

New International Relations

UNCERTAINTY IN GLOBAL POLITICS

Edited by
Miriam Matejova and Anastasia Shesterinina



Uncertainty in Global Politics

This book engages in a constructive, practical debate on the nature and effects of uncertainty in global politics. International contributors explore the processes associated with different forms of uncertainty in the context of environmental issues, diplomacy and international negotiations, and conflict and security. From the collapse of the Soviet Union to the 1997 and 2008 financial crises to the Arab Uprisings and the European migrant crisis and the COVID-19 pandemic, assessments of many events with lasting consequences on the global order have begun with: “why didn’t we see this coming?” There is much to learn from how phenomena that affect the global order generate uncertainty and what effects such uncertainty has on actors and issues. Presenting perspectives from all corners of the discipline and emerging and established scholars the book provides an up-to-date overview of the state of the literature; a concise yet conceptually rich theoretical framework; a mix of regional and global contemporary issues; process-oriented empirical evidence and methodological tools to assess different forms of uncertainty and propose practical solutions to addressing uncertainty in diverse contexts. The book will be of interest to scholars of global politics, international security, global environmental politics, international organizations and institutions, social movements, and conflict studies.

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and Anastasia Shesterinina



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Routledge
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LONDON AND NEW YORK

First published 2024
by Routledge
4 Park Square, Milton Park, Abingdon, Oxon OX14 4RN
and by Routledge
605 Third Avenue, New York, NY 10158

Routledge is an imprint of the Taylor & Francis Group, an informa business

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British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data

Names: Matejova, Miriam, editor. | Shesterinina, Anastasia, 1986- editor.

Title: Uncertainty in global politics / edited by Miriam Matejova and Anastasia Shesterinina.

Description: First edition. | New York: Routledge, 2024. |

Series: New international relations | Includes bibliographical references and index.

Identifiers: LCCN 2023035802 | ISBN 9781032546704 (hbk) |

ISBN 9781032546711 (pbk) | ISBN 9781003426080 (ebk)

Subjects: LCSH: International relations--Research. | Uncertainty--Political aspects.

Classification: LCC JZ1234 .U49 2024 | DDC 327--dc23/eng/20230925

LC record available at <https://lcn.loc.gov/2023035802>

ISBN: 978-1-032-54670-4 (hbk)

ISBN: 978-1-032-54671-1 (pbk)

ISBN: 978-1-003-42608-0 (ebk)

DOI: 10.4324/9781003426080

Typeset in Times New Roman
by Deanta Global Publishing Services, Chennai, India

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1 Introduction

Approaches to uncertainty in global politics

Miriam Matejova and Anastasia Shesterinina

From the collapse of the Soviet Union to the 1997 and 2008 financial crises to the Arab Uprisings and the European migrant crisis and most recently the COVID-19 pandemic and the 2022 Russian invasion of Ukraine, assessments of many events with lasting consequences on the global order have begun with: why didn't we see this coming? 'The end of the Cold War,' John Lewis Gaddis (1992/93: 6) famously states, 'was of such importance that no approach to the study of international relations claiming both foresight and competence should have failed to see it coming.' Timur Kuran (1991: 7) vividly captures the events:

'Our jaws cannot drop any lower,' exclaimed Radio Free Europe one day in late 1989. It was commenting on the electrifying collapse of Eastern Europe's communist regimes. The political landscape of the entire region changed suddenly, astonishing even the most seasoned political observers. In a matter of weeks entrenched leaders were overthrown, the communist monopoly on power was abrogated in one country after another, and persecuted critics of the communist system were catapulted into high office.

International relations (IR) theory was afflicted with what Benjamin J. Cohen (2009: 437) calls 'a grave case of myopia.' So was international political economy (IPE) in the lead up to the 2008 financial crisis and other expert communities observing the wave of protests demanding political change across the Middle East and the COVID-19 pandemic that unfolded with extraordinary speed and magnitude. 'The economic and financial turmoil engulfing the world marks the first crisis of the current era of globalization,' Jean Pisani-Ferry and Indhira Santos (2009: 8) write of the 2008 financial crisis. Kurt Weyland (2012: 917) similarly characterizes observers' surprise over the Arab Uprisings: 'With its tremendous speed and sweeping scope, the wave of protests and uprisings triggered by the demise of Tunisia's authoritarian regime in January 2011 stunned observers across the globe and scared nondemocratic governments in countries nearby, such as sub-Saharan Africa, and far away.' In 2020, reflecting on the outbreak of the COVID-19 pandemic in 2020, Fed Chairman Jerome Powell aptly summarized the level of uncertainty in his May 21st speech: 'We are now experiencing a whole new level of uncertainty, as questions only the virus can answer complicate the outlook' (see Dave Altig et al. 2020: 1). Samuel Greene (quoted in Peterson 2022) likewise recounts misprediction of the Russian invasion of Ukraine in 2022:

‘There’d be risks in terms of Russian domestic public opinion, which, at least up until now did not look like it was behind the war. It still doesn’t look like it’s really all that interested in the war. There are risks in terms of the war itself, because wars are unpredictable. So with all of those things in mind, plus of course, sanctions and the impact that has on ordinary citizens and on the elite, on whose behalf Putin rules, it just didn’t look like these were risks that would be worth taking. It wasn’t clear what he would get out of it that would be better than what he was already getting out of confrontation without a war.’

What these transformative events have in common is the sheer uncertainty in which they embroil ordinary people living through and participating in these events, policymakers and practitioners within and outside of the state adapting to change, academics grappling with the underlying processes and making predictions of the future, and a range of other actors experiencing the repercussions both directly and indirectly. Uncertainty, however, not only accompanies the events transformative of the global order, such as the collapse of the Soviet Union, but also shapes “normal” politics and everyday life, affecting individual, group, and state choices, decisions, and relationships, recalibrating near- and long-term beliefs and preferences, and triggering a range of responses and emotions. In short, uncertainty permeates every aspect of social activity in profound – and different – ways. As new shocks to human and environmental systems ripple through in unexpected directions and scales, there is much to learn from how phenomena that affect the global order, “normal” politics, and everyday life generate uncertainty and what effects such uncertainty can have on actors and issues of global importance.

The purpose of this volume is to engage scholars in a constructive and practically oriented debate on the nature and effects of uncertainty in global politics. Our underlying questions are: How do we best study, understand, and address political phenomena that are uncertain? Specifically, how do we define and theorize uncertainty in global politics? What can we learn from studying uncertainty in its various forms and how can we use this knowledge to our advantage in individual planning, policy-making, and global problem-solving? Scholars of global politics have widely used the term “uncertainty” but have devoted relatively little attention to examining what uncertainty is, how we can (and should) approach it, and how its different forms affect political actors’ identities, interests, and behaviors in distinct ways. To fill this lacuna, the chapters in this volume present a systematic analysis of the concept of uncertainty in global politics as it manifests itself in various issue areas, with possible practical implications in policy and elsewhere.

In this chapter, we tackle analytical confusion that exists in research on global politics over the meaning of uncertainty and the relationship between this concept and such associated terms as risk, complexity, and ambiguity. The prevailing IR traditions understand uncertainty differently – as a lack of information (rationalism), lack of shared meaning (constructivism), too much information (institutionalism), or multiplicity of interpretations that stem from the frames of reference that are dominant at a particular point in time (critical approaches).¹ In sorting through and presenting these different views of uncertainty in global politics, we reveal the

stories that IR scholars tell about the risky, uncertain, complex, and ambiguous world. We build on these stories to conceptualize uncertainty in IR further – by creating a typology of forms that uncertainty may take in global politics. We maintain that uncertainty can be experienced not only in relation to future outcomes and possibilities (Best 2008: 355) but also in the midst of ongoing events, which themselves may be uncertain. Uncertainty, therefore, relates to experiences and the phenomenon of uncertainty underlying these experiences as well as to our attempts to theorize and analyze them.

Starting from the argument that there are not one but many forms of uncertainty, the chapters in this volume explore the processes associated with different forms of uncertainty in the context of pressing contemporary challenges in global politics, covering topics linked to conflict and security, domestic politics, foreign policy, international law, environmental issues, pandemic governance, potential and possible future problems that we currently have a limited grasp of, and knowledge production itself.

What is uncertainty in global politics?

While uncertainty is by no means an understudied topic, there is a surprising lack of broader conceptual engagement and attempts for systematic analysis of what uncertainty *is* and what it *does* in global politics. Scholars have studied the role of uncertainty in state decisions and policies about security of critical infrastructure (Slann 2015); nuclear power (Kessides 2010); renewable energy sources (Alafita and Pearce 2014; Purkus et al. 2015); climate change impacts and communication (Ho et al. 2016; Koning et al. 2013; Meah 2019; Stern 2008); disease spread and new diseases (Fogarty et al. 2011; Gosling et al. 2012); migration and border security (Del Sarto and Steindler 2015); scientific and technological progress (Weiss 2015); trade negotiations (Oye 2005); private investment (Feng 2001); exchange rates (Leblang 2003); diplomatic relations (Easley 2017); and institutions and governance processes (Ovodenko and Keohane 2012; Van Bueren et al. 2003). These types of studies frequently focus on the uncertainty of some inherent environmental or social processes of global significance. They are often empirical studies that crucially lack a shared understanding (and discussions) of the concept of uncertainty.²

The discussion at the core of this chapter is not meant to be an exhaustive coverage of different understandings of the term “uncertainty” in the study of global politics. Rather, we present the profoundly different ways in which the term has been understood and how our view here builds on and departs from these diverse understandings of uncertainty. In this section we maintain that to understand what uncertainty means in global politics, we need to first position it in relation to the related but analytically distinct concepts of risk, complexity, and ambiguity.

Risk: A lack of information

In IR research, confusion has abounded particularly over the relationship between uncertainty and risk, with the distinction between the two frequently blurred. Much

scholarship in IR has assumed that actors have knowledge of the risks involved in their activities, even in sudden and unexpected events, such as the outbreak of war (Shesterinina 2021). Rationalist theories posit that we live in a world of **calculable risk** and actors make their decisions weighing the costs and benefits of different actions in the context of the specific risks that they face and are able to assess to a greater or lesser extent. As Rathbun (2007: 542) puts it, ‘decision makers are not completely certain of the situation they face, but have enough information based on prior experience to attribute probabilities,’ where information is understood as objective and actors are theorized to evaluate it as such. Uncertainty in this worldview entails *a lack of information*. Hence, as (credible) information becomes available, actors update their assessments of the relative probabilities of outcomes associated with different courses of action and behave accordingly, arriving at the same conclusions given identical information. Information updating constitutes learning from this perspective and helps actors make more effective decisions by improving their understanding of the world.

Rationalist explanations of war illustrate this view of uncertainty. Scholars like Fearon (1995), Fey and Ramsay (2011), Kaplow and Gartzke (2021), Morrow (1989), Reed (2003), Spaniel and Malone (2019), or Trager (2010) see uncertainty as insufficient information over states’ capabilities, resolve, or intentions, focusing on information asymmetries, information concealment, or diplomatic signals.³ James D. Fearon (1995), for example, understands uncertainty as a lack of information about the opponent’s military capabilities and willingness to fight. This type of information is something that rational leaders require to make probability calculations about the outcomes of one course of action versus another, but it is difficult to attain because actors have incentives to hide or misrepresent such information and to renege on their commitments. Others view uncertainty primarily as missing or incomplete information about states’ intentions. For example, the logic of the security dilemma and spiral models relies on the assumption of a perpetual state of uncertainty in which states exist due to international anarchy. In an anarchic world, states’ intentions are hardly knowable and even if known, they are not to be trusted. A solution to this uncertainty is to acquire more information through some form of communication of state intentions (e.g., Jervis 1978; Kydd 1997).

