Political Candidate Study Report
Client: Craig Sandler

TABLE OF CONTENTS

This report includes the following sections: Page

I. STUDY DESIGN

22 registered voters were presented bios of the top 5 Democratic candidates and top Republican candidates in the 2020 U.S. Presidential Election based on polling data and performance in the Iowa caucus and New Hampshire primary (see below). After reading each bio, respondents were asked to evaluate the candidate based on several key attributes (e.g., trustworthiness, expertise, assertiveness, attractiveness), feelings induced by the candidate, and likelihood to vote for the candidate. Data collection took place in the Communication Research Center between February 12-21, 2020.

Joe Biden
Party: Democratic

Age: 76

Joe Biden was a Senate Representative of Delaware for 36 years and the 47th Vice President of United States. He is one of the U.S. 2020 presidential candidates.

As the Vice President, Biden worked to raise the living standards of middle-class Americans, reduce gun violence, address violence against women, and end cancer. Biden has also supported deficit spending for fiscal stimulus in the American Recovery and Reinvestment Act of 2009, the increased infrastructure spending proposed by the Obama administration, mass transit, same-sex marriage, and the reduced military spending proposed in the Obama Administration's fiscal year 2014 budget. He favors efforts to invest and rebuild the middle class to bolster its competitiveness in the global economy.

Biden has been married to his wife, Jill Jacobs, for 42 years, and they have one child together. Biden also has three children from a previous marriage, two of whom passed away. Biden has five grandchildren.

Pete Buttigieg
Party: Democratic

Age: 38

Pete Buttigieg is former Mayor of South Bend, Indiana. Previously, he worked as a consultant at management consulting firm, McKinsey & Company, and served as a naval intelligence officer in the United States Navy Reserve. He is one of the U.S. 2020 presidential candidates.

As a Navy Lieutenant and mayor, Buttigieg focused on bringing Americans from different backgrounds together in common purpose. He worked to transform South Bend by increasing household income and decreasing poverty and unemployment. He also launched municipal identification cards for undocumented immigrants. Buttigieg supports abortion rights, elimination of the death penalty, abolition of the Electoral College, the strengthening of union bargaining power, higher minimum wage, national paid family leave, expansion of mental health care services, and initiatives to make college more affordable. He became the first openly gay person to seek the Democratic nomination, and has built his campaign around the idea of generational change.

Buttigieg has been married to his husband, Chasten Glezman, for two years. They have two rescue dogs, Buddy and Truman.

Amy Klobuchar
Party: Democratic

Age: 59

Amy Klobuchar is a lawyer and U.S. Senator from Minnesota. A member of the Minnesota Democratic-Farmer-Labor Party, she previously served as the Hennepin County Attorney. She is one of the U.S. 2020 presidential candidates.

As a U.S. Senator, Klobuchar favors reducing everyday costs for families, protecting consumers, strengthening the country's infrastructure, and ensuring fairness and transparency in democracy. She is pro-choice on abortion, supports LGBT rights and the Affordable Care Act, and was critical of the Iraq War. Klobuchar worked to pass the bipartisan 2018 Farm Bill, authored an amendment aimed at boosting funds for STEM education for American students, and led national initiatives to boost American tourism. She also secured $380 million to strengthen states' election infrastructure. Before being elected to public office, Klobuchar was the leading advocate for the successful passage of one of the first laws in the country guaranteeing 48-hour hospital stays for new mothers.

Klobuchar has been married to her husband, John Bessler, for 26 years. They have one child together.

Bernie Sanders
Party: Democratic

Age: 78

Bernie Sanders is a U.S. senator from Vermont. In 2006, he was elected to the U.S. Senate after 16 years as Vermont's sole congressman in the House of Representatives. Bernie is now serving his third term in the U.S. Senate after winning re-election in 2018. He is one of the U.S. 2020 presidential candidates.

A self-described democratic socialist and progressive, Sanders has been a proponent of workplace democracy. Sanders is known for his opposition to economic inequality. On domestic policy, he supports labor rights, universal and single-payer healthcare, paid parental leave, tuition-free college, higher minimum wage, and an ambitious Green New Deal to create jobs addressing global warming. In the area of foreign policy, he favors reducing military spending, pursuing more diplomacy and international cooperation, and putting greater emphasis on labor rights and environmental concerns when negotiating international trade agreements.

Sanders has been married to his wife, Jane O'Meara, for 31 years. He has four children and seven grandchildren.

Donald Trump
Party: Republican

Age: 73

Donald Trump is the 45th and current President of the United States. Previously, he was a real estate mogul, owned the Miss Universe and Miss USA beauty pageants from 1996 to 2015, and produced and hosted The Apprentice reality show from 2003 to 2015. He is one of the U.S. 2020 presidential candidates.

"Make America Great Again" is his campaign slogan, under which his political positions have been described as populist, protectionist, and nationalist. He supports bilateral trade deals, address of illegal immigrants residing in the U.S., the repeal of Obamacare, and capital punishment. He favors an "America First" foreign policy, an increased U.S. military defense spending, and the idea that America should re-orient its resources toward domestic needs. He is opposed to gun control in general and rejects the scientific consensus on climate change.

Trump has been married to his wife, Melania Trump, for 12 years, and they have one child together. Trump also has four children from a previous marriage, as well as ten grandchildren.

Elizabeth Warren
Party: Democratic

Age: 70

Elizabeth Warren has been Senior Senator from Massachusetts since 2013. She was formerly a law school professor for over 30 years specializing in bankruptcy law. She is one of the U.S. 2020 presidential candidates.

A self-described progressive, Warren has focused on consumer protection, economic opportunity, and the social safety net in the Senate. Warren has released policy proposals including plans to assist family farms, reduce student loan debt and offer free tuition at public colleges, make large corporations pay higher taxes and increase regulation on large technology companies, and address opioid addiction. Warren supports worker representation on corporations' board of directors, breaking up monopolies, stiffening sentences for white-collar crime, universal and single-payer healthcare, and a higher minimum wage.

Warren has been married to her husband, Bruce Mann, for 39 years. They have two children, a golden retriever, and three grandchildren.

II. STIMULUS

Each biography (approximately 150 words in length) contained information about each candidate's current/past professional positions, political positions, and personal life.

Joe Biden

Party: Democratic

Age: 76

Joe Biden was a Senate Representative of Delaware for 36 years and the 47th Vice President of United States. He is one of the U.S. 2020 presidential candidates.

As the Vice President, Biden worked to raise the living standards of middle-class Americans, reduce gun violence, address violence against women, and end cancer. Biden has also supported deficit spending for fiscal stimulus in the American Recovery and Reinvestment Act of 2009, the increased infrastructure spending proposed by the Obama administration, mass transit, same-sex marriage, and the reduced military spending proposed in the Obama Administration's fiscal year 2014 budget. He favors efforts to invest and rebuild the middle class to bolster its competitiveness in the global economy.

Biden has been married to his wife, Jill Jacobs, for 42 years, and they have one child together. Biden also has three children from a previous marriage, two of whom passed away. Biden has five grandchildren.

Pete Buttigieg

Party: Democratic

Age: 38

Pete Buttigieg is former Mayor of South Bend, Indiana. Previously, he worked as a consultant at management consulting firm, McKinsey & Company, and served as a naval intelligence officer in the United States Navy Reserve. He is one of the U.S. 2020 presidential candidates.

As a Navy Lieutenant and mayor, Buttigieg focused on bringing Americans from different backgrounds together in common purpose. He worked to transform South Bend by increasing household income and decreasing poverty and unemployment. He also launched municipal identification cards for undocumented immigrants. Buttigieg supports abortion rights, elimination of the death penalty, abolition of the Electoral College, the strengthening of union bargaining power, higher minimum wage, national paid family leave, expansion of mental health care services, and initiatives to make college more affordable. He became the first openly gay person to seek the Democratic nomination, and has built his campaign around the idea of generational change.

Buttigieg has been married to his husband, Chasten Glezman, for two years. They have two rescue dogs, Buddy and Truman.
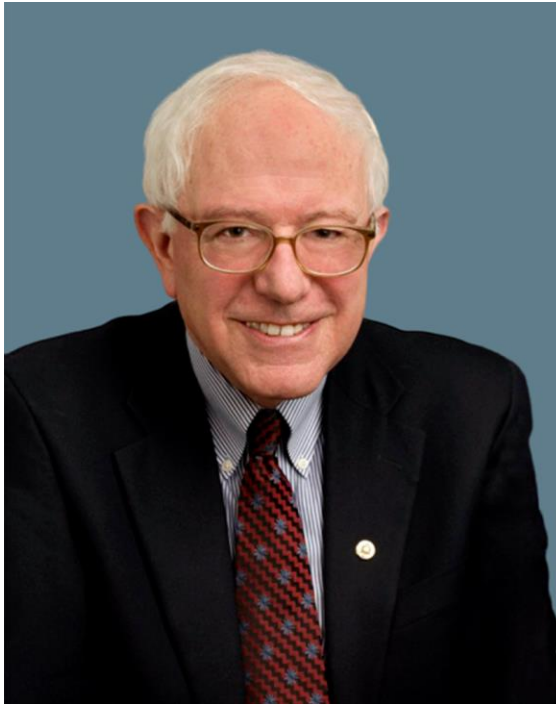
Amy Klobuchar

Party: Democratic

Age: 59

Amy Klobuchar is a lawyer and U.S. Senator from Minnesota. A member of the Minnesota Democratic–Farmer–Labor Party, she previously served as the Hennepin County Attorney. She is one of the U.S. 2020 presidential candidates.

As a U.S. Senator, Klobuchar favors reducing everyday costs for families, protecting consumers, strengthening the country's infrastructure, and ensuring fairness and transparency in democracy. She is pro-choice on abortion, supports LGBT rights and the Affordable Care Act, and was critical of the Iraq War. Klobuchar worked to pass the bipartisan 2018 Farm Bill, authored an amendment aimed at boosting funds for STEM education for American students, and led national initiatives to boost American tourism. She also secured $380 million to strengthen states' election infrastructure. Before being elected to public office, Klobuchar was the leading advocate for the successful passage of one of the first laws in the country guaranteeing 48-hour hospital stays for new mothers.

Klobuchar has been married to her husband, John Bessler, for 26 years. They have one child together.

Bernie Sanders

Party: Democratic

Age: 78

Bernie Sanders is a U.S. senator from Vermont. In 2006, he was elected to the U.S. Senate after 16 years as Vermont's sole congressman in the House of Representatives. Bernie is now serving his third term in the U.S. Senate after winning re-election in 2018. He is one of the U.S. 2020 presidential candidates.

A self-described democratic socialist and progressive, Sanders has been a proponent of workplace democracy. Sanders is known for his opposition to economic inequality. On domestic policy, he supports labor rights, universal and single-payer healthcare, paid parental leave, tuition-free college, higher minimum wage, and an ambitious Green New Deal to create jobs addressing global warming. In the area of foreign policy, he favors reducing military spending, pursuing more diplomacy and international cooperation, and putting greater emphasis on labor rights and environmental concerns when negotiating international trade agreements.

Sanders has been married to his wife, Jane O'Meara, for 31 years. He has four children and seven grandchildren.

Donald Trump

Party: Republican

Age: 73

Donald Trump is the 45th and current President of the United States. Previously, he was a real estate mogul, owned the Miss Universe and Miss USA beauty pageants from 1996 to 2015, and produced and hosted The Apprentice reality show from 2003 to 2015. He is one of the U.S. 2020 presidential candidates.

"Make America Great Again" is his campaign slogan, under which his political positions have been described as populist, protectionist, and nationalist. He supports bilateral trade deals, deportation of illegal immigrants residing in the U.S., the repeal of Obamacare, and capital punishment. He favors an "America First" foreign policy, an increased U.S. military defense spending, and the idea that America should re-orient its resources toward domestic needs. He is opposed to gun control in general and rejects the scientific consensus on climate change.

Trump has been married to his wife, Melania Trump, for 12 years, and they have one child together. Trump also has four children from a previous marriage, as well as ten grandchildren.

Elizabeth Warren

Party: Democratic

Age: 70

Elizabeth Warren has been Senior Senator from Massachusetts since 2013. She was formerly a law school professor for over 30 years specializing in bankruptcy law. She is one of the U.S. 2020 presidential candidates.

A self-described progressive, Warren has focused on consumer protection, economic opportunity, and the social safety net in the Senate. Warren has released policy proposals including plans to assist family farms, reduce student loan debt and offer free tuition at public colleges, make large corporations pay higher taxes and increase regulation on large technology companies, and address opioid addiction. Warren supports worker representation on corporations' board of directors, breaking up monopolies, stiffening sentences for white-collar crime, universal and single-payer healthcare, and a higher minimum wage.

Warren has been married to her husband, Bruce Mann, for 39 years. They have two children, a golden retriever, and three grandchildren.

III. MEASURES

This study measured physiological reactions during exposure to each candidate's bio captured by the iMotions biometric research platform which include facial expressions, eye tracking, and galvanic skin response. Following each candidate's bio, self-reported measures were collected through Qualtrics: demographics (gender, education, race, age, income, party identification, political orientation, voting registration status), candidate evaluations, and voting intention. Below is a comprehensive list of self-reported items:

If the election were held today, which candidate would you vote for?

O Joe Biden
O Pete Buttigieg
O Amy Klobuchar
O Bernie Sanders
O Donald Trump
O Elizabeth Warren
O None of the above
O I have not decided yet

Please rate [this candidate] on the following characteristics:

Note: Items below measure trustworthiness								
Untrustworthy	O	O	O	O	O	O	O	Trustworthy
Undependable	O	O	O	O	O	O	O	Dependable
Dishonest	O	O	O	O	O	O	O	Honest
Insincere	O	O	O	O	O	O	O	Sincere
Deceptive	O	O	O	O	O	O	O	Credible
Note: Items below measure expertise								
Inexperienced	O	O	O	O	O	O	O	Experienced
Unknowledgeable	O	O	O	O	O	O	O	Knowledgeable
Unqualified	O	O	O	O	O	O	O	Qualified
Incompetent	O	O	O	O	O	O	O	Competent
Note: Items below measure assertiveness								
Submissive	O	O	O	O	O	O	O	Dominant
Weak	O	O	O	O	O	O	O	Strong
Unsure	O	O	O	O	O	O	O	Confident
Note: Items below measure attractiveness								
Unattractive	O	O	O	O	O	O	O	Attractive
Not Classy	O	O	O	O	O	O	O	Classy
Ugly	O	O	O	O	O	O	O	Beautiful
Note: Items below measure other traits								
Immoral	O	O	O	O	O	O	O	Moral
Unlikeable	O	O	O	O	O	O	O	Likeable
Unapproachable	O	O	O	O	O	O	O	Approachable
Uncompassionate	O	O	O	O	O	O	O	Compassionate

How often does [this candidate] make you feel?

