Perceiving Politics: How Information and Communication Technologies Structure Political Subjectivity[1]

Kevin K. Troy
Harvard University, Department of Government
November 26, 2021

Introduction

Aristotle famously wrote that "a human being is by nature a political animal" (1998, 4). Critically, the reason Aristotle gives why humans are political hinges on the issue of perception: "For it is peculiar to human beings, in comparison to the other animals, that they alone have perception of what is good or bad, just or unjust, and the rest" (1998, 4). How have other theorists conceptualized this idea of political perception? In other words, *what is it like to be a political animal?* Many address this question using the concept of the state of nature, whether focused on the construction of an individual polity (Hobbes 1929; Locke 2003) or the interaction between states (Waltz 1979; Wendt 1992). With few exceptions (among them Deudney (2007)), this state of nature stands outside of time or regimes of technology. This approach has an attractive universalism. But is it a sound move, both theoretically and empirically? Perhaps not.

When Thomas Nagel (1974) asked, "What Is It Like to Be a Bat?" he justified the inaccessibility of the interior life of the bat by referencing its reliance on echolocation—a sense quite unlike our own. Echolocation highlights the thin line between senses and sensing technologies; after all, we have managed to disembody echolocation and repackage it as sonar on submarines. Returning to humans, while our five organic senses may be largely unchanged since the preeminent theorists of the state of nature were writing, the ways in which we perceive politics have not. Instead, they have been reshaped by such technologies as the written word, moveable type, telegraphy, television, and email. As McLuhan (1964) argues, media are "extensions" of our senses, suggesting that the social media-savvy politico of the twenty-first century might be as alien to Hobbes as a bat is to us.

My dissertation project makes the argument that, at least since the advent of spoken language, understanding what it is like to be a political animal is *impossible* without understanding how prevailing information and communication technologies (ICTs) limit and expand the scope of what we perceive about political life.

[1] Prepared for Research Exploration Meeting with Iain Johnston, Ryan Enos, Josh Kertzer, and Susanna Siegel.

Many have argued that different structures of political communication are associated with different political outcomes, such as the literatures linking social media to polarization (Levy 2021; Nordbrandt 2021; Zhuravskaya, Petrova, and Enikolopov 2020) or mobile phones to mass protest (Christensen and Garfias 2018; Manacorda and Tesei 2016; Theocharis et al. 2015). Political psychologists have shown the importance of affective associations and emotions that operate prior to conscious rationalization in shaping political beliefs and behaviors (Brader, Valentino, and Suhay 2008; Lodge and Taber 2013). But the political psychology literature tends to view media as delivering content, not as a force that shapes the structure and type of content that is delivered. And where the political psychology literature seeks cognitive universals, the political communication literature tends to study particular devices or technologies, posing a threat to generalizability in an age of rapid technological change (Munger 2019a, 2019b).

I contend that, by developing and applying a concept of *technologically mediated political subjectivity*, I can make a contribution at the intersection of these bodies of scholarship. I do not propose to definitively answer the question of what it is like to be a political animal. But I do intend to show that any compelling answer advanced by empirical or normative scholars of politics must engage with assumptions about the ICTs that shape political subjectivity.

I conceive of this dissertation as a book project, but a very modular one. The main contribution is synthetic, and the chapters are designed to operate like a mosaic; removing one or more tiles should leave the image detectable. Admittedly, the plan below is ambitious, but I prefer to be steered toward a narrower scope by wiser minds rather than preemptively self-censor.

The rest of this pre-prospectus details seven possible chapters, each including a research question, hypotheses, an empirical approach or preliminary results when available, and next steps. I conclude with some of the questions and concerns uppermost in my mind. An appendix presents a brief list of other projects I am working on that do not currently fall in the scope of the proposed dissertation.

Part One: Theory

Part One will justify and develop a theory of technologically mediated political perception.