Uncertainty: A lack of shared meaning

This view of uncertainty as a lack of information in a world of calculable risk has fallen under criticism. For example, in their elaboration of the notion of “protean power” – a creative power that operates in a world of **incalculable uncertainty** rather than of calculable risk, where “control power” instead prevails – Peter J. Katzenstein and Lucia A. Seybert (2018) challenge the assumptions underlying the rationalist framework as limited in capturing the ways in which uncertainty manifests itself in global politics. First, that actors should arrive at the same conclusions given identical information appears to be implausible when they are locked in a deadly conflict or in other situations with high stakes, as in trade negotiations, for example. Second, misperceptions and other cognitive limitations may prevent

the emergence of updated expectations regardless of the amount of information presented to actors (see the discussion of complexity below). Finally, there might simply not be enough instances to identify inferior causal models of the world that would help actors make more effective decisions when it comes to rare events, such as wars, regime change, financial crises, or pandemics.⁴

Uncertainty, in this view, arises from different understandings of the world and leads to deviations from risk-based models advanced in the rationalist framework (Scoones and Stirling 2020). Like Katzenstein and Seybert, others have also argued that causal models that are based on probabilities derived from past events can hardly help actors make effective decisions (Brigden 2015; Dumaine and Mintzer 2015; Matejova and Briggs 2021). Furthermore, actors' interpretation of any information – and thus uncertainty – may differ based on their different understandings of the world (Cooper and Pratten 2015; Scoones and Stirling 2020). These different understandings in the constructivist tradition of IR are not shaped by new information but by actors' shared identities and norms, which change over time. Information in this worldview is not objective, but nor is actors' perception of this information merely subjective; instead, it is intersubjective (Finnemore and Sikkink 2001; Hopf 1998; Neufeld 1995). In other words, information has no meaning in and of itself and this meaning is socially constructed in the process of actors' interaction with one another in a particular social context (Checkel 2001; Finnemore and Sikkink 1998; Price 1997; Ruggie 1982). The meaning that actors attribute to any given event may, as a result, vary and actors may arrive at different conclusions equipped with the same information, and differently so at different points in time. Uncertainty from this perspective entails *a lack of shared meaning* absent shared identities and norms that underpin social contexts in which actors interact.⁵

Complexity: Too much information

This notion of uncertainty is different from the related but distinct analytical construct of complexity. In a world of complexity, the problem is 'one of *too much information*, not too little,' and the volume of information, which is exacerbated by the ever-expanding number of interdependent actors, problems, and tasks that decisionmakers have to perform, prevents decisionmakers from fully comprehending any given situation and identifying readily available and appropriate means of addressing it (Rathbun 2007: 546, emphasis added; Haas 1980). Such complex contexts create 'uncertainties, for example about the current state of affairs, the relevant set of decision alternatives, the reactions of other governance actors or the future developments likely to affect the issue under consideration' (Dewulf and Biesbroek 2018: 442). Actors, therefore, use cognitive shortcuts and heuristics, including belief systems and associated biases, to screen and cope with the otherwise unmanageable amount of information (Pidgeon et al. 2003). Here, as in the rationalist framework, information is objective and actors are theorized to evaluate it as such, but the dynamics of learning are different and lead to different outcomes due to the underlying assumption of bounded rationality.

Arriving at the same conclusions even with identical information is not possible in the world of complexity because of the sheer amount of information that decisionmakers face and the different cognitive shortcuts that they use to cope with this information (Yarhi-Milo 2013). While actors process new information through their existing cognitive shortcuts, they can nonetheless learn, for example, from their own experiences and historical lessons (Jervis 1976: 220). It is, however, not information that actors seek, but rather expertise, frameworks, and institutions that could help them synthesize the already existing and overwhelming information (Haas 1992; Moravcsik 1999). In this way, the world of complexity, embraced particularly in institutionalist approaches, differs from the purely rationalist alternative. It also differs from its constructivist counterpart. The problem here is not one of a lack of shared meaning absent shared identities and norms but lack of understanding and actors' attempts to grasp, to the best of their abilities, their objective reality.

Ambiguity: A multiplicity of interpretations

The different notions of uncertainty as *a lack of information* and *a lack of meaning* and complexity as *too much information* also differ from ambiguity, which centers on knowledge production and its implications. The notion of ambiguity plays a central role in critical scholarship, which views concepts like risk and uncertainty as ideas or constructs that help us understand how 'unknowns have come to be represented and governed' (Best 2008: 360). From this perspective, the notion of risk has helped define the world in calculable ways, whereas uncertainty in incalculable ways, but both have been oriented toward what the future might hold, with "risk" offering 'a vision of the future as subject to probabilistic analysis,' whereas "uncertainty" offering 'a vision of the future as so fundamentally and radically indeterminate as to preclude such an analysis' (Reddy 1996: 222).

In a world of ambiguity, it is the present, and particularly present knowledge, that should be problematized and historicized. The intersubjective nature of this knowledge entails *a multiplicity of interpretations* that shape the meanings and practices attributed to any given issue (Ashley and Walker 1990; Larner and Walters 2004). Here, interpretation of the very terms such as risk and uncertainty affects how we understand and act on situations defined in these terms, conferring authority on certain frames of reference and establishing the boundaries of what is legitimate (Campbell 1992; Wedeen 1999). In other words, knowledge production itself is what makes some situations perceived as risky and uncertain and shapes how actors respond to them – often in short-sighted but also strategic ways based on current dominant frames of reference. Peter Katzenstein (2022: 4) amalgamates these frames of reference into the broader notion of 'worldviews,' which 'differ in the salience they assign to risk and uncertainty.' Uncertainty as ambiguity, thus, comes from the process of knowledge production that underlies political actors' attempts to control and manage reality, including by naming and defining it.

Sources of uncertainty

Where does uncertainty come from? The different views of uncertainty as a lack of information, too much information, a lack of shared meaning absent shared identities and norms, and a multiplicity of interpretations point to a variety of possible origins of uncertainty in global politics. At the most basic level, we can differentiate between *external* – natural and physical – sources of uncertainty that are beyond human control and *human* sources of uncertainty that result from actors' behavior. These ideal types are often intertwined as, for example, Kelman (in this volume) demonstrates in the case of disaster diplomacy. Both ideal typical sources can structure the uncertain environments in which actors operate as well as trigger particular moments of uncertainty. For example, the features of electoral autocracies underlie the general fragility of these regimes, but the agency of regime challengers and voters can trigger and intensify uncertainty around particular instances of elections in these contexts (see Bedford in this volume).

Biophysical and social interlinkages generate uncertainty due to their complexity and/or our limitations – we either do not yet know enough or can never know enough about these interlinkages as they manifest in the world (de Marchi et al. 1996; Gustafson and Rice 2019; Zehr 2000). These sources of uncertainty are, therefore, linked to either dearth or wealth of information, such as a lack of information surrounding a novel health crisis or overwhelming information in case of a complex environmental disaster with cascading impacts. They are also associated with a lack of shared meaning absent shared identities and norms that could guide actors' different, even if limited, understandings of associated phenomena or their multiple interpretations. In either case, the result of uncertainty that is produced by external sources is significant difficulty for actors to assess a situation, make predictions, or take action (Marris 2005).

Human activities too generate uncertainty. Two common sources of uncertainty are private information, which actors can withhold or misrepresent to their advantage, and errors from misperceptions that are due to actors' bounded rationality (Bas 2012; Signorino 2003). Related to these sources are actors' capabilities and their distribution as well as the strategic environment in which actors operate (Bas et al. 2017; Bas and Schub 2017; Kaplow and Gartzke 2021). Other activities include framing strategies of different political actors (Boettcher 2004; Entman 1993; McDermott et al. 2002). These actors can directly frame an event as uncertain with carefully chosen words, therefore using uncertainty as a rhetorical strategy, or increase uncertainty through actions like cover-ups and reinterpretation (Bailey et al. 2014). Government agencies, for example, may withhold information for bureaucratic reasons or delay the release of information for fear of legal action (de Marchi et al. 1996). They can censor, destroy, or refuse to collect relevant data (Martin 2007). Both Matchett and Prem (in this volume) discuss this type of uncertainty making.

Disagreement among actors – be it scientists, politicians, journalists, or the public – may also create uncertainty (Boykoff and Boykoff 2004; Gustafson and Rice 2019; Rice et al. 2018). Governments may use the conflicting accounts that

emerge, especially in the current ‘oversaturated high-speed information environment,’ to raise doubts about their opposition (Wedeen 2018: 79). Various withholding, misrepresenting, framing, or fabricating information are all activities that produce environments of lacking or overwhelming information. These activities can be shaped not only by strategic considerations but also by the meanings that actors attribute to associated phenomena given their identities and norms as well as interpretations of these phenomena that dominate the discourse.

The different views of uncertainty that we discussed above thus need to be applied, analyzed, and tested on a case-by-case basis. What these views provide are coexisting sets of assumptions, explanations, and general lenses – or stories that scholars of global politics tell about uncertainty. These stories can be a useful tool for studying, understanding, and addressing uncertainty as chapters in this volume demonstrate in a variety of contexts.

Forms of uncertainty

We draw on these stories to argue that at its core both external and human-generated uncertainty is about the limits of our knowledge and understanding of the past, present, and future in any given domain, be it everyday life, “normal” politics, or unexpected events transformative of global order. These limits entail a multiplicity of meaning that actors may generate in a particular context, regardless of whether there is or appears to be too little, too much information, or both and whether this information is understood and theorized as objective, subjective, or intersubjective. We agree that in some contexts a dearth of information may prompt actors to seek further or better information to make their decisions, whereas in others there may be too much information for actors to process in ways that are familiar to them, and yet in others, some elements of the problem may be in the dark while others are more readily available. The social world brings a variation on the axis of information that we need to grapple with analytically.

In world politics, multiple, qualitatively different forms of uncertainty exist that pose distinct challenges and affect actors in diverse ways. The different IR views of uncertainty that we outlined above help us pinpoint some of these distinctions. These existing stories, however, do not capture the extent of uncertainties that various actors face in global politics.

Rationalist and institutionalist perspectives tend to focus on the uncertainty of future outcomes, such as conflict outcomes, rather than the experience of uncertainty in the midst of conflict, for example (e.g., Bas and Schub 2016). These scholars also tend to be interested in existing and recurring problems, such as war, without paying much attention to issues that appear to be on the periphery – issues that are gradually developing in the present, for instance, in the environmental domain, that might become problems of global significance in the future.

Constructivist and critical approaches to uncertainty offer alternative stories, paying more attention to knowledge production. Yet, like rationalists and

institutionalists, both constructivist and critical scholars focus less on uncertainty that emerges in the process of knowledge production itself – through limitations that uncertain settings create for researchers, for instance (see Noakes in this volume). The uncertainty that researchers experience shapes their identities and attitudes as well as research findings.

Crucially, it is not only researchers or decisionmakers who must grapple with uncertainty in the political world. The prevailing perspectives on uncertainty in global politics fail to recognize the diverse ways in which a range of different political actors experience uncertainty. In IR scholarship much focus has been on decisionmakers and knowledge producers, overlooking the experiences (and influence) of ordinary people who live through uncertain, transformative events, from wars to regime changes to pandemics.

We approach uncertainty in global politics from two angles: by focusing on the various issues that may be perceived as uncertain in global politics, and by examining the ways in which different actors experience these uncertain issues. We identify six different forms that uncertainty may take in global politics (Table 1.1).⁶ At the aggregate level, we divide these forms into two categories: **epistemic** and **ontological** uncertainty.

Table 1.1 Forms of uncertainty.