	Never						Always
Angry	O	O	O	O	O	O	O
Afraid	O	O	O	O	O	O	O
Fearful	O	O	O	O	O	O	O
Disgusted	O	O	O	O	O	O	O
Curious	O	O	O	O	O	O	O
Unsafe	O	O	O	O	O	O	O
Sad	O	O	O	O	O	O	O
Hopeful	O	O	O	O	O	O	O
Passionate	O	O	O	O	O	O	O
Proud	O	O	O	O	O	O	O
Happy	O	O	O	O	O	O	O
Inspired	O	O	O	O	O	O	O

How do you feel about [this candidate] overall?

Extremely negative						Extremely positive
O	O	O	O	O	O	O

What is your likelihood to vote for [this candidate] for President?

Not at all likely						Very likely
O	O	O	O	O	O	O

This next section asks for general information about yourself.

What is your gender?
O Male
O Female
O Other _____

What is your highest education level?
O Some high school
O High school graduate
O Some college
O Community college
O 4-year college graduate
O Professional degree (MD, JD, MBA, etc.)

How would you describe your racial background? (Please check all that apply.)
□ Alaska Native
□ African American or Black
□ Asian or Pacific Islander
□ Caucasian
□ Hispanic, Latino, or Spanish Origin
□ Native American
□ Other _____

In what year were you born? _____

What is your total household income?
O Less than $10,000
O $10,000 to $19,999
O $20,000 to $29,999
O $30,000 to $39,999
O $40,000 to $49,999
O $50,000 to $59,999
O $60,000 to $69,999
O $70,000 to $79,999
O $80,000 to $89,999
O $90,000 to $99,999
O $100,000 to $149,999
O $150,000 or more

This final section asks for information regarding your political attitudes and voting intention for the upcoming Presidential Election.

Are you registered to vote in the upcoming Presidential Election?
о Yes
о No

Please rate your likelihood to vote in the upcoming Presidential Election.

Very unlikely						Very likely
о	о	о	о	о	о	о

Which political party do you identify with?
□ Democratic
□ Republican
□ Independent
□ I do not identify with any political party.
□ Other: _____

Generally speaking, how would you best describe your political orientation?

Extremely conservative			Moderate			Extremely liberal
о	о	о	о	о	о	о

If the election were held today, which candidate would you vote for?
о Joe Biden
о Pete Buttigieg
о Amy Klobuchar
о Bernie Sanders
о Donald Trump
о Elizabeth Warren
о None of the above
о I have not decided yet

After reading the candidate biographies, please rate the degree to which the biographies influenced your support of any of these candidates.

Not at all									Very much
о	о	о	о	о	о	о	о	о	о

IV. RESULTS

A. Sample
- o 22 registered voters (convenience sample)
- o Gender
  - Male - 50 % (n = 11)
  - Female - 50 % (n = 11)
- o Education
  - Some high school - 0% (n = 0)
  - High school graduate - 0% (n = 0)
  - Some college - 18.2% (n = 4)
  - Community college - 0% (n = 0)
  - 4-year college degree - 40% (n = 11)
  - Professional degree (MD, JD, MBA, etc.) - 31.8% (n = 7)

- o Race
  - Alaska Native - 0% (*n* = 0)
  - African American or Black - 0% (*n* = 0)
  - Asian or Pacific Islander - 4.5% (*n* = 1)
  - Caucasian - 95.5% (*n* = 21)
  - Hispanic, Latino, or Spanish Origin - 13.6% (*n* = 3)
  - Native American - 4.5% (*n* = 1)
  - Other - 4.5% (*n* = 1)
- o Age (*M* = 31.41 years, *Range*: 20-68, *SD* = 12.03)
- o Household income
  - Less than $10,000 - 4.5% (*n* = 1)
  - $10,000 to $19,999 - 9.1% (*n* = 2)
  - $20,000 to $29,999 - 9.1% (*n* = 2)
  - $30,000 to $39,999 - 18.2% (*n* = 4)
  - $40,000 to $49,999 - 0% (*n* = 0)
  - $50,000 to $59,999 - 0% (*n* = 0)
  - $60,000 to $69,999 - 13.6% (*n* = 3)
  - $70,000 to $79,999 - 4.5% (*n* = 1)
  - $80,000 to $89,999 - 0% (*n* = 0)
  - $90,000 to $99,999 - 0% (*n* = 0)
  - $100,000 to $149,999 - 18.2% (*n* = 4)
  - $150,000 or more - 22.7% (*n* = 5)
- o Likelihood to vote in the upcoming Presidential election: All reported 7 (extremely likely)
- o Political party identification [*Note: Results for the Republican respondent should be interpreted with caution given there is only one case in the sample.*]
  - Democratic - 68.2% (*n* = 15)
  - Independent - 9.1% (*n* = 2)
  - Republican - 4.5% (*n* = 1)
  - I do not identify with any political party - 18.2% (*n* = 4)
- o Political orientation from 1 (extremely conservative) to 7 (extremely liberal): (*M* = 5.41, *Range*: 2-7, *SD* = 1.44)
- o Voting intention: If the election were held today, which candidate would you vote for?

Pre-stimulus voting intention

Post-stimulus voting intention

Candidate	Count
Joe Biden	0
Pete Buttigieg	3
Amy Klobuchar	1
Bernie Sanders	6
Donald Trump	1
Elizabeth Warren	6
None of the above	0
I have not decided yet	5
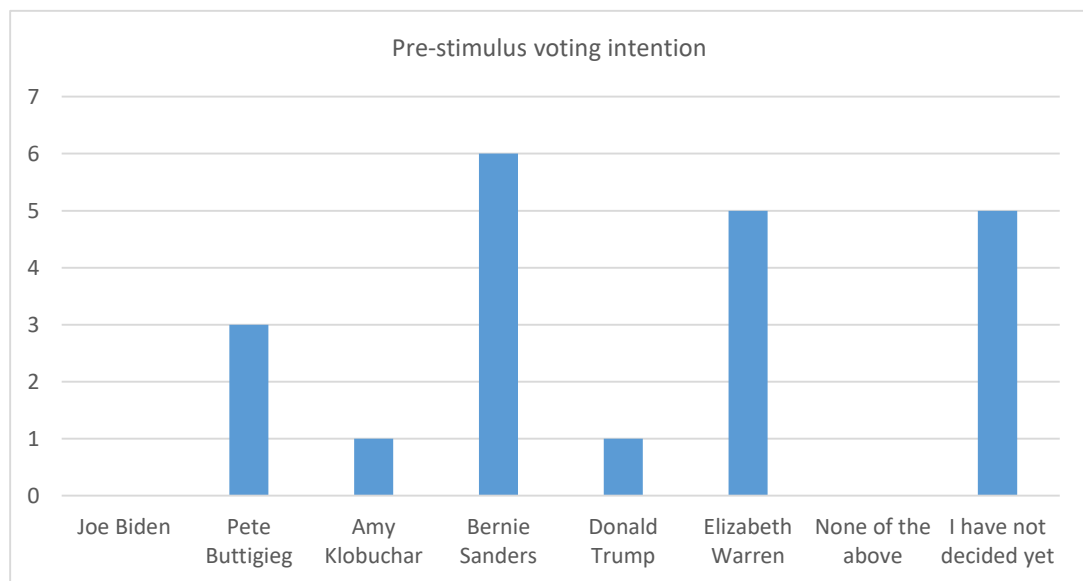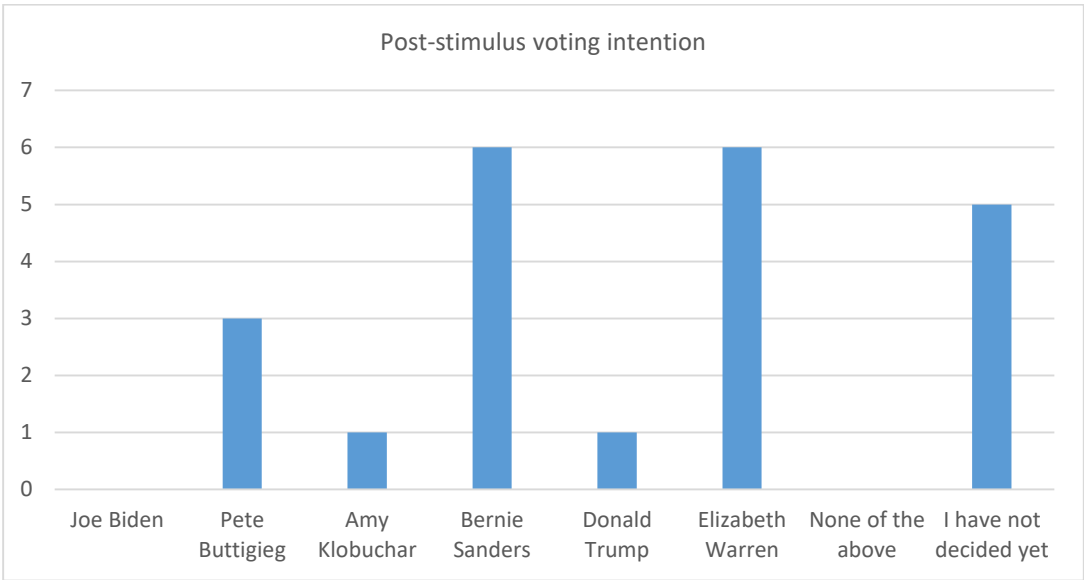
o Biographies influenced your support of any of these candidates from 1 (not at all) to 10 (very much): (*M* = 5.95, *Range*: 4-9, *SD* = 1.84)

B. Biometric Findings

Eye Tracking

Eye Tracking refers to the process of capturing data about the eyes' position and movement as it relates to a 2D or 3D environment. Eye tracking is used to document human behavior in a natural, unobtrusive way and to gather objective data about real human responses to various environments/stimuli. Eye tracking uses optical tracking of corneal reflections (Pupil Center Corneal Reflection [PCCR]) to assess visual attention.

BIDEN
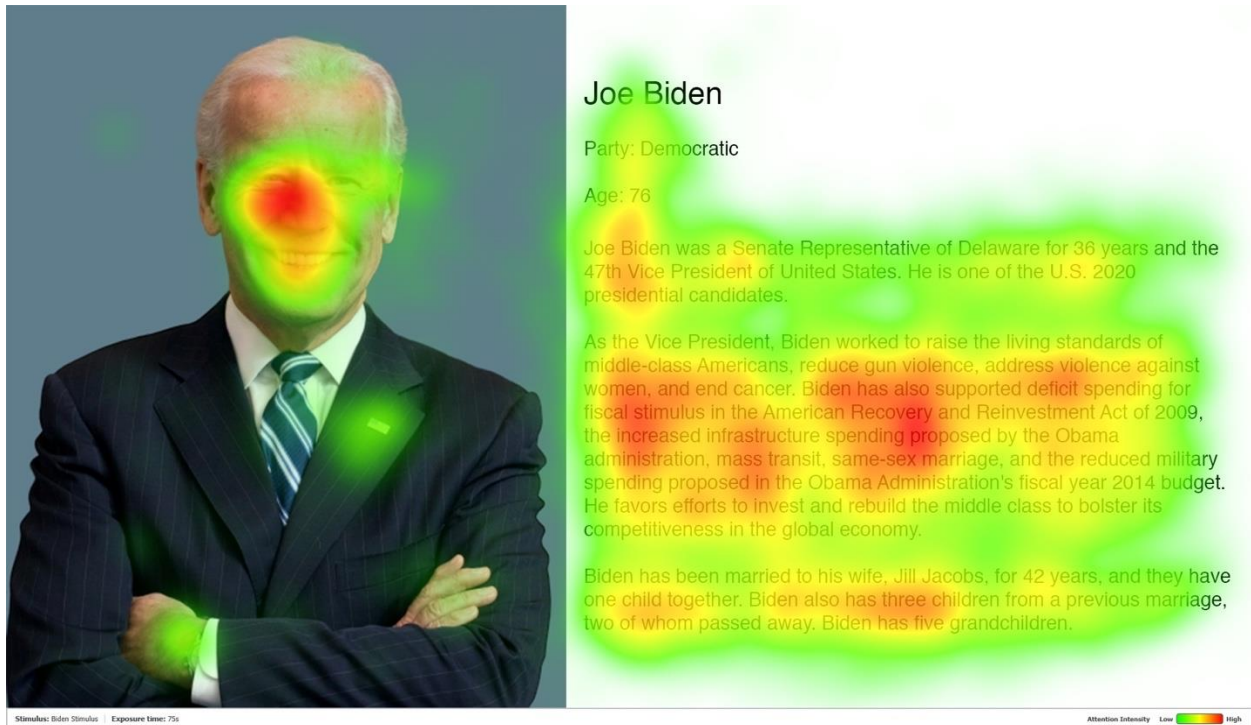
ALL RESPONDENTS (*n* = 22)

Area of Interest	% of Time Spent
Text	55%
Face	6%
Body	2%
Face+Body	8%
Paragraph 1	8%
Paragraph 2	32%
Paragraph 3	9%

MALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	56%
Face	7%
Body	3%
Face+Body	10%
Paragraph 1	7%
Paragraph 2	32%
Paragraph 3	10%

FEMALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	54%
Face	5%
Body	1%
Face+Body	6%
Paragraph 1	8%
Paragraph 2	32%
Paragraph 3	8%

DEMOCRATIC RESPONDENTS (*n = 15*)

Area of Interest	% of Time Spent
Text	54%
Face	6%
Body	2%
Face+Body	8%
Paragraph 1	8%
Paragraph 2	31%
Paragraph 3	10%

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n = 6*)

Area of Interest	% of Time Spent
Text	56%
Face	4%
Body	1%
Face+Body	5%
Paragraph 1	9%
Paragraph 2	32%
Paragraph 3	9%

REPUBLICAN RESPONDENT (*n = 1*)

Area of Interest	% of Time Spent
Text	52%
Face	11%
Body	11%
Face+Body	22%
Paragraph 1	5%
Paragraph 2	36%
Paragraph 3	6%

DECIDED VOTERS (*n = 17*)

Area of Interest	% of Time Spent
Text	54%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	8%
Paragraph 2	31%
Paragraph 3	10%

UNDECIDED VOTERS (*n = 5*)

Area of Interest	% of Time Spent
Text	55%
Face	3%
Body	1%
Face+Body	4%
Paragraph 1	7%
Paragraph 2	35%
Paragraph 3	8%

INCOME LESS THAN $40K (*n* = 9)

Area of Interest	% of Time Spent
Text	54%
Face	5%
Body	1%
Face+Body	6%
Paragraph 1	7%
Paragraph 2	33%
Paragraph 3	8%

INCOME GREATER THAN 40K (*n* = 13)

Area of Interest	% of Time Spent
Text	55%
Face	7%
Body	3%
Face+Body	10%
Paragraph 1	8%
Paragraph 2	31%
Paragraph 3	10%

BUTTIGIEG

Pete Buttigieg

Party: Democratic

Age: 38

Pete Buttigieg is former Mayor of South Bend, Indiana. Previously, he worked as a consultant at management consulting firm, McKinsey & Company, and served as a naval intelligence officer in the United States Navy Reserve. He is one of the U.S. 2020 presidential candidates.

