pho cookbooks

#### Indians

men

### cricket hindi

#### a software engineer

shantaram india idiots indian food bollywood veg i'm a simple guy mba every moment a foodie cuisines an engineer bhangra gandhi the kite runner tamil finance freakonomics the prestige developer different cultures exams slumdog millionaire loving guy happy go lucky soft rock the namesake red hot chili peppers investment serendipity tennis shahrukh khan trading ayn rand explore new things the alchemist analyst kumar innovative seinfeld maths r.e.m. entourage making friends consultant entrepreneur

women

#### bhangra the namesake shantaram

a thousand splendid suns **bollywood** residency the kite runner jhumpa lahiri interpreter indian food my passport my couch thai food slumdog millionaire i heart a foodie spices monsoon wedding bridget jones vegetarian frnds new yorker my parents neighborhoods social justice different cultures physician soca when harry met sally be silly norah jones paradiso anna karenina tapas the alchemist funny dance floor my mom's exotic destinations the unbearable lightness of being discovering new things gandhi dark chocolate analyst jane austen coffee great conversation vivacious salman rushdie god of small things

### Middle Easterners

men

women

arabia studying arabic iran i'm a simple guy arab egypt tel aviv arabian lebanese **persian** mechanical engineering the soprano turkish my physique cairo israel squash dubai faculty maths khalil electronic music lounges groundhog day a good heart nickelback soccer cultured gladiator engineer trading investing playstation finance accountant electrical engineering richard dawkins palestinian the kite runner different cultures friends discovering new things i am cool be loved work forrest gump seafood very funny

the net

different cultures petite my friends scarves the kite runner cat power big eyes new wave vogue nina simone the unbearable lightness of being

baudelaire **sexier** alicia keys bagels manu chao impromptu fireplace eat pray love elizabeth gilbert hairstylist coffee chocolate injustice a thousand splendid suns girlfriends innocence persepolis jewish aesthetics i love nature grape leaves strong darjeeling M.F.A. egypt exhibit tolstoy buddhism curly hair damien rice archery

political science quirky

#### Match % By Race

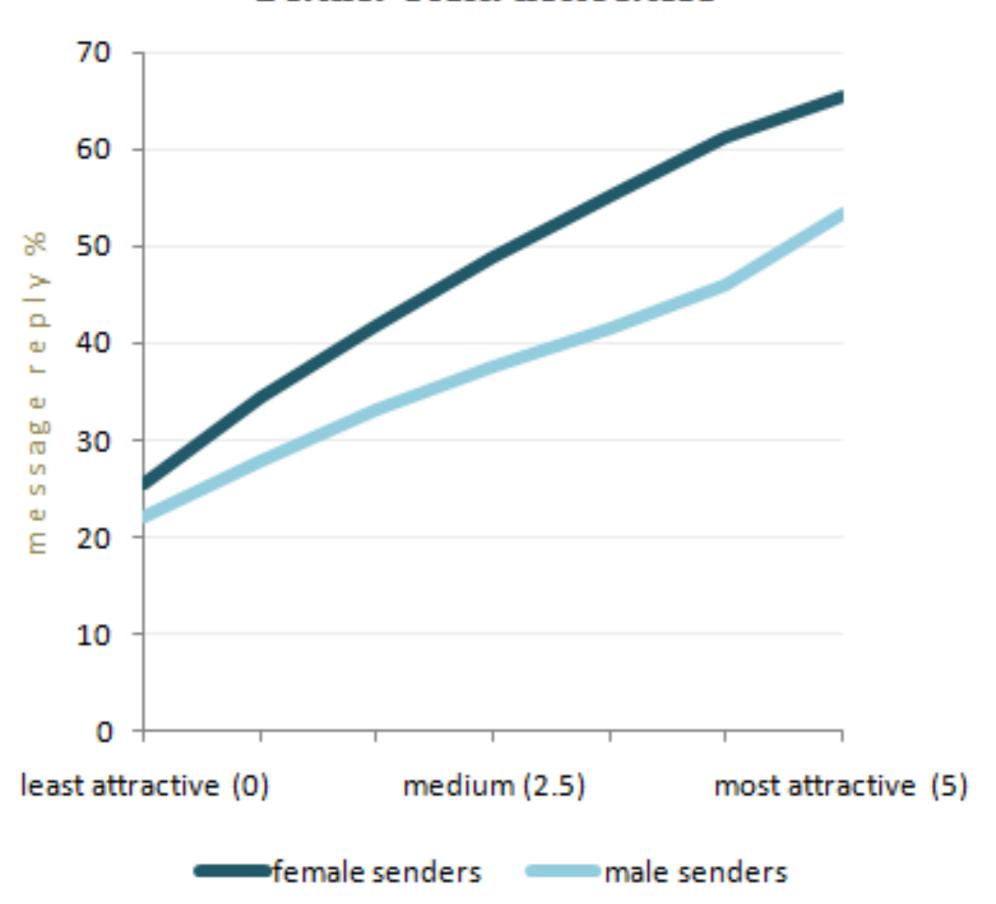
	Asian. Fez	Black Fere	Hispanie.	Indian-fe male	Jew .	Nathe A. Temale	Other Fe	icls,	White for Semale	, alle
	18/2	8/90	¥200°	,pul	Nio	Natu	ý, O	d d	N.	
Asian-male	59	60	59	60	60	60	60	61	61	60.5
Black-male	58	59	58	57	56	59	58	56	59	58.7
Hispanic/Latin-male	58	60	59	60	60	60	60	59	60	59.9
Indian-male	57	59	58	57	58	59	57	58	59	58.8
Middle Eastern-male	58	60	58	56	58	58	58	57	60	59.1
Native American-male	58	59	60	59	61	60	59	59	61	60.3
Other-male	59	59	60	58	60	60	59	59	60	60.2
Pacific Islander-male	58	61	59	61	56	60	57	59	60	60.0
White-male	59	60	60	60	61	61	61	60	62	61.6
	59.1	60.0	60.0	59.8	60.7	60.7	60.3	59.8	61.5	60.3

