

# THE WALL STREET JOURNAL.

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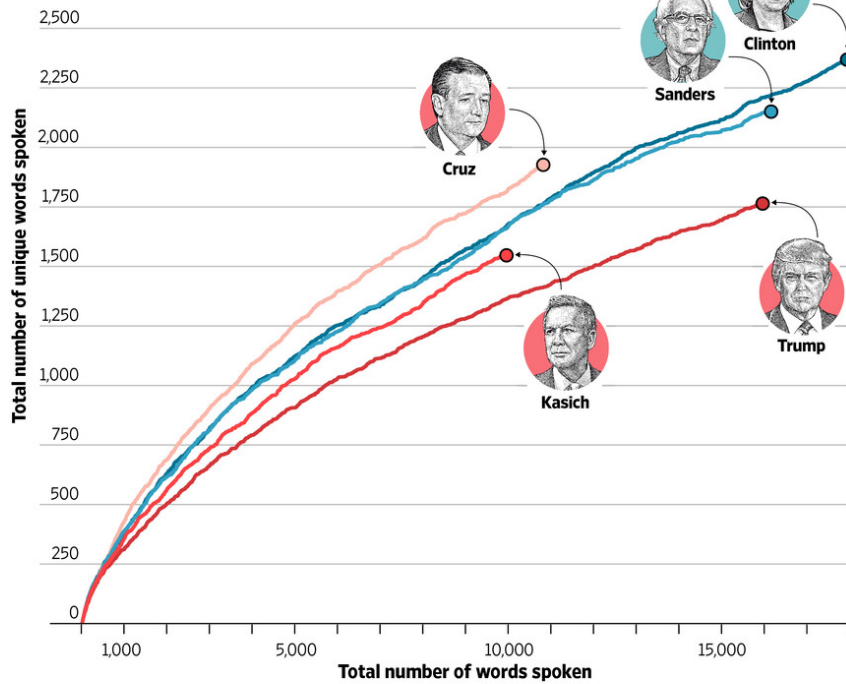
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## What Speech Patterns Say About the Presidential Candidates

Debate discourse provides glimpse of hopefuls' outlook and demeanor; analytical vs. anecdotal

### Word Up

Language experts track the presidential candidates' words to see how they stack up against each other. In the debates, Hillary Clinton and Bernie Sanders's words resembled each other in number and complexity, while Ted Cruz used a bigger variety of words than his Republican rivals.



Note: The data include eight Democratic debates and 12 Republican debates  
 Source: Mark Liberman, University of Pennsylvania

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By JO CRAVEN MCGINTY

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Since August, the presidential candidates have uttered more than 300,000 words in 20 televised debates. And as their statements have spilled out, language experts have pulled

them apart, categorized the words and counted them up.

The goal is to gain insight into the candidates' personalities by quantifying their verbal tics. In other words, these experts have taken reading between the lines to a new level.

“What we work on is of interest to people in marketing, politics, police and intelligence —any place where persuasion is of interest,” said James W. Pennebaker, a social psychologist at the University of Texas and a pioneer in the field of computerized textual analysis. “It gives you a sense of what people are interested in and what they are attending to, for whatever reason.”

Mr. Pennebaker's findings reveal that one presidential candidate leads the others in optimism. Two speak with such authority that doubt doesn't appear to exist in their minds. And another uses words that simultaneously signal insecurity and clout.

The most optimistic candidate? That's Hillary Clinton. The most self-certain among the contenders? Ted Cruz and Bernie Sanders. And the seemingly contradictory ball of confidence and insecurity? Donald Trump.

To conduct his research, Mr. Pennebaker funnels text into a computer program he designed that categorizes the information based on a dictionary of 6,400 words, word stems and emoticons. Measuring the frequencies of different kinds of words—negative emotions or words associated with risk, for example—helps him excavate the emotional and cognitive qualities that are buried in the heap of text.

