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Blavatnik School of Government
University of Oxford

Dear Faculty Search Committee,

I am writing to express my interest in the position of Associate Professor of Digital Technology and Public Policy in the Blavatnik School of Government at Oxford University. I am currently an Assistant Professor of International Affairs in the Bush School of Government and Public Service at Texas A&M University. Previously, I was a Postdoctoral Fellow at Stanford's Center for International Security and Cooperation (CISAC). My interdisciplinary background integrates computer science, international political economy, and engagement with global expert practitioners that ensure the security and stability of the Internet and the digital platforms it supports. I thrive in and embrace multidisciplinary environments, and believe my background, research, and teaching is exceptionally aligned with this posting and the development objectives of the TechGov Centre.

My applied research examines critical policy issues such as the real-time management of cybersecurity incidents, comparative analysis of digital platform governance, and the development of connectivity infrastructures in developed and developing regions. These kinds of 'wicked issues' cannot be resolved by policy formulation and implementation by a single stakeholder group or jurisdiction. The research and policy challenge central to my work is understanding how to systematically harness the capabilities and capacities of the diverse actors that sustain the security, stability, and integrity of complex infrastructures such as the Internet to solve global policy problems.

My work addresses two key parts of this challenge. First, my empirical work builds on established theories of institutional design and political economy to understand how transnational epistemic communities develop, and adapt, the norms, standards, and best practices they use to cope with uncertainties endemic in complex engineering systems such as the Internet and emerging digital technologies that rely on Internet communication. Second, I evaluate the feedback loops necessary to systematically integrate this knowledge into governance, regulatory, and policy-making processes, while being cognizant of the politics of science and technology policy advice. I believe my work on filling these knowledge gaps, in particular my work on consensus-based coproduction of knowledge and credible knowledge assessment, is exceptionally aligned with the recommendations of the Pathways for Prosperity Commission and the remit of the TechGov Centre.

Research

My research strategy has always been interdisciplinary. I started my academic life in computer science as a software engineer focusing on network security, but soon realized technical knowledge alone was insufficient to understand the complex sociotechnical dynamics shaping national and global policy challenges. To address these challenges, I pursued a PhD in Technology, Management, and Policy in MIT's Engineering Systems Division. I combined international political economy, operations strategy, and computer science to conduct extensive fieldwork examining on-the-ground practices in Internet infrastructure management and cybersecurity. This work explains and evaluates the norms, values, and practices (i.e. institutions) that sustain the core functions of the Internet, upon which a diversity of complex digital infrastructures and platforms are built.

In particular, I examine the consensus-based coproduction of these institutions' expert knowledge, how it sustains the capabilities and capacities necessary to adapt to the uncertainties endemic in these evolving digital platforms, and the challenges of integrating this knowledge into global and domestic policy development, regulatory design, and governance processes. In my planned adaptation work, I evaluate successful instances of systematically integrating epistemic communities' knowledge of complex engineering systems into regulation and policy. A key contribution of this work focuses the capabilities and capacities necessary to bridge the knowledge gaps between epistemic communities and policy and regulatory actors. My planned adaptation work distinguishes between distinguishes between (1) the domain-specific capabilities and capacities necessary to create and sustain the knowledge necessary to manage technical and operational elements of complex engineering systems and (2) the organizational and institutional capabilities and capacities necessary for effective collaboration between these actors and public policy communities. Understanding how these capabilities and capacities are developed and sustained is key to collaboratively solving global policy challenges such as cybersecurity and universal connectivity.

My current and ongoing work explores knowledge coproduction in a number of contexts. In my Combined Capabilities project (started at Stanford), I evaluate how transnational groups of cybersecurity experts and international law enforcement combine their capabilities and capacities to combat global cybercrime, highlighting the evolution of these relationships and the challenges of modernizing investigative procedure and Mutual Legal Assistance Treaties (MLATs). In collaboration with Dr. I. Brass at University College London, our article in *Regulation & Governance* argues for a novel, planned adaptive regulatory framework that closes the feedback loops between IoT security regulations and standards development and the expert knowledge of epistemic communities necessary to keep pace with innovations by cybercriminals taking advantage of low-margin, insecure IoT devices. In my recent article on Internet consolidation in the *Journal of Cyber Policy*, I comparatively evaluate the governance of digital platforms to contrast the roles of control and consensus-based knowledge coproduction for monitoring predatory practices, highlighting the need for coregulation that can build on these monitoring capabilities to ensure fair and equitable digital marketplaces. I am currently working on an article targeting *International Organization* that uses empirical cases from Internet resource management to characterize consensus-based knowledge coproduction and the attendant modes of political authority in these groups, arguing that these models of knowledge coproduction and credible assessment can be quite complementary to conventional regulatory and governance processes. Across each of these studies, the common theme is the collaborative application of consensus-based, coproduction of knowledge and regulatory authority to solve wicked global policy problems.

