

Millennials and Critical Issues of Today

Erin Pinkus, SurveyMonkey May 16, 2019



stheSkimmWANTYFAIR - H I V E

Millennial Takeover 2018

"THE 'BOYS' CLUB' MENTALITY IS STILL ALIVE": HOW MILLENNIAL WOMEN ARE COMBATTING THE GENDER-PAY GAP

Millennial Takeover 2018

HOW MUCH DO MILLENNIALS REALLY CARE ABOUT L.G.B.T.Q. RIGHTS?

A yearlong collaboration between the Hive, theSkimm, and SurveyMonkey focuses on female millennials as they prepare to vote in 2018. For Pride Month, we took a look at their views on L.G.B.T.Q. issues.

Millennial Takeover 2018

CAN MILLENNIAL WOMEN DECIDE THE NEXT ELECTION?

A new collaboration between the Hive, theSkimm, and SurveyMonkey traces the interest, and likely impact, of female millennial voters in advance of the consequential 2018 midterms.

Millennial Takeover 2018

THE SUPREME COURT IS IN DANGER OF LOSING A GENERATION OF VOTERS

Millennial Takeover 2018





- 55k+ responses collected between Jan. and Nov.
 2018
 - ✤ Female Millennials (18-34)~ 11%
- Topics include:
 - Politics
 - ✤ Activism
 - ✤ SCOTUS
 - ✤ Gender equality
 - ✤ LGBTQ rights
 - ✤ Immigration



POLITICS

Majorities Think it's Harder for a Woman to get Elected

- Greater shares of women believe it's harder for their gender to get elected than men.
- Many say Trump's election will influence their future voting behavior.
- However, Trump's election made greater shares of men consider running for office than women.





ACTIVISM

Young Women Support Progressive Social Movements

- BLM, #MeToo, and Pro-choice top 3 cited movements supported
- Believe the inaugural (2017) Women's March improved things for women in the U.S.
- Twice the shares of men, 12% of young women marched in 2018





SCOTUS

Similar Views on an Ideal SCOTUS and Nomination Process by Gender

- Greater shares of young women want a moderate to very liberal nominee to court.
- Majorities want nominees to be required to answer questions.
- Young adults most closely aligned on making term limits for justices.





GENDER EQUALITY

Greater Shares Young Women See Systemic Obstacles to Equality

 Far more young women point to hurdles for gender equality at work.

 Far fewer young men willing to acknowledge that, on average in the U.S., men earn more money than woman for doing similar work.



LGBTQ RIGHTS



Young Adults See A Long Road to LGBTQ Equality, Bias Persists

 Many see discrimination against LGBTQ community alive today and see a long way to go to equality.

• Hurdles include some bias within this group.





IMMIGRATION

Most Young Adults Hold Pro-Immigration Views

- Identical shares see immigration as helpful to U.S.
- Young women, more so than men, support DACA and application for legal status for undocumented immigrants.
- Approval of Trump's policy much lower among young women.



Key Takeaways

When compared to men of their age group, greater shares of young women...

- Acknowledge inequities and disadvantages in society (e.g. gender pay gap, LGBTQ discrimination)
- Support social movements (e.g. BLM, #MeToo)
- Hold socially progressive viewpoints (e.g. support DACA)
- Feel motivated to take specific actions (e.g. participate in Women's March)

Most Important Issue for Women Today...

Q: "Which one of the following issues matters MOST to you right now?"



Thank you



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Adaptive Head-to-Head Ranking: A New Method to Reduce Sample Size while Improving Data Quality

Gilad Amitai, Reuben McCreanor, Jack Chen May 19, 2019

Ranking Surveys

Data Intensive and Burdensome to Respondents

From Buzzfeed

Rank these Marvel characters from "If They Die, I Die" (highest) to "Not Worth Saving" (lowest):

≣		\$	Spider-Man
≣	2	\$	Groot
≣	4	¢	Black Panther
≣		\$	Ironman
≣		\$	Shuri
≣		\$	Loki
≣	1	\$	Thor
≣		\$	Black Widow



Ranking Surveys

Data Intensive and Burdensome to Respondents

From the

Thinking about the United States Presidents we have had since World War II, which one would you consider the best president?

🔘 Harry Truman

🔘 Ronald Reagan

George Bush Senior

🔘 Dwight Eisenhower

🔵 John Kennedy

🔿 Lyndon Johnson

🔘 Richard Nixon

🔵 Gerald Ford

🔘 Jimmy Carter

🔘 George W. Bush

Bill Clinton

- 🔘 Barack Obama
- 🔘 Donald Trump
- 🔵 Don't Know

Results in Percentages						
	Mar O					
	2018					
Harry Truman	3					
Dwight Eisenhower	4					
John Kennedy	10					
Lyndon Johnson	2					
Richard Nixon	1					
Gerald Ford	-					
Jimmy Carter	3					
Ronald Reagan	28					
George Bush Senior	1					
Bill Clinton	10					
George W. Bush	1					
Barack Obama	24					
Donald Trump	7					
DK/NA	6					

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Adaptive Methods

A solution

Quicksort Algorithm

Breakdown the ranking into head-to-head matches



Bayesian Adaptive Methods Decide winner of head-to-head match, reduce sample size

Example

Which of these candies do you prefer?