As a Navy Lieutenant and mayor, Buttigieg focused on bringing Americans from different backgrounds together in common purpose. He worked to transform South Bend by increasing household income and decreasing poverty and unemployment. He also launched municipal identification cards for undocumented immigrants. Buttigieg supports abortion rights, elimination of the death penalty, abolition of the Electoral College, the strengthening of union bargaining power, higher minimum wage, national paid family leave, expansion of mental health care services, and initiatives to make college more affordable. He became the first openly gay person to seek the Democratic nomination, and has built his campaign around the idea of generational change.

Buttigieg has been married to his husband, Chasten Glezman, for two years. They have two rescue dogs, Buddy and Truman.

Stimulus: Buttigieg Stimulus | Exposure time: 75s

Attention Intensity   Low [■■■■] High

ALL RESPONDENTS (*n* = 22)

Area of Interest	% of Time Spent
Text	59%
Face	6%
Body	1%
Face+Body	8%
Paragraph 1	12%
Paragraph 2	37%
Paragraph 3	4%

MALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	59%
Face	8%
Body	2%
Face+Body	10%
Paragraph 1	10%
Paragraph 2	38%
Paragraph 3	5%

FEMALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	59%
Face	5%
Body	1%
Face+Body	6%
Paragraph 1	8%
Paragraph 2	32%
Paragraph 3	8%

DEMOCRATIC RESPONDENTS (*n = 15*)

Area of Interest	% of Time Spent
Text	59%
Face	5%
Body	1%
Face+Body	7%
Paragraph 1	12%
Paragraph 2	37%
Paragraph 3	5%

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n = 6*)

Area of Interest	% of Time Spent
Text	59%
Face	6%
Body	1%
Face+Body	7%
Paragraph 1	12%
Paragraph 2	37%
Paragraph 3	3%

REPUBLICAN RESPONDENT (*n = 1*)

Area of Interest	% of Time Spent
Text	50%
Face	25%
Body	4%
Face+Body	29%
Paragraph 1	7%
Paragraph 2	39%
Paragraph 3	3%

DECIDED VOTERS (*n = 17*)

Area of Interest	% of Time Spent
Text	59%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	11%
Paragraph 2	37%
Paragraph 3	5%

UNDECIDED VOTERS (*n = 5*)

Area of Interest	% of Time Spent
Text	58%
Face	5%
Body	0%
Face+Body	5%
Paragraph 1	12%
Paragraph 2	37%
Paragraph 3	3%
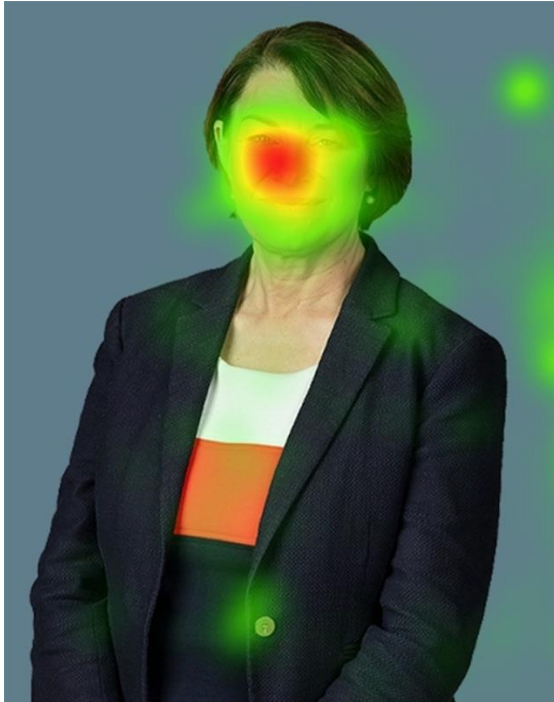
INCOME LESS THAN 40K (*n = 9*)

Area of Interest	% of Time Spent
Text	60%
Face	4%
Body	0%
Face+Body	4%
Paragraph 1	13%
Paragraph 2	37%
Paragraph 3	4%

INCOME GREATER THAN 40K (*n = 13*)

Area of Interest	% of Time Spent
Text	58%
Face	8%
Body	2%
Face+Body	10%
Paragraph 1	10%
Paragraph 2	37%
Paragraph 3	5%

Amy Klobuchar

Party: Democratic

Age: 59

Amy Klobuchar is a lawyer and U.S. Senator from Minnesota. A member of the Minnesota Democratic–Farmer–Labor Party, she previously served as the Hennepin County Attorney. She is one of the U.S. 2020 presidential candidates.

As a U.S. Senator, Klobuchar favors reducing everyday costs for families, protecting consumers, strengthening the country's infrastructure, and ensuring fairness and transparency in democracy. She is pro-choice on abortion, supports LGBT rights and the Affordable Care Act, and was critical of the Iraq War. Klobuchar worked to pass the bipartisan 2018 Farm Bill, authored an amendment aimed at boosting funds for STEM education for American students, and led national initiatives to boost American tourism. She also secured $380 million to strengthen states' election infrastructure. Before being elected to public office, Klobuchar was the leading advocate for the successful passage of one of the first laws in the country guaranteeing 48-hour hospital stays for new mothers.

Klobuchar has been married to her husband, John Bessler, for 26 years. They have one child together.

Stimulus: Klobuchar Stimulus | Exposure time: 7s

Attention Intensity   Low [████] High

ALL RESPONDENTS (*n* = 22)

Area of Interest	% of Time Spent
Text	60%
Face	5%
Body	1%
Face+Body	7%
Paragraph 1	12%
Paragraph 2	38%
Paragraph 3	3%

MALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	63%
Face	6%
Body	2%
Face+Body	7%
Paragraph 1	12%
Paragraph 2	41%
Paragraph 3	3%

FEMALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	57%
Face	5%
Body	1%
Face+Body	6%
Paragraph 1	12%
Paragraph 2	36%
Paragraph 3	3%

DEMOCRATIC RESPONDENTS (*n = 15*)

Area of Interest	% of Time Spent
Text	62%
Face	5%
Body	1%
Face+Body	5%
Paragraph 1	12%
Paragraph 2	41%
Paragraph 3	3%

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n = 6*)

Area of Interest	% of Time Spent
Text	55%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	11%
Paragraph 2	32%
Paragraph 3	2%

REPUBLICAN RESPONDENT (*n = 1*)

Area of Interest	% of Time Spent
Text	60%
Face	11%
Body	3%
Face+Body	13%
Paragraph 1	20%
Paragraph 2	33%
Paragraph 3	2%

DECIDED VOTERS (*n = 17*)

Area of Interest	% of Time Spent
Text	61%
Face	6%
Body	1%
Face+Body	7%
Paragraph 1	13%
Paragraph 2	38%
Paragraph 3	3%

UNDECIDED VOTERS (*n = 5*)

Area of Interest	% of Time Spent
Text	55%
Face	5%
Body	1%
Face+Body	6%
Paragraph 1	8%
Paragraph 2	38%
Paragraph 3	2%

INCOME LESS THAN 40K (*n* = 9)

Area of Interest	% of Time Spent
Text	58%
Face	5%
Body	1%
Face+Body	6%
Paragraph 1	13%
Paragraph 2	34%
Paragraph 3	4%

INCOME GREATER THAN 40K (*n* = 13)

Area of Interest	% of Time Spent
Text	61%
Face	6%
Body	1%
Face+Body	7%
Paragraph 1	11%
Paragraph 2	41%
Paragraph 3	2%

Stimulus: Sanders Stimulus | Exposure time: 75s   Attention Intensity Low ▬▬ High

ALL RESPONDENTS (*n* = 22)

Area of Interest	% of Time Spent
Text	55%
Face	8%
Body	2%
Face+Body	11%
Paragraph 1	16%
Paragraph 2	28%
Paragraph 3	3%

MALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	55%
Face	9%
Body	3%
Face+Body	12%
Paragraph 1	17%
Paragraph 2	27%
Paragraph 3	4%

FEMALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	55%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	15%
Paragraph 2	29%
Paragraph 3	3%

DEMOCRATIC RESPONDENTS (*n = 15*)

Area of Interest	% of Time Spent
Text	55%
Face	7%
Body	2%
Face+Body	10%
Paragraph 1	15%
Paragraph 2	29%
Paragraph 3	4%

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n = 6*)

Area of Interest	% of Time Spent
Text	56%
Face	6%
Body	3%
Face+Body	9%
Paragraph 1	18%
Paragraph 2	27%
Paragraph 3	2%

REPUBLICAN RESPONDENT (*n = 1*)

Area of Interest	% of Time Spent
Text	43%
Face	31%
Body	4%
Face+Body	34%
Paragraph 1	13%
Paragraph 2	20%
Paragraph 3	6%

DECIDED VOTERS (*n = 17*)

Area of Interest	% of Time Spent
Text	55%
Face	9%
Body	3%
Face+Body	12%
Paragraph 1	15%
Paragraph 2	29%
Paragraph 3	4%

UNDECIDED VOTERS (*n = 5*)

Area of Interest	% of Time Spent
Text	56%
Face	6%
Body	1%
Face+Body	7%
Paragraph 1	18%
Paragraph 2	27%
Paragraph 3	2%

INCOME LESS THAN 40K (*n = 9*)

Area of Interest	% of Time Spent
Text	56%
Face	6%
Body	2%
Face+Body	7%
Paragraph 1	17%
Paragraph 2	28%
Paragraph 3	3%

INCOME GREATER THAN 40K (*n = 13*)

Area of Interest	% of Time Spent
Text	54%
Face	10%
Body	3%
Face+Body	13%
Paragraph 1	15%
Paragraph 2	28%
Paragraph 3	3%

Donald Trump

Party: Republican

Age: 73

Donald Trump is the 45th and current President of the United States. Previously, he was a real estate mogul, owned the Miss Universe and Miss USA beauty pageants from 1996 to 2015, and produced and hosted The Apprentice reality show from 2003 to 2015. He is one of the U.S. 2020 presidential candidates.

"Make America Great Again" is his campaign slogan, under which his political positions have been described as populist, protectionist, and nationalist. He supports bilateral trade deals, deportation of illegal immigrants residing in the U.S., the repeal of Obamacare, and capital punishment. He favors an "America First" foreign policy, an increased U.S. military defense spending, and the idea that America should re-orient its resources toward domestic needs. He is opposed to gun control in general and rejects the scientific consensus on climate change.

Trump has been married to his wife, Melania Trump, for 12 years, and they have one child together. Trump also has four children from a previous marriage, as well as ten grandchildren.

Stimulus: Trump Stimulus | Exposure time: 75s

Attention Intensity   Low   High

ALL RESPONDENTS (*n* = 22)

Area of Interest	% of Time Spent
Text	54%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	13%
Paragraph 2	27%
Paragraph 3	8%

MALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	56%
Face	7%
Body	2%
Face+Body	10%
Paragraph 1	13%
Paragraph 2	28%
Paragraph 3	8%

FEMALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	52%
Face	7%
Body	1%
Face+Body	8%
Paragraph 1	14%
Paragraph 2	26%
Paragraph 3	8%

DEMOCRATIC RESPONDENTS (*n = 15*)

Area of Interest	% of Time Spent
Text	53%
Face	6%
Body	2%
Face+Body	8%
Paragraph 1	13%
Paragraph 2	26%
Paragraph 3	8%

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n = 6*)

Area of Interest	% of Time Spent
Text	59%
Face	8%
Body	1%
Face+Body	9%
Paragraph 1	14%
Paragraph 2	31%
Paragraph 3	8%

REPUBLICAN RESPONDENT (*n = 1*)

Area of Interest	% of Time Spent
Text	33%
Face	18%
Body	9%
Face+Body	30%
Paragraph 1	7%
Paragraph 2	19%
Paragraph 3	4%

DECIDED VOTERS (*n = 17*)

Area of Interest	% of Time Spent
Text	53%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	13%
Paragraph 2	28%
Paragraph 3	7%

UNDECIDED VOTERS (*n = 5*)

Area of Interest	% of Time Spent
Text	57%
Face	7%
Body	1%
Face+Body	8%
Paragraph 1	13%
Paragraph 2	23%
Paragraph 3	11%

INCOME LESS THAN 40K (*n = 9*)
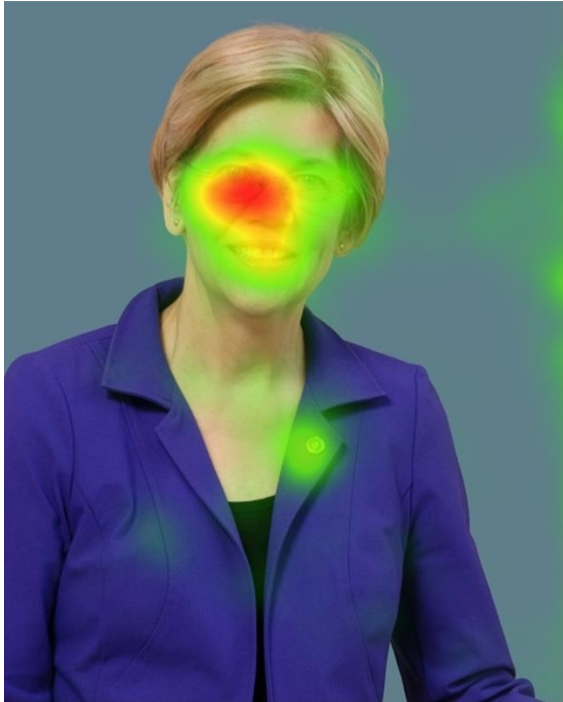
Area of Interest	% of Time Spent
Text	53%
Face	5%
Body	1%
Face+Body	5%
Paragraph 1	13%
Paragraph 2	28%
Paragraph 3	7%

INCOME GREATER THAN 40K (*n = 13*)

Area of Interest	% of Time Spent
Text	55%
Face	9%
Body	3%
Face+Body	12%
Paragraph 1	14%
Paragraph 2	27%
Paragraph 3	9%

Elizabeth Warren

Party: Democratic

Age: 70

Elizabeth Warren has been Senior Senator from Massachusetts since 2013. She was formerly a law school professor for over 30 years specializing in bankruptcy law. She is one of the U.S. 2020 presidential candidates.