Policy and Practitioner Engagement

Stakeholder engagement is essential to my work, and I believe it will be essential to developing the development of the TechGov Centre. Over the last eight years I have interviewed over 100 actors from network operator communities, digital platform managers, and cybersecurity and hacking communities at over 40 network operations and cybersecurity conferences around the world. By demonstrating I speak both technical and policy vernaculars, I have established a reputation as an honest broker that brings a deep understanding of the complex, sociotechnical governance and management problems that I believe are central to the remit of the TechGov Centre. Building on this network, I would like to contribute to the Blavatnik School and the TechGov Centre's efforts to develop stakeholder relationships that will inform on-the-ground institutional dynamics that shed light on the stability and security problems facing complex digital infrastructures, and how these stakeholders can engage with the policy-making community to solve global policy problems.

My recent engagements have given me the opportunity to apply my research. As the program chair of the Anti-Phishing Working Group (APWG)'s 2018 Symposium on the Policy Impediments to e-Crime Data Exchange, we brought together cybersecurity experts, lawyers, and policy-makers to highlight the GDPR as an opportunity to resolve the tensions between operational security groups, advocacy groups, and data protection authorities wresting with global privacy and security challenges. As a senior advisor to the Messaging, Malware, and Mobile Anti-Abuse Working Group (M^3AAWG), starting in 2016 I worked with M^3AAWG Board to redesign their Outreach initiative, creating and leading programs developing anti-abuse capabilities and capacity in Latin America and the Caribbean, Asia Pacific, and Africa appropriate for each regions' culture, values, and resource endowments, including support for government engagement.

Developing these global partnerships has given me substantial access to technical, law enforcement, and policy communities operating in the governance space of the Internet and emerging digital technologies. I believe this access and experience, not only understanding the technical and governance challenges, but also understanding the diverse cultural and political challenges, would be an asset to the leadership of the TechGov Centre. I am excited at the prospect of developing partnerships between the TechGov Centre and these global and regional organizations. Many of these organizations have substantive demand for professionals and researchers with a deep understanding of both digital technologies and international policy.

Teaching

Understanding the social, political, and economic challenges presented by digital and emerging technologies requires exposing students to contemporary, real-world problems. I am extremely excited at the prospect of bringing my experience and research-led teaching to the Masters in Public Policy, doctoral student advising, and executive education programmes at the Blavatnik School of Government. In my current post I direct the Cyber Policy Concentration, creating four of the five courses in a programme that develops students' understanding of Internet and communications technologies, their impact on broader digital technologies, and the attendant policy and security implications through research-led teaching. My courses include an introductory survey course on policy issues related to Internet and digital technologies, a course entitled *Internet Infrastructure: Platforms and Politics* that delves into the policy implications of how these technologies are designed and operate in the wild, a course on data science and visualization for policy analysis, and an advanced course on political authority in operational epistemic communities and its implications for developing policy and diplomacy.

In addition to contributing to the existing curriculum at the Blavatnik School, my teaching offers the rare interdisciplinary combination of accessible, deep dives into digital technologies and complex engineering systems, the politics of the design and operations of these and emerging technologies, and their implications for national and global policy issues. My modules' intensive term project requires students to do their own deep dive into a contemporary technology and policy issue that would effectively prepare students for Summer Projects, development of a research prospectus for doctoral students, and opportunities to directly apply their coursework to research in the TechGov Centre. I believe I could contribute to building on the Blavatnik School's existing modules and the model I have presented above to develop a world-class applied technology and policy track in the MPP and doctoral program.

I believe my approach to research, engagement, and teaching is very well aligned with this posting at the Blavatnik School and its plan for the TechGov Centre. I am quite excited at the prospect of bringing my ongoing research projects, access to expert networks, and engagement initiatives to the Blavatnik School. Please do not hesitate to contact me at jesse.sowell@gmail.com or +1 517

214 1900 with any questions about this application. Thank you for your time and interest, I am looking forward to hearing from you.

Sincerely,

Jesse H. Sowell II