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COVID-19 Conspiracy Thinking Across the World: A Multilevel Study of 20 Countries

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Research Question

- To what extent people engage in COVID-19 conspiracy thinking across countries and what individual and country characteristics explain people's COVID-19 conspiracy thinking?
- Context of crisis
- Belief in CTs to regain control

Relevance

- Belief in COVID-19 conspiracy theories is widespread
- Belief in COVID-19 conspiracy thinking is not harmless
- Most work are single country studies, strong focus on the U.S., no work estimating individual and country level variables simultaneously
- Lack of comparative work
 - To what extent are findings context specific?
 - How do country-level variables affect people's belief in COVID- 19 conspiracy theories?

Conspiracy Thinking

- Distinct type of misinformation
- Misinformation is defined as ‘factual beliefs that are false or contradict the best available evidence in the public domain’ (Flynn, Nyhan and Reifer 2017)
- Conspiracy theories are ‘causal explanations of events or circumstances that posit a powerful group acting in secret for their own benefit and against the common good’ (Uscinski & Parent, 2014)
- Interest is not people’s belief in a specific conspiracy theory, but people’s general tendency to COVID-19 conspiracy thinking

Individual-level Variables

- **Gender**
- **Age**
- **Education Hypothesis:** We expect people's propensity to COVID -19 conspiracy thinking to be conditional on people's level of education, whereby the higher the level of education, the lower people's propensity to COVID-19 conspiracy thinking
- **Right-wing Hypothesis:** We expect people's propensity to COVID-19 conspiracy thinking to be dependent on people's ideological position, whereby the more people perceive themselves as being positioned towards the right of the political spectrum, the higher their propensity to conspiracy thinking.

Individual-level Variables

- **Ideological Extremity Hypothesis:** We expect people's propensity to COVID-19 conspiracy thinking to be dependent on the extremity of people's ideological position, whereby people who perceive themselves as positioned on the ideological extremes of the political spectrum have higher propensity to COVID-19 conspiracy thinking than people who perceived themselves as not positioned on the ideological extremes of the political spectrum
- **Social Media Hypothesis:** We expect people's social media use to affect their tendency to COVID-19 conspiracy thinking, whereby people that use social media to discuss and read about current affairs have a higher tendency to COVID-19 conspiracy thinking than people who do not use social media to discuss and read about current affairs.

Individual-level Variables

- **Trust Social Media Commentary Hypothesis:** We expect people's propensity to COVID-19 conspiracy thinking to be dependent on people's trust in commentary on social media as information source about COVID-19, whereby the higher people's trust in commentary on social media as information sources on COVID-19 the higher their level of COVID-19 conspiracy thinking.
- **Trust Mainstream Media Hypothesis:** We expect people's propensity to COVID-19 conspiracy thinking to be dependent on people's trust in the mainstream media as information source about COVID-19, whereby the lower people's trust in the mainstream media as information source on COVID-19 the higher their level of COVID-19 conspiracy thinking.

Country-level Variables

- **COVID-19 Risk Hypothesis:** We expect people's tendency to COVID-19 conspiracy thinking to be dependent on the extent that COVID-19 has affected the country that they reside in, whereby people living in countries that have been strongly affected by COVID-19 tend to engage more in COVID-19 conspiracy thinking than people that live in countries that have been weakly affected by COVID-19.
- **Human Development Hypothesis:** We expect that people's propensity to COVID-19 conspiracy thinking to be dependent on the level of development of the country that they reside in, whereby people in more developed countries engage less in COVID-19 conspiracy thinking than people in less developed countries.

Country-level Variables

- **Democracy Hypothesis:** We expect people's propensity to COVID-19 conspiracy thinking to be dependent on how democratic the country is that they reside in, whereby people living in more democratic countries engage less in COVID-19 conspiracy thinking than people that live in less democratic countries.
- **Individualistic Culture Hypothesis:** We expect that people's propensity to COVID-19 conspiracy thinking to be dependent on the extent that the country they reside in has an individualistic or collectivistic culture, whereby the more individualistic a country's culture, the less people engage in COVID-19 conspiracy thinking.

