

AI-generated arguments changed minds on controversial hot-button issues, according to study

March 2 2023, by Andrew Myers

Example AI message

It is time that we take a stand and enforce an assault weapon ban in the country. Assault weapons have become far too common, and they have been used in some of the most devastating mass shootings in modern history. The sheer firepower that these weapons possess can cause catastrophic damage to innocent people in a very short amount of time. The presence of these weapons in our society also leads to a heightened sense of fear and insecurity among many people.

An assault weapon ban would help to reduce the number of deaths and injuries that are caused by these weapons. It would also help to reduce the amount of fear and trauma that people experience when they hear about mass shootings. Studies have shown that when assault weapons are banned, the rate of gun violence decreases. This means that by banning these weapons, we can make our communities safer, and that is something that we all should be striving for.

Furthermore, an assault weapon ban is supported by a majority of the public. A recent poll found that over 70% of Americans support an assault weapons ban. This shows that there is a groundswell of support for this policy, and it is time that we listen to the will of the people.

It is time that we take action to enforce an assault weapon ban in the country. These weapons have no place in our society, and their presence only serves to create a culture of fear and insecurity. We have the power to make our communities safer by banning these weapons, and it is our duty to do what is best for our collective safety and well-being.

Example human message

The local funeral homes are booked for the next week. More small caskets are having to be ordered. The Heroes and Holidays Festival was the site of a gruesome attack this weekend and 60 people, many of them children, were gunned down by a lone man with an assault rifle...

Too often, the above scenario is repeated. Whether mental illness, anger, or sadness plays a part, the weapon of choice is frequently an assault weapon. An assault weapon has no practical use... only to kill or injure many in seconds.

Guns and ammunition are becoming easier to get, as some states are relaxing carry laws. Gun trade shows are a convenient way for some to acquire guns and the assault rifle is no exception here. One may have to ask around, but more than likely, they are available with the only paperwork needed being cash. No trail left behind until the weapon falls into the wrong hands.

Only a total ban on assault weapons will stop the continuing massacres. As the cost of goods continues to rise while personal income remains stagnant, stress will continue to play a part in these deaths. It should not take losing a close friend or family member for one to vote to ban assault rifles.

Figure 1: Examples of AI and human-generated persuasive arguments. Credit: Stanford University

Suddenly, the world is abuzz with chatter about chatbots. Artificially intelligent agents, like ChatGPT, have shown themselves to be

remarkably adept at conversing in a very human-like fashion. Implications stretch from the classroom to Capitol Hill. ChatGPT, for instance, recently passed written exams at top business and law schools, among other feats both awe-inspiring and alarming.

Researchers at Stanford University's Polarization and Social Change Lab and the Institute for Human-Centered Artificial Intelligence (HAI) wanted to probe the boundaries of AI's political persuasiveness by testing its ability to sway real humans on some of the hottest social issues of the day—an assault weapon ban, the carbon tax, and paid parental leave, among others.

"AI fared quite well. Indeed, AI-generated persuasive appeals were as effective as ones written by humans in persuading human audiences on several political issues," said Hui "Max" Bai, a postdoctoral researcher in the Polarization and Social Change Lab and first author on a new paper about the experiment in pre-print.

Clever comparison

The research team, led by Robb Willer, a professor of sociology, psychology, and [organizational behavior](#) in the Stanford School of Humanities and Sciences and director of the Polarization and Social Change Lab, used GPT-3, the same large language model that fuels ChatGPT. They asked their model to craft persuasive messages on several controversial topics.

They then had thousands of real human beings read those persuasive texts. The readers were randomly assigned texts—sometimes they were written by AI, other times they were crafted by humans. In all cases, participants were asked to declare their positions on the issues before and after reading. The research team was then able to gauge how persuasive the messages had been on the readers and to assess which

authors had been most persuasive and why.

Across all three comparisons conducted, the AI-generated messages were "consistently persuasive to human readers." Though the effect sizes were relatively small, falling within a range of a few points on a scale of zero to 100, such small moves extrapolated across a polarizing topic and a voting-population scale could prove significant.

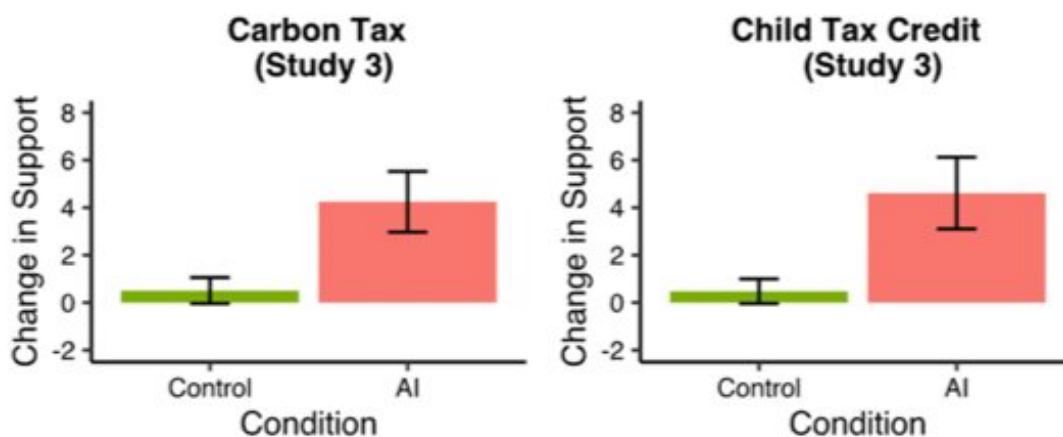


Figure 2: Y-axes represent the difference between participants' post-treatment and pre-treatment policy support. Higher scores indicate participants became more supportive of the policy. Credit: Stanford University

For instance, the authors report that AI-generated messages were at least as persuasive as human-generated messages across all topics, and on a smoking ban, gun control, carbon tax, an increased child tax credit, and a [parental leave](#) program, participants became "significantly more supportive" of the policies when reading AI-produced texts.

As an additional metric, the team asked participants to describe the

qualities of the texts they had read. AI ranked consistently as more factual and logical, less angry, and less reliant upon storytelling as a persuasive technique.

High-stakes game

The researchers undertook their study of political persuasiveness not as a steppingstone to a new era of AI-infused [political discourse](#) but as a cautionary tale about the potential for things to go afoul. Chatbots, they say, have serious implications for democracy and for national security.

The authors worry about the potential for harm if used in a political context. Large language models, such as GPT-3, might be applied by ill-intentioned domestic and foreign actors through mis- or disinformation campaigns or to craft problematic content based on inaccurate or misleading information for as-yet-unforeseen political purposes.

"Clearly, AI has reached a level of sophistication that raises some high-stakes questions for policy- and lawmakers that demand their attention," Willer said. "AI has the potential to influence political discourse, and we should get out in front of these issues from the start."

Persuasive AI, Bai noted, could be used for mass-scale campaigns based on suspect information and used to lobby, generate online comments, write peer-to-peer text messages, or even produce letters to editors of influential print media.

"These concerning findings call for immediate consideration of regulations of the use of AI for political activities," Bai said.

More information: [Artificial Intelligence Can Persuade Humans on Political Issues](#)

Provided by Stanford University

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