#### Reply Rate By Race male sender

				, Mal	ē,	Native American Female			White Female Female	
	.0	alema,	aleu,	Latin F	emale :	dste.	merican.	elews		emale.
	Asian . E.	Black Enale	Hispanie	Indian . Temal	Middle	Nather	Other Te	Pacifics	White E	•
Asian - Male	22	34	22	18	27	31	30	23	21	22.2
Black - Male	17	28	19	21	21	27	24	25	21	21.7
Hispanic/Latin - Male	20	31	24	25	25	29	27	24	22	23.1
Indian - Male	20	34	19	18	23	27	28	24	20	20.8
Middle Eastern - Male	26	37	23	24	23	36	29	28	25	25.7
Native American - Male	26	34	26	27	32	35	32	29	27	27.8
Other - Male	25	32	26	21	23	34	32	22	26	26.8
Pacific Islander - Male	21	39	21	33	32	32	35	30	23	24.6
White - Male	29	38	30	30	28	34	33	29	29	29.2
	25.7	244	27.4	25.4	27.0	22.0	24.4	27.0	27.2	27.5

25.7 34.1 27.1 25.1 27.0 33.0 31.4 27.0 27.3 27.6

#### Message Reply Rates Earned vs. Sender's Attractiveness



#### Reply Rates By Race female sender

				Male		Male	Mal	Z F	Male	,
	4	9/8	% .S	(Jaci)	986	45. A.	nerica)	9/8/	100 E	%
	Asian .	8/9CK . M.	Hispanie.	Indian Latin	Middle	Nathe Astern Male	Other merk	Pacific	White A Male	
Asian - Female	48	55	49	50	53	49	50	46	41	43.7
Black - Female	31	37	36	37	40	41	41	32	32	34.3
Hispanic/Latin - Female	51	46	48	45	50	45	48	48	40	42.5
Indian - Female	51	51	43	55	51	45	36	44	40	42.7
Middle Eastern - Female	51	55	54	63	56	63	52	48	47	49.5
Native American - Female	45	50	47	47	47	44	47	52	40	42.3
Other - Female	52	52	43	54	52	51	47	50	42	44.4
Pacific Islander - Female	51	57	49	35	60	53	50	46	44	46.0
White - Female	48	51	47	48	49	48	48	47	41	42.1
	47.3	46.9	46.4	48.2	49.7	47.3	47.5	46.2	40.5	42.0

## Do you think interracial marriage a bad idea?

	Yes	No	Yes %	No %
Females	8,432	128,367	6%	94%
Males	15,054	225,346	6%	94%
Whites	20,458	262,708	7%	93%
Non-Whites	3,028	91,005	3%	97%
Everyone	23,486	353,713	6%	94%

# Would you strongly prefer to date someone of your own racial background?

	Yes	No	Yes %	No %
Females	177,544	210,597	46%	54%
Males	216,491	422,211	34%	66%
Whites	337,955	410,324	45%	55%
Non-Whites	56,080	222,484	20%	80%
Everyone	394,035	632,808	38%	62%

#### Match % By Religion

		emale .	emale	Female	lemale.	r. female	ele.	emale.	emale
	48nostic	Atherst Female	Buddhiss	Catholic Female	Potesta	Hindu. F. Fen.	Muslin, ale	Jewish, remale	
Agnostic - male	69	69	65	61	59	61	53	68	63.7
Atheist - male	70	70	65	60	57	65	52	68	62.6
Buddhist - male	66	66	64	59	57	59	57	66	61.3
Catholic - male	61	59	59	61	61	61	57	62	60.6
Protestant - male	59	56	57	61	61	59	57	60	59.9
Hindu - male	56	57	55	57	55	52	54	55	55.8
Muslim - male	49	47	49	53	53	53	59	48	51.2
Jewish - male	68	68	64	61	60	62	60	68	63.4
	64.2	63.1	61.4	60.6	59.6	60.7	55.1	63.9	60.3

#### Match % By Religious Attitude

" (aughin	Not 700 out It's	Somewh Serious Abour	"Very Se, serious Ab, Te, Tenale	Jeway 16" Le male
67	63	62	58	62.7
63	63	62	59	61.9
62	62	61	59	61.1
60	60	59	58	59.3
63.3	62.2	61.1	58.5	60.3

"Laughing About It" - male

"Not Too Serious About It" - male

"Somewhat Serious About It" - male

"Very Serious About It" - male

## Straight People men women

band of brothers poker cars my boat saving private ryan hunting fishing my buddies golf sports the right woman ping pong a few beers engineering **rock** working out **playing pool** burn notice a country boy law enforcement can fix anything breaking bad tom clancy computers building thing tall dark and handsome apocalypse now coen brothers queens of the stone age full metal jacket guitar van halen my band taxi driver ufc

my girlfriends lip gloss **pretty woman** nicholas sparks dressed up a country girl wine love stories **medical field** eat pray love new recipes yoga independent my passport **my couch** romance novels nursing school close with my mom in nursing flip flops in education jane austen **dirty dancing** high heels my church baking reading horseback riding self-sufficient laughing mr. right i love children country music gone with the wind jane eyre

#### Gay People men the devil wears prada britney spears mean girls kelly clarkson Word the color purple project runway drop dead gorgeous running with scissors m.i.a.

imogen heap **a boyfriend** lily allen lady gaga the theater katy perry buffy the vampire slayer **tori amos** joni mitchell owl city the right guy david sedaris american idol **harry potter** angels in america **modern family** the perks of being a wallflower came out maroon 5 mr. right gossip girl moulin rouge x men **six feet under** the theatre justin timberlake nina simone black eyed peas michael buble ella fitzgerald sufjan stevens all american rejects the xx final fantasy the club rocky horror picture show cuddling panic at the disco kill bill jason mraz **fiona apple** 

## tegan and sara

#### ani difranco piercings

the color purple social justice cat power a girlfriend running with scissors the perks of being a wallflower buffy the vampire slayer my girl harold and maude law & order svu tori amos writing poetry rilo kiley janis joplin bitch if ur imogen heap my animals the used cuddling damien rice drop dead gorgeous came out my puppy mean girls lily allen tea obsession thexx favorite color rocky horror picture show finding nemo katy perry listening the giver beauty friends

