Initial Report

Last Modified: 02/01/2018

1. Name (first and last)

Text Response
Simon Heuberger

Statistic	Value
Total Responses	1

2. Email

Text Response
sh6943a@american.edu

Statistic	Value
Total Responses	1

3. Contact Phone

Text Response
2027632301

Statistic	Value
Total Responses	1

4. In Fall 2018 you will consider yourself to be a:

#	Answer	Bar	Response	%
1	VT Freshmen Undergraduate Student		0	0%
2	VT Sophomore Undergraduate Student		0	0%
3	VT Junior Undergraduate Student		0	0%
4	VT Senior Undergraduate Student		0	0%
5	Between Undergrad and Graduate school		0	0%
6	Graduate school		1	100%
	Total		1	

Statistic	Value
Min Value	6
Max Value	6
Mean	6.00
Variance	0.00
Standard Deviation	0.00
Total Responses	1

5. What degree(s) and major(s) are you pursuing along with institution?

Text Response
PhD American Politics and Quantitative Methods

Statistic	Value
Total Responses	1

6. List any Minors you are pursuing.

Text Response
PhD Comparative Politics

Statistic	Value
Total Responses	1

7. List any honors and/or awards received:

Text Response
Prestage-Cook Award, SPSA Annual Meeting New Orleans, 2018; National Science Foundation Grant, Presentation at Society for Political Methodology, 2017; Graduate Leadership Council Conference Travel Grant, 2017; Award from the Vice Provost for Research and Dean of Graduate Studies, "The Impact of Information and Emotions on Voter Turnout and Civic Engagement," with Jan E. Leighley, 2016; Department of Government Graduate Research Support, "Framing Methodologies," 2016; Graduate Assistantship 2015-2018; Best Master's Dissertation in the Fields of Sociology and Politics 2014; German Academic Exchange Service Scholarship for Study Abroad in Australia 2009

Statistic	Value
Total Responses	1

8. Currently we have 1 program accepting applications which includes:

#	Answer		Total Responses
15	Data Science for the Public Good	0	0
	Total	0	-

Statistic	Data Science for the Public Good
Min Value	-
Max Value	-
Mean	0.00
Variance	0.00
Standard Deviation	0.00
Total Responses	-

9. Essay (up to 500 words): "What do you want to get out of this experience?"

Text Response
I am excited about the crucial role that data analysis plays in public policy. I strongly believe that careful and elaborate data science enables metropolitan areas to drive social transformation and economic prosperity. While I tremendously enjoy working in academia, I miss the connection to the real world. I miss having an impact on the communities I live in. I want to apply my skills in statistics, data science, and social and behavior science to positively shape the world we live in, since data-driven research has the tremendous potential to bring about positive social change by providing much needed evidence and analyses to inform policy-makers. The Social and Decision Analytics Laboratory does exactly that. It brings together social scientists, policy-makers, and statisticians to provide actionable knowledge and guide effective policy-making based on expertly researched evidence. I want to be a part of this endeavor. In addition, I am thrilled by the possible opportunity to learn GIS and Hadoop, which is not offered at American University, and use of the state-of-the-art parallel cluster High-Performance Computing Facility at Virginia Tech. I believe that my skills provide an excellent fit for this Fellowship. I have experience using multiple statistical software programs, have a strong background in the social and behavioral sciences, and analyze very large datasets on a daily basis using a high-performance computer. It would thus be an honor to be considered for this highly prestigious position.