Chapter One: A Theory of Information and Communication Technology and Political Subjectivity

This chapter will begin by justifying the investigation of political perception. Some prominent studies show the effects of fleeting perceptions, such as of the faces of candidates for office, on political evaluations (Atkinson, Enos, and Hill 2009; Todorov et al. 2005). Other political science research has shown that the affective valence of political objects is triggered within milliseconds of perception, with substantial downstream consequences for political behavior as these initial perceptions travel through associative networks in memory (Lodge and Taber 2005). But philosophers of perception have argued that our perceptions can encompass far more complex concepts than mere sense-data like color and shape (Neisser 2015; Siegel 2011). Psychological research backs this up, with one study concluding that causal history is perceived in an object like a cookie with a bite taken out of it (Chen and Scholl 2016). Political science should thus expand its understanding of political perception beyond visual sense data or binary affective categories. Under the right circumstances, people really may *perceive* partisanship when they look at their obnoxious neighbor.

Perception does not merely admit a richer character than is typically recognized in political science; it is as capable of being informed by experience or emotion as the more familiar case of cognition (e.g. motivated reasoning). As Siegel (2017, 3) writes, "Influences on perception could come from beliefs, hypotheses, knowledge, desires, traits, and moods." Indeed, Bayesian theories of the brain blur or erase the line between perception and inference (Friston 2018).

Perception is at the heart of subjectivity, the 'what-is-it-like' character of an individually situated experience. Crucially, I argue, *political* subjective experience is particularly prone to mediation by technology. Far more so than visual perceptions of objects around us or our daily experience of our social lives, our sense-data about politics come to us through ICTs.[2] And these ICTs will thus structure the patterns of perception that tell us what politics is *like*. The child who grows up going to city council meetings will perceive politics in a higher resolution than the child

[2] Although augmented reality and ubiquitous electronic communication, respectively, may be undermining this distinction.

who grows up reading about politics in the newspaper. (Let it not be suggested that these imagined children are particularly cool.)

Understanding how ICTs play this structuring role and doing so in a way that is durable across different generations of technology poses its own challenge. Scholars of science and technology studies have developed powerful approaches to comparing ICT across centuries using engineering characteristics like bandwidth and storage capacity that are common to multiple generations of technology (Koh and Magee 2006). I plan on using these concepts—called functional performance metrics—to inspire my own typology of the common characteristics of ICT that are important for shaping political perception and can be well defined whether considering papyrus scrolls or flash drives. I will then derive key theoretical expectations for the effects on political perception and subjectivity of changes to these characteristics of ICT.

- Status of Project: I have writing relevant to this chapter scattered across several papers but have not yet brought it together in one place.
- Next Steps: I need to spend more time with the philosophy, psychology, and neuroscience literature on these issues. I also need to consider if I am comfortable extending the ideas of political perception and subjectivity to collective actors like movements and states, as I am currently inclined to do in Part Four.

Part Two: The Person and The Polity – ICT's Role in Molding the Political Subject

Part Two focuses on how individual people perceive themselves and others as 'political animals.' If politics is about "who gets what, when, how" (Lasswell 1936), then this part of the book project asks how people conceptualize who is the 'who,' and how the answer to that question may depend on the ICTs we encounter in the world and use ourselves.

Chapter Two: Public Space, Private Artifacts, and Democratic Citizenship

Public space is a site of intersubjective awareness. Even if it is not at the forefront of our mind, an integral part of the experience of being in a public park is the mutual awareness between ourselves and those we see (even if they are strangers) that we are all sharing in the same natural beauty and constructed amenities.

Benedict Anderson (1991) recognized how one communication technology—newspapers—facilitated the formation of "imagined communities," through their format, content, and how they

shape public space. As he explains, "the newspaper reader, observing exact replicas of his own paper being consumed by his subway, barbershop, or residential neighbours, is continually reassured that the imagined world is visibly rooted in everyday life" (Anderson 1991, 35–36). Agree or disagree about political issues, one cannot help but impute a common frame of reference.

Newspapers, however, no longer dominate cafés and waiting rooms. Does the ubiquity of smartphones in public spaces jeopardize the degree to which individuals view themselves as members of a democratic polity? I hypothesize that it does; smartphones' multiple uses and lack of external cues signaling those uses make them markedly worse at generating joint attention and intersubjective awareness of membership in a common polity.

To test this hypothesis, I plan to conduct a lab experiment in which subjects sit in a waiting room surrounded by confederates who are either on their phones (in the treatment condition) or reading local magazines and newspapers (in the control condition). Through subsequent survey questions and behavioral games measuring their trust and generosity toward their apparent fellow research subjects, I hope to gain leverage on the question of if the very device that grants us access to nearly unlimited information has the side effect of weakening the subjective bonds that tie us together.