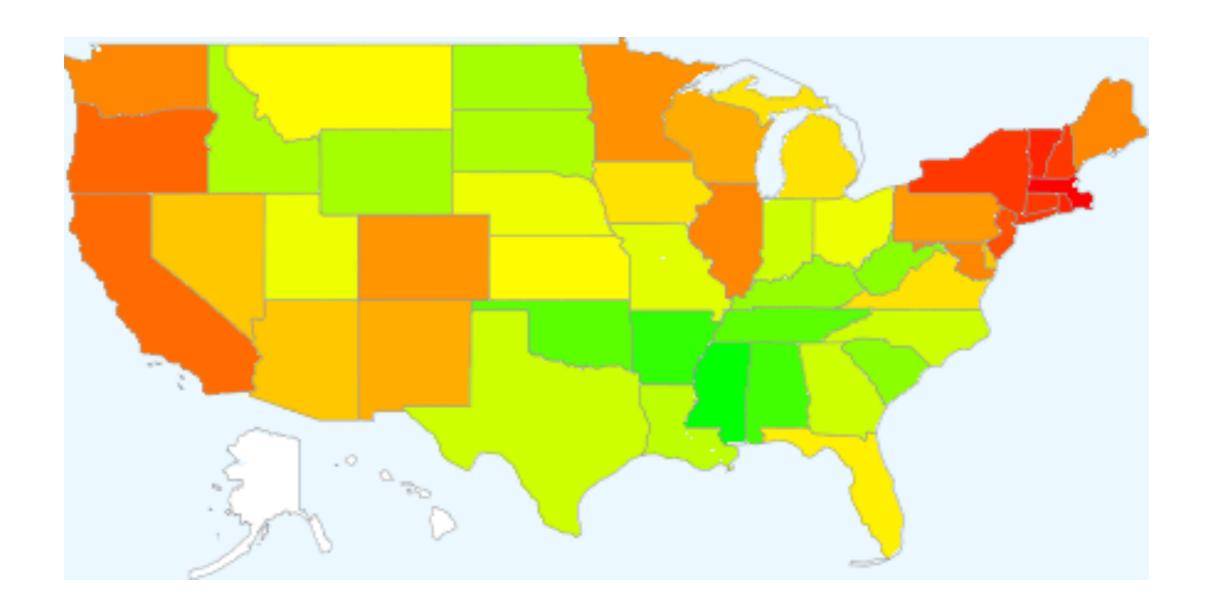
anned by the hell assemumentee on helly dealers levely house

## Misconceptions about Gay People

- Gay people more promiscuous that straight people
- Gay people want to convert straight people
- Gay people shouldn't be allowed to teach in our schools



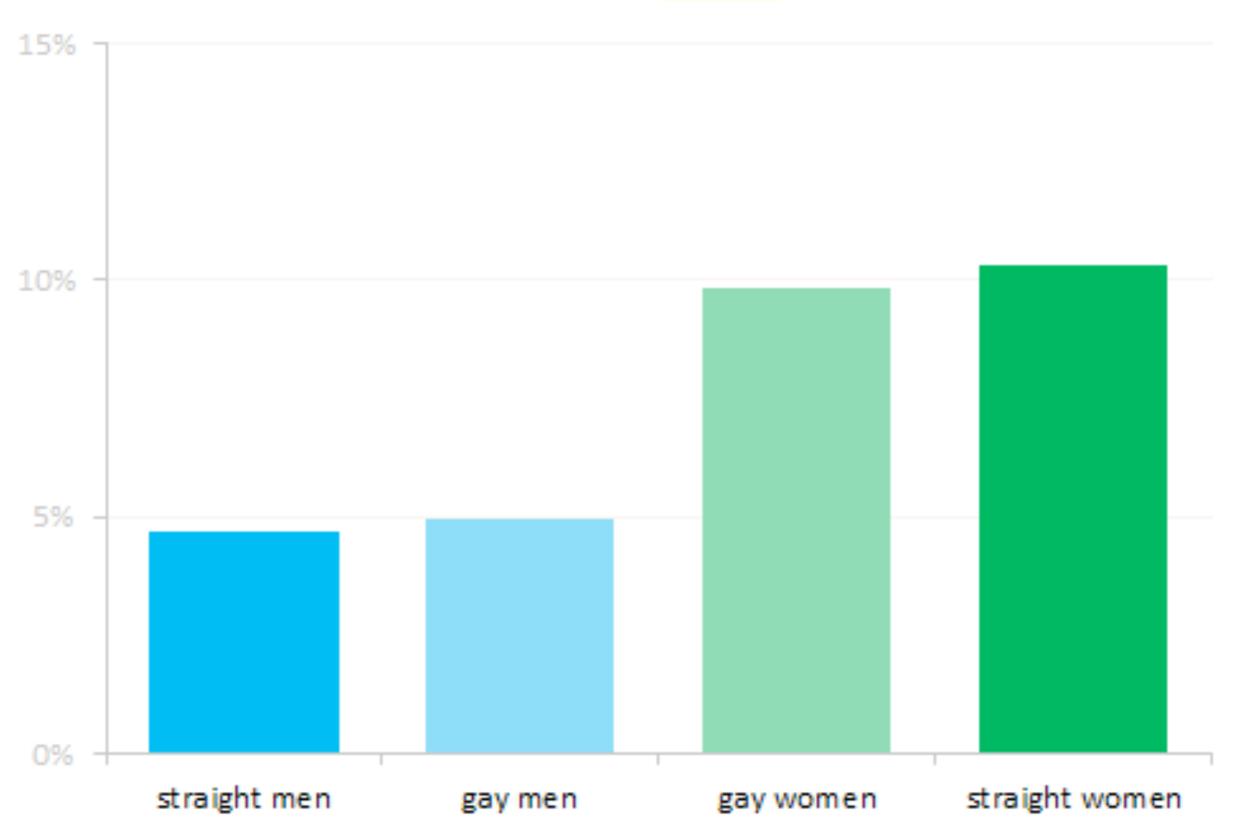
## Is homosexuality a sin?