<i>Form</i>		<i>Author</i>	<i>Example</i>	<i>Source</i>
Epistemic	<i>Practical</i>	Noakes	Practicalities of fieldwork	Human
	<i>Analytical</i>	Krystalli, Tripathi, and Hunfeld	Academic practice	Human
		Hasenkamp	Science–policy interfaces in pandemic governance	External/human
Ontological	<i>Inherent</i>	Bedford	Elections in autocratic regimes	Human
	<i>Routine</i>	Kelman	Disasters	External/human
		Matchett	State armament	Human
	<i>Extreme</i>	Yüksel	International law	Human
		Driscoll and Savelyeva	War	Human
		Swedlund	Unconstitutional regime change	Human
		Moore and Orchard	Sea-level rise induced migration	External/human
	<i>Potential / possible</i>	Elliott	Climate change	External/human
Bower		Orbital space technologies	External/human	
	Prem	Emerging weapons systems	Human	

Epistemic uncertainty

Epistemic uncertainty is linked to knowledge production, which is in part addressed by constructivist and critical IR scholars. In our view, however, epistemic uncertainty is also about practical challenges of producing knowledge, whether it is the uncertain circumstances of knowledge production or academic practice more broadly. Specifically, we understand epistemic uncertainty as practical and analytical.⁷

Epistemic **practical uncertainty** refers to the practicalities of conducting academic research – collecting data in conditions that can change unpredictably, for instance, through regime change or tightening authoritarian controls, whereby data collection that may be feasible and ethical at one point in time may no longer be at another (Parkinson and Wood 2015), or generally grappling with the challenge of data availability and data quality (Herrera and Kapur 2007). A vivid example is the Arab Uprisings, which transformed with whom and under what conditions of anonymity and confidentiality researchers could speak and whether researchers could be present in those areas over time. Atef Said (2018) reveals how doing research on the revolution in Egypt, for example, changed in the aftermath of the uprising, especially with regard to interview subjects who were targeted as a result of their activism as well as due to the increasing possibility of being targeted for doing research.

Epistemic **analytical uncertainty** is about broader academic practice; it links to scholarly dissemination of knowledge through pedagogy, public engagement, or the policy–science interface in state or global governance. Nigel Gould-Davies (2017: 446) captures some questions underlying this form of uncertainty: ‘Why do we want to know the future? Who tries to do so? How well can it be done?’ We add to these questions: How do we shape uncertainty by seeing and talking about world politics in particular ways? Interpreting the world through a risk-based, Newtonian lens that rejects uncertainty in favor of risk management, for example, instills the belief in the possibility of control among agents in world politics where such control may not be possible or even desirable (Katzenstein 2022). The mechanical foundations of balance of power theories, for instance, prevented many IR scholars from envisioning the possibility of the Soviet Union collapse, with implications for how policymakers operated at the time.

Ontological uncertainty

Ontological uncertainty is not about analyzing and understanding but rather experiencing uncertainty as an empirical phenomenon. Rationalist, constructivist, and institutionalist scholars tend to work with this category. It refers to the multitude of different ways in which political actors live *with* and *through* uncertainty in specific settings. We identify four categories of ontological uncertainty: inherent, routine, extreme, and potential/possible.

Inherent uncertainty stems from the characteristics of environmental and social systems where at least some elements of these systems are external to human knowledge and control. Inherent uncertainty can have natural or physical origins,

such as the timing of disasters from natural hazards like earthquakes (Kelman 2020). It can also stem from human behavior and specific political systems, such as uncertainty surrounding elections in multiparty systems (Bauer et al. 2022).

Prediction mechanisms have been developed and perfected for both environmental and social forecasting. For example, Peter K. Enns and Julius Lagodny (2021) used thousands of simulations to predict the 2020 US Electoral College winner with great precision. However, uncertainty inherent in environmental and social systems, especially the latter, in general, prevents precise forecasting (e.g., Hong 2022). As John Kay and Mervyn King (2000: 35–36) explain in relation to the 2008 financial crisis, while NASA could predict the path of MESSENGER to Mercury because the solar system does not change in response to human interaction, the economic system changes over time, including in response to our expectations about it. Had the collapse of Lehman Brothers been predicted, it would not have happened at the time and in the way that it did because steps would have been taken to at least minimize that possibility. This does not mean that political actors always take steps to minimize risk when outcomes, such as earthquakes and election victories, are forecasted even with the greatest precision available. Ilan Kelman (2020: 8), for example, shows that little was done to prepare for the Haitian earthquake of 2010 even though knowledge of seismicity, including a historical precedent, existed.

Unlike inherent uncertainty, which we struggle to influence due to various structural limitations, **routine uncertainty** is part of everyday politics. It is common, pervasive, and tolerated as an inevitable condition of sociopolitical existence. It can be found, for example, in mundane processes of interpretation of national or international law or in regular state armament decisions. In contrast to the occurrence of earthquakes or electoral outcomes whose uncertainty stems from inherent characteristics of environmental and social systems and to which we are not exposed at all times, political actors constantly experience routine uncertainty. While there are often precedents for a particular law interpretation or a decision around armaments in a given context, this does not mean that these precedents will be applied precisely or at all, which will have trickle-down effects. For example, armament decisions can raise questions among affected actors about the need for change in their own behavior, be it in the context of crisis or routine decision-making (McDermott, Cowden, and Koopman 2002).

What we call inherent and routine forms of uncertainty have often been subsumed under the category of “operational uncertainty,” which manifests in the world of known unknowns where risk models apply and more information and better knowledge can help address the unpredictability of events and our actions, at least to an extent (Katzenstein and Seybert 2018: 30, 41). The distinction between inherent and routine uncertainty is important because it draws attention to different experiences of agency within this broader category. Whereas political actors generally have little control over the inherently uncertain environmental and social systems within which they operate, their routine decisions matter for the unfolding of “normal” politics. In this latter context, actors themselves can shape and even manipulate uncertainty through the different courses of action that are available to

them (Hassib and Shires 2021). For example, the Biden administration's routine decisions not to inform the Afghan government or forces and even American diplomats and troops on the ground of the evacuation plans generated 'profound frustrations' within the US military in the lead up to the withdrawal from Afghanistan (Gramer and Detsch 2022; Lamothe and Horton 2022).

The world of unknown unknowns has been characterized as that of 'radical uncertainty' where risk models do not apply and no amount or quality of information can help formulate the probability of outcomes (Katzenstein and Seybert 2018: 55). We highlight two distinct forms of uncertainty within this world: extreme and potential/possible uncertainty. **Extreme uncertainty** characterizes sudden, transformative events that rupture everyday lives in major ways, whether they emerge from nonhuman or human sources. Whereas inherent and routine forms of uncertainty are present in everyday life as conditions that structure political actors' activities, extreme uncertainty ruptures 'everyday routines and expectancies' in major ways (Snow et al. 1998: 2). The unexpected onset of war or regime change are clear examples, which unsettle planned courses of action for decisionmakers and ordinary people alike and can undermine existing social and even environmental systems and routines of "normal" politics. Anastasia Shesterinina (2021) illustrates such extreme uncertainty at the onset of the Georgian-Abkhaz war of 1992–1993, which shocked ordinary residents of Abkhazia, forcing people to abandon their anticipated activities and make difficult decisions about whether and how to mobilize in response to Georgia's advance into the territory.

These different forms of uncertainty, both those that permeate everyday life and that rupture it, fall within the realm of the imaginable if rare, as in the case of extreme uncertainty. Even if a war might not have taken place in a particular context before, it is a phenomenon that is familiar and various courses of action are associated with it based on historical precedents. In turn, the last form of uncertainty we introduce here, that of **potential or possible uncertainty**, encompasses the prospect that future issues may become problems in ways that our forecasting methods and ideas, or worldviews, in Peter Katzenstein's (2022) language, may not be able to address. This is perhaps most evident in the emergence of technological innovations like autonomous weapons systems that will require new ways of strategic and normative thinking, but can also be exemplified with such strategically and normatively unthinkable events as nuclear war in the post–Cold War period. Analyses of Russian nuclear doctrine, for example, suggest that Russia's use of nuclear weapons against a NATO state is not unlikely regardless of how mutually destructive and generally unbelievable this possibility seems (e.g., Schneider 2018).

As noted in Table 1.1, the chapters that follow explore these forms of uncertainty in depth. However, it is important to stress that the forms frequently overlap, with some factors serving as a structural background while others triggering uncertainty in a given context. The inherent uncertainty surrounding climate change – a structural feature of current life on the planet – can be experienced in extreme ways, for example, at the moment when sea-level rise in low-lying areas triggers displacement of populations, rupturing their existing livelihoods (see Moore and Orchard in this volume). Similarly, while multiple actors have been

dealing with various activities in orbital space or in the area of weapons systems – the activities that are constitutive of the international security environment – new technologies are emerging that we do not know how to address and that trigger a different form of uncertainty around potential and possible futures in these areas (see Bower’s and Prem’s contributions in this volume). What Table 1.1 reflects, therefore, are examples of the forms of uncertainty that can be found in the chapters, even though individual chapters can cover different, overlapping forms.

Viewing uncertainty as an empirical phenomenon, Jesse Driscoll and Natalia Savelyeva explore the war in the Donbas region of Ukraine that broke out in 2014 as a case of extreme uncertainty. Such uncertainty stems from acute crises that put in flux constraints on human agency and engender contingency of political identities and ideologies. In this context, the contestation of meaning feeds into action, highlighting the power of emotions in human decision-making. The authors analyze original interview data gathered from ordinary individuals who volunteered to fight on the separatist side in the war and demonstrate the prevalence of hate, resentment, and fear as powerful emotions in this case. The chapter has implications for Russia’s use of warfare techniques designed to sow uncertainty.

Sofie Bedford advances the discussion of the ordinary people’s roles in politics of uncertainty by analyzing the interaction between the ruling elite, regime challengers, and society in the 2020 presidential election in Belarus. She draws attention to the inherent uncertainty in electoral authoritarian regimes where elections create windows of opportunity for political change despite the absence of competition or fundamental freedoms and rights necessary for voters to have a choice. Bedford argues that elections create risks for authoritarian leaders, as their ambition to uphold a democratic facade affects their ability to control the electoral process. Oppositional actors take advantage of the various instruments provided by the electoral platform to question the legitimacy of the regime and convince the citizens to become active voters. The chapter highlights even fraught elections as moments that can propel processes of change in authoritarian states.

Leah Matchett and Haley Swedlund shift the focus from ordinary people’s experiences of uncertainty to different actors within the state. Matchett discusses one of the fundamental decisions that states face in the international system: when and how much to arm. She problematizes the distinction between uncertainty over adversaries’ intentions and over the relative offensive advantage of weaponry commonly used to analyze armament decisions and instead focuses on the process by which state actors come to understand and incorporate new information into their belief systems when making armament decisions. In such situations of routine uncertainty where shared meaning is lacking, politicians make decisions and advance their political agendas based on motivated reasoning. This argument is supported by a quantitative analysis of the US Congress voting on missile defense from 1980 to 2017 and a case study of the First Gulf War. The chapter shows that cognitive factors can be a source of uncertainty in the political process of decision-making on armament.

Swedlund further opens the black box of the state and looks at a largely understudied actor in global politics: ground-level diplomats. She finds that paradoxically

moments of extreme uncertainty generated by unconstitutional regime change in receiving states create opportunities for ground-level diplomats to influence foreign policy decisions. This is chiefly because time pressures and a lack of information force politicians to rely on diplomats who have grounded knowledge and links to local actors, other states, and multilateral organizations. At the same time, these moments disrupt highly routinized bureaucracies, in which ground-level diplomats are embedded, constraining their ability to effect change. Extreme uncertainty thus creates both opportunities and challenges for foreign policy actors, which helps better understand inconsistencies in these actors' rhetoric and behavior in such conditions.

Umut Yüksel similarly highlights opportunities and constraints that legal uncertainty creates for actors in the international system, moving our discussion to questions of international policy and law. Here the diffuse nature of lawmaking authority and the lack of a clear hierarchy among the sources of international law make legal uncertainty a routine feature of state choices and interstate relations. Focusing on the drawing of common maritime boundaries between neighboring states, Yüksel assesses the degree of consensus in a range of legal sources on maritime delimitation and in interpretations of rules emanating from these sources. He traces the events that changed the degree of consensus over time. The chapter draws implications of legal uncertainty for state behavior as well as for conflict and cooperation outcomes between states, suggesting that legal uncertainty can make cooperation more difficult but not impossible.