- Motivating Question in the Context of the Theory: *Do different ICTs affect the role that public space plays in cultivating perceptions of membership in a common polity?*
- Status of Project: I have a substantial (approximately 20 page) theoretical development of this hypothesis that engages extensively with political theory and philosophy, as well as a preliminary experimental protocol.
- Next Steps: I need to deepen the experimental protocol, write a pre-analysis plan, and secure funding for what will doubtless be a fairly expensive experiment involving confederates and non-student subjects.

Chapter Three: Lawn Signs, Likes, and Perceived Partisan Geography

The third chapter will move from asking how technology shapes one's view of oneself as a member of a polity to asking how technology changes views of other members of the polity. As sports broadcasts have transitioned from over-the-air images to high-definition signals sent through fiber optic cables, the accompanying improvement in resolution has given viewers more knowledge

than ever about things like where a receiver's feet landed or if a ball was juggled—but less understanding than ever about basic questions like what counts as a catch.

In the political realm, before social media, one would only know the partisanship of one's neighbors through conversations with them, gossip about them, or signals sent by them intended for local consumption like lawn signs or bumper stickers. I am concerned that the increasing resolution available to us through constant electronic connectivity via email, text, and social media may have given us a clearer picture of our neighbors' and co-nationals' politics at the expense of an admittedly fuzzier amity (for a similar argument in a legal context, see Sunstein's (1995) notion of "incompletely theorized agreements").

I plan to test this argument in the context of partisanship in American politics. I hypothesize that, for minority partisans in homogenous areas and all partisans in closely divided areas, increased perceived knowledge of neighbors' partisanship is negatively associated with feelings of civic trust. I further hypothesize that increased use of social media is positively associated with perceived knowledge of local partisan geography. I plan on gathering these data using surveys of thousands of voters from the voter file currently spearheaded by Jacob Brown and Ryan Enos.

- Motivating Questions in the Context of the Theory: *Does social media lead people to have a sharper perception local political context? Does this sharper perception facilitate or degrade trust?*
- Status of Project: I have written a memo with the outlines of a simple formal model explaining the intuition behind my hypotheses. I have written preliminary questions designed to gauge the relationship between perceived partisan geography and civic trust; these questions will be fielded in the next round of the Brown and Enos survey. I have also included pilot questions designed to capture the social media dimensions of this issue.
- Next Steps: The first round of data collection will be very informative as to the construction of questions on future surveys. In addition, I would consider a social media-shutdown experiment along the lines of Asimovic et al. (2021).

Part Three: Perceiving Policy – Constraints, Affordances, and Political Beliefs

Once people perceive themselves, other members of their polity, and members of other polities as political agents, how do they perceive political issues—questions of policy? Part Three examines how constraints of some ICTs (like those on the length of messages) or affordances provided by

them (like the ability to share one's own opinions at a low cost) shape how complex or simple people imagine politics to be, how confident they are in their understanding of politics, and the process by which opinion forms and ossifies.

Chapter Four: Less Information, More Overconfidence

The fourth chapter begins to zoom out, examining how structural features of ICT can shape individuals' beliefs about political concepts and arguments. At various points in history, important messages have had severe constraints on length. For nineteenth century submarine cables used to transmit transatlantic telegrams, low bandwidth and high cost led to brief messages (Nickles 1999). In the twenty-first century, Twitter—with its elective character limits—became an improbably important tool of international politics during the Trump administration.

In two pilot survey experiments using the Harvard Digital Lab for the Social Sciences, I have found that individuals who read tweet-length information about foreign affairs were substantially more overconfident in the correctness of their answers to factual questions about the topic than people who read longer, article-length passages. I posit that this relationship is due to people implicitly perceiving shorter content as indicative of a simpler, less complex issue. In future iterations of this experiment, I plan to test this mechanism by varying the number of correct answers that could be given by reading each treatment and seeing if those in the longer treatment are consistently better calibrated.

This project promises to make contributions to the literature on media and public opinion in general, and public opinion and foreign policy in particular. In addition, motivated by the emphasis on presenting information to senior policymakers in extremely short formats, I hope to conduct a version of this experiment on an 'elite' sample or embedded in a wargame associated with one of the schools of professional military education.

Additionally, I plan to conduct further online experiments on a nationally representative sample using a wider variety of political issues related to both domestic and foreign policy.

