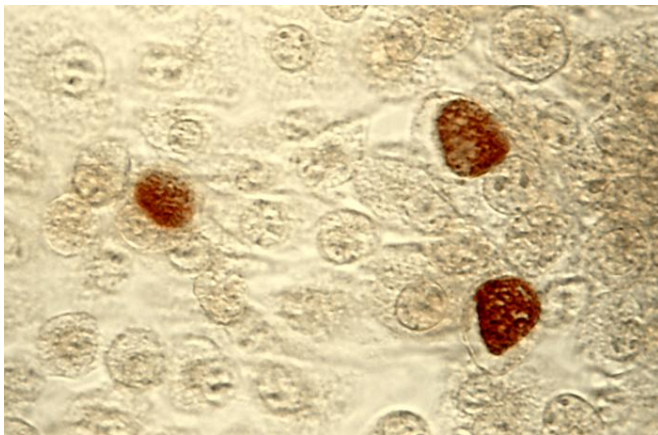


# Rates of infectious disease linked to authoritarian attitudes and governance: study

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Chlamydia trachomatis inclusion bodies (brown) in a McCoy cell culture. Credit: public domain

According to psychologists, in addition to our physiological immune system we also have a behavioral one: an unconscious code of conduct that helps us stay disease-free, including a fear and avoidance of unfamiliar—and so possibly infected—people.

When infection risk is high, this "parasite stress" behavior increases, potentially manifesting as attitudes and even voting patterns that champion conformity and reject "foreign outgroups"—a core trait of authoritarian politics.

Now, a new study, the largest yet to investigate links between pathogen prevalence and ideology, reveals a strong connection between infection rates and strains of authoritarianism in public attitudes, [political leadership](#) and even lawmaking.

While data used for the study predates COVID-19, University of Cambridge psychologists say that greater public desire for "conformity and

obedience" as a result of the pandemic could ultimately see liberal politics suffer at the ballot box. The findings are published in the *Journal of Social and Political Psychology*.

Researchers used infectious disease data from the United States in the 1990s and 2000s and responses to a psychological survey taken by over 206,000 people in the US during 2017 and 2018. They found that the more infectious US cities and states went on to have more authoritarian-leaning citizens.

The US findings were replicated at an international level using survey data from over 51,000 people across 47 different countries, comparing responses with national-level disease rates.

The most authoritarian US states had rates of infectious diseases—from HIV to measles—around four times higher than the least authoritarian states, while for the most authoritarian nations it was three times higher than the least.

This was after scientists accounted for a range of other socioeconomic factors that influence ideology, including religious beliefs and inequalities in wealth and education. They also found that higher regional [infection rates](#) in the US corresponded to more votes for Donald Trump in the 2016 US Presidential Election.

Moreover, in both nations and US states, higher rates of infectious disease correlated with more "vertical" laws—those that disproportionately affect certain groups, such as abortion control or extreme penalties for certain crimes. This was not the case with "horizontal" laws that affect everyone equally.

"We find a consistent relationship between prevalence of infectious diseases and a

psychological preference for conformity and hierarchical power structures—pillars of authoritarian politics," said study lead author Dr. Leor Zmigrod, an expert in the psychology of ideology from the University of Cambridge.

"Higher rates of infectious diseases predicted political attitudes and outcomes such as conservative voting and authoritarian legal structures. Across multiple geographical and historical levels of analysis we see this relationship emerge again and again."

"We found that pathogen rates from over twenty years ago were still relevant to political attitudes as recently as 2016. If COVID-19 increases the allure of authoritarian politics, the effects could be long-lasting," said Zmigrod, from Cambridge's Department of Psychology.

The study also tested whether the link to authoritarianism held for zoonotic diseases—those only acquired from animals—but found it related solely to human-to-human disease transmission, further suggesting this is part of a "behavioral immune system" say researchers.

In 2017, Cambridge psychologists worked with TIME Magazine to launch a two-part personality survey. Part one was based on the Harry Potter novels, but participants could also opt in to a second part used for scientific research, which included a textbook measure of authoritarianism.

Participants were presented with pairs of personality traits and asked which quality was most important for a child to possess e.g. independent or respectful, obedient or self-reliant. Over a quarter of a million people completed this section and provided their postal—or zip—codes.

For disease levels in US states, scientists used data from the Centers for Disease Control and Prevention (CDC) from between 1993 and 2007. These included rates of pathogens such as viral hepatitis, herpes, HIV, measles and chicken pox.

For US cities, the Cambridge team calculated rates of chlamydia and gonorrhoea from 2002 to 2010. For the 47 nations, an index of nine infectious diseases

ranging from tuberculosis to malaria was used.

"These findings are a warning sign that [disease](#)-avoiding behaviors have profound implications for politics," added Zmigrod. "COVID-19 might shape people's tendencies towards conformity and obedience, and this could be converted into authoritarian political preferences, voting patterns, and laws."

"Health and politics may be more intertwined than we previously envisioned."

**More information:** Leor Zmigrod et al, The psychological and socio-political consequences of infectious diseases: Authoritarianism, governance, and nonzoonotic (human-to-human) infection transmission, *Journal of Social and Political Psychology* (2021). [DOI: 10.5964/jssp.7297](https://doi.org/10.5964/jssp.7297)

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