Statistic	Value
Total Responses	1

10. Essay (up to 500 words): "Please describe any previous research experience and/or work experience you may have."

Text Response
In the summer of 2015, I began a PhD in American Politics at American University in Washington, DC. Over the past 2.5 years, I have been working as a research and teaching assistant for several professors. In 2015/16, I worked with Prof Matthew Wright. My work focused on the strength and effectiveness of framing measures in political behavior, public opinion of then-President Obama's executive order on immigration, and immigration as a focal aspect of the 2016 presidential race. In the summer of 2016, I was employed as a teaching assistant for Prof Jan E. Leighley in her undergraduate course Introduction to Political Research. I designed as well as lead sessions using Stata. In 2016/17, I worked with Prof Ryan T. Moore, who is also a Senior Social Scientist at the The Lab @ DC. My work concentrated on list experiments on social desirability bias, the enhancement of the R package blockTools (written by Prof Moore), and the development of aptitude tests for data scientist positions at The Lab @ DC. I also helped design and teach the undergraduate course Introduction to Political Research. Prof Moore and I introduced students to the use of R Markdown as an integration of R and Latex. For this purpose, I wrote a 30-page introduction guide. Since the summer of 2017, I have been working with Prof Jeff Gill. I am assisting Prof Gill with his research and am also the Editorial Assistant for the journal Political Analysis. In this capacity, I also work closely with Prof R. Michael Alvarez at CalTech and Prof Jonathan Katz at the University of Maryland. I am in charge of all data replication of journal submissions, code debugging and quality control in R, Python, and Stata, as well as the organizational management of the online Dataverse archive. Before to coming to American University, I completed a Master's Degree at the University of Warwick and the University of Cambridge in the UK. During this time, I worked as a research assistant for Prof Eric Jensen. My responsibilities there included the review of quantitative data management practices in the Department of Sociology, the analysis of the political economy of face-to-face public dialogue practices in Sciencewise, and the role of social media in public dialogue. I also worked as a research fellow for the British American Security Information Council in London, Washington, and Cairo. I covered nuclear disarmament negotiations in the UK and the Middle East, provided analysis for the BASIC UK Trident Commission Report, and was deployed for on-site coverage of the 2014 Egyptian elections and Muslim Brotherhood prosecution.

Statistic	Value
Total Responses	1

11. Essay (up to 500 words): "Please describe your background (courses taken, research projects, etc.) in statistics and mathematics."

Text Response
I completed all four courses of the quantitative methods sequence at American University. These courses are called Conduct of Inquiry, numbered I to IV and cover a multitude of statistical topics. Conduct I was taught by Prof Ryan T. Moore and used R. It covered randomized experiments, measurement, visualization, survey sampling, correlation, clustering algorithms, linear regression, multiple regression, and causation. Conduct II was also taught by Prof Ryan T. Moore and covered regression discontinuity, difference-in-difference, probability, uncertainty, causal inference and linear algebra. Over the course of both classes, I designed and carried out a survey on the effects of moral frames on respondents' issue positioning. I presented the resulting paper both in class and at several professional conferences. Conduct III and IV were taught by Prof Dave Marcotte and used Stata. They covered outliers, influence diagnostics, robust regressions, MLE, missing data, the synthetic control method, fixed effects, random effects, proxy variables, instrumental variables, panel data, matched methods (such as propensity score matching), and probit and logit regressions. The collective class project was the analysis of the impact of the SEED (School for Educational Evolution and Development) program on Baltimore City school students. Since my coursework finished, I have been studying Bayesian Causal Inference under my supervisor, Prof Jeff Gill. We are currently working on a paper named "Standard and Extended Model Comparison Tools: IC Tools and More" which addresses the unstructured use of the Akaike Information Criterion (AIC), the Corrected AIC, and the Bayesian Information Criterion (BIC) as measures of the relative quality of statistical models for a given set of data. In the paper, we provide guidelines and rules how to use these criteria in a more structured and thus more transparent way. I am also currently working on paper called "Conjoint Analysis and Candidate Characteristics: Explorations in Causal Inference", in collaboration with Prof Moore. Here we are testing the causal effects of presidential candidate characteristics on vote choice by conducting a series of conjoint survey experiments. We are employing Prof Moore's blockTools R package to match and randomly assign participants. The survey design will be done through Qualtrics. Finally, I am in the process of drawing up the layout for my dissertation. In rough terms, I plan to contribute to both matching and survey methodology. In terms of matching, I plan to further improve Prof Moore's blockTools R package. In terms of survey methodology, I plan to improve the assignment of questions in adaptive surveys, as current installments in Qualtrics suffer from serious shortcomings.

Statistic	Value
Total Responses	1

12. Essay (up to 500 words): "Please describe your background (courses taken, research projects, etc.) in social and behavioral sciences."