Country-level Variables

- **Masculine Culture Hypothesis:** We expect that people's propensity to COVID-19 conspiracy thinking is dependent on the extent that the country they reside in has a masculine culture, whereby the more masculine a country's culture, the more people engage in COVID-19 conspiracy thinking.
- **Culture of Uncertainty Avoidance Hypothesis:** We expect that people's propensity to COVID-19 conspiracy thinking to be dependent on the extent that the country that they reside in has a culture of uncertainty avoidance, whereby the stronger the culture of uncertainty avoidance in a country the more people engage in COVID-19 conspiracy thinking.

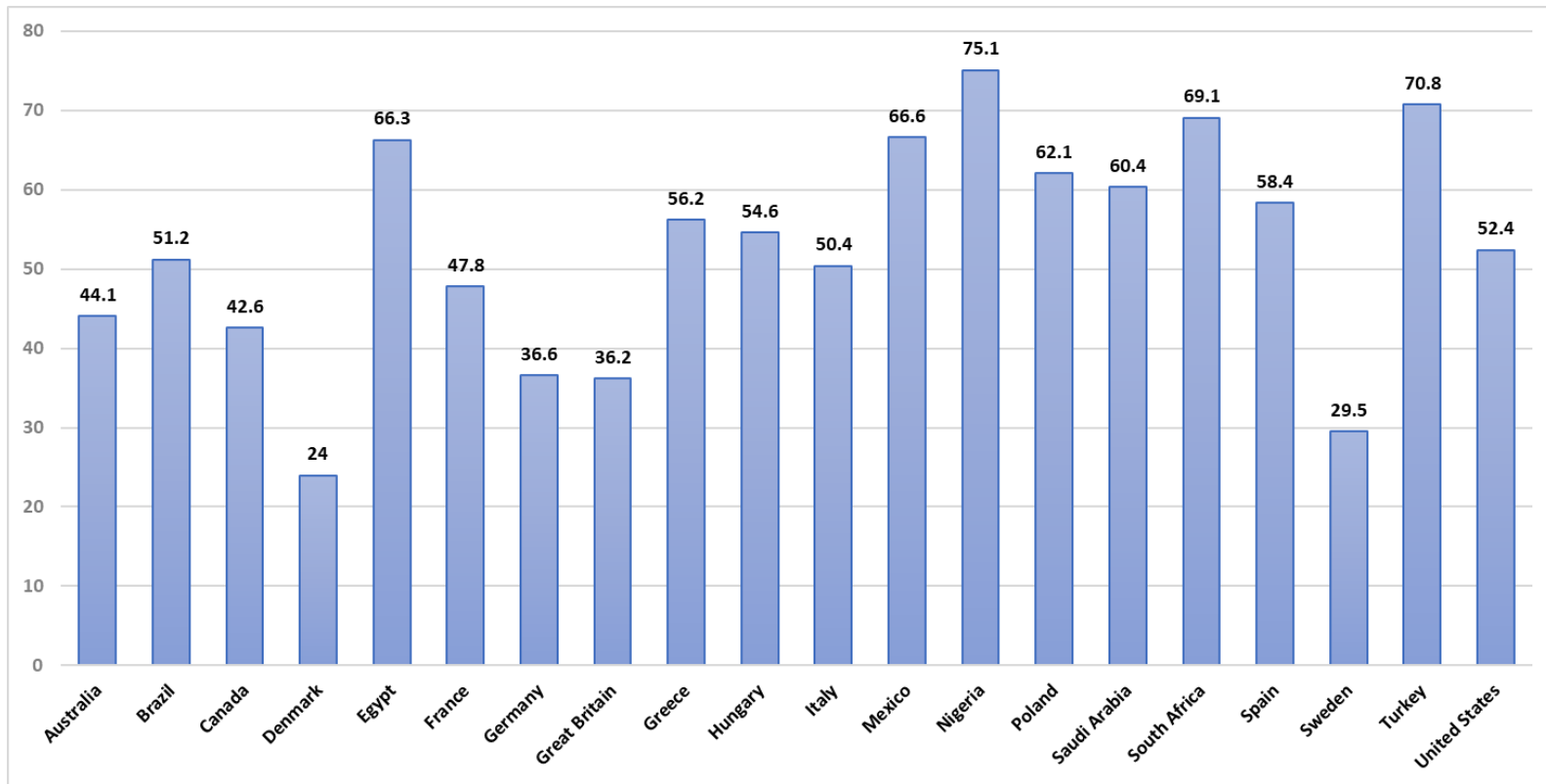
Data

- YouGov-Cambridge Globalism Project 2020
- Representative samples of the population (21,220 respondents) surveyed between 30 July and 24 August in 20 countries
- The countries were selected to maximize variation in terms of 'deemed relevant' independent factors
- COVID-19 conspiracy thinking is measured on the basis of 6 ordinal survey items .