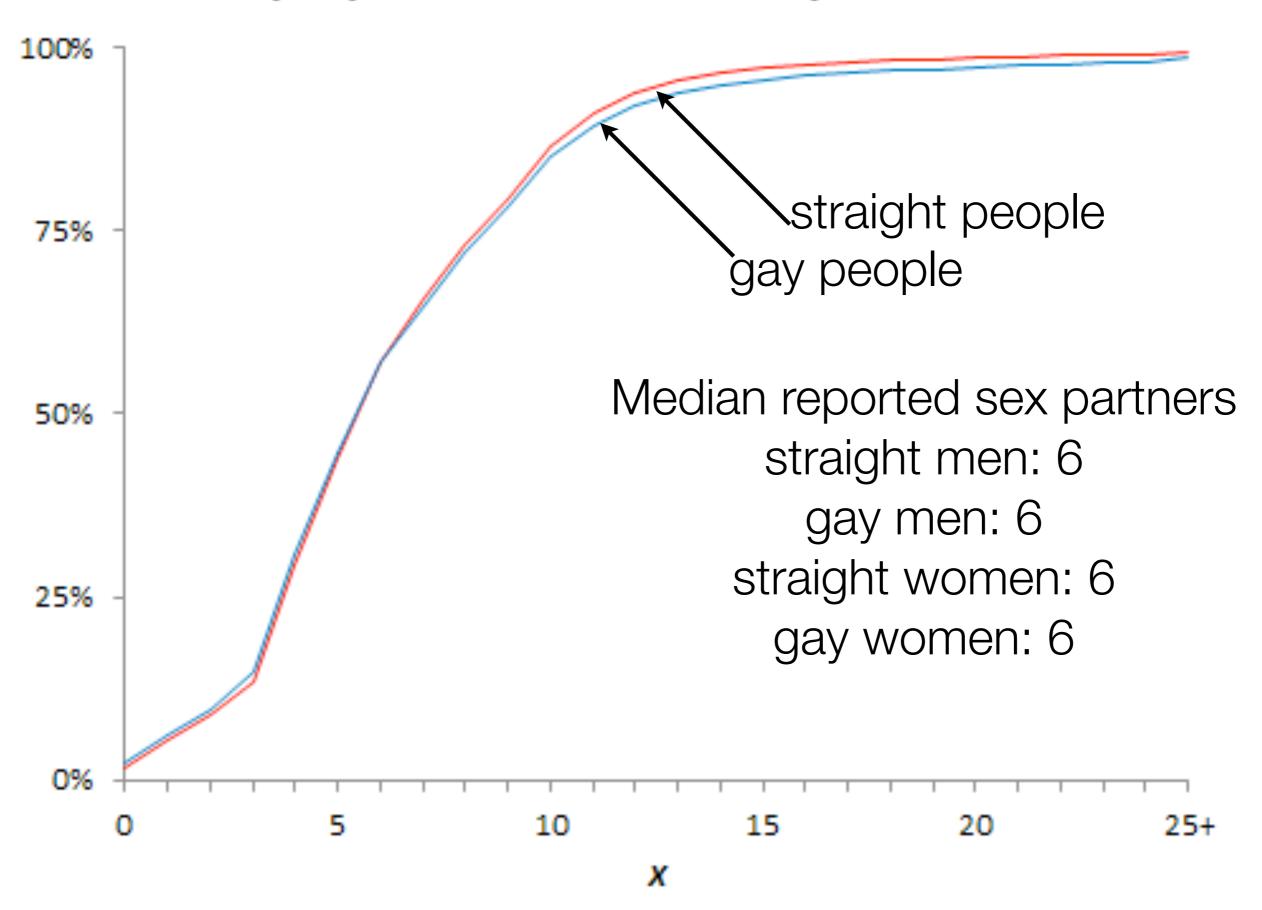
YES

#### Which is bigger: the earth or the sun?

% answering 'the earth'



