Anti-Skeptical: Clusterization of the Hofstede Cultural Matrix via Machine Learning Methods Applied to the Analysis of Anti-Vax Behavior in Brazil

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Our research seeks to apply the concepts from Hofstede's Cultural Matrix to better understand vaccine skepticism and Anti-Vax behavior. So far, the research has focused on identifying cultural indicators of skepticism that can be applied in an analysis of the Brazilian cultural profile entitled Anti-Skeptical. By indicating the points of risk in the nation's culture in this analysis, we try to assist vaccination campaigns, identify the impact of Fake News, as well as generate knowledge for future research. The analysis was done by correlating two databases, the cultural dimensions of each country and the percentage of each nation's population that does not believe in the safety of vaccines in general. We used the Machine Learning Method called K-Means where we grouped the culturally similar countries and studied the cultural profile of the most skeptical groups. We also performed the individual representation of each dimension in relation to skepticism in a scatter plot, so that we could check for linearity between any dimension and skepticism about vaccines. As a result, we found neither a linear relationship nor a consistent cultural indicator of skepticism in this initial analysis. Even so, we have already developed a test version of Anti-Skeptical that serves as a guide for the coming versions, which has already had a specific study applied to its development and is based on the methodology used by the WHO in the development of similar media. For the future of the research, we will conduct a further study of the characteristics of the matrix and try to develop a framework that enables its indirect application in understanding skepticism by providing Cultural Insights for government agencies and stakeholders. The Statistical Analysis will also be continued.

Awards Won:
Fourth Award of $500