



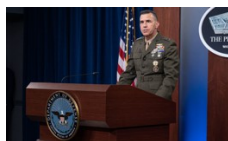
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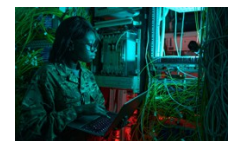
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A Qanon believer speaks to a crowd of President Donald Trump supporters outside of the Maricopa County Recorder's Office where votes in the general election are being counted, in Phoenix, on Nov. 5, 2020. AP / DARIO LOPEZ-MILLS

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IDEAS

An AI Tool Can Tell a Conspiracy Theory from a True

Conspiracy

It comes down to how easily the story falls apart.

BY TIMOTHY R.

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NOVEMBER 24, 2020



COMMENTARY

The audio on the otherwise shaky body camera footage is unusually clear. As police officers search a handcuffed man who moments before had fired a shot inside a pizza parlor, an officer asks him why he was there. The man says to investigate a pedophile ring. Incredulous, the officer asks again. Another officer chimes in, "Pizzagate. He's talking about Pizzagate."

In that brief, chilling interaction in 2016, it becomes clear that conspiracy theories, long relegated to the fringes of society, had moved into the real world in a very dangerous way.


Conspiracy theories, which have the potential to cause significant harm, have found a welcome home on social media, where forums free from moderation allow like-minded individuals to converse. There they can develop their theories and propose actions to counteract the threats they "uncover."

But how can you tell if an emerging narrative on social media is an unfounded conspiracy theory? It turns out that it's possible to distinguish between conspiracy theories and true conspiracies by using machine learning tools to graph the elements and connections of a narrative. These tools could form the basis of an early warning system to alert authorities to online narratives that pose a threat in the real world.

The culture analytics group at the University of California, which I and Vwani Roychowdhury lead, has developed an automated approach to determining when conversations on social media reflect the telltale signs of conspiracy theorizing. We have applied these methods successfully to the study of Pizzagate, the COVID-19 pandemic and anti-vaccination movements. We're currently using these methods to study QAnon.

Actual conspiracies are deliberately hidden, real-life actions of people working together for their own malign purposes. In contrast, conspiracy theories are collaboratively constructed and develop in the open.

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Conspiracy theories are deliberately complex and reflect an all-encompassing worldview. Instead of trying to explain one thing, a conspiracy theory tries to explain everything, discovering connections across domains of human interaction that are otherwise hidden – mostly because they do not exist.

storytelling. The participants work out the parameters of a narrative framework: the people, places and things of a story and their relationships.

The online nature of conspiracy theorizing provides an opportunity for researchers to trace the development of these theories from their origins as a series of often disjointed rumors and story pieces to a comprehensive narrative. For our work, Pizzagate presented the perfect subject.

Pizzagate began to develop in late October 2016 during the runoff to the presidential election. Within a month, it was fully formed, with a complete cast of characters drawn from a series of otherwise unlinked domains: Democratic politics, the private lives of the Podesta brothers, casual family dining and satanic pedophilic trafficking. The connecting narrative thread among these otherwise disparate domains was the fanciful interpretation of the leaked emails of the Democratic National Committee dumped by WikiLeaks in the final week of October 2016.

We developed a model – a set of machine learning tools – that can identify narratives based on sets of people, places and things and their relationships. Machine learning algorithms process large amounts of data to determine the categories of things in the data and then identify which categories particular things belong to.

We analyzed 17,498 posts from April 2016 through February 2018 on the Reddit and 4chan forums where Pizzagate was discussed. The model treats each post as a fragment of a hidden story and sets about to uncover the narrative. The software identifies the people, places and

things in the posts and determines which are major elements, which are minor elements and how they're all connected.

The model determines the main layers of the narrative – in the case of Pizzagate, Democratic politics, the Podesta brothers, casual dining, satanism and WikiLeaks – and how the layers come together to form the narrative as a whole.

To ensure that our methods produced accurate output, we compared the narrative framework graph produced by our model with illustrations published in The New York Times. Our graph aligned with those illustrations, and also offered finer levels of detail about the people, places and things and their relationships.

To see if we could distinguish between a conspiracy theory and an actual conspiracy, we examined Bridgewater, a political payback operation launched by staff members of Republican Gov. Chris Christie's administration against the Democratic mayor of Fort Lee, New Jersey.

As we compared the results of our machine learning system using the two separate collections, two distinguishing features of a conspiracy theory's narrative framework stood out.

First, while the narrative graph for Bridgewater took from 2013 to 2020 to develop, Pizzagate's graph was fully formed and stable within a month. Second, Bridgewater's graph survived having elements removed, implying that New Jersey politics would continue as a single, connected network even if key figures and relationships from the scandal were deleted.

The Pizzagate graph, in contrast, was easily fractured into smaller subgraphs. When we removed the people, places, things and relationships that came directly from the interpretations of the WikiLeaks emails, the graph fell apart into what in reality were the unconnected domains of politics, casual dining, the private lives of the Podestas and the odd world of satanism.

In the illustration below, the green planes are the major layers of the narrative, the dots are the major elements of the narrative, the blue lines are connections among elements within a layer and the red lines are connections among elements across the layers. The purple plane

shows all the layers combined, showing how the dots are all connected. Removing the WikiLeaks plane yields a purple plane with dots connected only in small groups.