The stakes of this perception of complexity are high. If people perceiving politics in more bite-sized chunks view politics itself as less complex, they may believe engaging in politics requires less nuance and empathy.

- Motivating Questions in the Context of the Theory: *How does the length of information affect how people perceive policy issues? Are they complex or simple? Does perceived simplicity induce overconfidence?*
- Status of Project: I have completed two pilot studies, one on a low-salience issue (Philippines-U.S. military policy) and one on a higher-salience issue (Chinese human rights abuses), both with evidence of the link between brevity and overconfidence. I am in the process of redrafting this paper to incorporate the second pilot study.
- Next Steps: Developing the experimental protocol to test the proposed mechanism of perceived complexity; implementing it in nationally representative and elite samples using examples from additional areas of policy.

Chapter Five: Expressive Affordances and Belief Reinforcement

How does cheap talk about politics affect the beliefs and behavior of those talking cheaply? No study of which I am aware has this question as its central focus. The limited evidence that does exist on this question suggests it is important to take the possibility of signals' effects on the sender seriously. Tingley and Walter (2011) find that cheap talk in a repeated entry-deterrence game has an effect on the play of the signaler in early rounds, but do not settle on a theoretical explanation for this result or investigate its broader significance for international politics. Cho et al. (2018) and Sude et al. (2021) find that self-expression about American politics in a social media context hardens the opinions of the expresser.

An important technological development motivates increased attention to what I will call signaling effects on the sender. Very simply: talk is getting cheaper. The affordances of social media such as the like button, the ability to up-vote/down-vote, retweeting, and commenting radically close the gap between information consumption and information production. Compare Twitter to a newspaper. Newspapers have a mechanism for readers to engage in talk in the form of the letter to the editor. But this talk is not particularly cheap, requiring time, postage, and patience. Twitter enables instantaneous sharing of content and the ability to learn about an issue and provide one's own hot take nearly simultaneously. (Devices and internet access are costly, but the marginal cost of a tweet approaches zero.) For the average citizen, the radical reduction in the cost of engaging in talk about politics occasioned by this new technological era is clear. But similar developments hold for public officials and world leaders, whose extensive use of Twitter reflects

the fact that it at least has the potential to be far less cumbersome than the traditional speech or press release (Barberá and Zeitzoff, 2018; Collins et al., 2019). Even formal channels of communication are getting cheaper and faster. Koh and Magee (2006) estimate that the earliest single cable submarine cables in the mid-to-late 19th century had a bandwidth on the order of 0.1 kilobits per second, whereas modern optical undersea cables transmit at bandwidths on the order of 10^{10} kilobits per second.

This chapter will make two main contributions. First, theoretically, I advance a view of cheap talk as a sociotechnical affordance that gives elites and publics the ability to engage in low cost signaling about politics. Second, using survey experiments, I investigate whether these low-cost signals might reinforce the views or behaviors that are expressed.

Results from two pilot experiments regarding this primary question are inconclusive; they are consistent with, but not dispositive of, a causal interpretation. I do find evidence that cheap talk can be informative about policy beliefs and future behavior even in adversarial settings. However, these two experiments (one varying the presence or absence of social media 'like' and 'comment' features in response to text about a nuclear arms control treaty and a second placing subjects in an entry-deterrence behavioral game with or without the ability for cheap talk) did reveal an interesting possibility of bidirectional causality in the presence of the expressive affordance. That is, people who used the 'cheap talk' feature may have been substantially more likely to endorse or enact that perspective and those who were exposed to the expressive affordance but declined to use it may have been negatively reinforced in their opinions and beliefs. Future iterations of this work will use a hierarchical modeling approach to explore this hypothesis.

- Motivating Questions in the Context of the Theory: *How does the presence or absence of expressive affordances affect how people form opinions about policy issues? Do expressive affordances play a role in opinion polarization?*
- Status of Project: A draft paper based on the two pilot studies is complete.
- Next Steps: Developing new experiments with greater ecological validity (the pilot examples did not simulate social media very well or providing the most convincing behavioral game setup) and issue diversity; identifying a new analytical strategy to get around the violation of the exclusion restriction that comes from the potential bidirectional causal effect of expressive affordances (whereby non-compliers are still affected); implementing the new experiments, either in the lab or online.