A self-described progressive, Warren has focused on consumer protection, economic opportunity, and the social safety net in the Senate. Warren has released policy proposals including plans to assist family farms, reduce student loan debt and offer free tuition at public colleges, make large corporations pay higher taxes and increase regulation on large technology companies, and address opioid addiction. Warren supports worker representation on corporations' board of directors, breaking up monopolies, stiffening sentences for white-collar crime, universal and single-payer healthcare, and a higher minimum wage.

Warren has been married to her husband, Bruce Mann, for 39 years. They have two children, a golden retriever, and three grandchildren.

Stimulus: Warren Stimulus | Exposure time: 75s   Attention Intensity   Low [   ] High

ALL RESPONDENTS (*n* = 22)

Area of Interest	% of Time Spent
Text	55%
Face	8%
Body	2%
Face+Body	10%
Paragraph 1	11%
Paragraph 2	33%
Paragraph 3	6%

MALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	57%
Face	7%
Body	2%
Face+Body	10%
Paragraph 1	9%
Paragraph 2	35%
Paragraph 3	7%

FEMALE RESPONDENTS (*n* = 11)

Area of Interest	% of Time Spent
Text	53%
Face	8%
Body	2%
Face+Body	10%
Paragraph 1	13%
Paragraph 2	31%
Paragraph 3	4%

DEMOCRATIC RESPONDENTS (*n* = 15)

Area of Interest	% of Time Spent
Text	55%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	11%
Paragraph 2	34%
Paragraph 3	6%

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n* = 6)

Area of Interest	% of Time Spent
Text	58%
Face	7%
Body	2%
Face+Body	9%
Paragraph 1	13%
Paragraph 2	32%
Paragraph 3	5%

REPUBLICAN RESPONDENT (*n* = 1)

Area of Interest	% of Time Spent
Text	46%
Face	20%
Body	9%
Face+Body	30%
Paragraph 1	6%
Paragraph 2	24%
Paragraph 3	12%3

DECIDED VOTERS (*n* = 17)

Area of Interest	% of Time Spent
Text	55%
Face	7%
Body	2%
Face+Body	10%
Paragraph 1	11%
Paragraph 2	33%
Paragraph 3	6%

UNDECIDED VOTERS (*n* = 5)

Area of Interest	% of Time Spent
Text	57%
Face	8%
Body	2%
Face+Body	10%
Paragraph 1	13%
Paragraph 2	34%
Paragraph 3	4%

INCOME LESS THAN 40K (*n* = 9)

Area of Interest	% of Time Spent
Text	52%
Face	6%
Body	1%
Face+Body	7%
Paragraph 1	11%
Paragraph 2	30%
Paragraph 3	5%

INCOME GREATER THAN 40K (*n* = 13)

Area of Interest	% of Time Spent
Text	58%
Face	9%
Body	3%
Face+Body	12%
Paragraph 1	11%
Paragraph 2	35%
Paragraph 3	6%

Overall Eye Tracking Trends:

- Females spent slightly less time on the candidates' faces and bodies than males did (except for Warren).
- Males spent slightly more time on the candidates' text than females did (except for Buttigieg and Sanders).
- Independents spent slightly more time on the candidates' text than respondents of the other parties did (except for Buttigieg and Klobuchar).
- Decided voters spent slightly more time on the candidates' faces and bodies than undecided voters did (except for Warren).
- Undecided voters spent slightly more time on the candidates' text than decided voters did (except for Buttigieg and Klobuchar).
- Respondents who make more than $40,000 per year spent slightly more time on the candidate's faces and bodies than those who make less than $40,000 per year did.

Facial Expression Analysis

Facial Expression Analysis refers to the process of continuously recording respondent emotions as indicated via facial expressions (i.e., movements of the muscles of the face). It is used to document immediate emotional reactions, both conscious and subconscious, in real time. Facial Expression Analysis uses (1) a common web camera to record the respondent, and (2) software that analyzes this footage, picks up landmarks or geometric locations on the face, and then calculates the discrete emotions manifested.

Note: ==Highlight== indicates the candidate with the highest sum of frames >=threshold.

ALL RESPONDENTS (*n* = 22)

	Sum of Frames >= Threshold								
	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
Biden	==72==	0	70	281	33	15	64	354 (35.08%)	655 (64.9%)
Buttigieg	0	4	39	==1251==	35	0	166	==1231 (55.7%)==	977 (45.15%)
Klobuchar	11	1	==86==	360	68	0	==521==	202 (14.92%)	1152 (85.08%)
Sanders	12	==154==	58	812	87	0	242	761 (33.57%)	1506 (66.43%)
Trump	0	0	12	160	==116==	==18==	127	730 (27.36%)	==1938 (72.64%)==
Warren	61	0	30	369	18	0	117	476 (22.47%)	1642 (77.53%)

Overall, Buttigieg elicited the most positive expressions, while Trump elicited the most negative expressions.

MALE RESPONDENTS (*n* = 11)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	5	0	33	265	0	0	64	236 (37.11%)	400 (62.89%)
Buttigieg	0	0	16	527	0	0	158	443 (33.36%)	885 (66.64%)
Klobuchar	4	1	58	98	0	0	506	101 (10.47%)	864 (89.53%)
Sanders	3	0	31	281	48	0	123	104 (12.21%)	748 (87.79%)
Trump	0	0	12	0	13	18	76	41 (2.59%)	1540 (97.41%)
Warren	45	0	30	17	0	0	104	17 (1.12%)	1504 (98.88%)

Among men, Buttigieg elicited the most positive expressions, while Trump elicited the most negative expressions.

FEMALE RESPONDENTS (*n* = 11)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	67	0	49	16	33	15	17	118 (34.6%)	223 (65.4%)
Buttigieg	0	4	17	761	43	0	17	827 (89.6%)	96 (10.4%)
Klobuchar	7	0	0	262	77	0	9	101 (23.27%)	333 (76.73%)
Sanders	9	154	27	531	39	0	127	657 (46.43%)	758 (53.57%)
Trump	0	4	0	160	164	0	92	689 (62.86%)	407 (37.14%)
Warren	16	0	0	301	18	0	13	400 (74.35%)	138 (25.65%)

Among women, Buttigieg elicited the most positive expressions, while Sanders elicited the most negative expressions.

DEMOCRATIC RESPONDENTS (*n* = 15)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	37	0	34	0	0	15	64	60 (13.42%)	387 (86.56%)
Buttigieg	0	4	19	458	35	0	149	534 (39.53%)	817 (60.47%)
Klobuchar	11	0	58	182	9	0	506	0 (0%)	769 (100%)
Sanders	12	154	58	672	66	0	160	600 (30%)	1400 (70%)
Trump	0	0	12	150	116	0	113	730 (29.46%)	1748 (70.54%)
Warren	61	0	30	135	18	0	104	184 (11.59%)	1404 (88.41%)

Among Democrats, Trump elicited both the most positive and negative expressions.

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n* = 6)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	35	0	36	281	33	0	0	294 (54.95%)	241 (45.05%)
Buttigieg	0	0	20	793	0	0	17	690 (81.18%)	160 (18.82%)
Klobuchar	0	1	28	178	59	0	15	202 (34.53%)	383 (65.47%)
Sanders	0	0	0	140	21	0	82	161 (60.3%)	106 (39.7%)
Trump	0	0	0	10	0	18	14	0 (0%)	190 (100%)
Warren	0	0	0	234	0	0	13	292 (55.09%)	238 (44.91%)

Among independent and unaffiliated respondents, Buttigieg elicited the most positive expressions and Klobuchar elicited the most negative expressions.

REPUBLICAN RESPONDENT (*n = 1*)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	0	0	0	0	0	0	0	0 (0%)	27 (100%)
Buttigieg	0	0	0	0	0	0	0	7 (100%)	0 (0%)
Klobuchar	0	0	0	0	0	0	0	0 (0%)	0 (0%)
Sanders	0	0	0	0	0	0	0	0 (0%)	0 (0%)
Trump	0	0	0	0	0	0	0	0 (0%)	0 (0%)
Warren	0	0	0	0	0	0	0	0 (0%)	0 (0%)

For the one Republican respondent, Buttigieg elicited the most positive expressions and Biden elicited the most negative expressions.

DECIDED VOTERS (*n = 17*)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	37	0	34	16	0	15	0	99 (21.34%)	365 (78.66%)
Buttigieg	0	4	39	1158	35	0	55	1141 (56.51%)	878 (43.49%)
Klobuchar	11	0	86	262	58	0	42	101 (9.0%)	1021 (91.0%)
Sanders	12	154	43	619	18	0	61	722 (34.01%)	1401 (65.99%)
Trump	0	0	12	150	108	0	51	712(29.37%)	1712 (70.63%)
Warren	61	0	30	369	18	0	11	476 (26.7%)	1307 (73.3%)

Among decided voters, Buttigieg elicited the most positive expressions and Trump elicited the most negative expressions.

UNDECIDED VOTERS (*n = 5*)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	35	0	36	265	33	0	64	255 (46.79%)	290 (53.21%)
Buttigieg	0	0	0	93	0	0	111	90 (47.62%)	99 (52.38%)
Klobuchar	0	1	0	98	10	0	479	101 (43.53%)	131 (56.47%)
Sanders	0	0	15	193	69	0	181	39 (27.08%)	105 (72.92%)
Trump	0	0	0	10	8	18	76	18 (7.38%)	226 (92.62%)
Warren	0	0	0	0	0	0	106	0 (0%)	335 (100%)

*Among undecided voters, Biden elicited both the most positive **and** negative expressions.*

INCOME LESS THAN 40K (*n = 9*)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
				Sum of Frames >= Threshold					
Biden	0	0	1	16	0	0	0	99 (48.29%)	106 (51.71%)
Buttigieg	0	4	23	887	35	0	16	951 (91.18%)	92 (8.82%)
Klobuchar	7	0	28	262	58	0	6	101 (25.96%)	288 (74.04%)
Sanders	9	154	27	531	18	0	29	657 (47.99%)	712 (52.01%)
Trump	0	0	7	150	103	0	3	689 (69.88%)	297 (30.12%)
Warren	16	0	22	352	18	0	0	459 (80.53%)	111 (19.47%)

Among respondents who make less than $40,000 per year, Buttigieg elicited the most positive expressions, while Trump elicited the most negative expressions.

INCOME GREATER THAN 40K (*n* = 13)

	Anger	Sadness	Disgust	Joy	Surprise	Fear	Contempt	Positive	Negative
Biden	0	0	1	16	0	0	0	99 (48.29%)	106 (51.71%)
Buttigieg	0	4	23	887	35	0	16	951 (91.18%)	92 (8.82%)
Klobuchar	7	0	28	262	58	0	6	101 (25.96%)	288 (74.04%)
Sanders	9	154	27	531	18	0	29	657 (47.99%)	712 (52.01%)
Trump	0	0	7	150	103	0	3	689 (69.88%)	297 (30.12%)
Warren	16	0	22	352	18	0	0	459 (80.63%)	111 (19.47%)

Among respondents who make more than $40,000 per year, Buttigieg elicited the most positive expressions, while Sanders elicited the most negative expressions.

Galvanic Skin Response

Galvanic Skin Response (GSR) is a method of measurement of the level of perspiration on the surface of the skin that is controlled by the autonomic nervous system. It is used to measure emotional intensity that is beyond the recognition or control of the subject (subconscious). GSR uses (1) physiological sensors (electrodes attached to specific parts of the body, in this case, the index and middle fingers) that pick up the electrical conductance of the skin, and (2) software that calculates the changing tonic and phasic levels

Note: Highlight indicates the candidate with the highest number of peaks and highest average of peaks per minute.

ALL RESPONDENTS (*n* = 22)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	141	5.127272727
Buttigieg	137	4.981818182
Klobuchar	138	5.018181818
Sanders	142	5.163636364
Trump	126	4.581818182
Warren	130	4.727272727

Overall, Sanders elicited the most GSR peaks among respondents and also elicited (on average) the most GSR peaks per minute.

MALE RESPONDENTS (*n* = 11)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	78	5.672727273
Buttigieg	69	5.018181818
Klobuchar	75	5.454545455
Sanders	81	5.890909091
Trump	72	5.236363636
Warren	72	5.236363636

Among the one Republican respondent, Sanders elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

FEMALE RESPONDENTS (*n* = 11)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	63	4.581818182
Buttigieg	68	4.945454545
Klobuchar	63	4.581818182
Sanders	61	4.436363636
Trump	54	3.927272727
Warren	58	4.218181818

Among the one Republican respondent, Buttigieg elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

DEMOCRATIC RESPONDENTS (*n* = 15)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	95	5.066666667
Buttigieg	83	4.426666667
Klobuchar	91	4.853333333
Sanders	111	5.92
Trump	96	5.12
Warren	83	4.426666667

Among Democrats, Sanders elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

INDEPENDENT/UNAFFILIATED RESPONDENTS (*n* = 6)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	40	5.333333333
Buttigieg	45	6
Klobuchar	37	4.933333333
Sanders	28	3.733333333
Trump	22	2.933333333
Warren	38	5.066666667

Among independent and respondents who didn't identify with any political party, Buttigieg elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

REPUBLICAN RESPONDENT (*n* = 1)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	6	4.8
Buttigieg	9	7.2
Klobuchar	10	8
Sanders	3	2.4
Trump	8	6.4
Warren	9	7.2

For the one Republican respondent, Klobuchar elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

DECIDED VOTERS (*n* = 17)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	103	4.847058824
Buttigieg	113	5.317647059
Klobuchar	111	5.223529412
Sanders	114	5.364705882
Trump	96	4.517647059
Warren	96	4.517647059

Among decided voters, Sanders elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

UNDECIDED VOTERS (*n* = 5)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	38	6.08
Buttigieg	24	3.84
Klobuchar	27	4.32
Sanders	28	4.48
Trump	30	4.8
Warren	34	5.44

Among undecided voters, Biden elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

INCOME LESS THAN 40K (*n* = 9)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	61	5.422222222
Buttigieg	64	5.688888889
Klobuchar	68	6.044444444
Sanders	60	5.333333333
Trump	56	4.977777778
Warren	49	4.355555556

Among respondents who make less than $40,000 a year, Klobuchar elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

INCOME GREATER THAN 40K (*n* = 13)

	Total # of Peaks	Avg. # of Peaks Per Minute
Biden	80	4.923076923
Buttigieg	73	4.492307692
Klobuchar	70	4.307692308
Sanders	82	5.046153846
Trump	70	4.307692308
Warren	81	4.984615385

Among respondents who make more than $40,000 a year, Sanders elicited the most GSR peaks and also elicited (on average) the most GSR peaks per minute.

