**PERSONAL STATEMENT, RELEVANT BACKGROUND, FUTURE GOALS**

As a political science PhD student at Yale, I plan to investigate key questions in international relations and to develop new statistical methods for social science scholarship. The NSF Graduate Research Fellowship will help me conduct research that advances quantitative security studies and informs the American foreign policy community. My past experiences inside and outside the classroom, in the U.S. and abroad, have prepared me for the challenges of graduate school and beyond. Having grown up in a low-income immigrant family, I have aimed to achieve academic success despite the hindrances of my background. Combining this determination with my research skills and creativity, I aspire to become an active and publicly engaged scholar.

**I. Personal Statement.** My interest in international politics began in journalism. During my senior year of high school, I interned at *Newsweek*'s Washington, D.C. bureau, where I reported about the role of Twitter in the 2009 Iranian electoral protests. In my later internships at PBS "Need To Know" and "Charlie Rose," I compiled a dataset of domestic terrorists and analyzed Chinese espionage in the U.S. The pressure of airtime deadlines and the challenges of teamwork made me an efficient and collaborative researcher. Most importantly, working in journalism taught me how to seek out puzzles and problems in contemporary politics, a skill I still use daily as an academic. Although I originally intended to become a reporter, I soon discovered that political science is my true calling. I realized answering important questions about international politics requires well-designed research, not mere punditry.

Since my sophomore year of college, I have prepared for graduate school. Within the political science major, I specialized in international relations and American politics. Furthermore, I completed five courses in statistics and econometrics. Through research work with Prof. Nikolay Marinov (Yale), Prof. Donald Green (Columbia), and Prof. Steven Wilkinson (Yale), I have built up considerable statistical computing and geospatial analysis skills.

My academic experience in China, the UK, and Sweden has prepared me for fieldwork abroad and collaboration with foreign academics. I studied Chinese and politics at Peking University, international history at Cambridge University, and advanced statistics at Uppsala University. While abroad, I embarked on several collaborative and independent projects. Working with students from Peking University, I filmed a documentary about education reform in urban China. In England, I conducted archival research in London and Cambridge about the Malayan Emergency. Through these experiences abroad, I have established a network of international colleagues who can assist me with fieldwork.

Although I devote most of my time to coursework and research, my extracurricular activities have also prepared me for the challenges of being a professor. My tenure as a multimedia editor at the *Yale Daily News*, the university's student newspaper, taught me much about leadership and project management. I organized several long-term projects at the *Yale Daily News*, such as raising $8,000 for a video equipment upgrade and organizing two school-wide debates. As the newspaper's pollster, I used probability sampling, post-stratification weights, and randomized question wording to improve the design and analysis of surveys.

At Yale, I have also worked to reduce inequality in education. I served as a founding member of the university's QuestBridge Scholars Club, which provides a support network for low-income students on campus and recruits high school students from needy families. Through this organization, I have mentored younger QuestBridge Scholars and helped students from New Haven public high schools apply to college.

My experience inside and outside the classroom has informed my goal to become a political scientist. In addition to becoming an international relations scholar and political methodologist, I also hope to be a mentor to and advocate for undergraduates from disadvantaged backgrounds.

**II. Relevant Background.** My experience as a student and a researcher at Yale University has prepared me to succeed in graduate school and beyond. Having worked on several projects of my own design, I have gained strong skills in experimental methods, quantitative analysis, and archival research. Building upon my background in international relations and political behavior, I plan to study the intersection between domestic politics and international relations.

My most recent solo paper, currently under review at the *Journal of Conflict Resolution*, focuses on whether foreign opposition to war depresses domestic support for the conflict. By the logic of Crawford and Sobel's model of strategic communication, opposition by ally countries should be more informative and credible than opposition by rival countries. In a survey experiment, I tested whether UN Security Council veto by an American ally (France) decreases support for war more than a veto by an American non-ally (Russia). Contrary to my initial hypothesis, the data show the French veto and the Russian veto lowered public support for war by the same amount. In addition, I found that Democrats, compared with Republicans, were more persuaded by foreign opposition to the war. Using Latent Dirichlet Allocation and keyword classification, I analyzed the open-ended responses to study mechanisms behind subjects' reactions to the vignettes. I presented my findings at the 2013 Midwest Political Science Conference.

This research project has broader impacts for understanding contemporary foreign affairs. In the lead up to the Iraq War, French opposition to the conflict dominated the American news media. More recently, Russian president Vladmir Putin directly appealed to Americans in a *New York Times* editorial urging against intervention in Syria. My survey experiment suggests that these types of cues from foreign elites can dampen some Americans' support for military action.