Part Four: The Name of Action – Seeing Allies and Enemies in Contentious Politics

Having examined ICT's effect on perceptions of political agents and policy issues, Part Four turns to political agency. When considering political action, our understanding of who our potential allies and enemies are and—if they are collective actors—what they are made of, substantially affects our perception of the strategies that are available or advisable. By extending the concept of political subjectivity from the individual to the movement and the state, this part of the project investigates the link between technologies of perception and the pursuit of contentious political strategies.

Note that these are the least well-developed of the proposed chapters.

Chapter Six: Information Terrain and Protest

This chapter will examine social movements' choice whether to resist the state using violent or nonviolent strategies. Chenoweth (2019) has noted that movements have increasingly opted for nonviolent resistance, but that the rate at which this nonviolence is effective in accomplishing campaign goals is decreasing. I propose that the spread of low cost, high bandwidth connectivity at the individual level has changed movements' perceptions of the information environment in their polity. In the language of science and technology studies, these technological changes have created affordances that make movement building seem easier—potentially inducing strategically suboptimal decision-making by those who would resist the state.

Harvard Library has access to fine-grained geospatial data on the rollout of 3G networks—the key technological improvement that enabled the current ecosystem of apps on smartphones—and several coauthors and I have collected the first worldwide, province-level data on the location of nonviolent civil resistance events. Together, these data will enable a preliminary test of the link between movements' perceived information environments and their strategic decisions. In particular, I will use the lightning strike instrument for cellular coverage expansion used by Manacorda and Tesei (2020) and Guriev, Melnikov, and Zhuravskaya (2019) to enable causal inference.

- Motivating Questions in the Context of the Theory: *How do movements perceive their potential popular support and strength in different information environments? How do these perceptions affect the location of protest events in time and space?*

- Status of Project: Coauthors and I have gathered province-level data on civil resistance campaigns. I have access to the Collins-Bartholomew Mobile Explorer data on cell coverage through the library.
- Next Steps: Theoretically, I have a previous project related to the issue of ICT and movements' choice of resistance strategy, but it needs to be substantially reworked. On the empirical side, substantial data cleaning, additional data collection, and an analysis plan will need to be completed. I will also need to identify some case studies to test whether the observed behavior of resistance movements reflects the perceptual dynamics I am proposing as a mechanism.

Chapter Seven: What Are Other States Made of? Perceiving Like a State, Public Diplomacy, and Propaganda

My final planned chapter asks if changes in prevailing information technology alter what states (or their national security bureaucracies) think of when they imagine other states. To this day, diplomatic traditions like ambassadors receiving credentials from the head of state recall a time when other countries were very much embodied in a single sovereign. By the second world war, dueling radio propaganda campaigns between Germany and the Allies were clearly premised on a conception of opposed mass publics (Whitton 1941). Today, the United States government has accused China of stealing the personal information of millions of Americans, many of whom have no obvious connection to government or strategic industry (NBC News 2020). If this stylized change in how states see one another (from a ruler, to a mass public, to a mass of individuals) is valid, how might it shape patterns of great power competition? Are national security bureaucracies that matured at an earlier time when prevailing ICT offered only the resolution to see opponents as mass publics at a disadvantage compared to newer bureaucracies that emerged more recently when a granular view of geostrategic opponents was possible?

This chapter needs the most additional conceptualization, theoretically and empirically. I am interested in using archival sources, such as declassified President's Daily Briefs, which are now available from 1961-1977 (National Security Archive, Chadwyck-Healey, and ProQuest 1998). I expect my approach would include both qualitative case studies and computational text analysis, wherein I examined the archives to see if changes in the computational and information

gathering architecture of the U.S. national security state led to discontinuities in how foreign states and their citizens were characterized.

- Motivating Question in the Context of the Theory: *How does the granularity of information collected by a state's national security bureaucracy and the computing power with which that information is processed affect how that bureaucracy perceives the nature of its adversaries?*
- Status of Project: This chapter remains in the preliminary brainstorming phase.
- Next Steps: More precisely nailing down a specific research question and the appropriate sources of data.

Concluding Thoughts

I am aware that the project outlined above may not be achievable in its entirety as a dissertation. I certainly welcome feedback about feasibility and which projects are best to move to the back of the pipeline, which should be cut entirely, and if any should be replaced by projects currently listed in the appendix. I am also eager for feedback about coherence. This is a diverse research agenda; does it hang together well enough?