C. Self-Reported Findings

Note: <mark>Highlight</mark> indicates the highest mean score.

Trustworthiness (taps into trustworthy, dependable, honest, sincere, and credible)

	M
Joe Biden	4.87
Pete Buttigieg	5.33
Amy Klobuchar	5.48
Bernie Sanders	5.73
Donald Trump	1.67
Elizabeth Warren	5.62
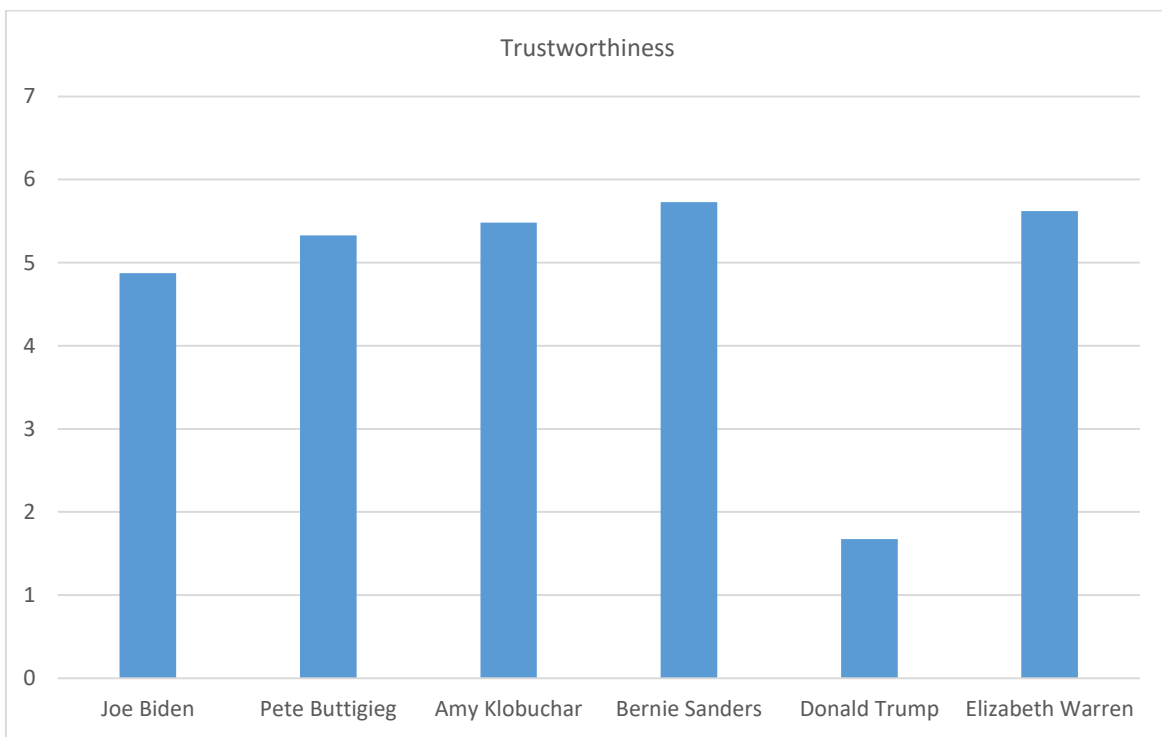
Expertise (taps into experienced, knowledgeable, qualified, and competent)

	M
Joe Biden	5.75
Pete Buttigieg	5.07
Amy Klobuchar	5.83
Bernie Sanders	6.00
Donald Trump	2.25
Elizabeth Warren	6.38
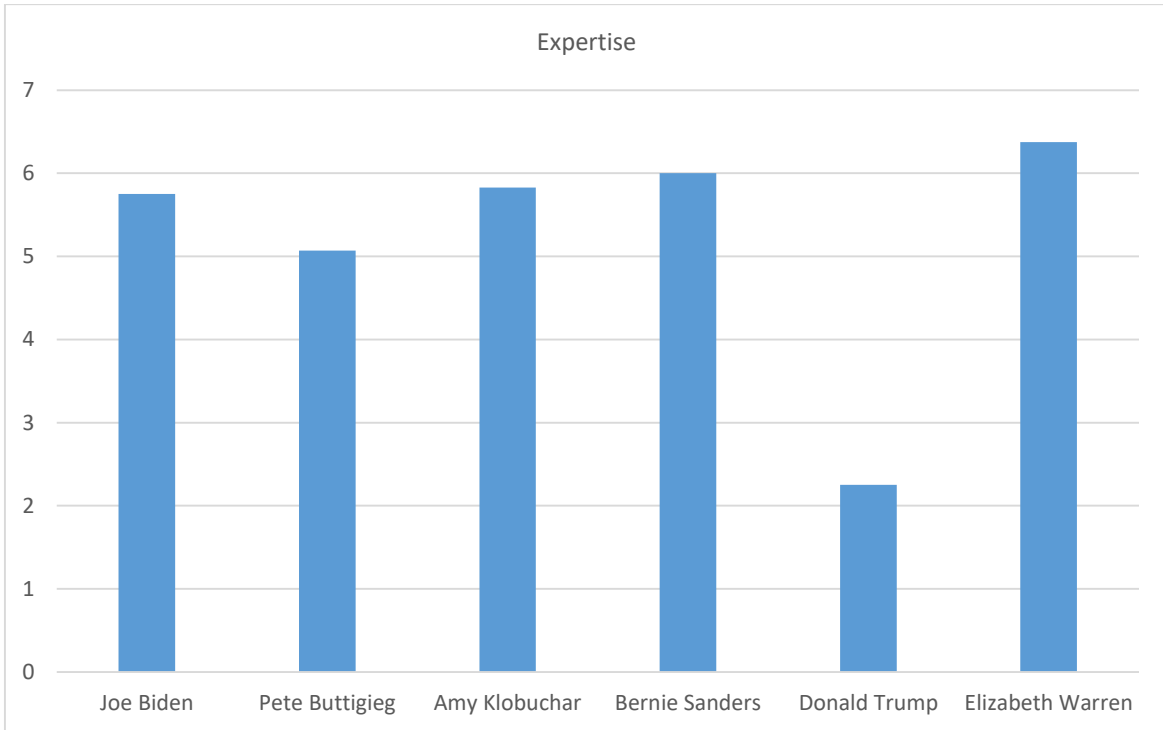
Assertiveness (taps into dominant, strong, and confident)

	M
Joe Biden	5.39
Pete Buttigieg	5.00
Amy Klobuchar	5.44
Bernie Sanders	5.71
Donald Trump	4.06
Elizabeth Warren	5.94

Assertiveness
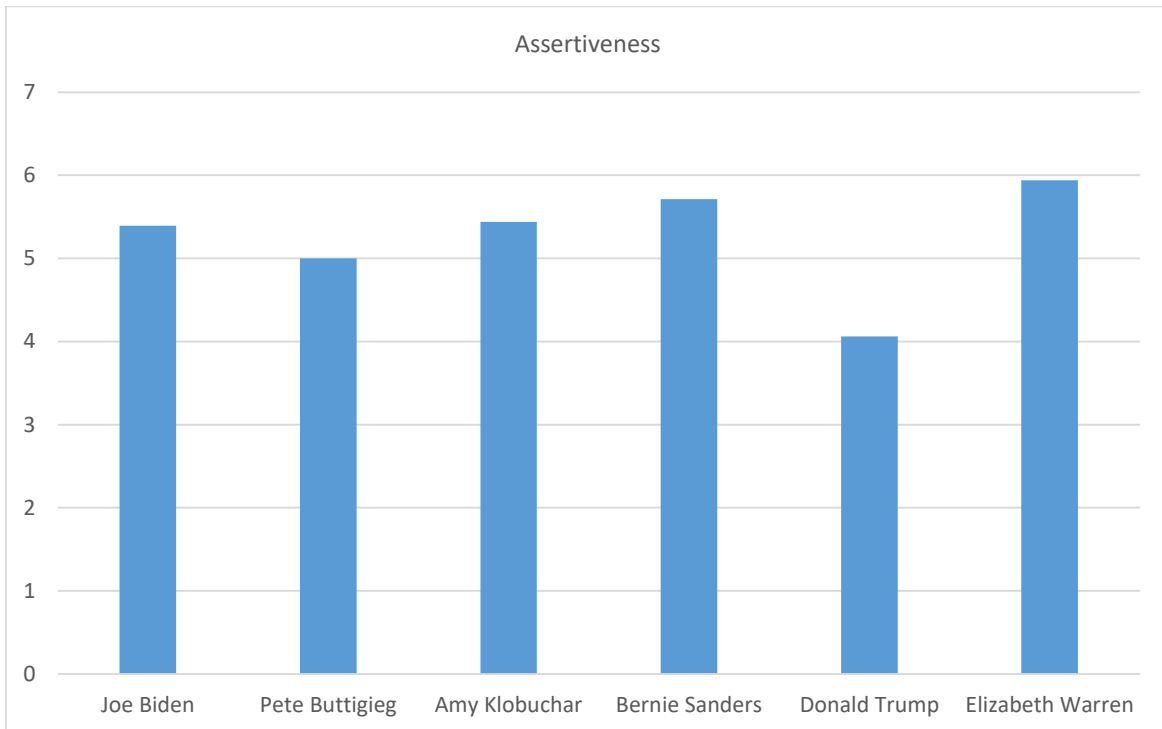
Attractiveness (taps into attractive, classy, and beautiful)

	M
Joe Biden	4.29
Pete Buttigieg	4.73
Amy Klobuchar	4.92
Bernie Sanders	4.27
Donald Trump	2.08
Elizabeth Warren	4.80
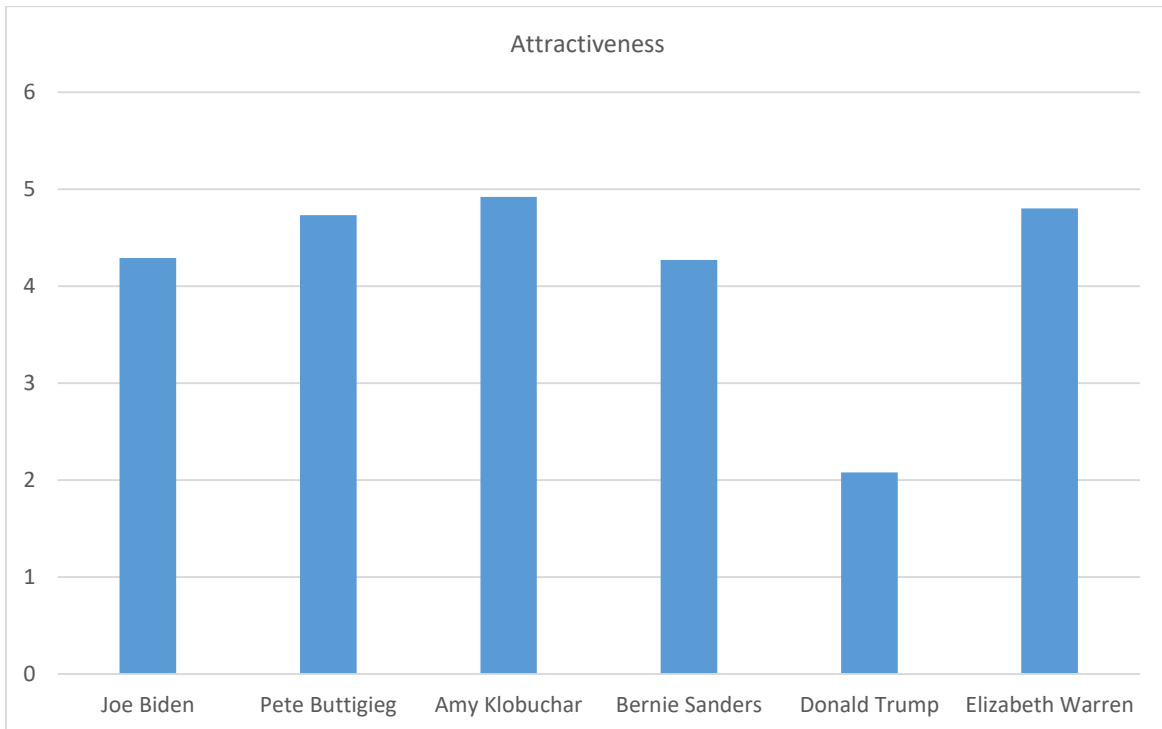
Moral