#### people with X or fewer sex partners

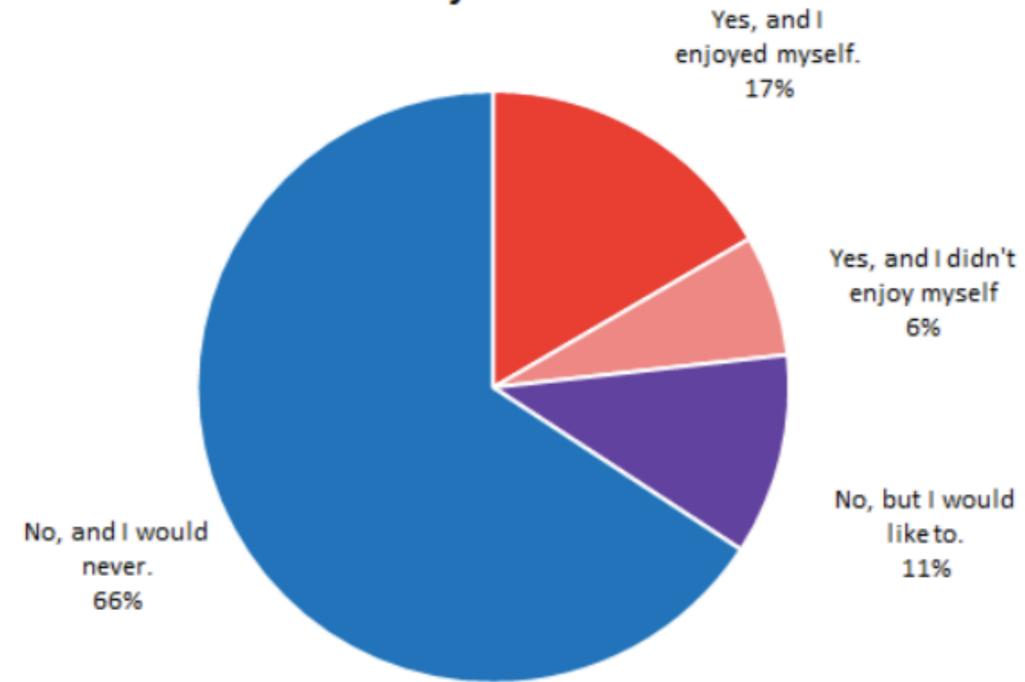


## Gay people looking at straight profiles

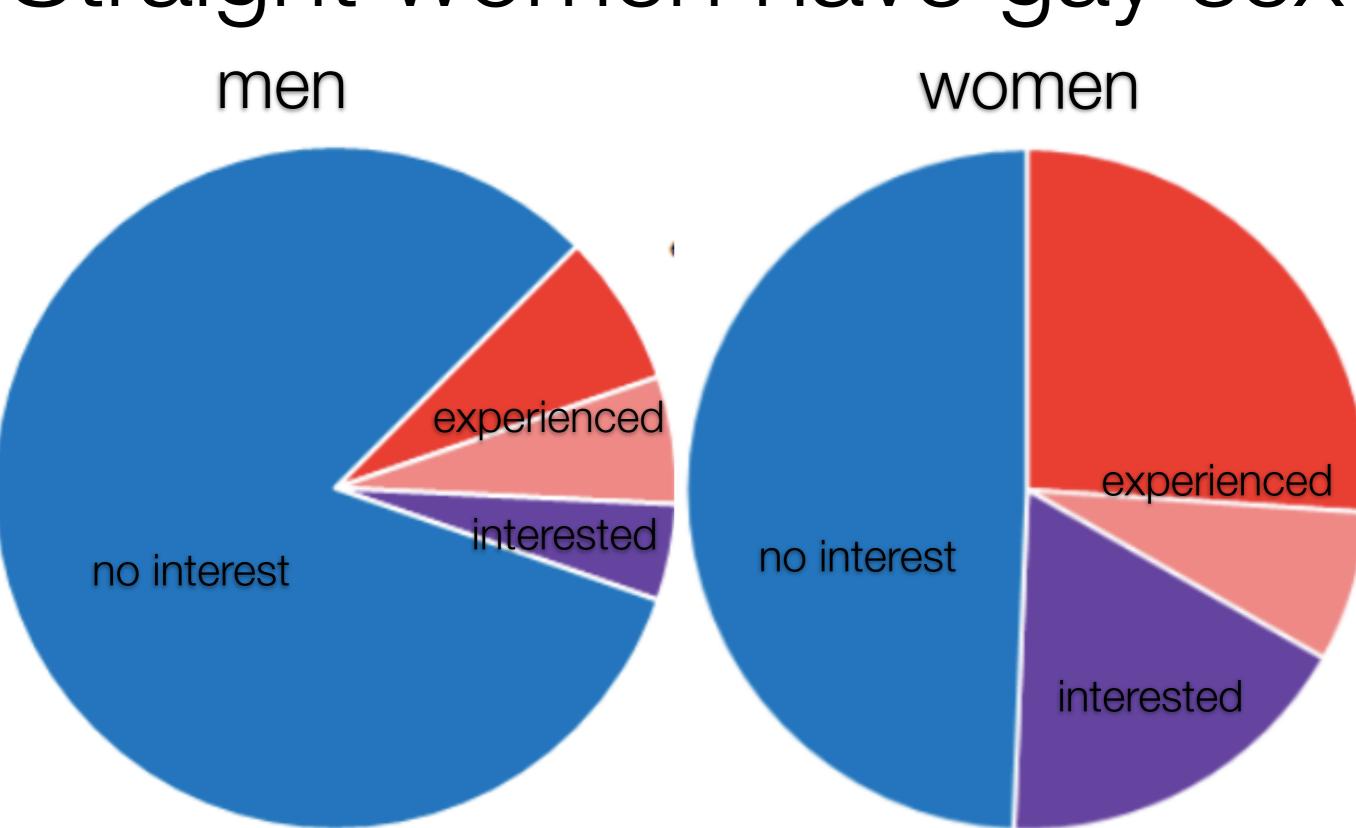
- Only 0.6% of gay men have ever searched for straight matches.
- Only 0.1% of lesbians have ever searched for straight matches.
- Only 0.13% of straight people's profile visitors are gay.