Methodologically, my project advances the use of text data in survey research. Although open-ended responses can provide researchers with nuanced answers, in the past, hand-coding them required much human labor. I used unsupervised machine learning to identify topics in the responses and automated the classification of the responses through supervised learning. These techniques allowed me to study subjects' attitudes without imposing assumptions about the subjects' thought process. I hope to continue to work with statisticians in developing estimators to compare differences between open-ended responses. We will share our findings with applied researchers.

Seeking to improve research methodology, I am currently collaborating with Prof. Allan Dafoe (Yale University) and Prof. Devin Caughey (MIT) on a project to address confounding in survey experiments. Because they involve random manipulations, it is widely believed that survey experiments allow researchers to overcome the problems of spurious correlation confounding that plague most observational methods. But varying one component of a vignette scenario will generally change subjects' beliefs about other aspects of the scenario. This violates the exclusion restriction required for the experimental component of a vignette to serve as a valid instrument for respondents' beliefs about the causal factor of interest. For instance, in survey experiments about the democratic peace, the treatment of differing regime type (democracy vs. autocracy) is likely to be confounded with unspecified features of democratic states and autocratic states. For instance, Americans respondents might associate autocracies with being less wealthy, being in the Middle East or Sub-Saharan Africa, or being culturally dissimilar to the U.S.

In a working paper, we address confounding in survey experiments by introducing and evaluating a set of tools. First, we recommend using placebo tests to diagnose possible confounding

in survey experiment scenarios. Second, we test two possible strategies for overcoming confounding: (1) controlling for potential confounds by specifying them in the scenario; (2) embedding a plausible natural experiment in the scenario so that respondents' beliefs about the treatment are uncorrelated with their beliefs about other aspects of the scenario.

We are currently evaluating such methods to detect and overcome confounding in survey experiments using a study of the democratic peace on American subjects. In the naïve vignette, we describe the opponent country as either "a democracy" or "a dictatorship." In the vignettes with controls, we insert additional information about the opponent country's level of economic development. Finally, in the vignettes with an embedded natural experiment, the opponent country's regime type is as-if randomly assigned through the success or failure of an assassination attempt on the country's president.

In a pilot study, we discovered the naïve vignette caused subjects to think the dictatorship is more likely to be in the Middle East and Central Asia. The other two vignette types did not cause such confounding. We presented our theoretical framework and initial findings at the 2013 American Political Science Association Conference. Currently, we plan to conduct additional survey experiments about the democratic peace and other substantive topics to confirm our theory about confounding in survey experiments. In the past decade, survey experiments have become an increasingly popular research method in political science, sociology, psychology, and behavioral economics. The results of our project will help social scientists from various disciplines to better understand and overcome the threats to causal inference in survey experiments.

Aside from experimental methods, I also have experience conducting research using qualitative methods. With two research grants, I spent Summer 2012 in London and Cambridge researching how British domestic politics influenced the outcome of the Malayan Emergency, often considered a textbook example of effective counterinsurgency (COIN).

Previous studies of the Emergency have largely centered on the role of civilian and military leadership in Malaya. In contrast, my research focuses on the role of Whitehall and Parliament in developing COIN strategies. Between 1945 and 1948, Britain relied on Malaya for its exports of rubber and tin to generate dollars; yet, the Colonial Office neglected the colony's economic development and worsened ethnic tensions. During the first year of the Emergency, indecisive action by Whitehall and unsubstantiated scaremongering from Parliament translated into an uncoordinated ground campaign. The election of 1951, in which Conservatives regained power, brought Oliver Lyttelton into the Foreign Office. After his visit to Malaya, Lyttelton revamped Britain's strategy, providing financial and personnel support to the "hearts and minds" campaign that contributed to the Emergency's success. The findings of my project may help analysts and practitioners understand how legislative politics can influence the outcome of counter-terrorism campaigns.

**III. Future Goals.** During my time at Yale, I plan to continue my research on the intersection between domestic politics and international relations. One future project, outlined in my research proposal, seeks to test whether states with audience cost mechanisms have a bargaining advantage in international disputes. Besides my substantive interests, I hope to use my statistical training to develop new ways to analyze text data. In my capacity as an educator, I want to mentor undergraduates from disadvantaged backgrounds by guiding them in both coursework and research. Funding from the NSF Graduate Research Fellowship will help me achieve my goals to advance quantitative political science, to inform national security policymakers, and to foster diversity in the social sciences.