Moving the discussion from problems that arise between states in the international system to paramount international policy problems of our time, Miaoling Lin Hasenkamp addresses the science–policy interfaces in the governance of the COVID-19 pandemic, with a focus on its gender-specific effects in the United Kingdom, Germany, and Sweden. Analyzing policymaking through the integrated complexity theory, and feminist and policy-learning framework, she highlights the commonalities and differences in national pandemic responses in these democratic contexts that resulted from their specific institutional settings, arrangements, and knowledge production processes. The chapter proposes a model of deliberative policymaking that is adaptable, resilient, socially distributed, and gender-sensible and relies on anti-disciplinary research.

While the COVID-19 pandemic presents one of the major contemporary challenges worldwide, Christian Elliott turns to the profoundly uncertain future defined by human environmental impact. He conducts a discourse analysis of the financial sector's response to climate change, relying on primary documentary evidence and secondary research on the Climate Finance Leadership Initiative (CFLI). Elliott argues that choices about how to frame policy problems underpinned by political interests shape policy solutions in profound ways. The chapter demonstrates that a reckoning with the uncertainty over possible and potential environmental consequences of anthropogenic climate change would threaten the interests of financial actors and their associated industrial sectors. As a result, these unknown consequences are presented as risks to be measured and managed to the neglect of their underlying uncertainty.

This discussion serves as a bridge to related key challenges – climate mobilities and disasters – that require global-level norms and action. Liam Moore and Phil Orchard explore the challenge of climate mobilities in the case of Fiji where climate change poses an existential risk, particularly to populations in low-lying coastal areas and the nature of response is uncertain. Unlike the sources of law on maritime delimitation discussed by Yüksel, which have varied but have nonetheless generated different degrees of consensus over time, Moore and Orchard show that global norms around climate mobilities have been unclear, complex, and at times lacking global leadership. In this context, the authors argue, small states such as Fiji can establish themselves as leaders and introduce policies that shift global normative agendas. Uncertainty can, therefore, create space for agency of otherwise overlooked actors by opening normative opportunity structures and enabling normative contestation.

Ilan Kelman expands the lens to look at disaster diplomacy in a range of cases from human-caused climate change, including sea-level rise and ecosystem impacts of ocean acidification, to outer space threats, such as solar flares and gamma-ray bursts. He argues that disaster “un”-ness – the uncertain, unexpected, unprecedented, unpredictable, unusual, and unstoppable qualities attributed to disasters – is often used as an excuse for inaction around disaster risks at the global level, including within the United Nations (UN). Instead, instituting long-term political processes to tackle fundamental causes of disasters can reduce uncertainties in global disaster-related action should a disaster occur.

Adam Bower and Berenike Prem continue the discussion of possible and potential challenging environments, delving into questions of space technologies and emerging weapons. Bower looks at actor capabilities, operations, and intentions in the case of space technologies, specifically satellites and their associated ground-based infrastructure. He argues that while information from space technologies can help reduce uncertainty on Earth, uncertainty in orbit emerges from the combination of the physical properties of orbital space, the diversity of actors and activities, and the technical, political, and human limitations on information transparency. Intersections between commercial and national security activities in orbit make it difficult to determine whether a particular technology or behavior is threatening or benign, which offers new insights for the analysis of security dilemmas, crisis escalation, and deterrence in international relations, particularly in the context of a prospective arms race in outer space. The chapter highlights the importance of transparency surrounding space activities for mitigating uncertainty in this domain.

Prem shifts attention to future technologies, focusing on the case of autonomous weapons systems where conventional modes of knowing through observation and documentation do not apply. Based on the analysis of the ongoing ban deliberations within the UN Convention on Conventional Weapons, she argues that in this context, actors engage in anticipatory norm-building through assessing weak signals, using imaginations and analogical reasoning, and tests and evaluations for making future problems present. Uncertainty in this case is both a limit to and an object of governance that actors shape in order to drive or contain normative change. This chapter powerfully demonstrates that uncertainty itself is not an objective fact but is socially constructed through political processes in issue-specific domains.

Stephen Noakes differentiates between the empirical phenomenon of uncertainty that most chapters in the volume explore and the practical, methodologically oriented understanding of the term centered on how researchers carry out their work. He focuses on practical dimensions of conducting fieldwork under uncertainty, particularly in authoritarian contexts, and argues that there are different uncertainties that can arise for researchers working in such contexts, drawing on his own fieldwork experience of studying human rights nongovernmental organizations (NGOs) in China. The sources of these uncertainties range from restrictions on personal safety to problems ensuring the secure storage of data. The chapter concludes with implications for preparedness and training of scholars embarking on fieldwork. It makes the case for adaptability as a necessary and underappreciated virtue in social science research.

Drawing on critical, feminist, and decolonial perspectives, Roxani Krystalli, Shambhawi Tripathi, and Katharina Hunfeld push the boundaries of our understanding of uncertainty by introducing a different strand of epistemic uncertainty: analytical uncertainty in academic practice. Reflecting on this form of uncertainty in the study of IR, the authors argue that the field has been dominated by intellectual expectations of prediction, certainty, and fixity, with uncertainty viewed as something to measure, manage, minimize, and control. Instead, they call on scholars to embrace uncertainty as a research ethos and epistemological practice that can shape knowledge, knowledge-making practices, and the knowledge creators themselves. Doing so can help unsettle hierarchies of knowledge creation and move toward a more inclusive field of study and research.

Miriam Matejova and Anastasia Shesterinina conclude the volume by bringing insights from individual chapters together using the framework developed in this introduction. The conclusion discusses the questions of the effects of uncertainty and responses to uncertainty that contributors to the volume collectively raise. This, in turn, helps address the initial question of the volume – why didn't we see this coming? – and enrich practices surrounding uncertainty in global politics.

Notes

- 1 Here we echo Brian Rathbun (2007) who outlines in detail the distinctions between different worldviews' understandings of uncertainty. He then goes on to elaborate on responses to uncertainty as per these different understandings: fear (realism), ignorance (rationalism), confusion (cognitivism), and indeterminacy (constructivism).
- 2 Some scholars of resource management and environmental governance have devoted a lot of attention to defining uncertainty albeit not in the context of global politics. See, for example Brugnach et al. 2008; Dewulf et al. 2005; Dewulf and Biesbroek 2018; Funtowicz and Ravetz 1990; Janssen et al. 2005; Kwakkel et al. 2010; van der Sluijs et al. 2005; Walker et al. 2003.
- 3 Bas and Schub (2016) add uncertainty over conflict outcomes, which prevails even in contexts of complete information, and stress system polarity and distribution of capabilities as key factors affecting such uncertainty. On system polarity, see, for example, Deutsch and Singer (1964) and Waltz (1979). See Bas and Schub (2017) for an overview of approaches to uncertainty and international conflict.

- 4 The emphasis on the rarity of some events in global politics is central to the distinction between risk and uncertainty that Katzenstein and Seybert (2018) and others have drawn. Scholars have traced the roots of this distinction to the writings of Knight (1921) and Keynes (1936), for whom risk was calculable, whereas ‘uncertainty was found in moments that agents subjectively defined as unique events where there were no priors to rank, and thus no basis for probabilistic calculation’ (Blyth 2006: 495). We adopt a broader view of uncertainty that incorporates not only rare events but also those of “normal” politics and everyday life.
- 5 Rathbun (2007: 534) highlights the importance of norms and identity and a lack of shared meaning absent these ideational phenomena in relation to uncertainty but views uncertainty in the constructivist tradition as indeterminacy. We find that a lack of shared meaning is a defining feature of uncertainty in this tradition, whereas indeterminacy is a broader concept that subsumes uncertainty, risk, complexity, ambiguity, and other terms used to describe the difficulty we have with grappling with potential and possible futures and current events, in other words, with the unknown (Best 2008).
- 6 Reviews of various classifications of uncertainty in different issue areas have been offered, for example, by Walker et al. (2003) in model-based decision support, Bas and Schub (2017) in conflict studies, and Dewulf and Biesbroek (2018) in environmental governance. Our aim is to depart from issue-specific classifications to provide a typology that would be relevant across issue areas in global politics.
- 7 This differs from a narrower view of analytic uncertainty discussed, for example, by Iida (1993) as incomplete information about how any given system, such as the world economic system, operates.

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I

Uncertainty and ordinary people



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2 Beyond “bluffing”

The weaponization of uncertainty in Russia’s war against Ukraine

Jesse Driscoll and Natalia Savelyeva

It is always possible to describe interstate crises using the language of uncertainty. Actors choose strategies knowing the other may hold different assessments of salient variables. In international relations (IR), commonly analyzed variables include adversary intentions (e.g., revisionist, or defensive) and adversary capabilities (e.g., weak, or strong).¹ In the context of Russia’s 2022 invasion of Ukraine, such variables generate *epistemic analytical uncertainty*, captured by Michael Kofman (2022):

You have to appreciate uncertainty. The last time Russia really went through a mobilization like this – which is in many respects a phased general mobilization – was during World War II. So among us there are approximately zero experts on military mobilization on this scale ... [and we should] be a bit honest about the uncertainty and the confidence levels of what it may (or may not) produce for Russia.

There was uncertainty on both sides prior to full-scale invasion. Western defense analysts were uncertain about whether Russia’s military buildup in the fall of 2021 was to signal resolve and exert coercive leverage or whether it was an attempt to take control of Ukraine’s territory. Russian defense analysts prior to invasion were uncertain about how costly occupation would be, miscalculating the ability and will of the Ukrainian military to defend its territory so effectively.

Fighting a war helps parties resolve this kind of uncertainty. Parties disagree about their relative power and relative will. War resolves the disagreement, revealing information about the true state of the world. Settlements that terminate wars for good reflect updated understandings grounded in a more certain picture of the balance of power. Tens of thousands of soldiers have been killed or wounded since the full-scale Russian invasion of 2022, but there is still great uncertainty over how long the fighting can go on. On the one hand, Ukraine now has found many friends and acquired the strongest battle-tested army in Europe.² On the other hand, Russia is Russia. Uncertainty, looking forward dimly towards settlement, takes the form of familiar questions: What is the underlying balance of power? Which side can best absorb costs and reconstitute combat power? And if the sides reached a deal, would it be self-enforcing?

As analysts and pundits try to imagine an end to the conflict, at the time of this writing there are two common complicating factors. First, there is a *lack of information* on what Russia's minimal war aims are. Vladimir Putin's stated maximal war aims – regime change in Kyiv, “de-Nazification,” eliminating Ukrainian sovereignty, forcing the withdrawal of the North Atlantic Treaty Organization (NATO) from Eastern Europe, and the rest – seem out of touch with reality. Certainly, these aims are not the basis for productive negotiation with the existing government in Kyiv. The mobilization of hundreds of thousands more Russian soldiers for war may be a play for time, hoping that the Western alliance cracks or the government in Ukraine is replaced by a more pliant one. Even this account makes more sense if the maximalist aims are an opening offer (a “bluff”), with a private offer held in reserve that would satisfy Russian security needs and that Kyiv could accept. Uncertainty about whether an acceptable offer *actually exists* is a barrier to creative thinking about a potential peace process.