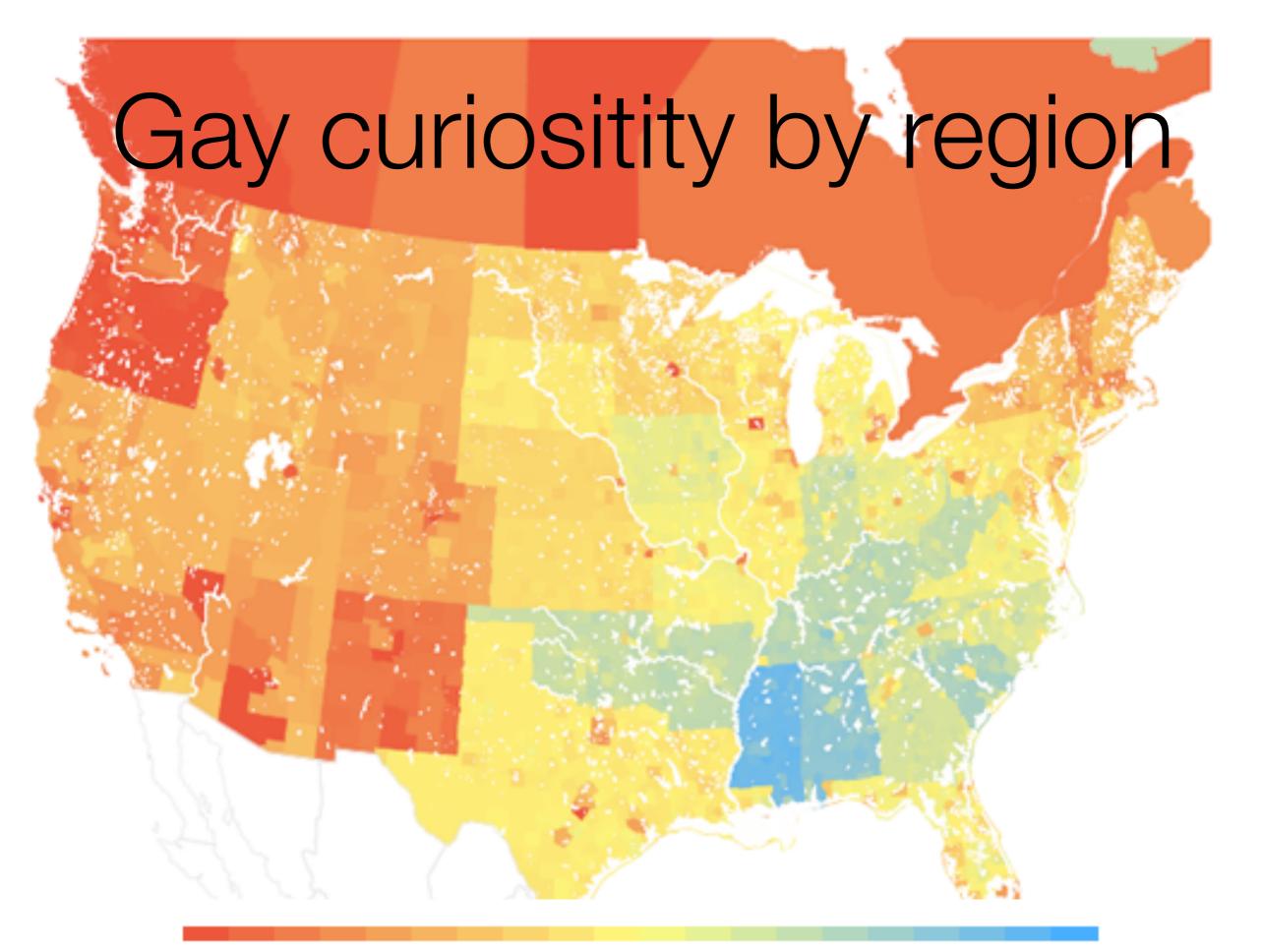
## Straight people have gay sex

Have you ever had a sexual encounter with someone of the same sex?



## Straight women have gay sex





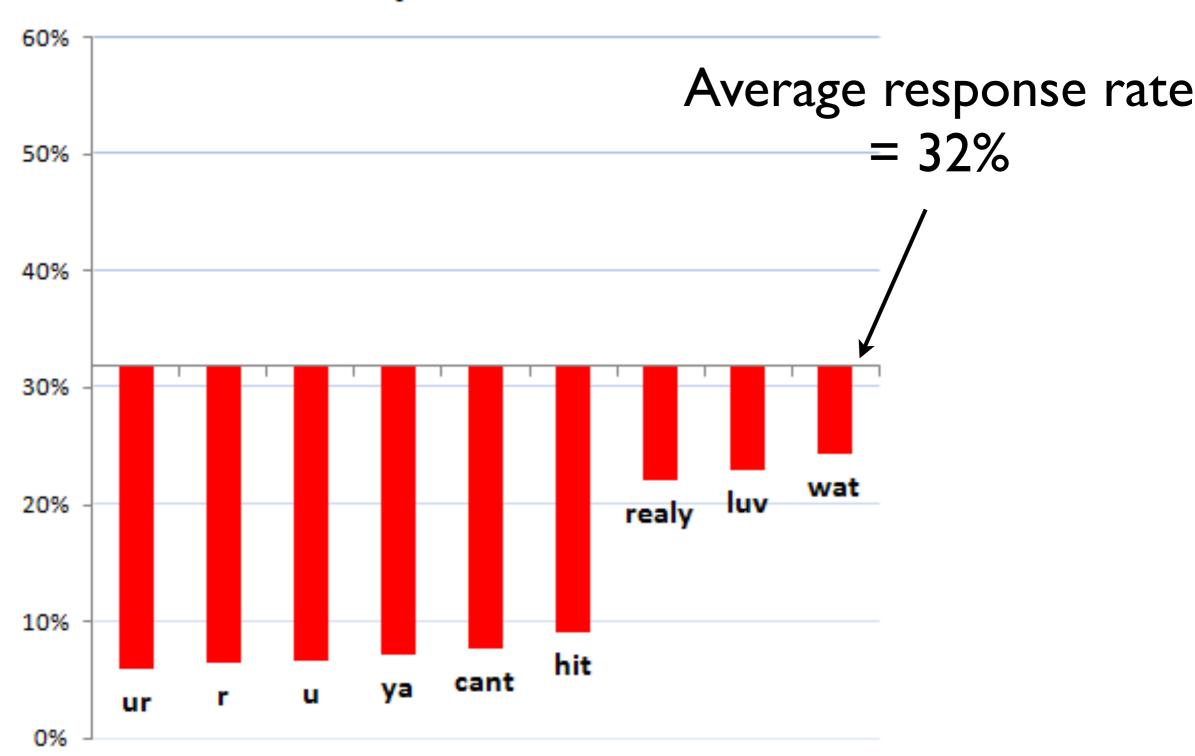
more gay curious less gay curious

## How to increase your chances

- Data analysis can help determine what strategies work best for eliciting a reply
- A/B testing for pickup-lines?