- “Would you say the following statement is true or false?” The respondents were provided with five answer options, respectively definitely true (1), probably true (2), probably false (3), definitely false (4) and don't know (5)

Survey Items

Items	Question wording
Item 3	Coronavirus is a myth created by some powerful forces, and the virus does not really exist
Item 5	Coronavirus was deliberately created and spread by some powerful forces in the business world
Item 6	Coronavirus was deliberately created and spread by the US Government
Item 7	The world's largest pharmaceutical companies are deliberately delaying or hiding the development of a vaccine that could end the Coronavirus Pandemic, in order to drive up the price of the vaccine
Item 8	Coronavirus was deliberately created and spread by the Chinese Government
Item 10	The symptoms of Coronavirus are caused or enhanced by the direct, physical effects on the human body of "fifth generation" wireless communications networks, also known as "5G"

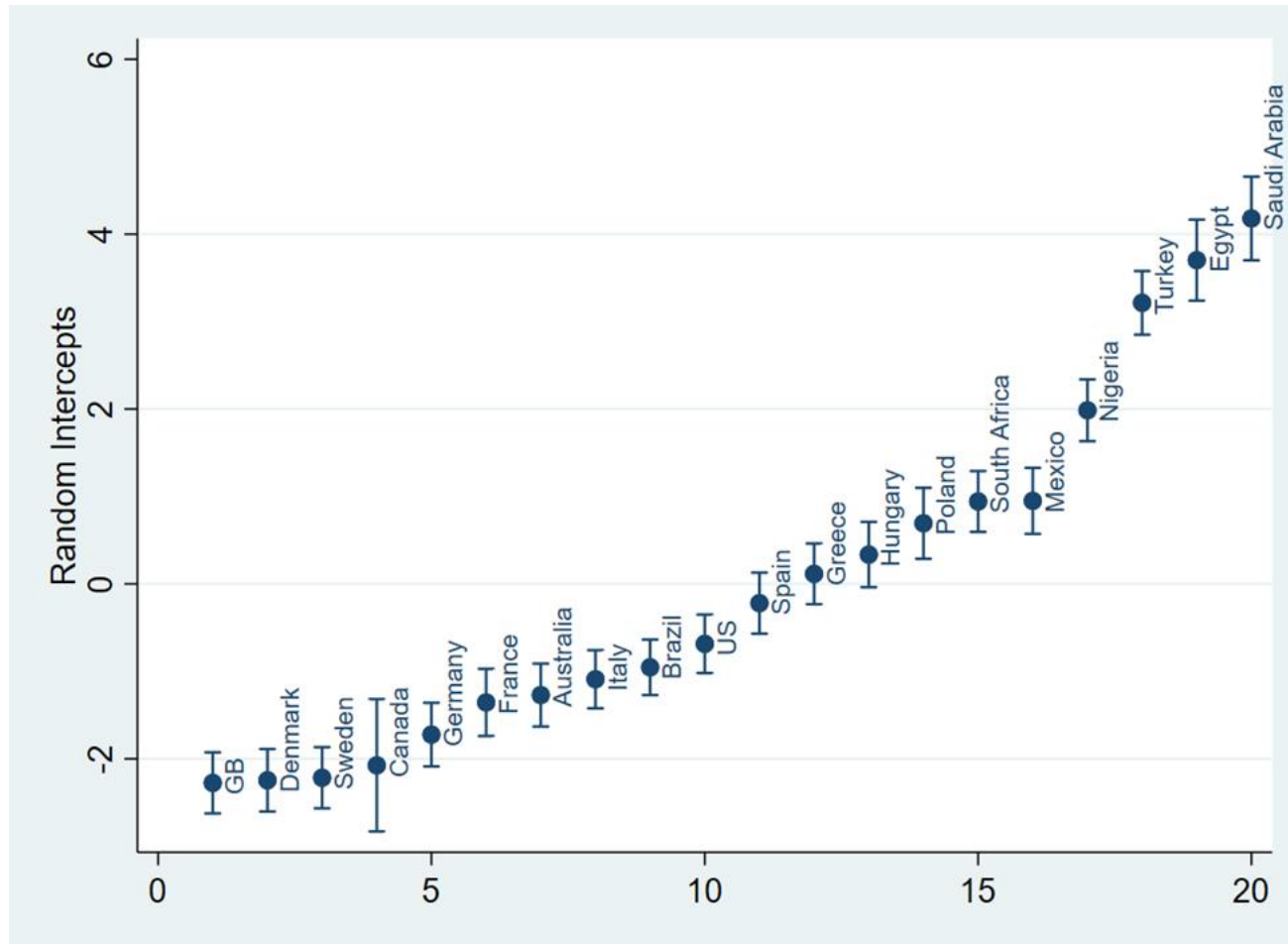
Percentage of People that Believes in One or More COVID Conspiracy Theory Per Country