This chapter tackles a distinct complicating factor as analysts try to imagine a lasting peace. Emotions are clouding rational calculations on both the Russian and Ukrainian sides. It is uncertain how, or whether, the intensity of these emotions will wane. It is a mistake to simply wish them away. The experience of this war will be the defining experience in the lives of millions, including civilians, refugees, policymakers, and military professionals. The experience of war is an intense emotional event and also a *communal* event, producing powerful new meanings and subjectivities in a nation's understanding of itself.³

In this chapter, we present data on the emotional states of a sample of Russian soldiers, as well as a framework to parse emotions that can also be easily applied to the Ukrainian side of the conflict. Critical to our argument is that new media technologies bring the experience of war to those far from the frontlines. High-production-value content spread by state-controlled media is often curated with the intent of activating subjects' emotions. The Russian state employs warfare techniques designed to sow uncertainty strategically. The uncertainty we have in mind stems from *misinformation* and *disinformation* (Martin et al. 2022).⁴ One result is uncertainty about what Russian elites and voters believe, how malleable those beliefs are, and whether beliefs (and associated emotions) will outlast this regime. Russian information producers may be on a self-referential, hermetically sealed, nihilistic “narrative track” with respect to Ukraine. This narrative seems (to us) to be fueled as much by powerful emotion as any consistent set of logical connections between geopolitical or historical facts, generating uncertainty about whether there is an “off switch” to the emotions activated by the narrative. Thomas Rid (2020: 10–11) is pessimistic:

At-scale disinformation campaigns are attacks against a liberal epistemic order, or a political system that places its trust in essential custodians of factual authority. These institutions – law enforcement and the criminal justice system, public administration, empirical science, investigative journalism, democratically controlled intelligence agencies – prize facts over feelings, evidence over emotion, observations over opinion. They embody an open

epistemic order, which enables an open and liberal political order; one cannot exist without the other ... [but] when the authority of evidence is eroded, emotions fill the gap.

Probing the links between emotions and uncertainty is the primary goal of this chapter. In the first section, we begin with a summary of research on how emotions affect information processing. Emotions reduce cognitive dissonance by “smoothing out” uncertainty, simplifying an environment of *too much information* that is overwhelmingly complex. Emotions have predictable action tendencies. We lean heavily on the work of Roger Petersen (2002) to introduce some of the findings from the field of psychology before proceeding to our data. The second section then introduces data from a unique sample of Russian voices: fighters who volunteered to go to war against Ukraine in 2014. The data reveal a striking similarity of emotional content, as well as common words, symbols, and phrases invested with *multiple, varied meanings*, invoking different things to different audiences, but all meant to coordinate violent action. We conclude with a framework for making conservative predictions about the future. We devote most attention to the roots of the prominent emotions of *resentment*, a nationalist obsession with relative status and perceived injustice, and *fear* (of the West, for which Ukraine is a proxy). Since the Russian narrative often sows uncertainty about the legitimacy of the Ukrainian state, Ukrainians have been put in a situation where their national sovereignty is uncertain. The chapter ends with brief speculation about the (admittedly bleak) prospects of healing emotional wounds, including a discussion of *Ukrainian* emotions: the combination of fear, resentment, and hatred towards the Russian other.

Theory: Emotions and Russian nationalism

Ukrainians and Russians agree on very little with respect to the origins of the war. One of the few points of agreement is that the war began in Maidan Square in 2013, when a dispute over whether Ukraine would join Russia’s Eurasian Economic Union sparked contentious political dynamics that escalated into violence, resulting in irregular regime change in Ukraine in February 2014. Russia sent troops into the Crimean Peninsula days later, annexing the territory with a hasty election.⁵ The West did not recognize this map change. Russia also sent troops covertly into the Donbas region (without annexation), which eventually yielded the Minsk Accords.⁶ Diplomacy then stalled for years. Far from the frontlines, as Kyiv’s and Moscow’s bargaining positions calcified, two emotion-laden media narratives, curated by politicians and supercharged by television, took hold. Putin’s decision in 2022 to launch a full-scale invasion of Ukraine (after strenuously denying this was the plan for months) introduced a new phase of the conflict.⁷

If we wind the clock back to 2014–2015, however, what was the root cause of the war? Russian talking points emphasize Russia as a victim of encirclement by NATO, misled by the hypocrisy and manipulation of nefarious forces in Western capitals. This narrative emphasizes the following elements: (1) a coup took place in Kyiv in February 2014, removing a legitimately elected government; (2) in

the coup, fascists from Western Ukraine seized the Ukrainian state apparatus; (3) this was followed by anarchy and civil war, in which (4) Russia came to the rescue of stranded, vulnerable Russians.⁸ A counternarrative, emphasizing virtuous Ukrainian democratizers standing up to a bully, yearning to break free of corrupt oligarchs in the present and symbols of Soviet domination in the past, rejected all these premises, emphasizing instead that (1) a broad-based, largely nonviolent social revolution displaced a thoroughly corrupt government with legal, constitutional procedures; (2) Russia responded with information warfare and the illegal military seizure of Crimea; (3) to the extent there was “anarchic” violence, it was the fault of Putin’s decision to redraw Ukraine’s borders, encourage the formation of illegal militias, and support terrorism, and so it follows (4) the war was a result of Ukraine’s legitimate right to self-defense. Both geopolitical narratives trigger a deep emotional response.

A large body of empirical research finds that narratives can be designed to activate emotions in predictable ways. Emotions have the power to alter both perceptions and memories. When people tell stories about tragic, traumatic events – like war – the content of the stories, and the act of storytelling, can leave an emotional residue that outlives the event.⁹ Memories fade, facts are contested and uncertain, and details can become muddled in retelling, but *emotions* persevere, producing a variety of feedback effects on information collection and processing. Emotions affect individual beliefs directly and indirectly, affecting preference formation, the process of belief construction, and memory. Like magic in a genre fiction narrative, shared focal points and emotions “smooth over” narrative inconsistency and uncertainty, satisfying a need for cognitive consistency.

Consider the example of a simplified victimization narrative script. Rather than parse all of the messy, uncertain details that can complicate an event subjected to multiple points of view (Rashomon style), the storyteller reduces a complicated story to a general case of interaction between “peoples” A and B. A has suffered wrongly at the hands of B. Telling a story this way can have predictable effects. It generates anger, reinforcing in-group identity (A). Members of A are invited to direct anger outward at “the other” (B). Political opponents are defined as morally blameworthy, deserving of punishment, so the value of future cooperative payoffs is discounted, allowing one particular issue to become an obsession and play an outsized role in decision-making. This is not irrationality but a temporary amplification of certain preferences at the expense of others. Uncertainty is reduced in the mind of the listener. If there are many listeners, they may all intuit that all their uncertainty has been reduced in the same way, in the sense that the same emotional filters are coloring new incoming information. The same intuition can be applied to emotion-stoking narratives designed to amplify fear, disgust, hatred, rage, spite, envy, contempt, or resentment towards another group. After the story ends, negative stereotyping of group B may linger. In this way, emotions heighten the saliency of particular concerns – a “switch” that flips between sets of desires, creating an urgency to act on a particular desire – and thus alter preferences in predictable ways, with different emotions priming distinct action tendencies.¹⁰ Differentiating narratives by emotion is a useful sorting heuristic.

Petersen (2002) contrasts the effects of three powerful emotions associated with negative stereotyping: fear, hatred, and resentment. *Fear* is predicated on conditions of vulnerability, producing antagonistic feelings towards a group posing a threat to one’s own. The action tendency for the emotion of fear is defensive action or flight. An exemplary *fear*-based narrative would emphasize themes like “they were coming to rape and kill us.” A listener might be uncertain about whether the threat is exaggerated, but the message is clear.

The emotion of *resentment* is distinct, triggered by an expectation of group status reversals, not attack. *Resentment* is about perceived changes to the social status hierarchy, producing antagonistic feelings towards members of an outgroup that has risen higher than one’s own.¹¹ The prospect that sudden political change could lead to permanent institutionalized subordination is often conflated with *fear*, and both may be salient, but the important difference between *fear* and *resentment* is that they lead to different predictions about which groups will be targeted for violence in target-rich environments during moments of anarchy. *Fear* predicts violence directed at the group that is most threatening. *Resentment* predicts violence against a group higher than one’s own on the status hierarchy – if (and only if) they can be cut down to size. An exemplary *resentment*-based narrative would emphasize themes like “they always thought they were better than us.” A listener might be uncertain about whether the categories are accurate or the threat of social subordination is exaggerated, but the message is clear.

The residue of violence can even linger long after social order is restored. Sometimes, memories and emotions of violence come to define intergroup relations over years that become decades. Especially, if similar events are repeated over and over, emotional scripts can congeal into *hatred*. With *hatred*, an outgroup is infused with characteristics that are blameworthy, disgusting, and in need of contempt but also an object of fear, thus possessing the intrinsic properties of a traditional enemy. *Hatred* forms from the belief that the opponent is both defective (and thus cannot be reasoned with) and dangerous. Again, this is usually based on a long history of intergroup violence and humiliation. The action tendency of *hatred* is to eliminate the physical presence of the target. An exemplary *hatred*-based narrative emphasizes “our groups have known each other for ages and, though sometimes we pretend differently, we don’t care for each other.” A listener might be uncertain about whether that generalization is correct, but the message is clear.

Data: Categorizing the emotional appeals invoked by pro-Kremlin volunteers

Having sketched the wavetops of the Russian narrative “supplied” by state-controlled media, in order to illuminate the “demand side uptake” of the Russian narrative by actual Russian soldiers, we solicited life histories in open-ended interviews of 57 combatants. All interviews were conducted in 2016–2017. The interviews were collected by Public Sociology Laboratory members through snowballing in Moscow, St. Petersburg, and Donetsk and Luhansk regions.¹² If we indulge the premise that the war between Russia and the West began in 2014, these were the “first wave” of pro-Russia volunteers in that war.¹³

Since similar justifications for military service were repeated by many respondents, we began by sorting interview content according to emotions of *resentment*, *fear*, and *hatred*. Interviewees included a mix of Ukrainian and foreign (Russian) supporters. More than half of the sample (56%) claimed they had been residing in the Donbas in the spring of 2014. A quarter of the sample (27%) arrived from Russia. A sixth (16%) reported that they had been living in other parts of Ukraine at the first stage of the conflict, then migrated to the Donbas to fight. Various class backgrounds were represented. Just one in five of the respondents seemed to enjoy war or conformed to a stereotype of a “thug” or a “criminal mercenary.” Most reported receiving some kind of pay, though financial inducements never emerged as a dominant motivation. Tables 2.1 to 2.4b summarize these findings.

The emotion of *fear* was prominent in the data (see Tables 2.5a and 2.5b). Russian language media coverage puts a great emphasis on imminent threats to Russians. These narratives were internalized by our respondents. Virtually, all members of the sample reported that they had volunteered in order to defend themselves or their “fraternal people” from attack. The source of the attack was sometimes geopolitical enemies (the West, NATO, Americans) and sometimes domestic enemies (Western Ukrainians, fascists).