Part of my goal here is to make a synthetic point that, since political communication and political psychology are operative in both domestic and international politics, theories and empirical tests thereof should be able to cross subfields (in my case, IR and American Politics). I do recognize, however, that my approach to this task makes this project a bit hard to pin down in terms of traditional political science subfields. To be frank, even if this may cost me somewhat on the job market, I may be willing to pay that price to stick to my intellectual interests and convictions. But I want to make that tradeoff with open eyes and honest counsel, so invite feedback on the strategic dimensions of defining a dissertation project like this.

Appendix

Here is a list of selected other projects I am working on, some fairly advanced, others merely ideas, either solo or with coauthors. I provide this both for context so that you know where else my mind is roaming and in case any of them sound more promising than those listed above as fodder for the dissertation. They are presented in roughly descending order from most to least polished.

- "Bounded Rule and Regional Stability in Fragile States" (with Michael F. Harsch, Associate Professor, National Defense University.) This paper uses novel data on the characteristics of governors in Afghanistan, Iraq, and Somalia to argue that local security in fragile states depends in part on the presence of locally bounded rulers, who hail from a dominant local group that is a national minority, thus governing with a longer time horizon.
- "Mapping Information Terrain in International Relations: A Review Essay." This review essay uses several recent books to argue that studies of cyberspace in IR, mobile telephony in civil conflict, and the historical link between telegraphy and diplomacy can all be productively conceptualized as examples of the importance of *information terrain* as a feature that shapes international politics, much as geopolitical thinkers have long conceptualized physical terrain.
- "Documenting Subnational Variation in the Incidence of Nonviolent Resistance Campaigns" (with Uma Ilavarasan and Katherine Irajpanah). This working paper introduces a new, worldwide dataset coding the activities of nonviolent civil resistance campaigns at the province level. Previous data with similar coverage are aggregated at the national level. The paper demonstrates the importance of this geographic disaggregation of the data by showing how it reveals that the relationship between terrain ruggedness and nonviolent resistance is the opposite of the well-established positive relationship between rough terrain and civil war.
- "Computational Detection of Topical Diversity in Political Text" (with Dominic Valentino). This working paper introduces the use of Shannon entropy in conjunction with topic models as a way of estimating the diversity in topics addressed in corpuses of comparable political text. Using the example of open-ended responses on the American National Election Survey, the paper shows how this method can help describe whether the rationales for affective partisan polarization in America are becoming more complex or simpler.

- "Social Media and International Identity Difference" (with Iain Johnston). A pilot experiment has been run for this project. Using the same research design as my experiments on brevity and overconfidence, this project investigates if brevity (or some other characteristic of social media), affects people's perception of identity difference between their own nationality and another nationality. The pilot suggested null results for the feature of brevity; we are considering other hypotheses to test.
- "Ventriloquism: An Approach to Strategic Communication When the Puppet is more Credible than the Puppeteer" (with Sarah Mohamed and Andi Zhou). This project is at an advanced stage of conceptualization. For states developing international propaganda or news outlets with a pronounced bias, content that aligned with a desired message has historically had to be paid for or produced. With blogs, social media, and citizen journalists, the ability to find someone spouting a version of your desired message, but with credibility-enhancing characteristics that you lack (e.g. a Westerner for foreign-facing Russian state media or a person of color academic for certain type of Fox News broadcast), is easier and cheaper than ever. Do media organizations adopt this strategy of ventriloquism and does it work? This project aims to answer the descriptive and causal question with a mix of content analysis and survey experiments; a pilot experimental protocol has been completed and will be run on DLABSS in 2022.
- "Communication Bandwidth and Cooperative Games." This project is at the conceptual stage. Does communication bandwidth affect the prevalence of equilibrium play in games with cooperative equilibria? I would design behavioral games with communication channels whose bandwidth was designed to match historical markers such as shipment of mail by boat, early undersea telegraphs, and modern instant messaging to see if Pareto optimal equilibria are easier or harder to achieve as bandwidth improves.
- "A Colonial World Wide Web: Mapping Communication Costs in the British Empire." This project is at the conceptual stage. I would construct the first cross-sectional, time series dataset of the functional performance and relative costs of communication technologies that (a) extends back to the early 19th century, (b) enables within-polity comparison based on geographic and socioeconomic diversity, and (c) makes different technologies (e.g. post and telegraph) easily commensurable. Data would be compiled from the *Blue Books* and the *Colonial Office List*, administrative records of the British Empire

that cover the period from the 1820s through the end of World War II (Preston 2018). These annual records contain precise details about the location, number, and cost of postal services, newspapers, and telegraphs, along with demographic data and wage data. From the 1890s on, many of these resources are available through libraries outside the UK. However, the earlier records are only available in the UK National Archives in London.

