Measuring political bias of network news

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(PhysOrg.com) -- That FOX Broadcasting Company has a conservative slant and MSNBC skews liberal may reflect widespread opinion, but a Washington University in St. Louis study suggests that news networks' biases can be measured.

Published in March 2011 in the journal *Behavioral Research Methods*, the findings are important in their validation of a new research tool developed by Washington University psychologists, according to lead author Nicholas Holtzman, a graduate student in psychology in Arts & Sciences at the university.

Using the Contrast Analysis of Semantic Similarity (CASS) text analysis software, the researchers evaluated 12 months' worth of transcripts from MSNBC, FOX and CNN. Confirming their hypotheses and validating the CASS method, FOX demonstrated a conservative bias, while MSNBC exhibited a liberal leaning. CNN fell squarely in between.

Acknowledging the competitive 24/7 news cycle, Holtzman explains that the investigators strategically selected a provocative topic for testing their research method.

"We tried to make a dry process of text analysis a little bit sexier with the media bias component because we're hoping it will attract some interest so that other researchers will then use this analytic method," Holtzman says.

Political implications in an election cycle

Tweaking an existing text analysis tool called BEAGLE, developed by co-author Michael Jones and colleagues, the researchers crafted the CASS text analysis method to measure word-to-word correlations. For the study, they focused on 2008 network transcripts containing the word "politics."

Using four words associated with liberal leanings, four connected to conservatism, and four each denoting negative and positive attributes, the investigators evaluated the number of times one word appeared in proximity with others. For example, the word "Democrat" occurring with a positive word such as "good" or "strong" indicated liberalism; the frequency with which "Republican" occurred with a positive term implied conservatism.

According to Holtzman, the study — which began during one presidential political season and whose results are being released at the start of another — could be valuable in the assessment of candidates.

"I hope that CASS will be used to detect bias in, say, the Republican candidates since we don't know who the GOP nominee will be," Holtzman says. "It could help determine who is more right-wing, who is more centered and so forth."

By comparing speeches and interview texts, researchers also could use the text analysis tool to determine how a politician's biases shift over time.

"For example, it may be that Barack Obama was substantially more liberal before he became president than he is now. Or maybe George W. Bush was more conservative before he became president," Holtzman says.

Blogs doubling as Rorschach tests?

A personal blog can speak volumes about its author. Running blog text through the CASS software to assess personality is the next step for Holtzman and his team.

After receiving permission from the bloggers to analyze their text, the investigators will ask bloggers to self-assess their personality traits. Researchers will compare those self-reports to the text analysis results.

"One hypothesis is that people who are narcissistic, for example, will talk about themselves in overly positive ways, and CASS might be able to extract the relevant associations among words — e.g., 'I' and 'wonderful' in the sentence: 'I am wonderful,' reflecting egotistical grandiosity," Holtzman says.

If researchers can ultimately evaluate personality through blogs, could psychologists in private practice do the same with their clients?

"We're not there yet; right now we're just trying to see if it works," Holtzman says. "Social and personality psychologists do help feed clinicians ideas about how they can help their clients. But it can take 10, 20 or 30 years to get to that point."

Amateur scientists, beware

In the nascent field of text analysis, which cuts across numerous fields, researchers are happy to share their methods.

"Political scientists are probably just as interested in this as psychologists," Holtzman says. "We have made connections with people in the political science department at Washington University, and I've

met with people in the English department. Someone in the business management department at Northwestern University is interested as well."

In fact, the CASS tool is available for download — to anyone — at casstools.org. It comes complete with exercises for beginners.

What if a senior manager was looking to hire a new associate? Could the software assess candidates' personalities? It's possible, Holtzman says.

"Anyone can download the software and perform this analysis," Holtzman says.

But amateurs should pay attention to the science behind the CASS tool.

"You can't read someone's 300-word blog post and make a grand inference about them as a person. We had 50 million words in one of our text totals. The others were between 5 and 10 million," Holtzman says.

The sheer amount of material available for well-known figures helps ensure the quality of text analysis research on subjects such as national politicians.

"That's the great thing about analyzing people who are really prominent; there is tons of information about them," Holtzman says. "So the people we're most interested in are the people whose analysis would be the most valid."

Provided by Washington University in St. Louis