	M
Joe Biden	5.14
Pete Buttigieg	5.55
Amy Klobuchar	5.64
Bernie Sanders	6.18
Donald Trump	1.36
Elizabeth Warren	5.59
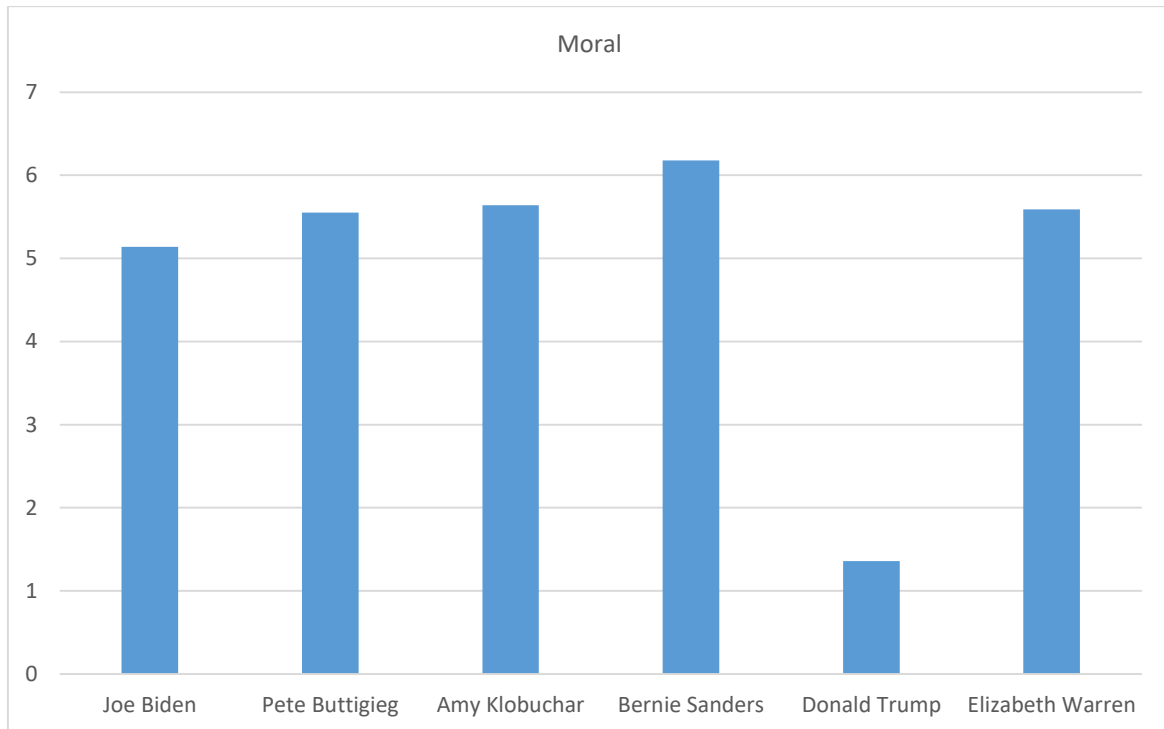
Likeable

	M
Joe Biden	4.95
Pete Buttigieg	5.45
Amy Klobuchar	5.27
Bernie Sanders	5.23
Donald Trump	1.55
Elizabeth Warren	5.14
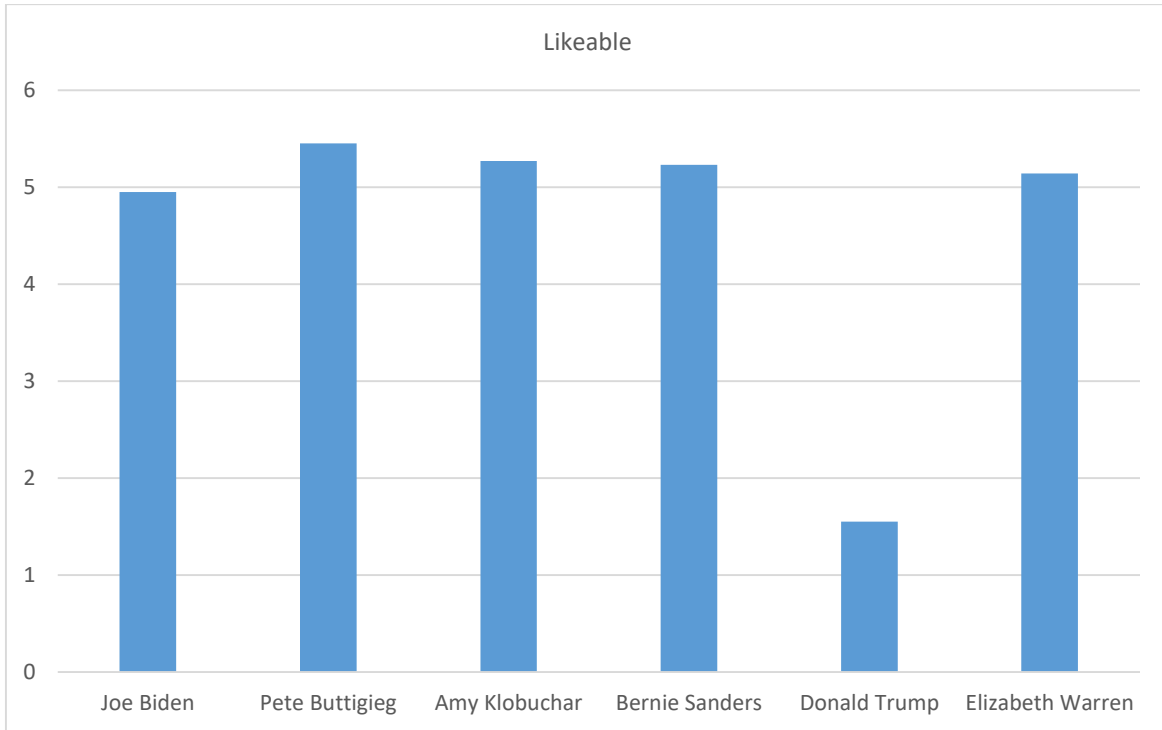
Approachable

	M
Joe Biden	5.27
Pete Buttigieg	5.82
Amy Klobuchar	5.27
Bernie Sanders	6.05
Donald Trump	2.91
Elizabeth Warren	5.64
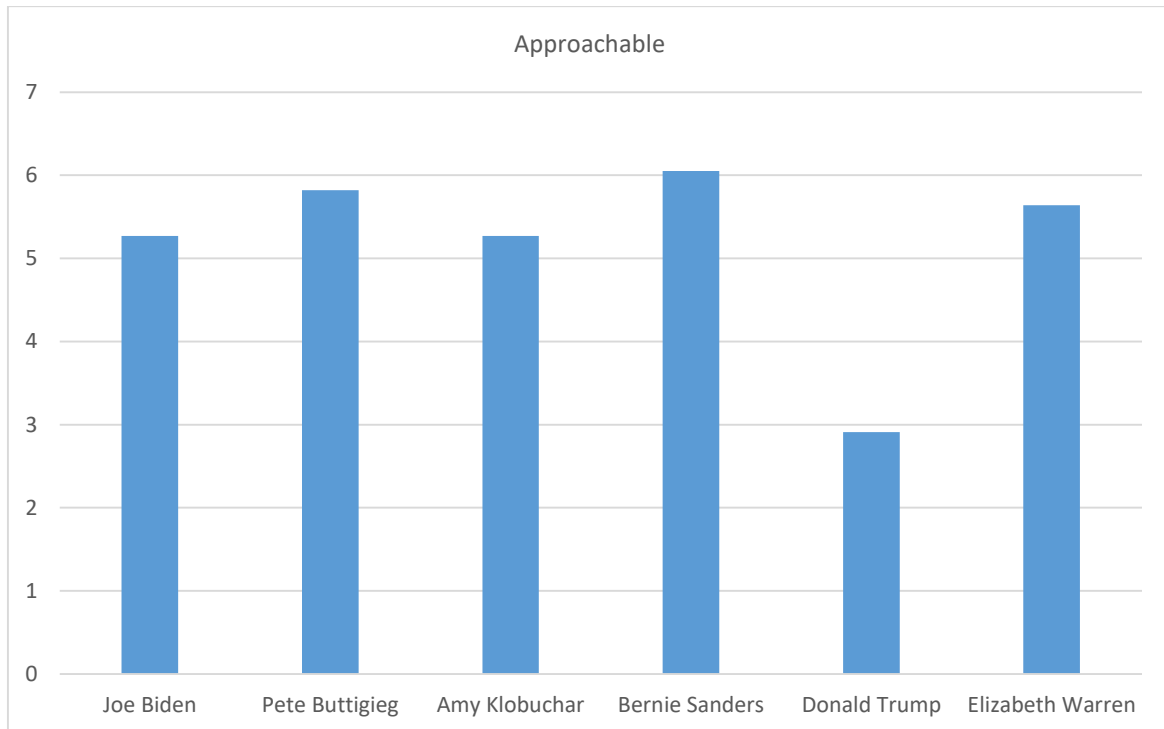
Compassionate

	M
Joe Biden	4.95
Pete Buttigieg	5.55
Amy Klobuchar	5.32
Bernie Sanders	5.95
Donald Trump	1.50
Elizabeth Warren	6.09

Compassionate
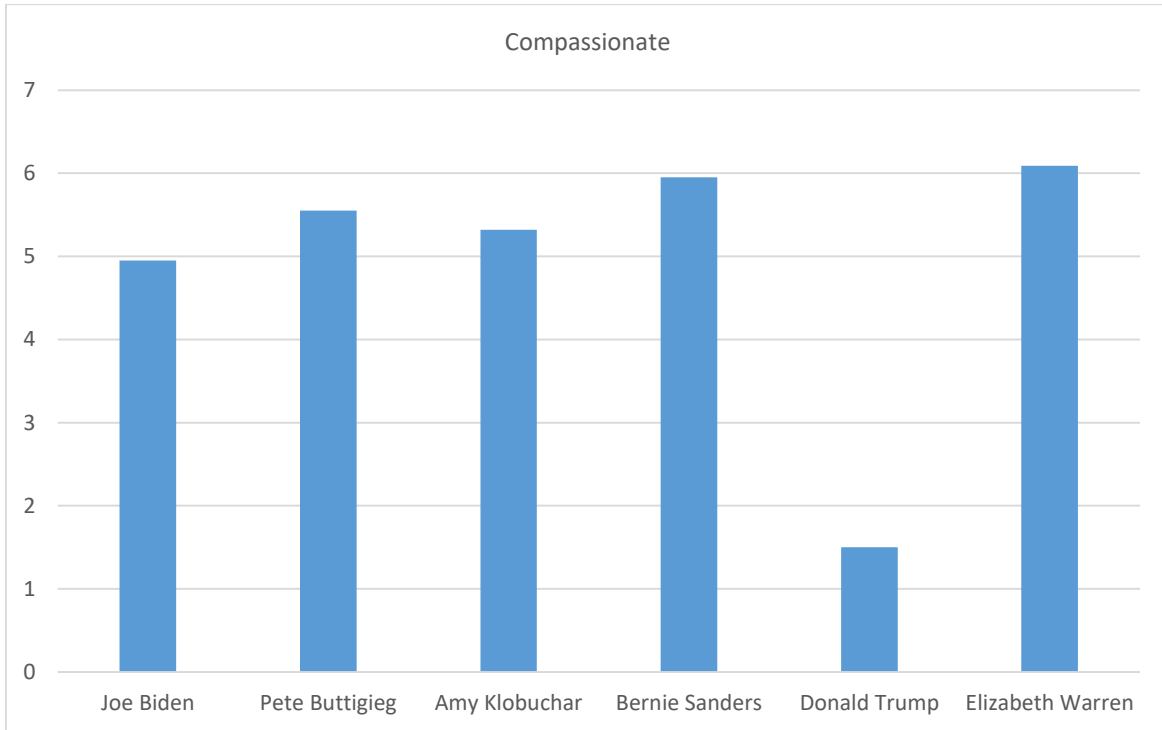
Negative Emotions

	M
Joe Biden	2.30
Pete Buttigieg	1.89
Amy Klobuchar	1.88
Bernie Sanders	2.11
Donald Trump	5.20
Elizabeth Warren	2.17

Negative Emotions (bar chart)
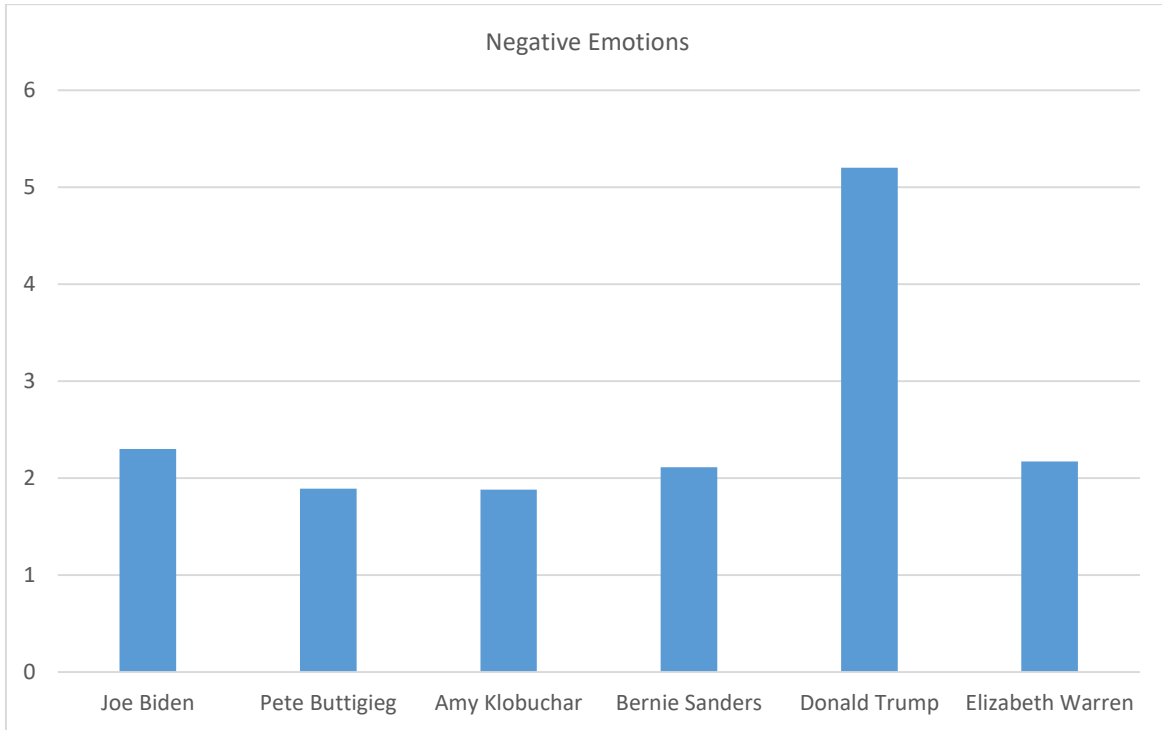
Positive Emotions

	M
Joe Biden	3.12
Pete Buttigieg	4.07
Amy Klobuchar	3.82
Bernie Sanders	4.30
Donald Trump	1.96
Elizabeth Warren	4.45