Text Response
While I have also taken and completed social science courses and research projects during my academic time in the UK, I will limit myself in this essay to my ongoing PhD at American University, as this is where the most recent and important courses and projects have taken place. In the academic years 2015/16 and 2017/17, I completed four behavioral science courses that focused on U.S. politics. The course Introduction to American Politics presented an overview of the field, covering such diverse topics as mass public opinion, rational choice theory, polarization, and U.S. institutions. Seminars on the U.S. Congress, U.S. Political Behavior, and Political Polling provided in-depth knowledge on the psychology of political communication, the structure of the American legislative, and the concept of survey design. I also completed two behavioral science courses on comparative politics, with the first covering a survey of the field and the second concerning inequality in the global south. Finally, I completed an invaluable course on Research Design that covered theory design, hypothesis-testing, causal inference, randomized controlled trials, and natural experiments, among others. This course provided me with in-depth knowledge required to design, carry out, and analyze research projects of the highest quality. Besides these courses, I also completed the entire quantitative methods section offered at American University (details on these will be part of my essay on my statistical background). In the past 2.5 years, I have also written and presented several papers at major political science conferences across the country. These conferences include the Southern Political Science Association, the Midwest Political Science Association, the American Political Science Association, and the Society for Political Methodology. In one of these papers, "Changing Public Opinion with Ethical Arguments", I tested the effect of moral frames on respondents' issue positioning on minimum wage, the travel ban, and the confrontation with North Korea in an online survey experiment that I designed and carried out myself. I found that, contrary to the literature, moral frames do not outweigh pragmatic frames in terms of persuasive power. In another paper, "Us v. Them: Voter Turnout, Partisanship, and Emotional Responses to Presidential Candidates, 1980-2012", my colleagues Will Jorgeson, Jan E. Leighley and I investigated whether potential voters who were angry at or afraid of presidential candidates were more likely to turn out over time. The results suggest that this is indeed the case, which points to the increased significance of emotions in mass voting behavior over the past 30 years. I am also currently working on paper called "Conjoint Analysis and Candidate Characteristics: Explorations in Causal Inference", in collaboration with Prof Ryan T. Moore. Here we are testing the causal effects of presidential candidate characteristics on vote choice by conducting a series of conjoint survey experiments.

Statistic	Value
Total Responses	1

13. Essay (up to 500 words): "Please describe your background in programming."

Text Response
I have engaged in various coding projects during my time at American University. As part of my coursework, I learned the use of R, Stata, and Latex. On my own, I learned R Markdown as an integration of R and Latex to produce journal-worthy PDFs straight from the R environment. I now write all conference papers and create all presentations in R Markdown. I also taught myself Python and how to develop web applications directly from R with shiny. Together with Prof Ryan T. Moore, I helped develop the blockTools R package and engaged in general package development with devtools. Prof Moore and I also pioneered the introduction of R Markdown in the undergraduate Introduction to Political Research class at American University -- all previous classes employed Stata. I am currently working as the Editorial Assistant of the political journal Political Analysis, under my supervisor Prof Jeff Gill. I am responsible for the replication and debugging of all quantitative data submitted in R, Python, and Stata. The replication process requires the use of American University's High-Performance Computing system due to the often computationally highly intensive data sets. I am also in the process of drawing up the layout of my dissertation. I will improve on Prof Moore's blockTools R package and adapt it for the specific purposes of adaptive survey methodology. This will be combined with the development of a shiny web application. The end result will be an R package that enables the user to create an entire adaptive survey on a web server by simply inputting a *.csv* file with the respective survey questions into R. This survey can then directly be distributed to respondents. This package will allow much more sophisticated matching and blocking designs than Qualtrics and also bypass Qualtrics' need to set up each survey question in turn. Everything will be handled from within the R environment. I will also use this package, once finished, to analyze original survey data on political framing.

Statistic	Value
Total Responses	1

14. Essay (up to 500 words): "Please provide information about other significant courses you have taken within your field of study."

Text Response
There are no other courses I have taken that would significantly add value to my application.

Statistic	Value
Total Responses	1

15. Please list the name and contact information for 2 references (teachers, mentors, or employers) that we will contact for a letter of reference/brief survey. Please make sure you list the correct email and they know we will be contacting them soon (within the next week). Only 2 references will be contacted; do not list more than 2.

Text Response
Prof Jeff Gill, jgill@american.edu; Prof Ryan T. Moore, rtm@american.edu

Statistic	Value
Total Responses	1