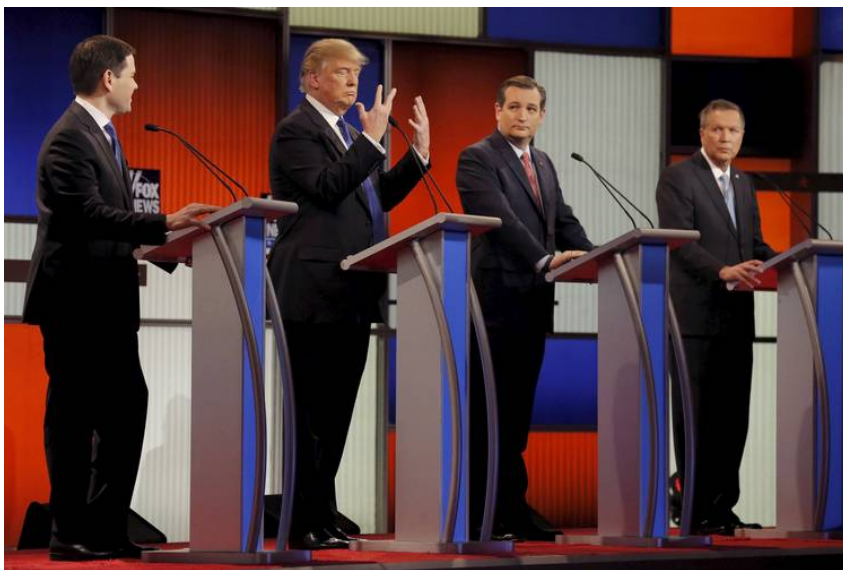
He and other researchers are careful to point out that these verbal measurements do not account for nuance, irony or context, and they are not fail-safe truth detectors. But, the researchers note, candidates' speech patterns influence voters, and the words they choose offer glimpses into their psyches.

The sheer number of Republicans running for president may have reduced the opportunity to speak during the debates, but Mr. Cruz made the most of it. With an average of 2,700 words per debate, Mr. Cruz talked less than any of the leading candidates, but he was the most analytical of the group, and he used more big words—qualities correlated to intelligence.

Mr. Pennebaker defines words of six or more letters as big, and about 20% of Mr. Cruz's words fit that description. Mrs. Clinton used big words about 18% of the time, Mr. Sanders about 19% of the time, and Mr. Trump about 14% of the time.



Democratic presidential candidates Bernie Sanders and Hillary Clinton, shown during a debate in early March, both spoke more words than their GOP rivals, in part because they've had fewer contenders on stage with them. *PHOTO: WILFREDO LEE/ASSOCIATED PRESS*



The Republican president candidates ran from highly analytical (Ted Cruz) to anecdotal (Donald Trump) to somewhere in the middle (John Kasich). Here, a debate stage in March before GOP hopeful Marco Rubio, at left, dropped out. *PHOTO: JIM YOUNG/REUTERS*

Mr. Cruz was also the most self-certain of the candidates and the most power-conscious of the group, meaning he tended to include references to the status of people, for example, by using their formal titles.

“He is so analytical. He is so power-oriented. He is so certain,” Mr. Pennebaker said of Mr. Cruz. “He is unlike anybody I’ve seen.”

On the debate stage, Mr. Trump was the exact opposite. He was the least analytical of the candidates. He was the most confident of his own status. And yet based on his use of

first-person singular pronouns, which he used more than anyone, he sounded the least secure. Interestingly, this verbal habit also was responsible for conveying his air of authenticity.

While the other candidates displayed analytical skills, Mr. Trump used storytelling to talk about issues.

“If you look at his debates, you have rarely seen him approach a problem and show any kind of analytical interest,” Mr. Pennebaker said. “He relies on narrative. The Democratic debates, all they do is talk about problems and how to solve them and work through them logically. What a snore.”

Mark Liberman, a linguist at the University of Pennsylvania who also has analyzed the candidates’ words, notes another unusual Trump characteristic: He repeats exact word sequences over and over—but he virtually never fills pauses with “uh” or “um.”

“One substitutes for the other,” Mr. Liberman said.

The most talkative candidate in the debates was Mrs. Clinton, who averaged around 6,000 words (although with far fewer Democrats running for president, she and Mr. Sanders had more opportunity to talk).

Like Mr. Cruz, Mrs. Clinton was analytical in approach, but her words indicated more cognitive processing, rather than self-certainty, a signal that a topic at hand is complex. Her language was more optimistic than the others, and based on the resemblance of her words to those used by previous presidents in their inaugural addresses, she was the most presidential.

Mr. Sanders uttered an average 5,500 words per debate, a close second to Mrs. Clinton. His words, like hers, tended to be analytical, and he was surpassed only by Mr. Cruz in self-certainty. Although Mr. Sanders is a socialist whose chief concern is the well-being of the working masses, his language revealed few personal connections.

“He knows what he thinks, and he knows what he thinks is right,” said Kayla Jordan, a doctoral student who works with Mr. Pennebaker. “He and Ted Cruz are similar on that measure.”

The language of John Kasich, the remaining candidate, falls somewhere in the middle. He is moderately positive. He’s generally sociable. He focuses more on rewards than risks. “That’s about it,” Mr. Pennebaker said. “He’s not extreme on anything.”

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His more dynamic Republican opponents, on the other hand, are a linguist's dream.

“For a wordsmith, it is the most beautiful

art you've ever seen,” Mr. Pennebaker said. “It's this rainbow of word usage. At one end is Cruz. At the other is Trump.”

Or, to read between the lines, the biggest spectacles produce the most interesting copy. Even in academia.

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