Positive Emotions
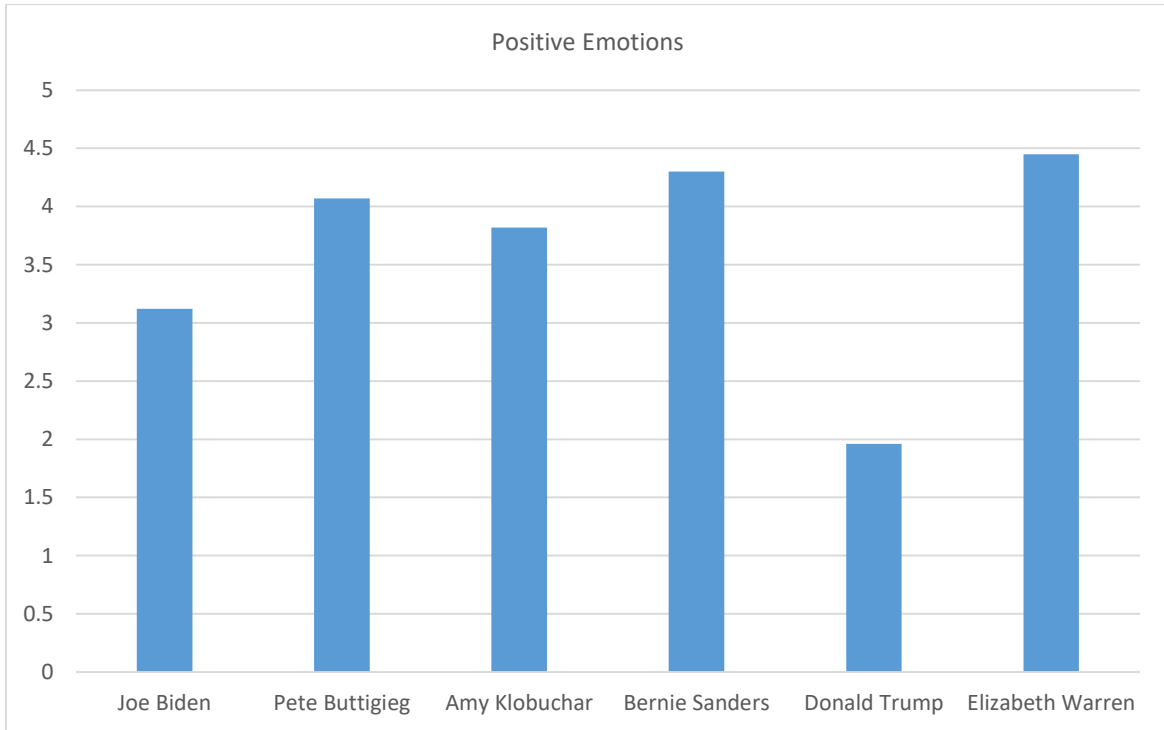
Overall feeling about candidate (extremely negative -> extremely positive)

	M
Joe Biden	3.95
Pete Buttigieg	4.86
Amy Klobuchar	4.68
Bernie Sanders	4.68
Donald Trump	1.41
Elizabeth Warren	4.95
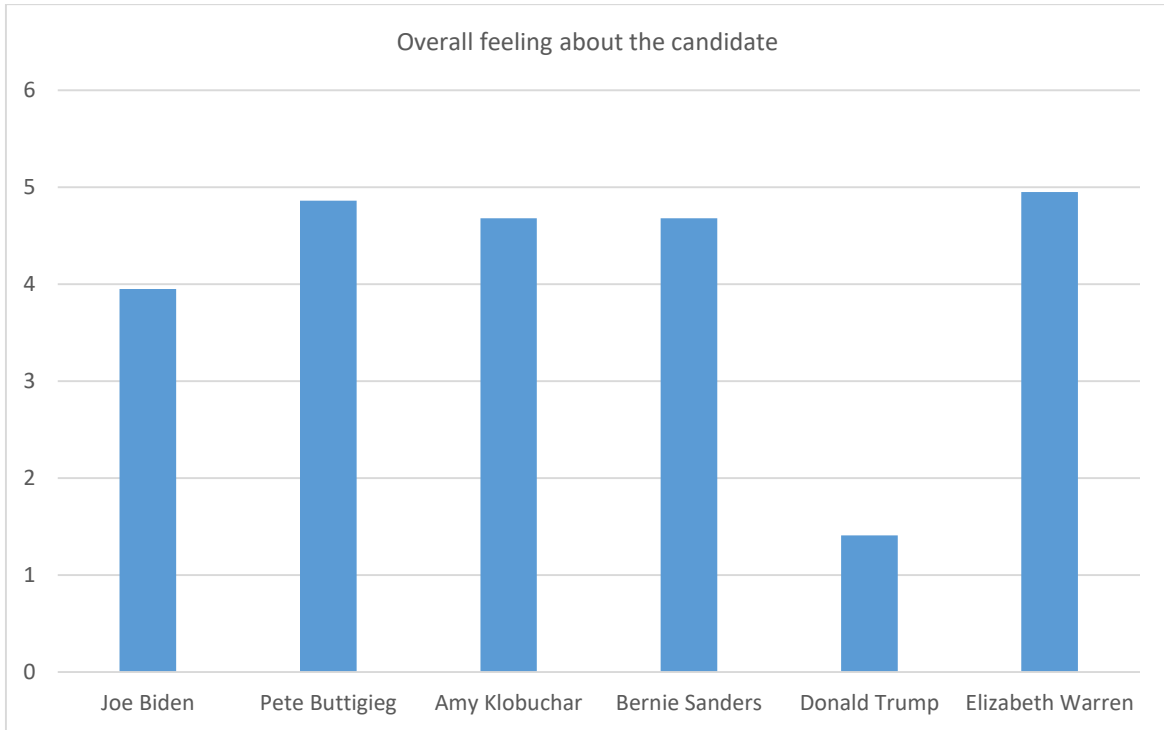
Likelihood to vote for candidate

	M
Joe Biden	3.73
Pete Buttigieg	4.68
Amy Klobuchar	4.23
Bernie Sanders	4.91
Donald Trump	1.36
Elizabeth Warren	4.64

Likelihood to vote for candidate
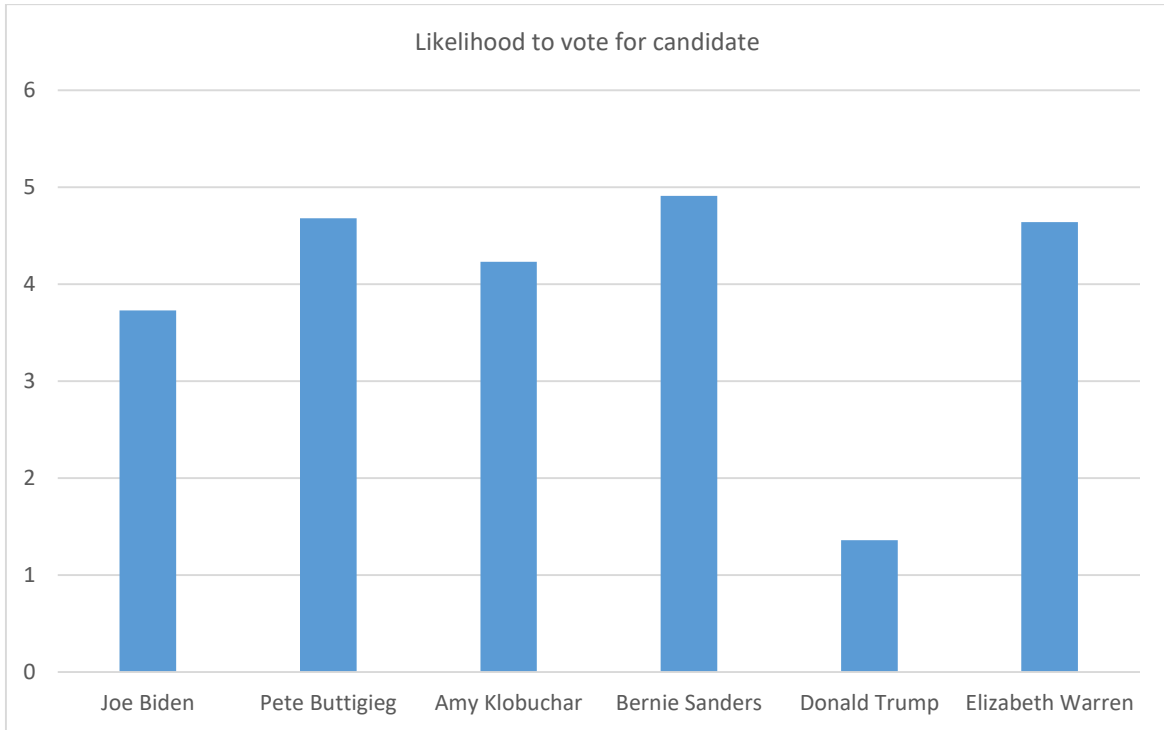
Frequency in which Biden makes you feel the following emotions

	M
Angry	2.48
Afraid	2.14
Fearful	2.1
Disgusted	2.57
Unsafe	2.05
Sad	2.52
Hopeful	3.52
Passionate	2.73
Proud	3.1
Happy	3.57
Inspired	2.95
Curious	2.95

Biden elicits following emotions
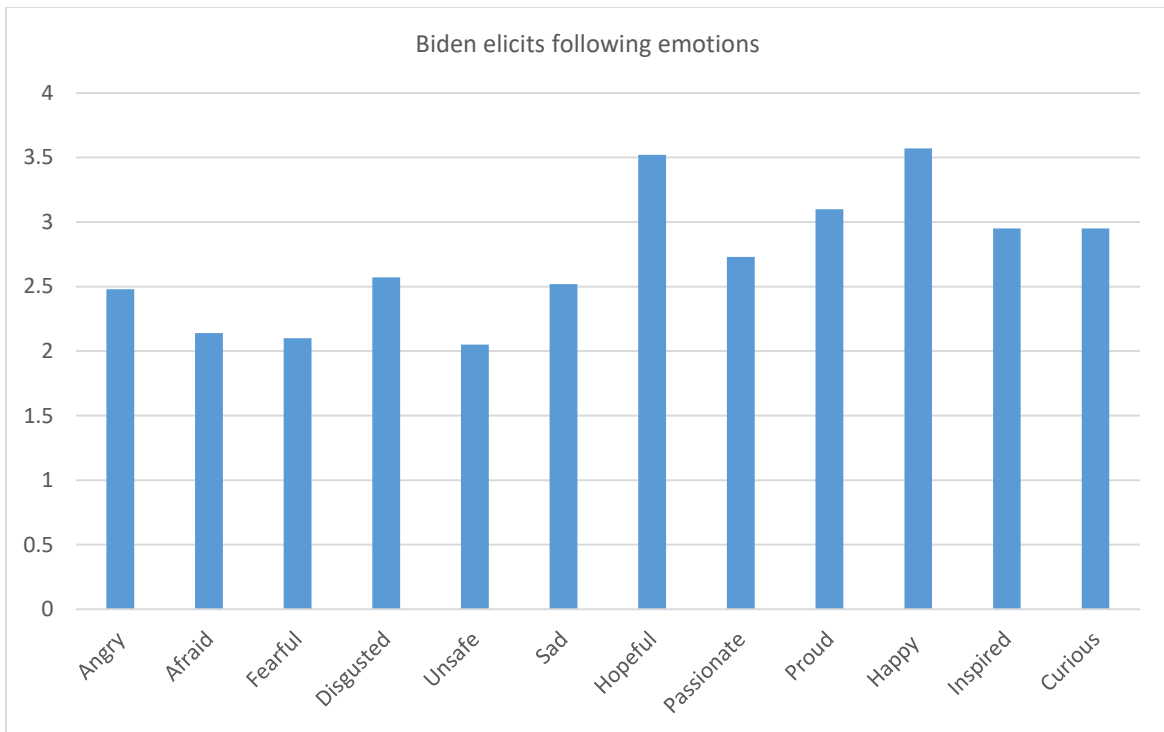
Frequency in which Buttigieg makes you feel the following emotions

	M
Angry	2.27
Afraid	1.82
Fearful	1.68
Disgusted	1.95
Unsafe	1.68
Sad	1.91
Hopeful	4.45
Passionate	3.86
Proud	3.95
Happy	4.00
Inspired	4.05
Curious	4.09

Buttigieg elicits following emotions
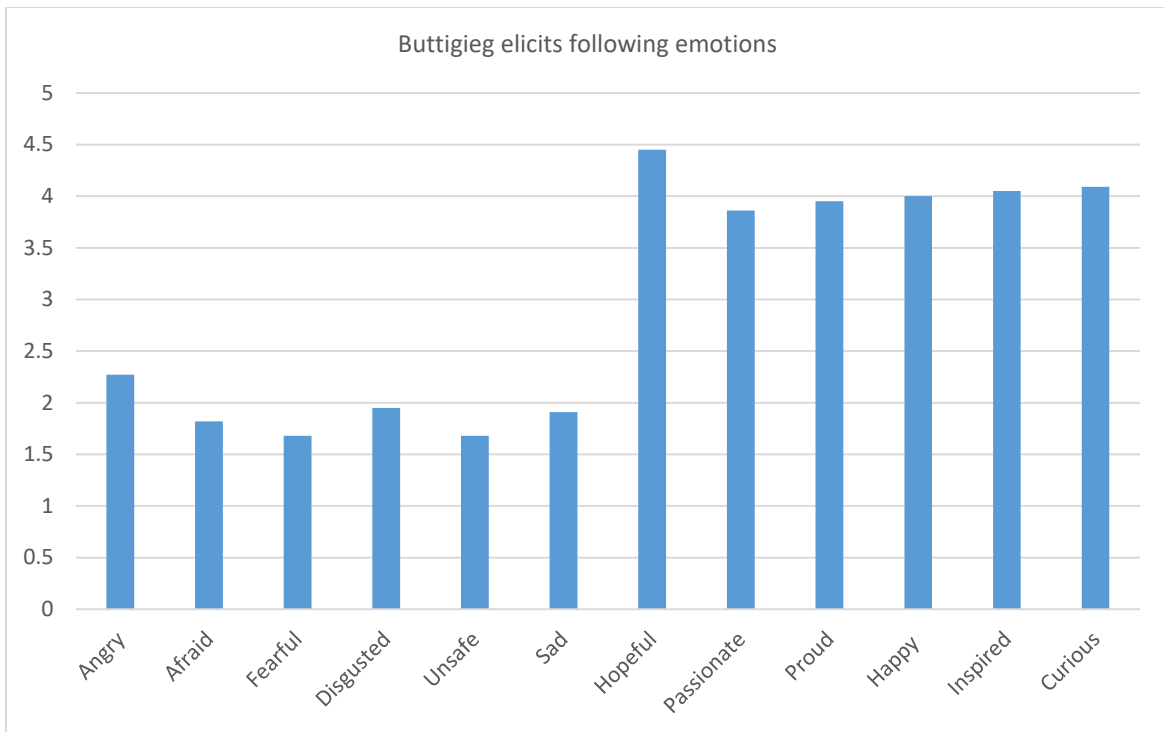
Frequency in which Klobuchar makes you feel the following emotions

