"Religiosity and warfare: Towards causal evidence via pre-Enlightenment solar eclipses"

Prof. Tim Krieger

Albert-Ludwigs-Universität Freiburg

Can the salience of religious beliefs, and specifically beliefs in the supernatural, affect a society's propensity to go to war? Plagued with endogeneity concerns, this question has concerned historians, political scientists, religious scholars, anthropologists, and sociologists for centuries. This project's first contribution consists in deriving a consistent and comparable measure of religiosity from the year 1500 onwards. To do so, we apply a linguistic dictionary of religiosity words and stems in the English language to Google Ngram. This allows us to determine the annual frequency of religious terminology used in books since 1500. We also translate that dictionary to French, German, Italian, and Spanish (the languages featuring substantial numbers of books captured by Google Ngram) to derive the same measure in these languages.

We then correlate that linguistic proxy of religiosity with subsequent attack war onset and attack war incidence in a comprehensive dyad-level database (derived from Brecke, 1999) that connects the five main states of these languages with every state they warred with at least once from 1500 to 1714 (beginning of the Enlightenment). The corresponding estimates are not statistically significant at conventional levels – an artefact potentially owed to substantial endogeneity concerns pertaining to measurement error/attenuation bias (the frequency of religious language may not adequately capture religiosity) and omitted variables (e.g., income levels, education).

To alleviate these concerns, we introduce a plausibly exogenous driver of religiosity that is neither related to preceding wars, the economy, political factors, nor any other anthropoid characteristics: solar eclipses visible in the respective state capitals. Instrumental variable regression results suggest the likelihood of attack war onset and incidence rose significantly when religious language was more frequently used in books. Similarly, reduced form estimates show the chances of attack war onset and incidence increased significantly in the year after a state's capital experienced a solar eclipse. Results prevail, and remain largely unaffected in magnitude, when accounting for dyad- and year-fixed effects, as well as state-specific time trends. While results need to be interpreted carefully (i.e., considering the Local Average Treatment Effect of solar eclipses), these estimates provide some of the first plausibly causal estimates of religiosity's effect on interstate warfare, at least to our knowledge.