Status reversals – specifically the subordination of Eastern regions of Ukraine under Western regions, and Russians subordinated below “Western proxies” and “Nazis” was a reoccurring theme, suggesting a more complex combination of emotions – *fear* amplified by *hatred* and *resentment*. Scripted *hatred* was reserved for distant out-groups that were acknowledged to *not* be the frontline enemies: Nazis and Americans. Notions of “ancient hatreds” between Ukrainians and Russians were

Table 2.1 Respondents’ birthplace

	<i>Number of respondents</i>
1. Russia (Russian SSR)	15
2. Ukraine (Ukrainian SSR)	35
3. Other Soviet or ex-Soviet republics	4
4. Other countries	1
<i>Total</i>	55
NA (no information about the variable)	2

Table 2.2 Respondents’ ethnic identity

	<i>Number of respondents</i>
1. I am Russian	37
2. I am Ukrainian	4
3. Not important/Slav/Soviet person/borders artificial	10
<i>Total</i>	51
NA (no information about the variable)	6

Table 2.3 Respondents’ location in spring 2014

	<i>Number of respondents</i>
1. Russia	15
2. Donbas	31
3. Other Ukraine	9
<i>Total</i>	55
NA (no information about the variable)	2

Table 2.4a Respondents’ employment before war

	<i>Number of respondents</i>
1. Upper (education + property + stable/high income)	3
2. Higher middle (managers, office workers, or students)	18
3. Lower middle (factory workers, miners, journalists)	23
4. Precarious (income moderate/low, unstable)	12
<i>Total</i>	56
NA (no information about the variable)	1

Table 2.4b Respondents’ employment at the time of war

	<i>Number of respondents</i>
1. Was employed at the moment when he decided to join armed groups (finished, took a leave, or quit his job in order to join)	36
2. Was not employed when joined armed group	14
3. Was a student, attended secondary school; retired	5
<i>Total</i>	55
NA (no information about the variable)	2

Table 2.5a Evidence of outgroup fear

	<i>Number of respondents</i>
1. Local Donbas population OR Russian speaking people OR Russian world are threatened by new Ukrainian authorities OR fascists OR Americans; “we came to protect civic population”	55
2. No fear motivations are indicated	2
<i>Total</i>	57
NA (no information about the variable)	0

Table 2.5b Fear/defense by category (they are not mutually exclusive)

	<i>Number of respondents</i>
1. In-country fear and defense: Kyiv (nationalists, so on) threatens Donbas (Russian population in Ukraine, so on)	40
2. Out-country fear and defense: Americans/the West threaten Donbas (Russia/Russian world, so on)	9
3. Unspecified source of the threat; “we defend locals”	13
0. No fear motivations are indicated	2

never mentioned.¹⁴ The assumption that *some* misguided Western Ukrainian activists, assisted by Western intelligence, were steering the state against the interests of right-minded Ukrainians (who understood themselves to be fraternally linked with Russians) was very common in the sample. Subjects could reduce cognitive dissonance by imagining the Donbas people as victims of aggression by an alien Ukrainian government (a puppet of fringe social actors manipulated by NATO) or Ukrainian extremist nationalists (brainwashed and thus different from “normal” Ukrainians), but also that Russia acted legitimately to protect the interests of the real steward of the land – the right-minded Russian-speaking population of Ukraine. Some respondents reported being the object of hatred by Ukrainian nationalists:¹⁵

And when they said that our wives are “females of Colorado beetles” [*samki kolorada*], and our children are maggots, and they must be swatted with a big, red-black slipper. Well ... and we are the second class of people? Then there were no options left.

(Interview 30, m., b. 1989)

After we heard that armed activists of Right Sector lean toward us, when they started drafting people to Ukrainian army and sending them here, so when we understood that people with weapons are making way toward us, that they are not going to talk, they are going to kill.

(Interview 37, m., b. 1974)

Resentment narratives in the data were more complicated and diverse (see Table 2.6). Although opinions about group status reversals were not solicited, emotional appeals to *resentment* appeared spontaneously in most (88%) of the interviews. Subordination to Western Ukrainians was cited as a common source of humiliation for the members of the sample who were citizens of Ukraine. Subordination to the West (Europe, but especially the USA) was cited as a common source of humiliation for Russian citizens in particular and appeared in numerous interviews with pro-Russia Ukrainians. Historical resentment over the dissolution of the Soviet Union appeared in all interviews. Taken together, sources of resentment referred to economic, representation, and symbolic issues.

Table 2.6 Evidence of status reversals, resentment

	<i>Number of respondents</i>
1. Donbas-centric resentment: Maidan transformed old hierarchy (“new government doesn’t represent us”/“we did not vote for them”)	33
2. The West wants to tell us how to live now (LGBTQ rights, etc.)	15
3. Broader resentment about the past (Western power vs. Russia dissolution of USSR, nostalgia for socialism, Russian Empire, etc.)	16
No resentment	6
<i>Total</i>	<i>51</i>
NA (no information about the variable)	0

There were two basic variants of the *resentment* narrative. The first was a narrative on the special position of the Donbas within Ukraine. The second relates to Russia’s place in the world. The social structure referenced by our subjects often unintentionally conflated Russia’s “place” in an *international* social structure, and Russians’ “place” in Ukraine’s *domestic* social structure as they explained their grievances.¹⁶ Either way, this is evidence of the emotion of *resentment*, and the action tendency is the same: violence against Ukrainians who are rising too quickly in status.

These arguments had been nurtured by the Donbas Party of Regions clan to justify their political dominance of the state prior to 2014. This narrative persisted until the waning hours of the Yanukovich regime. In a nutshell, the argument was that since the dissolution of the Soviet Union, the region’s slide into “Rust Belt” decline, despite being the most industrially developed region in the country, was because of “leeches” in the Western part of the state (who had never paid their fair share in the first place):

Donbas people are hardworking. Donbas have a lot of resources. This is why *Banderites* always want to take from Donbas. Why we should work for them, for those who hate us?

(Interview 25, m., about 35 years old)

[Western Ukraine] attacked us, we did not attack them. Why we should pretend we are brothers as we did before? Donbas fed Western Ukraine. We sent them 100 percent of our taxes, but we got back only 30%.

(Interview 24, m., b. 1990)

The Donbas people perceive themselves as the ones actually working (or at least working harder) than people in other regions, producing more real value than those who populated the Western, poorer, agrarian, Euro-dependent parts of the country. The Donbas residents believed they had been “giving away” more with taxes than they ever received back with government investments:

We were against the EU ... – naked, barefoot Europe, which has always lived at the expense of the colonies ... What do they have? Only technology, I beg your pardon, exported from the Soviet Union in the nineties. In Russia – gas, oil, gold, diamonds, everything is there!

(Interview 22, m., b. 1965)

The Donbas residents tended to see Russia as a better economic partner for the Donbas, uncertain about a future without economic ties to Russia. As it dawned on this population that a regime change had separated the Donbas people from real political power and elevated the Ukrainian West, crushing disappointment mixed with *resentment*. They feared that the regime change would bring Ukraine to align economically with Europe, with catastrophic and unjust results.¹⁷ Even without the EU, resentment over the irregular nature of the power transfer was a common expression of grievance. After all, their legitimate representative – the acting president of Ukraine Viktor Yanukovich – was illegitimately forced to leave his office and replaced by someone who did not represent them:

What if those who participated in Maidan waited for elections and chose Poroshenko? Donbas would not say a word. Everything would be legitimate. But what we have now is that the East [of Ukraine] brought Yanukovich to power. The East always did it. The majority of the population here always supported him. We always said it was better to have a bad one but ours than a good one but a stranger. But it turned out that they canceled our choice. And everybody was furious about it. And then they started beating our Berkut. They were beating our boys. They removed Yanukovich from his post. So it turns out that they screwed up our choice.

(Interview 30, m., b. 1989)

For Ukrainians surveyed, especially the Donbas residents, resentment over symbolic issues and subordination was more down-to-earth and referred first to the right to speak the Russian language and polarizing symbols like Stephan Bandera, as well as commemorative traditions related to World War II. Resentment originated from a perceived violation of the existing order. The Maidan violated this order because it challenged the fragile equilibrium between East and West. The main principle of this equilibrium was, according to Ukrainian residents from the sample, local nonintervention: people from different regions would be permitted to speak their language and have their version of history, considered a fundamental right. Imposing new rules and values would be a violation of this order. Combatants describe “Ukrainization” attempts, i.e., the proliferation of Ukrainian schools and demand to use Ukrainian as a language of state bureaucracy, as the first signs of the reversal. Post-Maidan policies and actions, real or imagined, only made this resentment stronger:

I am a Soviet person. When people who came to power [after the Maidan] say that those who wore SS uniform in Ukraine [during World War II] can be heroes, I cannot stand it, it is just outrageous.

(Interview 19, m., b. 1977)

We have been speaking Russian here for a long time. But we don't reject those people who speak Ukrainian or *surzhyk* [(mixed language)]. We had tolerated everybody until they came here, until they started *pogroms*, until they started their actions on Lenin Square. ... Nobody wanted to live following their laws, you know. Because while we were working here, they [people from Western regions] had camps there, they had a completely different ideology. They are completely different people. We had some tensions before with the West [of Ukraine]. But now it escalated, and this is why we stand up to defend ourselves. To defend our interests, our children, our people. ... You see, they are rewriting history. They transform villains into heroes, you saw it yourself. Bandera, Shuchevich became national heroes. They renamed streets. Of course, we don't like it.

(Interview 36, m., about 35 years old)

The second, separate source of resentment is nested in a broader Russian grievance narrative of subordination to the West. The idea that Russia has a “right” to claim a sphere of influence that includes Ukraine was once a staple of the bipolar international order. Within Russia's diplomatic echo chamber, therefore, it is the West that is revisionist, it is the West that is at fault for the entire conflict, it is the West that is ignoring geography and giving Ukrainians false hope – and, critically to a *resentment* narrative, it is the West that ignores Russia's great power status. The claim is that Russia is a great power and Ukraine is not, period, and the sooner Ukraine figures this out the better. To most respondents, matters of lost status, nostalgia for the days of Soviet glory, and deference as a power worthy of being listened to were central motivations:

I think that what is happening in Novorossiia is a civil war. But it is not a civil war within Ukraine, it is a civil war within “ex-USSR” or “big Russia.” People who are fighting on the other side want to serve the West, they are against Russia. And vice versa. ... Putin should say it straight, that we lost the Cold War, we failed. They annexed our territory, and we want to restore the unity of our country.

(Interview 1, m., b. 1965)

Relative status concerns were often intermixed with “traditional vs. cosmopolitan” and “core vs. periphery” talking points familiar from other contemporary “culture wars.” The political and cultural transformation brought about by Euromaidan was presented, unsubtly, as a cultural threat. The argument was that Euromaidan elites represented just a tiny sliver of the Ukrainian society but were trying to push the

perverse values of Europe “down” onto a virtuous traditional society (of pro-Kremlin Russian speakers, of course). The lionization of Ukrainian nationalistic heroes at the expense of Soviet ones, or commonly stated fears of being forced to change national identification or educate their children in Ukrainian, pointed out (in a way that blurred together, sometimes in the same sentence) disgust at Kyiv’s “alien values” including consumerist feminism, transgender rights, and gay marriages. All were being pressed by shadowy and distant cultural elites to replace traditional family and patriarchy. For everyone in the sample, cultural threats came from the West. The USA and NATO were rarely distinguished from Europe, scheming to establish total cultural, economic, political, and military domination over Russia by weakening the Russian nation from within:

Since 1991 and till 2000 in our country [Russia] they were building a system of colonial economy. Russian financial structures were dependent on western ones. ... Russia now is trying to leave US zone of influence. ... All this situation with Ukraine is a consequence of this confrontation. They got tough on us, we made an abrupt movement, and all that started.

(Interview 5, m., b. 1973)

[The West] has been nourishing Ukraine since 1980s. Ukraine played an important role in the dissolution of the Soviet Union. ... So everything goes from there, and now they use Ukraine as an instrument to harm Russia as much as possible. When the Soviet Union collapsed, what did they inculcate in us? They inculcated fashion, i.e., it is fashionable to drink, to wear this or that, to behave in a particular way or to have sex – everything what was dirty in Europe came to us. ... The Western world never wished us well. They always wanted to destroy us.

(Interview 29, m., b. 1984)

Note that these arguments are not only about physical security. They appeal rather to the loss of dignity and status. Violence is justified, in the heat of an emotional moment, by a perception that values worth protecting – culture, social status, the memories, and values being passed on to one’s children – are “being traded away” by distant elites. Military matters were rarely distinguished from matters of economic/cultural hegemony. The mythology is that where once there was balance and mutual respect, the West had inflicted one cultural humiliation after another. The Donbas conflict was thus not just a local event but the next dramatic stage in a global war that “the West” had been waging against Russia for years, attempting to remake Russia in its decadent image. The Donbas war was a dramatic next stage of the next world war (and, by extension, the next phase in the Great Patriotic War). If Russian-speaking communities were being “dragged out” of Russia’s protective orbit and towards second-class status, *fear* and *resentment* and rote anti-Nazi *hatred* could blur together neatly.