	M
Angry	2.18
Afraid	1.77
Fearful	1.86
Disgusted	1.73
Unsafe	1.82
Sad	1.91
Hopeful	4.18
Passionate	3.23
Proud	3.86
Happy	3.73
Inspired	3.73
Curious	4.18
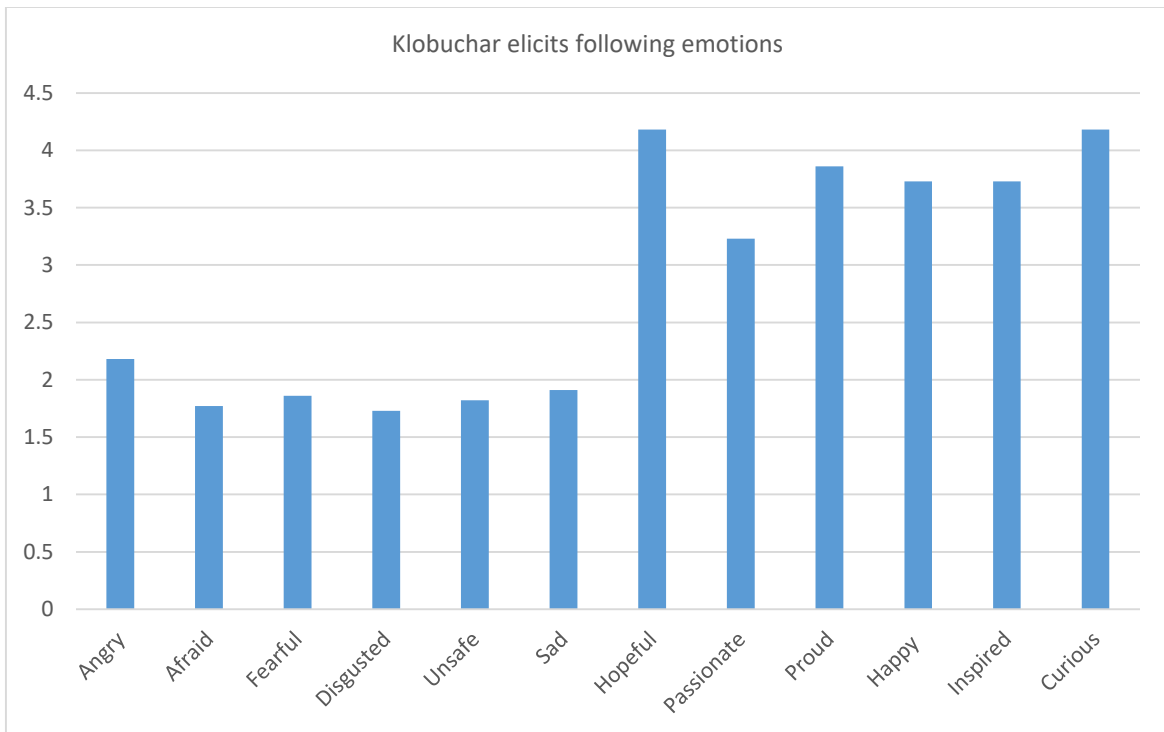
Frequency in which Sanders makes you feel the following emotions

	M
Angry	2.68
Afraid	2.14
Fearful	1.86
Disgusted	1.95
Unsafe	1.68
Sad	2.36
Hopeful	4.55
Passionate	4.36
Proud	4.05
Happy	4.23
Inspired	4.36
Curious	4.23

Sanders elicits following emotions
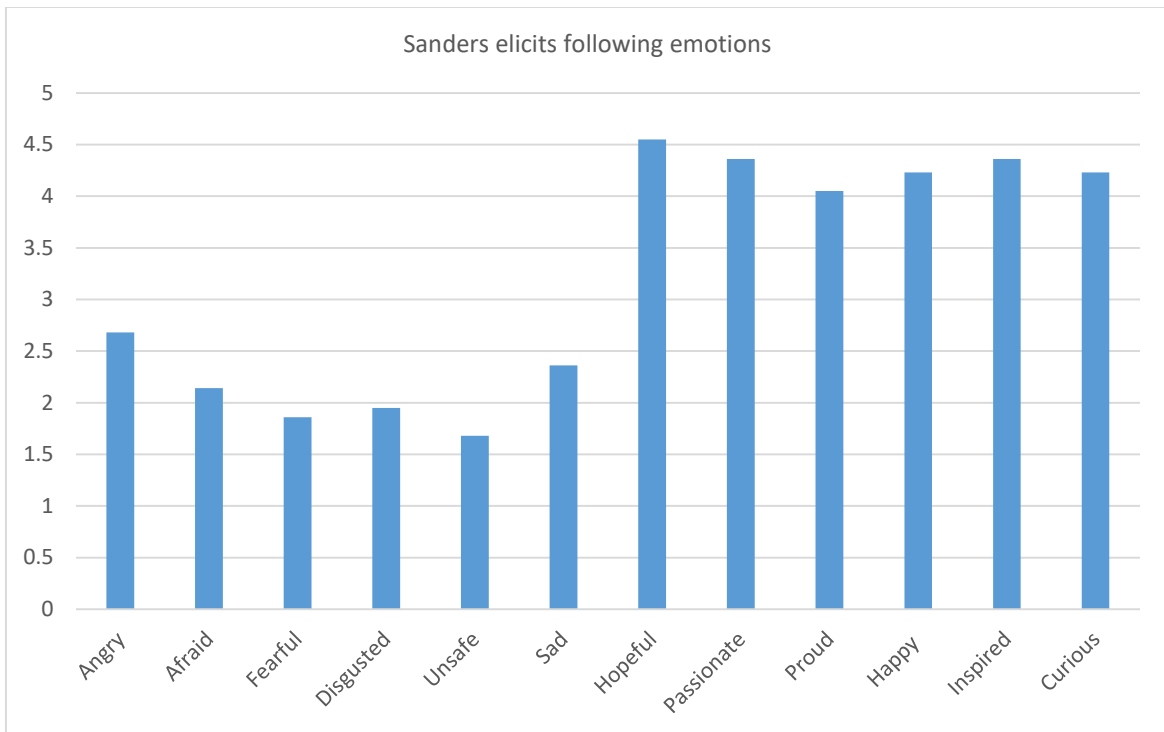
Frequency in which Trump makes you feel the following emotions

	M
Angry	5.05
Afraid	5.14
Fearful	4.9
Disgusted	5.33
Unsafe	5.29
Sad	5.24
Hopeful	1.81
Passionate	3.00
Proud	1.62
Happy	1.57
Inspired	1.48
Curious	2.48

Trump elicits following emotions
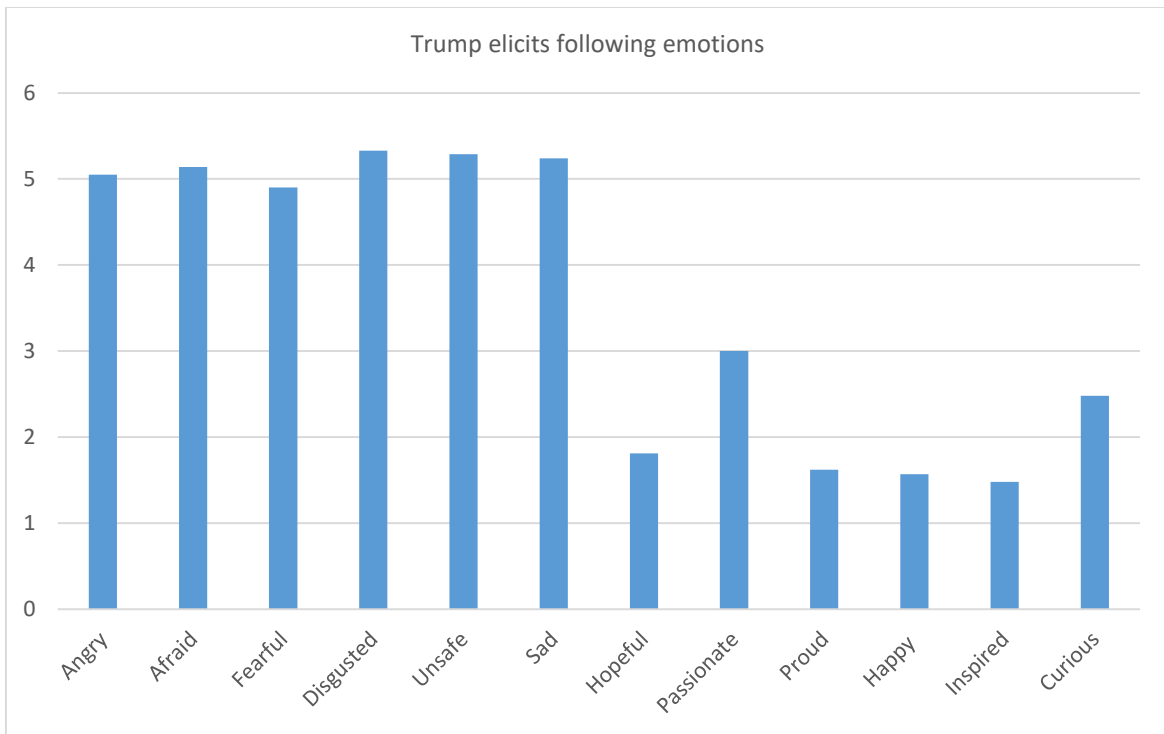
Frequency in which Warren makes you feel the following emotions

	M
Angry	2.36
Afraid	2.05
Fearful	2.09
Disgusted	2.14
Unsafe	1.73
Sad	2.64
Hopeful	4.68
Passionate	4.50
Proud	4.45
Happy	4.27
Inspired	4.36
Curious	4.45

Warren elicits following emotions
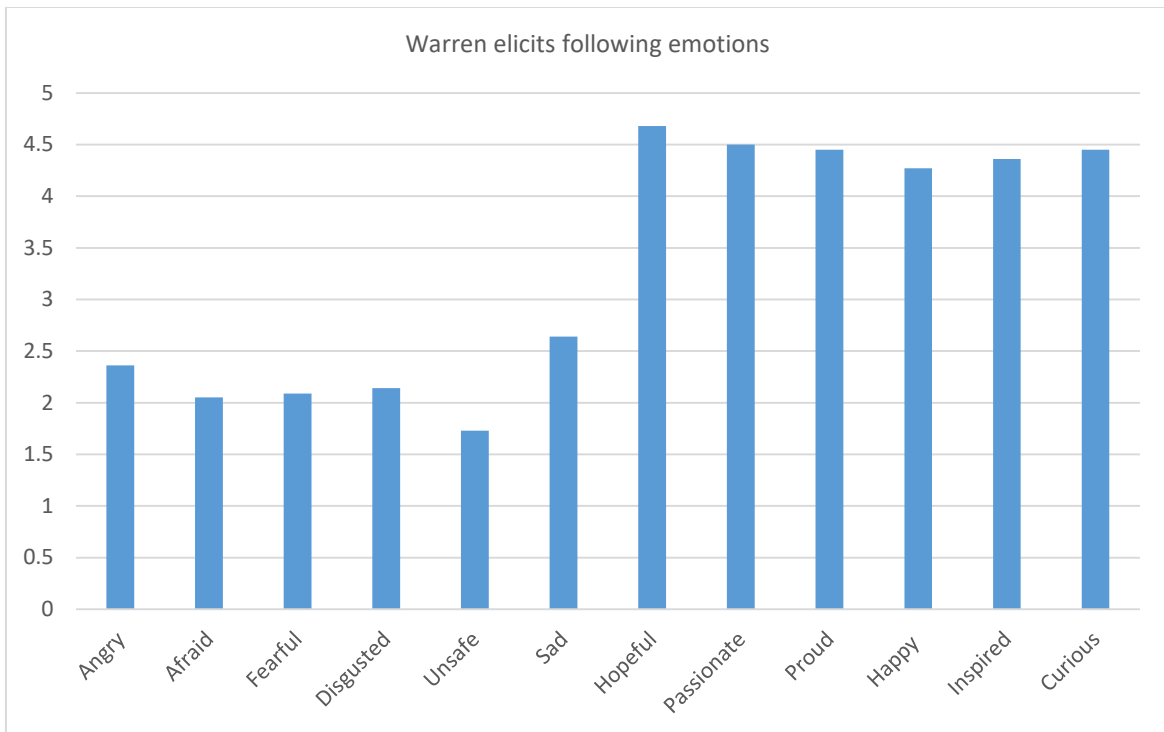
Factors related to likelihood to vote for candidate

	r	*p*
Trustworthiness	.642	.001
Expertise	.463	.030
Assertiveness	.433	.044
Attractiveness	.427	.048
Moral	.709	.000
Likeable	.610	.003
Approachable	.625	.002
Compassionate	.618	.002
Negative Emotions	-.377	.084
Positive Emotions	.765	.000
Overall feeling about candidate	.792	.000

Overall Self-Reported Trends:

- Characteristics of candidates
    - Buttigieg: Highest on likeable
    - Klobuchar: Highest on attractiveness (followed closely by Warren)
    - Sanders: Highest on trustworthiness, moral, approachable, likelihood to vote
    - Trump: Highest on negative emotions elicited
    - Warren: Highest on expertise, assertiveness, compassion (followed closely by Sanders), positive emotions elicited, overall feeling about candidate (followed closely by Buttigieg)

- Emotions induced by candidates
    - Hopeful was the strongest emotion induced by each of the Democratic candidates.
    - Disgusted, unsafe, and sad were the strongest emotions induced by Trump.

- Factors related to likelihood to vote for candidate from strongest to weakest
    - Overall feeling about candidate
    - Positive emotions
    - Moral
    - Trustworthiness
    - Approachable
    - Compassionate
    - Likeable
    - Expertise
    - Assertiveness
    - Attractiveness