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**David Lazer/Network Science Institute Case Statement**

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**Launching a Multinational COVID-19 Survey**

At Northeastern University’s Network Science Institute, our world-class researchers are applying their diverse expertise to help measure the impact of COVID-19 and alleviate its adverse consequences. **David Lazer, University Distinguished Professor of Political Science and Computer and Information Science,** is leading efforts to launch a year-long study that includes a rolling multinational survey linked to social media behavior during the pandemic. With his research, he aims to provide data that would improve the global response to the virus and examine its social implications, such as the effects COVID-19 is having on people’s lives and how they are adapting. But to do so, he requires funding to collect data, subsidize computational costs, and add personnel to analyze, model, and interpret the survey’s results.

Lazer will explore the efficacy of state, local, and federal government policies—all of which are geared toward similar or identical ends, but assume different forms. He will also study individual-level heterogeneity, depending on factors like political orientation, socioeconomic status, religiosity, and other factors. For instance, who complies when a government directs citizens to stay home? Who defies the orders and why? To what extent do information consumption patterns predict responsiveness? These issues will become particularly acute as divergent signals are sent by leaders and policymakers.

**Empowering a Global Response**

With the limited availability of testing for COVID-19, the actual results represent a fraction of the total people who are sick. To help estimate the number of those who are ill, Lazer’s study would collect data about who is likely to be infected, analyze how the virus is spreading, and evaluate social distancing behaviors. This data can then be used to guide mitigation strategies and resource allocation, inform epidemiological models, and improve predictions of COVID-19’s spread and impact. Lazer will assess:

* **Respondent and household symptoms.** A novel, social network-based methodology would be used to estimate the prevalence of COVID-19 and identify emerging “hot spots.” Lazer would inqure about a respondent’s behaviors, then their household members, parents, grown children, and friends, and identify those belonging to high-risk professions likely to be sentinels of disease prevalence. This will help show where the virus is spreading and how it flows in social networks.
* **Social distancing behaviors.** Using data from mobile phones, Lazer would evaluate changes in movement patterns and social distancing. In doing so, he can identify the causal effect of various types of messaging—including recommendations, stay-at-home orders, or enforced lockdowns—on contact patterns.
* **Information and communication needs.** Lazer’s survey would capture how individuals are using technology to do work, attend classes, and secure services and critical information, and record the challenges and disparities in access quality and digital skills. The study will also examine social barriers to obtaining timely and reliable information due to, for example, the use of low-quality sources and lack of confidence in official messages and guidelines.
* **Information acquisition and evaluation.** Lazer’s survey would ask knowledge and media consumption questions, evaluate exposure to misinformation, and add a social media component to monitor respondents’ information sharing behavior. The combination of longitudinal survey data and social media records will provide a robust and methodologically advanced way of tracking news consumption, digital network structures, and social interactions.
* **Economic impacts.** Have people lost their jobs or closed their businesses, and in what sectors? The degree of the economic damage is evolving daily, and exploring how that is unfolding may help inform plans to effectively restart the economy. And for students, as schools and universities have closed and classes have moved online, the impact on education and learning may have negative personal and economic consequences well into the future.

**Expanding the Survey’s Scope**

In late April 2020, Lazer launched his survey in the United States with modest seed funding from the National Science Foundation. With added philanthropic resources, he could substantially expand the study’s reach. Lazer aspires to conduct a year-long investigation in the United Kingdom, the results of which will inform public policy and mitigation tactics as both countries consider and implement strategies to reopen their economies. Longer term, he envisions deploying the study to the emerging economies of India and nations throughout Africa.

By gathering comprehensive data on policies, opinions, information acquisition, and social behaviors, Lazer will help communities around the world grasp why COVID-19 has devastated some areas more than others—and in creating that knowledge, better fight the pandemic and chart a path forward.