A final note is on mobile technology. For Petersen (2002), sources of resentment are the day-to-day experiences of perceived unjust domination (e.g., having

to speak an opponent’s language, wear an opponent’s uniform, walk one’s children past a statue of an oppressor on the way to school). A major difference in the case of Ukraine in 2014 was the sense that status-reversing geopolitical events were underway, existential threat from “the West” was everywhere, and that the “Russkii Mir” (Russian World) was emergent as the locus of resistance. This was a cell phone-enabled “call to action.” The media that our respondents were consuming contained highly charged government propaganda delivered to them, wherever they were. This did, quite effectively for our subjects, “personalize” and “localize” what could otherwise have been a somewhat abstract emotional geopolitical narrative, along with a very specific course of action: to take up arms in order to restore the “just” order, fighting for one’s home:

We all were against pro-fascist government, our idea was that we have to defend our city, our village, our land. Nobody wanted to take over Kyiv, we just wanted to liberate our land and that’s all.

(Interview 32, m., b. 1978)

When they started shooting us, many people started leaving the city. But I just have nowhere to go. It is my home, it is my town.

(Interview 55, m., b. 1966)

Analysis: A bottomless hole?

In the spirit of this volume, we conclude by returning to the language of uncertainty – and the phrase in the title of this chapter, namely, *weaponization of uncertainty*. *Ontological extreme uncertainty*, as characterized in this volume, ruptures people’s lives, in our case, to leave their jobs to fight in what otherwise could be seen as a “distant war” or volunteer to “defend their homes.” On the one hand, these are real people – not chatbots, not paid spokespersons for a party. They risked their lives for something. On the other hand, we are uncertain about whether it matters that these fringe beliefs exist. It is not our claim that these 57 subjects are representative or evidence of a wider general sickness in Russian society.¹⁸ Now that there is a full-scale conventional war in Europe, the fact that these voices have been nurtured by state policy takes on new urgency and raises *epistemic analytical uncertainty* for foreign observers of Russia (in Ukraine especially, but not exclusively). Uncertainty can be expressed in the following forms: How *unrepresentative* would these men have to be from the pool of similarly aged men to affect conscription? Has the introduction of more information since they were sampled caused them to “shed” these ideas, or have they doubled down on them?

We admit we are uncertain. Many Russian male citizens are stuck in dead-end jobs and desire a means of heroic escape from otherwise discouraging lives. Among ourselves, we call this population *the bottomless hole*. Russia is the most populous country in Europe. If one assumes a renewable pool of just 25,000,000 conscriptable males, the back-of-the-napkin algebra suggests it would take 2% of that pool to find 500,000 infantry. Russian nationalism “personalizes” the experience of the

nation, the greatness, and humiliation, allowing one to identify psychological well-being with the well-being of the nation-state. Emotion is the gas that fires the war engine. Admitting our own uncertainty, but also acknowledging that the Russian state has great influence over the streams of data that propagate across cellular phone networks, let us recap the content of the three emotional narratives curated to fit a narrative of the Ukrainian war as of 2023.

Fear of Ukraine is framed as a fear of Western power. This fear can be justified by facts that reinforce the mismatch of material capability. The balance of soft and hard power obviously favors the West. NATO is a nuclear-armed alliance full of capable states. Alliance membership was promised to Ukraine in 2008, the West cheered (perhaps engineered) the Maidan, and now Alliance support to Ukraine is making the difference in the 2022 fight.¹⁹ The EU's colossal gross domestic product tempts Russians to emigrate, where they are exposed to new values. Ukraine has proudly rebranded itself as a vector of influence for Russia's traditional enemy. So even as Russia invaded Ukraine, moving Ukraine's border West, Moscow strenuously asserted defensive motivations (in 2014 so Russia could maintain the base in Crimea for its Black Sea Fleet, in 2022 for depth of defense).²⁰ The underlying emotion of *fear* makes these justifications cohere.

Resentment of Ukrainians is a matter of relative status in a structured social hierarchy. The specter of status reversals for Russian-speaking *Ukrainians* (who may have identified as *political* Russians but were nonetheless members of the Ukrainian state at the time our interviews were conducted) in the sample is straightforward: they feared being reduced to second-class citizens in Ukraine under its 1991 borders.

The matter of how Russians *living in Russia* might come to resent Ukrainians is more complicated and requires a bit of conceptual slippage. Nostalgia for a familiar colonial order is one mechanism. Ukrainians and Russians were both formally recognized national groups in the Soviet state, but there had been a fairly prominent strain of argument in Russia going back decades – indeed centuries – that the Ukrainian nation was, and is, an artificial entity.²¹ A tendency to view Ukrainians as inherently inferior goes a long way towards understanding Russia's willingness to take military gambles based on a premise that a viable Ukrainian nation-state did not exist except as a figment of Western geopolitical optimism.

A separate source of Russian resentment, clear in the data collected years ago but still obvious in this conflict, relates to geopolitical hierarchy and Russia's status relative to Ukraine. It's well-captured in the cutting, but factual, observation by Stephen Kotkin: 'The problem ... is Russia wants a place in the world and an authority in the world that is not commensurate with its current capacities and trajectory.'²² Larson and Schvechenko (2019) identify the root cause of Russia's historical friction with Western states as a matter of frustrated status-seeking. Russia's great power status is intrinsic to many Russians' sense of self-esteem. Russians have repeatedly behaved as if they believe they have a right to communicate *directly* to the USA *about Ukraine, over the heads of Ukrainians*. Taking a

historical view, the notion that Russia is being denied access to Western “clubs” is a reoccurring pattern and familiar cultural schema.²³ If the USA can violate international law and invade Iraq and bomb Serbia and Libya to induce regime change, then it *must be* legitimate for Russia to do the same.²⁴

What of hatred? Interestingly, by the definition we employ, Ukrainians can hate Russians, and Russians can hate “the West” (“Nazis” and “Satanic Americans”), but Russians *in Russia* cannot easily hate Ukrainians.²⁵ No doubt that both sides have contempt for the other by this point in the conflict – but this is insufficient. Ukrainians simply do not have the ability to threaten Russia properly at this time. So-called Ukrainian fascism, even if it existed, would only be a threat to Russians inside Ukraine. Ukrainians are not currently an existential threat to Russia. Russians cannot hate Ukrainians. They may pity them for their false consciousness but mostly they just wish they would come to their senses. (In time, this may change, of course, but probably not quickly.)

Conclusion

It is important to reemphasize just how much uncertainty remains in the background of ongoing Ukraine–Russia conflict. Thinking towards the future, questions include uncertainty over whether Ukraine can reclaim its entire territory (and, if not, what the new *de jure* or *de facto* borders will be), how long it will take Russia and Ukraine to reach a settlement, whether settlement actually requires regime change in Russia or Ukraine (or both), how long Western support to Ukraine can be expected, and how long Putin’s regime will hold out.²⁶

In this war, which is so much about morale and legitimacy, it is worth giving the final word to the victims of the war by being attendant to the strong emotions on the *Ukrainian* side. Although it is not the empirical sample analyzed in this chapter, we can easily recreate the algebra from above. Ukraine is a nation of 40,000,000 – perhaps not “a bottomless hole” but not exactly a flimsy country on the brink of running out of recruits. Moreover, Ukrainians are intensely experiencing all three of the emotions that are the focus of this chapter – and *extreme uncertainty* that Matejova and Shesterinina discuss in this volume. Russians have made themselves objects of fear, resentment, and hatred by all current living generations of Ukrainians. This is a truly remarkable combination, and not one conducive to reconciliation or healing.

Notes

- 1 Empirically, this uncertainty is defined as *ontological uncertainty* in this volume, but our knowledge of these variables also falls under *epistemic uncertainty*. A classic discussion of ontological uncertainty in this issue area is Jervis (1976), particularly Chapter 3, where perceptions of Russian (then Soviet) intent are discussed. Powell (1999: 8–20, Chapter 2) crisply summarizes the possibility that this uncertainty will be exploited by strategic elites seeking bargaining advantage (“bluffing”). See also Gartzke (1999) and Glaser (2010).
- 2 As Kendall-Taylor and Kofman (2022) observe, ‘A European army would have been forced off the field long ago if it had taken even a fraction of the casualties suffered by the Russian or the Ukrainian armed forces.’

- 3 Anderson (1983) opens *Imagined Communities* with a haunting discussion of the tomb of the unknown soldier – purposefully unidentified remains – for this reason. Howard’s (1976: 111–113) account is also haunting.
- 4 In their dataset, 62% of Foreign Influence Efforts were tracked to Russia between 2011 and 2021. Radnitz (2021), especially Chapter 3, provides rich empirical analysis of the post-Soviet information landscape. For more on how Russia’s warped domestic information ecosystem leaks, see Yablokov (2015), Bornstein (2019), Pomeratsov (2019), Frye (2022: 132–172, 205), Matovsky (2022), Triesman and Guriev (2022), and Tolz and Hutchings (2023).
- 5 Ukrainians call the Crimea seizure a clear violation of the letter and spirit of the United Nations (UN) Charter, often using emotional language to describe their situation (e.g., rape), and note that because of the Russian veto on the UN Security Council, no one will ever be able to do anything about the annexation, even if they care. Russian counters with diplomatic talking points invoke Article I of the Charter (self-determination) and “Responsibility to Protect” arguments, along with advocacy for cultural rights as human rights for the Russian minority in Ukraine. See also Beissinger (2015) and Fabry (2018).
- 6 For more on military activity, see Zuhkov (2016), Mikheieva (2018), Kudelia (2019), and Kudelia and Van Zyl (2019). The question of how much mobilization in the East was grass-roots, and how much was astroturf, remains disputed (and is itself a source of controversy). Carson (2016:107-108) usefully identifies four strategies for a state to intervene militarily and maintain deniability. Uncertainty about whether Russia would (or had already) intervened is a cause of war in the Arel-Driscoll model (Arel and Driscoll 2023: 208–210).
- 7 From a strategic/military perspective, these denials created uncertainty that served many well-rehearsed purposes: deception; splitting the NATO alliance member-state governments by hawk/dove assessment of a Russia threat; assuaging anti-war constituencies in Russia; keeping the Minsk Accords available to Ukrainians as an off-ramp until the last moment; buying time for pro-Russia forces inside Ukraine to organize; and so on.
- 8 For evidence from social media that these narratives did not convince most Russian-speaking Ukrainians (with caveats related to Crimea) in 2014, see Driscoll and Steinnert-Threlkeld (2020). On the dominance of Russian-language broadcast patterns into Eastern Ukraine pre-2014, see Peisakhin and Rozenas (2018).
- 9 Raynor (2023, 52–56) provides an excellent review of the methodological implications for researchers working with veteran subjects.
- 10 For the purposes of this chapter, we will not provide scientific citations for the claims in this paragraph, which summarizes the literature review in Petersen (2002, 2017), including the “switch” metaphor.
- 11 See Petersen (2002: 25, 40–61, especially 41-43 on social structure) and Petersen (2011: 40-42, 142).
- 12 For more information on survey methodology, see Savelyeva and Yerpyleva (forthcoming).
- 13 Neither of the authors of this chapter accept this premise uncritically, but most subjects quoted would. We hope it goes without saying that deliberately over-sampling these voices should not be decoded as a claim that our sample is “representative of” or “speaks for” the people of East Ukraine.
- 14 Notably, not many – less than 8% – in the sample identified as Ukrainian. Most identified as Russian, denied the premise of a question that the sample *could* contain multiple ethnicities, or refused to answer, declaring that this was not a war of ethnicity and ethnicity was not important. All of this reflects internalization of the Russian nationalist line that Ukrainians are “actually Russians,” that there is no difference between the people, etc. But this is not *hatred* as we define it.
- 15 In their worldview, these nationalist extremists did not speak for the whole Ukrainian nation, as noted in the main text, but the claim that Ukrainians have cause to see Russians as defective and dangerous (thus hated) is highly plausible. We return to this point in the conclusion.