🔵 Coffee Crisp

🔘 Wunderbar

Quicksort Algorithm

An efficient, comparison sorting algorithm

- 1. Pick a *pivot* from an unsorted array.
- 2. Compare each element in the unsorted array to the pivot to create a larger-than and less-than array.
 - The pivot is now in its final position.
 - An array of size one or zero does not need to be sorted.
- 3. Recursively apply the above steps to the larger-than array and less-than array until all the elements are in their final position.



Stopping Rule

How do you know when to stop a head-to-head comparison?

• Let Y be the choice of the pivot as the higher ranked. Let θ be the preference for the pivot over the unsorted array element. Model each head-to-head comparison such that:



• Example: 52 people have chosen Coffee Crisp, 31 people have chosen Wunderbar

Example

Which of these candies do you prefer?

🔘 Coffee Crisp

$$\begin{cases} \theta \sim \text{Beta}(1,1) \\ Y \sim \text{Binomial}(83,\theta) \end{cases}, \text{ then } \{\theta | Y = 52\} \sim \text{Beta}(53,32)$$

🔘 Wunderbar

Stopping Rule

How do you know when to stop a head-to-head comparison?

• Decide based on the posterior distribution of θ :

 $\begin{array}{l} \text{if } \operatorname{Prob}\left(\left\{\theta|Y=y\right\}\leq.5\right)\leq\alpha/2 \text{ then pivot}>\text{array element}\\ & \swarrow_{\text{is greater than .5}}\\ \text{if } \operatorname{Prob}\left(\left\{\theta|Y=y\right\}\leq.5\right)\geq\alpha/2 \text{ then array element}>\text{pivot} \end{array}$

• Example: 52 people have chosen Coffee Crisp, 31 people have chosen Wunderbar

$$\begin{cases} \theta \sim \text{Beta}(1,1) \\ Y \sim \text{Binomial}(83,\theta) \end{cases}, \text{ then } \{\theta | Y = 52\} \sim \text{Beta}(53,32) \end{cases}$$

 $\operatorname{Prob}\left(\{\theta|Y=52\}\right)=I_{.5}(53,32)=0.011\leq .05/2, \quad \text{then Coffee Crisp}>\text{Wunderbar}$

Stopping Rule Considerations

- A θ close to .5 will lead to too many respondents needed to decide winner of head-to-head match.
 - Create a lower and upper limit to cap response requirement. Measure significance of sorted list with:

effective confidence =
$$1 - \frac{2}{n_c} \sum_{i=1}^{n_c} \min \left\{ \underbrace{I_{.5}(a + y_i, b + n_i - y_i)}_{\text{posterior probability of } \theta \text{ being less}}_{\text{posterior probability of } \theta \text{ being less}}_{\text{posterior probability of } \theta \text{ being greater than .5 given observed counts}} \right\}$$

• Example:

$$\left. \begin{array}{l} I_{.5}(34,48) = 0.94 \\ I_{.5}(45,21) = 0.001 \\ I_{.5}(201,200) = 0.52 \end{array} \right\}, \quad \text{then effective confidence} = \frac{0.94 + (1 - .001) + 0.52}{3} = .80 \end{array}$$

Stopping Rule

Considerations

- Decrease sample size.
 - Use a presorted list to choose optimal pivot that will reduce number of iterations:
 - From a presorted list, keep the elements that are in the unsorted array that needs to be sorted, choose the median value from the trimmed presorted list to be the pivot.
 - Ask the same respondent to judge multiple comparisons.

In a seven-game series, which NBA team would most likely win? Results

- 1. Golden State Warriors
- 2. Boston Celtics
- 3. Houston Rockets
- 4. San Antonio Spurs
- 5. L.A. Clippers
- 6. Philadelphia 76ers
- 7. Portland Trailblazers
- 8. Milwaukee Bucks
- Oklahoma City Thunder 8. Denver Nuggets 9. Indiana Pacers 10. Orlando Magic **11. Detroit Pistons** 12. Utah Jazz 13. Toronto Raptors 14. Brooklyn Nets

- 70% Effective Confidence.
- Resolved in 4039 responses.
- Presorted list: playoff seeding.

How would you rate your knowledge of the NBA?				
Very good	11%			
Good	15%			
Fair	27%			
Poor	20%			
Very Poor	27%			

Of the two options, which make of car would you prefer to lease or own? Results

- 1. Toyota 10. BMW
- 2. Audi 11. Jeep
- 3. Honda 12. Ford
- 4. Subaru 13. Tesla
- 5. GMC 14. Chevrolet 23
- 6. Mercedes-Benz 15. Dodge
- 7. Land Rover 16. Buick
- 8. Volkswagen
- 9. Lexus 18. Nissan 27

17. Acura

- 19. Chrysler 20. Infiniti
 - 21. Mitsubishi
- 22. Cadillac
- rolet 23. Hyundai
 - 24. Mazda
 - 25. Volvo
 - 26. Lincoln
 - 27. Kia

- 80% Effective Confidence.
- Resolved in 1066 responses.
- Presorted list: previous survey.



Thank you



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