Methods

- COVID-19 conspiracy thinking operationalized as an additive scale running from 6 to 24 (Mean= 11.058, Std. dev=4.471). Homogeneity coefficient=.596
- Linear Multilevel Model: 21,220 citizens (level 1) residing within 20 countries (level 2)
- Intraclass correlation coefficient (ICC) is .187
- Models run on 9281 observations

Caterpillar Plot of the Random Intercepts with Confidence Intervals (Base Model)



Results Random Intercept Model

Effect	Significance	Direction
Individual-Level Predictors		
Sex	X	Negative
Age	X	Positive
Education	X	Negative
Household Income	X	Negative
Ideological Position	X	Positive
Ideological Extremity	X	Positive
Social Media Use	X	Positive
Trust Commentary Social Media	X	Positive
Trust Mainstream Media	X	Negative
Country-Level Predictors		
COVID-19 Infection Risk	-	-
COVID-19 Mortality Risk	X	Negative
Level of Development	X	Negative
Quality of Democracy	X	Negative
Individualistic Culture	X	Negative
Masculine Culture	-	-
Culture of Uncertainty Avoidance	X	Positive

Predicted Scores Main Effects

Variable	Moderate Difference	Maximum Difference
Sex	NA	-.183
Age	-.914	-.895
Education	NA	-1.637
Household Income	-.428	-1.353
Ideological Position	.445	.837
Ideological Extremity	NA	1.004
Social Media Use	NA	.668
Trust Commentary Social Media	NA	2.164
Trust Mainstream Media	-.910	-1.673
COVID-19 Mortality Risk	1.719	2.231
Level of Development	-1.664	-3.240
Quality of Democracy	-.259	-4.828
Culture of Uncertainty Avoidance	1.547	2.668
Culture of Individualism	-2.165	-3.224

Conclusions

- Context matters
- County-level predictors matter more than individual-level predictors
- Largest effect found for country's quality of democracy
- Limitations:
 - Correlational study
 - Limited number of observations at level 2
 - Limited number of countries that have an authoritarian or hybrid regime