### Be Literate

#### netspeak = fail

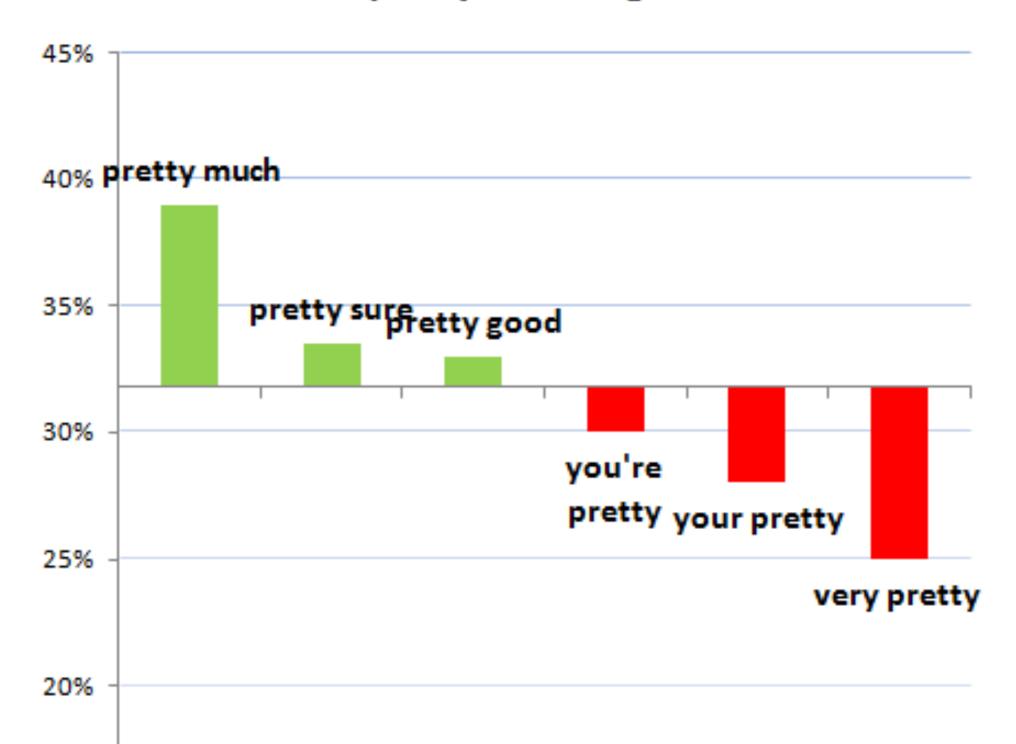


## Avoid physical complements



## Avoid physical complements

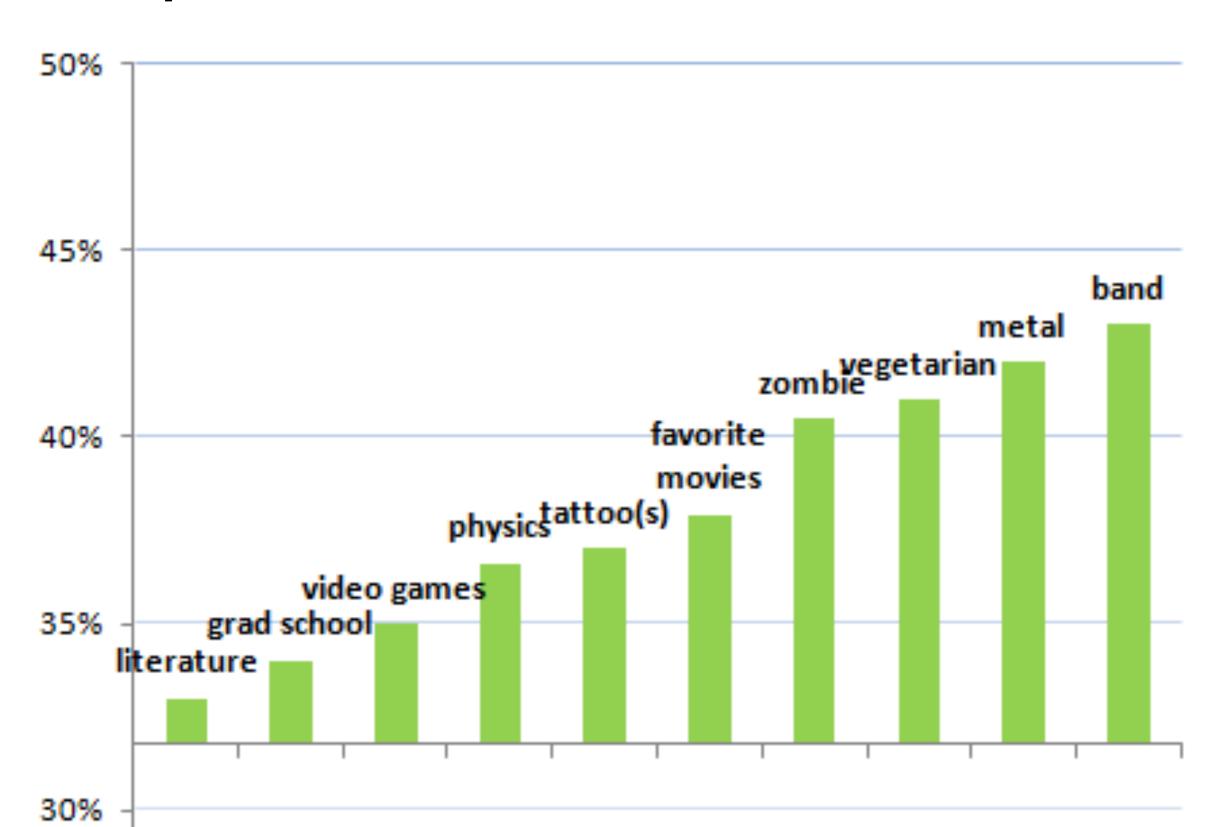
#### pretty revealing



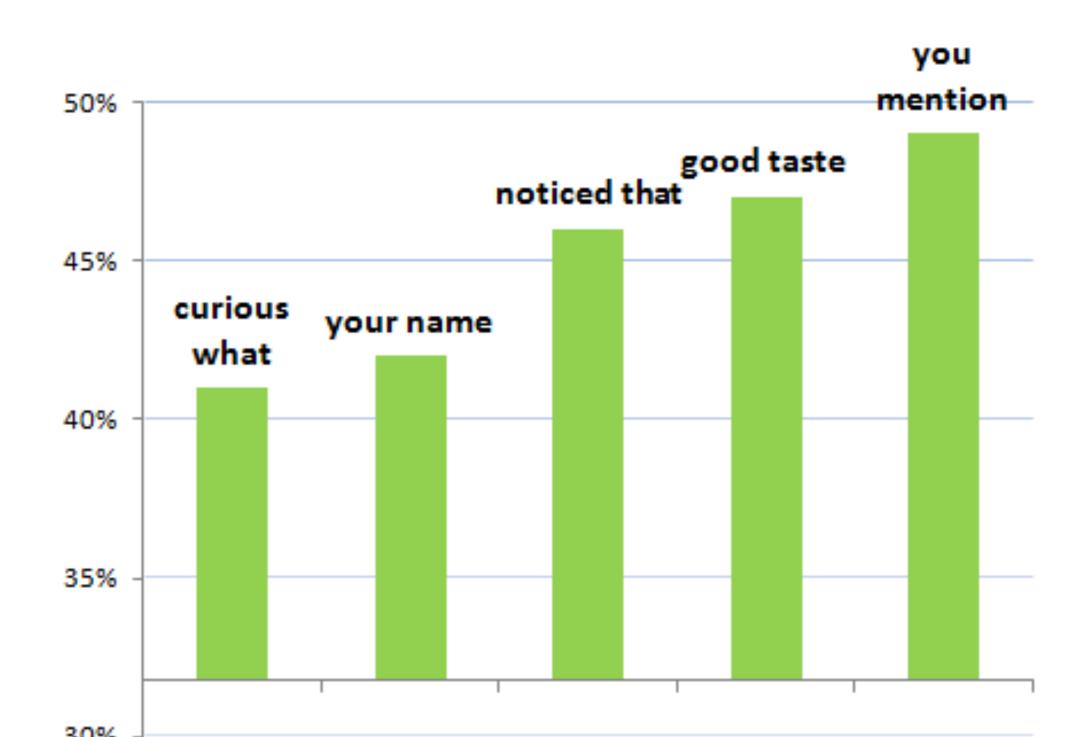
## Use Unusual Greetings



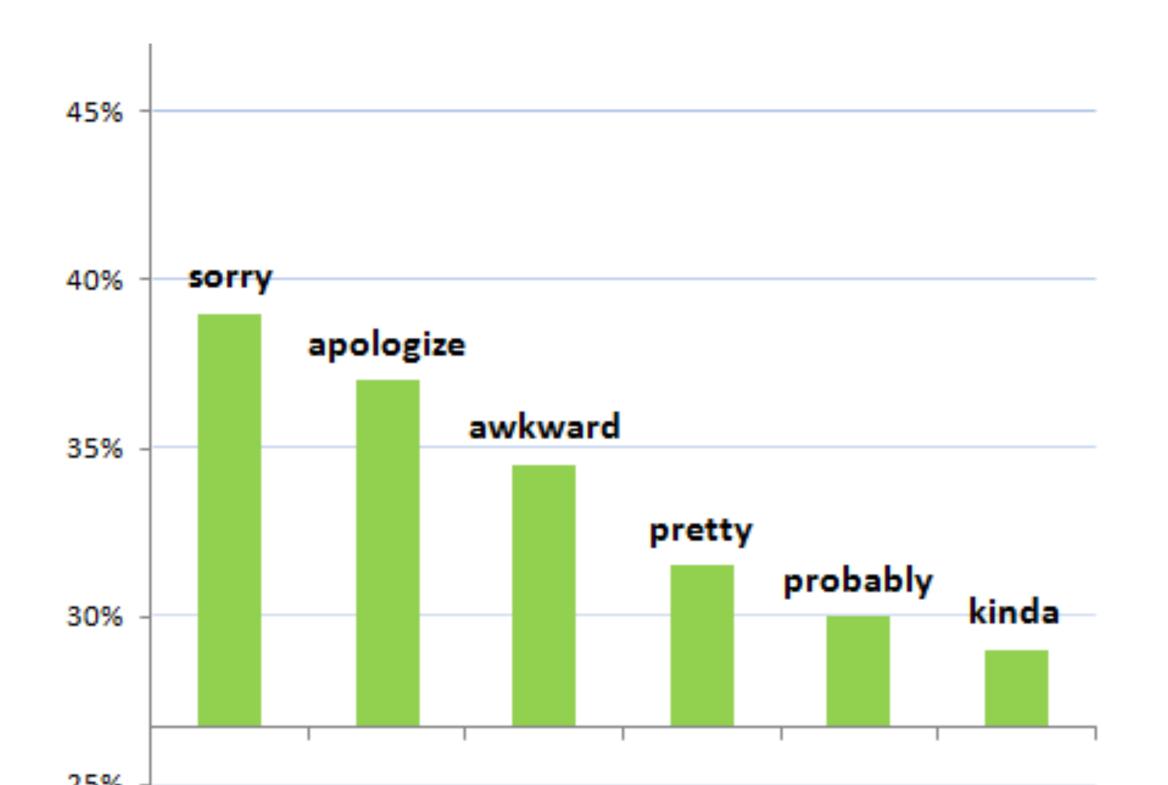
## Specific are successful



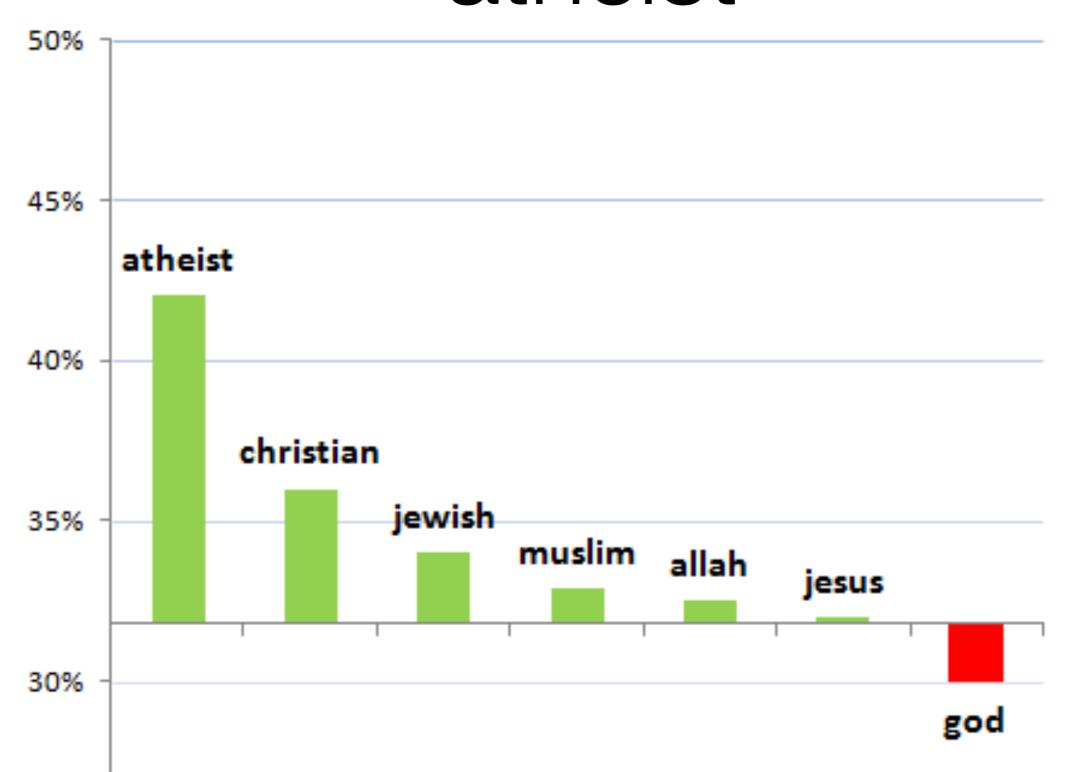
## Specific about them



### Male self-effacement



## Consider becoming an atheist



## Implications

- Large numbers of people are willing to disclose information about their attitudes, and beliefs about religion, sex, politics
- Incentive: improving the algorithm for matching them up with compatible partners
- Side effect: coolest sociological data around

## Last HW Assignment

## No Class Wednesday (Friday Schedule)