Honor and Homicide: A Computational Approach

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Abstract: One prominent theory in the sociological and psychological study of crime posits that cultures of honor have higher homicide rates. According to this theory, individuals in cultures of honor are likelier to respond to perceived insult with retaliatory violence to uphold a reputation for toughness. While existing evidence lends support to this theory, 'cultures of honor' are currently measured with overly simplistic variables such as binary indicators for Southern states. In this study, I investigate the relationship between cultures of honor and homicide rates using novel methodologies. Using data from Google search queries, I create a new state-level measure of 'honor cultures' based on the frequency with which Google searches in a given state contain words that are semantically and conceptually related to concerns with honor and reputation. I will then reexamine the culture of honor theory by investigating whether my new measures of honor predict variation in homicides within and across states.

Proposal: In this project, I propose to reexamine the cultures of honor hypothesis using novel computational methods. According to the cultures of honor hypothesis, honor cultures will experience higher levels of homicide. The logic, which derives from cultural psychology, is that individuals in honor cultures are socialized to respond to affronts to one's honor with excessive violence. To date, this hypothesis has been tested in two ways. First, some scholars correlate state-level homicide rates with a variable for whether the state is located in the US South (the quintessential honor culture). Second, other scholars, usually those in psychology, perform experiments to determine whether Southern individuals are likelier to respond to perceived insult with aggression or anger. Dozens of studies find support for the culture of honor hypothesis using these approaches.

However, there are some notable limitations to the research designs in these studies. Although the South has historically been the one 'honor culture' in the United States, using binary indicators for the South as a measure of honor culture is problematic for a number of reasons. First, these studies render it impossible to explain or predict variation in homicide rates outside the South; they can only confirm that the South has a higher homicide rate than other regions. From a policy perspective, this leaves much to be desired because there is significant variation in homicide rates outside the US. Second, it is also impossible to explain within-state variation in homicide over time using these measures. Third, this ignores important factors such as migration and movement among US regions. State composition varies over time, and state cultures are likely to change accordingly.

To alleviate these problems, I propose a novel, continuous measure of honor culture that varies across states and within states over time. I will build on vector semantics models from psychology to accomplish this task. According to vector semantics models, complex cultural and psychological constructs (such as personality) can be measured by examining the words that individuals use in speech or text. For example, to measure 'depression' (as in the psychological state of being depressed) only from the written word a psychologist can create a list of words that are semantically and conceptually related to depression (based on existing theory and evidence) and examine how often these words feature in a particular document. Moreover, lists of relevant words can be generated automatically with machine learning; a neural network algorithm can be used search large quantities of text and uncover large numbers of words that are conceptually related to 'depressed.'

I propose using machine learning and my preexisting theoretical knowledge to develop a list of words conceptually related to concerns of honor, reputation, and insult. Rather than examining texts, however, I will use Google search queries to measure how frequently these terms related to honor are searched within each US state. Data on Google search queries is available from 2004 to present. States where honor-related search terms are more frequent are argued to have greater concern with honor and therefore higher levels of 'honor culture.' Using this novel state-level measure of honor culture, which varies across all states and varies within states over time, my objective is to determine whether I can better predict variation in state homicide rates than existing studies on cultures of honor and homicide.

Policy Relevance: Research on cultures of honor and homicide have had limited policy relevance to date. One reason is that repeatedly noting that the South has greater homicide rates does not lead to actionable policy recommendations. In this project, I provide new measures and methods that can

better aid criminal justice policy. A new time-varying measure of honor culture can help policy makers track cultural changes that predict levels in homicide rate. Moreover, my measurement relies on open source Google data that can allow policymakers to track cultural variation related to homicide themselves. Lastly, my proposed empirical analysis will include basic predictive models that I hope can enable policymakers to forecast fluctuations in state-level homicide rates and to update policy accordingly.

Previous Work: I have completed several studies that are substantively and methodologically related to this proposed work. I have published one article on cultures of honor and terrorism in the journal *Social Science Quarterly*. In this article, I apply the cultures of honor theory to terrorism in the United States and find that Southern states have deadlier domestic terrorist attacks than other states. Additionally, I have several ongoing projects that use the computational text analysis methods described above. One project, which uses vector semantics methods to identify right-wing terrorist texts from a large corpus of texts, has received a revise and resubmit from the journal *Psychology of Violence*. I have several other projects using these methods at various stages of completion. Thus, I have experience with both the theoretical literatures and the methodologies that will feature in my proposed project.

Collaboration: Although I am tentatively proposing an individual project, there is great value in working on this project at the Public Policy Center. One area where I lack expertise is in Crime and Justice Policy. I would benefit from working alongside and consulting with experts in this field. It would be especially helpful to receive feedback and advice on the appropriate data sources for US homicide data, and the special data cleaning, data management, and analysis concerns when using these data. Additional substantive information on how to integrate this proposed study with existing criminology literatures outside the cultures of honor hypothesis would also be very helpful. I am certainly open to making this project a collaborative effort with interested members of the Public Policy Center.

Final Product: My goal is to disseminate this project as an article for publication in an academic journal. My initial intention is to submit this article to a high ranking journal in the field of criminology, such as *Criminology*, *Crime & Public Policy*, or the *British Journal of Criminology*. The proposed project stands to make a significant contribution to the study of criminology by applying new measures and methods to investigate one of its more prominent theories; it also will allow policymakers to use existing theory to guide future policy. For these reasons, I believe that targeting reputable criminology journals is a reasonable and appropriate strategy.