There are clear ethical challenges that our work raises. Our methods, for instance, could be used to generate additional posts to a conspiracy theory discussion that fit the narrative framework at the root of the discussion. Similarly, given any set of domains, someone could use the tool to develop an entirely new conspiracy theory.

However, this weaponization of storytelling is already occurring without automatic methods, as our study of social media forums makes clear. There is a role for the research community to help others understand how that weaponization occurs and to develop tools for people and organizations who protect public safety and democratic institutions.

Developing an early warning system that tracks the emergence and alignment of conspiracy theory narratives could alert researchers – and authorities – to real-world actions people might take based on these narratives. Perhaps with such a system in place, the arresting officer in the Pizzagate case would not have been baffled by the gunman's response when asked why he'd shown up at a pizza parlor armed with an AR-15 rifle. [D](#)

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An Airman assigned to the West Virginia National Guard's Task Force provides a COVID-19 test to a local citizen on May 22, 2020, in Charleston, W. Va. STAFF SGT. CALEB VANCE

IDEAS

Where Does the Defense Production Act Go from Here?

Key aspects need strengthening.

By [JERRY MCGINN](#) and [DANIEL KANIEWSKI](#)

NOVEMBER 24, 2020



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The [Defense Production Act](#), though [regularly used](#) before the pandemic, has been invoked more broadly and urgently since March. The Trump administration put the 70-year-old law to work in various ways: prioritizing U.S. government orders for N95 masks, directing companies to produce ventilators, and most recently, aiming to rebuild industrial capacity related to public health. The Biden administration should build on these efforts – and work to strengthen sections of the DPA that hinder its broader use.

At the direction of the Acting Homeland Security Secretary, we recently participated in a [review](#) of the department's economic security role, including a look at the DPA. The law is composed of several sections ("Titles"), each providing the president various authorities. Over time, the president has delegated the execution of these authorities to relevant federal agencies, primarily the Departments of Defense, Homeland Security, and, since the onset of COVID-19, Health and Human Services.

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Title I of the DPA gives the president the authority to allocate and distribute goods and services to meet government needs. President Trump invoked the distribution authority in mid-March to enable HHS to prioritize contracts for health and medical resources such as personal protective equipment, or PPE. Since then, at least \$3.15 billion of COVID-19 contracts have been issued this way. The president was more reluctant to use the allocation authority of Title I, but did direct specific companies to produce equipment such as ventilators. These efforts have had a clear impact. Despite the pressure that the recent surge in COVID-19 cases has put on supply chains, there have been no significant national shortages of PPE or other equipment since the early spring.

To address the substantial longer-term supply chain challenges exposed by the pandemic, a number of DPA Title III projects have been awarded since May focused on public health and defense industrial capacity. Congress appropriated \$1 billion under the CARES Act to the DPA Fund and DoD, because Title III projects have historically focused on defense industrial base needs, has worked in close coordination with HHS to obligate these and other funds. In addition, the long-dormant Title III loan authority, launched in May under the direction of the U.S. International Development Finance Corporation, recently announced its first award, a \$590 million loan to expand infrastructure and deliver critical COVID-19 vaccines.

voluntary agreements between the government and the private sector, but only one voluntary agreement existed before COVID-19. In August, the Federal Emergency Management Agency (FEMA) issued a new voluntary agreement with private industry to respond to pandemics by increasing “information sharing and coordination...to maximize the effectiveness of the pandemic response...”

During the campaign, the Biden team emphasized that it would use the DPA to its fullest extent to combat the coronavirus. Here are two suggestions toward that end. First, build on existing DPA efforts. Title I helped deliver PPE and public health equipment where it was needed most, so only tweaking is necessary there. The significant increase in Title III projects, the creation of the loan program, and the new Title VII voluntary agreement are all

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promising developments, but each will need strong leadership to ensure their success to help nurture the expansion of U.S.-based production of PPE, pharmaceutical, and defense capabilities.

Second, strengthen the DPA for the future. The Homeland Security Advisory Council [Economic Security Subcommittee report](#) noted two areas where additional action would be particularly beneficial. At a national level, the DPA is governed by a mishmash of old and overlapping executive orders spanning numerous administrations that need to be refreshed and simplified. The President has delegated the authority to execute these orders to DHS – and more specifically the Federal Emergency Management Authority – but the FEMA programs supporting the DPA and related authorities have atrophied since the end of the Cold War. While detailed plans and standing organizations are not solutions by themselves, a new executive order clearly outlining and aligning the DPA and other authorities, policies, and responsibilities would better position the government to address future national emergencies.

Another area is the expansion of Title III to areas beyond defense and public health industrial capacity. DHS currently has one active Title III project underway, but it should strengthen this connection and its use of Title III by working with DoD to build an institutional capacity to identify homeland industrial base weaknesses and develop Title III projects to mitigate these areas. Other agencies should consider this approach as well. **D**

Jerry McGinn is the Executive Director of the Center for Government Contracting in George Mason University's School of Business and previously oversaw Defense Production Act activities at the U.S. Department of Defense. Daniel Kaniewski is a managing director at Marsh and McLennan Companies and a former deputy administrator of the Federal Emergency Management Agency. They are writing in their personal capacities.

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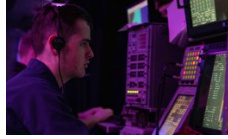
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