- "Honing the Cutting Edge: Why State of the Art Military Technology Concentrates in the Hands of a Few." This project is at the conceptual stage. The finding that the cost of cutting-edge military technology increases faster than the rate of inflation is well-established in the defense economics literature. IR scholars, however, have not sufficiently exploited this as an explanation for how hype around supposedly low-cost emerging military technologies, from city walls to air power, gives way to expensive, exquisite systems in the hands of superpowers—which then induce geopolitical realignments as varied as the emergence of the nation state or the innovation of the nuclear umbrella. This paper would theoretically and empirically investigate these dynamics of cost, diffusion, retrenchment, and realignment.

References

Anderson, Benedict R. O'G. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Rev. ed. London ; New York: Verso.

Aristotle, and C. D. C. Reeve. 1998. *Politics*. Indianapolis, Ind: Hackett Pub.

Asimovic, Nejla, Jonathan Nagler, Richard Bonneau, and Joshua A. Tucker. 2021. "Testing the Effects of Facebook Usage in an Ethnically Polarized Setting." *Proceedings of the National Academy of Sciences* 118(25). http://www.pnas.org/content/118/25/e2022819118 (June 16, 2021).

Atkinson, Matthew D., Ryan D. Enos, and Seth J. Hill. 2009. "Candidate Faces and Election Outcomes: Is the Face–Vote Correlation Caused by Candidate Selection?" *Quarterly Journal of Political Science* 4(3): 229–49.

Brader, Ted, Nicholas A. Valentino, and Elizabeth Suhay. 2008. "What Triggers Public Opposition to Immigration? Anxiety, Group Cues, and Immigration Threat." *American Journal of Political Science* 52(4): 959–78.

Chen, Yi-Chia, and Brian J. Scholl. 2016. "The Perception of History: Seeing Causal History in Static Shapes Induces Illusory Motion Perception." *Psychological Science* 27(6): 923–30.

Chenoweth, Erica. 2019. *Kenneth N. Waltz Lecture — Erica Chenoweth: The Paradox of Civil Resistance in the 21st Century*. https://www.youtube.com/watch?v=QGKdQUQyaTc (April 16, 2020).

Christensen, Darin, and Francisco Garfias. 2018. "Can You Hear Me Now? How Communication Technology Affects Protest and Repression." *Quarterly Journal of Political Science* 13(1): 89–117.

Deudney, Daniel. 2007. *Bounding Power: Republican Security Theory from the Polis to the Global Village*. Princeton: University Press. http://nrs.harvard.edu/urn-3:hul.ebookbatch.PMUSE_batch:PMUSE429920151124 (February 17, 2021).

Friston, Karl J. 2018. "Active Inference and Cognitive Consistency." *Psychological Inquiry* 29(2): 67–73.

Guriev, Sergei, Nikita Melnikov, and Ekaterina Zhuravskaya. 2019. *3G Internet and Confidence in Government*. Rochester, NY: Social Science Research Network. SSRN Scholarly Paper. https://papers.ssrn.com/abstract=3456747 (October 6, 2020).

Hobbes, Thomas. 1929. *Hobbes's Leviathan*. Oxford: Clarendon Press.

Koh, Heebyung, and Christopher L. Magee. 2006. "A Functional Approach for Studying Technological Progress: Application to Information Technology." *Technological Forecasting and Social Change* 73(9): 1061–83.

Lasswell, Harold D. 1936. *Politics: Who Gets What, When, How*. New York: PSmith.

Levy, Ro'ee. 2021. "Social Media, News Consumption, and Polarization: Evidence from a Field Experiment." *American Economic Review* 111(3): 831–70.

Locke, John. 2003. *Two Treatises of Government: And a Letter Concerning Toleration*. New Haven, Conn. ; London: Yale University Press.

Lodge, Milton, and Charles S. Taber. 2005. "The Automaticity of Affect for Political Leaders, Groups, and Issues: An Experimental Test of the Hot Cognition Hypothesis." *Political Psychology* 26(3): 455–82.

———. 2013. *The Rationalizing Voter*. Cambridge University Press - MUA.

Manacorda, Marco, and Andrea Tesei. 2016. "Liberation Technology: Mobile Phones and Political Mobilization in Africa." *IDEAS Working Paper Series from RePEc; St. Louis*. http://search.proquest.com/docview/1790226003?rfr_id=info%3Axri%2Fsid%3Aprimo (November 7, 2019).

———. 2020. "Liberation Technology: Mobile Phones and Political Mobilization in Africa." *Econometrica* 88(2): 533–67.

McLuhan, Marshall. 1964. *Understanding Media: The Extensions of Man*. [1st ed.]. New York: McGraw-Hill.

Munger, Kevin. 2019a. "Knowledge Decays: Temporal Validity and Social Science in a Changing World." *Working Paper*. https://osf.io/4utsk/ (June 15, 2020).

———. 2019b. "The Limited Value of Non-Replicable Field Experiments in Contexts With Low Temporal Validity." *Social Media + Society* 5(3): 2056305119859294.

Nagel, Thomas. 1974. "What Is It Like to Be a Bat?" *The Philosophical Review* 83(4): 435–50.

National Security Archive, Inc Chadwyck-Healey, and ProQuest. 1998. "Digital National Security Archive."

NBC News. 2020. "China Spent Years Collecting Americans' Personal Information. The U.S. Just Called It Out." *NBC News*. https://www.nbcnews.com/tech/security/china-spent-years-collecting-americans-personal-information-u-s-just-n1134411 (November 2, 2021).

Neisser, J. 2015. *The Science of Subjectivity*. 1st ed. 2015. London: Palgrave Macmillan UK : Imprint: Palgrave Macmillan.

Nickles, David. 1999. "Telegraph Diplomats: The United States' Relations with France in 1848 and 1870." *Technology and Culture* 40(1): 1–25.

Nordbrandt, Maria. 2021. “Affective Polarization in the Digital Age: Testing the Direction of the Relationship between Social Media and Users’ Feelings for out-Group Parties.” *New Media & Society*: 14614448211044392.

Preston, Sarah. 2018. “Colonial Blue Books: A Major Resource in the Royal Commonwealth Society Library.” https://www.lib.cam.ac.uk/collections/departments/royal-commonwealth-society/projects-exhibitions/colonial-blue-books-major (January 11, 2021).

Siegel, Susanna. 2011. *The Contents of Visual Experience*. Oxford University Press. https://oxford.universitypressscholarship.com/10.1093/acprof:oso/9780195305296.001.0001/acprof-9780195305296 (October 27, 2021).

———. 2017. *The Rationality of Perception*. First edition. Oxford: University Press.

Sunstein, Cass R. 1995. “Incompletely Theorized Agreements.” *Harvard Law Review* 108(7): 1733–72.

Theocharis, Yannis, Will Lowe, Jan W. van Deth, and Gema García-Albacete. 2015. “Using Twitter to Mobilize Protest Action: Online Mobilization Patterns and Action Repertoires in the Occupy Wall Street, Indignados, and Aganaktismenoi Movements.” *Information, Communication & Society* 18(2): 202–20.

Todorov, Alexander, Anesu N. Mandisodza, Amir Goren, and Crystal C. Hall. 2005. “Inferences of Competence from Faces Predict Election Outcomes.” *Science* 308(5728): 1623–26.

Waltz, Kenneth Neal. 1979. *Theory of International Politics*. 1st ed. New York: McGraw-Hill.

Wendt, Alexander. 1992. “Anarchy Is What States Make of It: The Social Construction of Power Politics.” *International Organization* 46(2): 391–425.

Whitton, John B. 1941. “War by Radio.” *Foreign Affairs (pre-1986)* 19(000003): 584.

Zhuravskaya, Ekaterina, Maria Petrova, and Ruben Enikolopov. 2020. “Political Effects of the Internet and Social Media.” *Annual Review of Economics* 12(1): 415–38.