- 16 For a definition and discussion of social structure, see Petersen (2002: 41–43). Elsewhere, Petersen usefully describes other emotions that are frequent fellow-travellers: *spite* and *rage*. Petersen (2011: 47–50) defines *spite* as joy at the suffering of another. *Rage* is an emotion that does not have cognitive antecedents beyond (perhaps) the existence of an outgroup, which has flexible, plastic features and takes on negative images that are not consistent – “bending categories” or “inventing facts” to fit a situation (Petersen 2002). *Rage* may help explain the blurring of international and domestic structures. On the persistent obsession of the Russian government with international social structure, see Larson and Schvechenko (2019: 1–22, 227–228, 243–244).
- 17 It was often left vague what this disaster would be. Usually informants referred to “the other countries,” without naming them, which joined the EU and experienced economic decline (“look what happen in other countries”) and to the fact that “in Europe nobody cares about us.” See also Giuliano (2018).
- 18 See Mueller (2000) for an argument that over-generalizing from the behaviors/statements of a few “thugs” can paint a skewed picture. For an argument that Russia is *not* fascist, and that the term is not useful, see Laurelle (2021). Until the last moment of the full-scale invasion in February 2022, many Russia-watchers in the West had rationalized this milieu of hateful anti-Ukrainian sentiment as a result of a morally imperfect strategy of domestic population control and electoral management. (A common analogy was a “release valve” for frustrated *nashi* (ours) with nothing better to do). People accepted that Russia under Putin is a state with superficially free media, legitimized by a mix of resignation and cynicism, supported by a consistent ribbon of *resentment* against cosmopolitan foreigners (“who think they know our history better than we do”) set lowest-common-denominator expectations for consumers (Treisman and Guriev 2022). On the information environment since the full-scale invasion, see Tolz and Hutchings (2023).
- 19 Radnitz (2021: 7–9) notes Western involvement in regime change in 2014 is unproven. See also Belton (2020: 271–273, 383–391) and Arel and Driscoll (2023: 67–99). The prose choice in the main text is not meant to offend, but rather to show the echoes of themes in the data from our subjects. We reproduce the Russian narrative more forcefully than we ourselves believe in order to steel-man the *fear* narrative.
- 20 Mearsheimer (2022) argues the narrative is largely correct. A counter would be that Russians, even as they say these things, *know* deep down they are lying to themselves but pretend true belief to justify aggression (that gains them access to the Black Sea as an energy corridor, for example). This is a variant of a “bluffing” argument.
- 21 Laitin (1998: 305-310 and 316-318), and note especially the quote from Solzhenitsyn on 318. Frye (2022: xii) implies this is a fringe position in Russia, but see Driscoll and Arel (53–55). Aleksei Navalny, in 2014, while making clear that he disagreed with Putin’s policies, also distanced himself from Ukrainians ‘to whom it is a matter of principle to prove that we are different peoples. ... I don’t see any difference between Russians and Ukrainians, none at all.’
- 22 This quote is from a moderated discussion hosted by the Council of Foreign Relations on 25 October 2017.
- 23 Consider Charap and Colton (2017: 49), describing missed opportunities to forge cooperative arrangements to give Russia some stake in the European security order, specifically referring to NATO expansion in the 1990s: ‘The psychological fallout from the heir to a superpower being denied an authentic voice in shaping the regional order and told to wait its turn to get in – Gulliver standing in line behind the Lilliputians – was evident to sophisticated observers. Its significance was grievously underestimated by those in a position to do something about it.’
- 24 Again, we reproduce this Russian narrative more forcefully than we ourselves believe it in order to steel-man a Russian *resentment* narrative of self-pity.
- 25 We are grateful to Roger Petersen for making this point to us in private communication.
- 26 See Krastev (2022), for a representative admission of this uncertainty.

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3 “Politics of uncertainty” in practice

The Belarusian 2020 presidential election

Sofie Bedford

When the Belarusian leaders decided not to postpone the presidential election in August 2020, although it would have been entirely possible with reference to the ongoing global Coronavirus pandemic, they made a fatal mistake. They expected Alyaksandr Lukashenka to be reelected for the fifth time, in the usual order without major complications. They could not have been more wrong. Previously, politics had largely been a nonissue for most Belarusians and most of the population was accepting the political status quo despite being acutely aware that democratic standards were lacking in their society. Elections, especially after the harsh crackdown on the protesters in 2010 (Ash 2015; Padhol and Marples 2011), had been followed by an atmosphere of “resigned acceptance,” no matter how dishonest they were (Ge’lman 2010: 55).

This time was different. The inability of the authorities to address popular expectations and needs during the pandemic, growth of grass-root solidarity and mobilization untypical for Belarusians, and appearance of new election candidates different from the traditional opposition created an unusual context for the 2020 election (Bedford 2021). As a result, formerly apolitical residents actively participated *en masse* throughout the whole electoral process, openly expressing their desire for change and support for Sviatlana Tsikhanouskaya, who became Lukashenka’s main contestant. Stunned observers witnessed the emergence of a massive protest movement as more than 200,000 people met at Stella Square in Minsk on 16 August 2020 to contest the official election results, according to which Lukashenka was reelected. Besides, not only in Minsk but also in cities, towns, and even villages all over the country Belarusians took to the streets to openly show their desire for change. Many of them for the first time ever (Douglas 2020). The mass protests lasted till approximately November 2020, when they were largely suspended because of, among other reasons, severe pressure from law enforcement and increasingly cold weather. However, the dissatisfaction of Belarusians with the current leadership has not disappeared, and localized protest activities continue, albeit on a much more limited scale (Narodny opos 2021).

What circumstances contributed to this unexpected development? How did the electoral process in 2020 go from meaningless to meaningful? In retrospect, this development can be understood as the outcome of what Andreas Schedler (2013; 2006; 2002) has called the “politics of uncertainty” in electoral authoritarian regimes. He describes authoritarian elections as a two-level game: the electoral

competition is embedded with the meta-game over the “rules of the game,” e.g., institutional change. To appear credible, these elections cannot be mere window dressing; they must have some degree of autonomy, which opens a small window of opportunity for oppositional actors to use the electoral process to expose and attack vulnerabilities of the authoritarian regime and thereby challenge and sometimes even change the status quo.

The purpose of this chapter is to generate new knowledge about what “politics of uncertainty” in an electoral authoritarian regime can look like in practice and what consequences it can have, through an in-depth analysis of the 2020 Belarusian presidential election. To this end, the chapter aims to generate an understanding of the roles that *ontological uncertainty* can play in political developments. In relation to the conceptual framework outlined by Matejova and Shesterinina in the introduction to this volume, the chapter proposes that three different types of uncertainty in particular – *inherent*, *routine*, and *extreme* – contributed to the processes which gave the 2020 election and its aftermath its remarkable character.

The rest of the chapter proceeds as follows. As a theoretical point of departure, the chapter starts with an overview of the literature on authoritarian elections as arenas for struggles over inherent and routine uncertainty. The next part looks at latent threats to Lukashenka’s legitimacy and the inherent uncertainty of authoritarianism that made the regime unpopular in a society that yet remained ignorant of these threats. The rest of the chapter is dedicated to the election. It describes how until 2020 the regime managed to neutralize any electoral insecurity and why this time they failed. This is followed by the conclusion.

Authoritarian elections as struggles over routine and inherent uncertainty

In electoral autocracies, the regime is characterized by the ruling elite’s monopoly on political power, but unlike in a dictatorship, regular elections are an important part of the democratic facade (Lindberg and Teorell 2013; Morse 2012). The literature on electoral authoritarianism suggests that by holding these elections, the authoritarian leaders make themselves vulnerable. Although such elections are eternally asymmetrical power struggles, they offer an opportunity, of sorts, for the regime’s challengers to try to make the predetermined outcome of the vote a little less certain.

On the other side of the fence, the regime strives to ensure the political status quo by ‘undermining the defining components of liberal democracy’ (Haggard and Kaufmann 2021: 55) and applies manipulative strategies that prevent long-term challenges to the authoritarian rule as well as comprehend short-term risks arising from the electoral situation (Beaulieu et al. 2007; Haggard and Kaufmann 2021; Beaulieu and Hyde 2009; Hyde 2011; Schedler 2002; 2013; 2009). In this sense, authoritarian elections can be seen as a struggle for the regime that attempts to contain the “routine uncertainty” (Matejova and Shesterinina in this volume), rendered by regularly occurring election, and to ensure that elections remain ‘a mode of regime reproduction’ rather than ‘a mode of transition’ (Lindberg 2009a: 330).

At the same time, regime challengers try to exploit and intensify this uncertainty by using the election as a focal point for the channeling and voicing of popular dissatisfaction with the current system.

The regime's effective marginalizing of political opposition and democracy activism often make electoral authoritarianism seem institutionalized to the point that the regime would likely win even competitive elections. Nonetheless, authoritarian leaders rarely take the risk to find out if this is really the case (Bernhard et al. 2020; Frear 2018; Silitski 2005). Their ambition to hold elections that are at least superficially legitimate comes at a cost – it makes it more difficult for them to ensure that the electoral process is truly noncompetitive.

One specific case in point is the 'opacity of citizen preferences' (Schedler 2013: 126). While both the opposition and the current rulers suspect the outcome of the vote to be the result of authoritarian influence, nobody knows for sure. Genuine citizen preferences are notoriously unknown, precisely because of authoritarian manipulation and lack of public transparency. Consequently, voters can never be considered completely predictable (Schedler 2002). Clearly though, their votes are cast not only based on their individual choices but are also influenced by state decisions, repression, and other maneuvering. Thus, if those who challenge the regime manage to convince the citizens that their personal choice matters, they may become active participants in the electoral process and, possibly, divert the election from the beaten path staked out by the current rules. Consequently, the unpredictability of the voters is seen as something that has the potential to activate the routine uncertainty of the election and disrupt the authoritarian flow (Lindberg 2009b; Morse 2012; Schedler 2002).

As there are no other platforms for political interaction in these contexts, authoritarian elections, by default, become the arena for a battle between the regime and its contenders that is more about changing the status quo than winning the votes (Schedler 2013). To this end, the opacity of citizen preferences also reflects the existence of and contestation over the overall inherent uncertainties of the authoritarian regime.

Twin problem of uncertainty in authoritarian regimes

Knowing citizen preferences is vital for the regime because it suffers from an *inherent institutional uncertainty*, stemming from the fact that authoritarian leaders know they lack a democratic mandate (Schedler 2013). As a result, they risk forceful removal from power because there is no procedure in place for their dismissal (Wintrobe 1998). However, relying on control and repression to stifle dissent, authoritarian regimes also suffer from *inherent informational uncertainty*, which makes it impossible to find out what the citizens think (Schedler 2013). Ronald Wintrobe (1998: 20) describes this as the "dictator's dilemma" – authoritarian leaders cannot know whether the population 'genuinely worships them or worships them because they command such worship.' The more repressive the regime, the less likely their population is to reveal how they really feel about it. Andreas Schedler (2013: 21) describes it as a 'twin problem of uncertainty' related to both

‘security’ and ‘opacity.’ The rulers must constantly try to detect and prevent challenges to their power, but they cannot generate enough knowledge to know they are successful – that they truly identified and eliminated all the threats to their position.

At the same time, as long as citizens keep their opinions to themselves, they do not pose an acute threat. But, if they are somehow triggered – by, for example, a global event, an economic crisis, a societal emergency, or similar – to cross their “revolutionary threshold,” that is, to make their personal preferences public, this might inspire others to do the same. This in turn may ‘generate a revolutionary bandwagon, an explosive growth in public opposition’ that can altercate the prevailing balance of power (Kuran 1991: 20). Importantly, because of the “opacity of citizen preferences,” e.g., informational uncertainty, until it happens, nobody will see it coming. This is why consolidated autocracies appear unassailable despite the existence of severe latent threats to their stability (Garfias and Magaloni 2018; Kuran 1991; Schedler 2013). From this also follows that widespread dissatisfaction with an authoritarian leader or system is not enough in itself to mobilize a large number of people to enforce change. For this to happen, other factors are needed as well, such as a trigger of sorts, and/or someone to start the bandwagon (Kuran 1991: 16).

Latent threats to Lukashenka’s legitimacy and inherent uncertainty of authoritarianism

The longevity of Lukashenka’s rule has often been explained by him enjoying genuine support from his citizens (e.g., Frear 2018; Klymenko and Gherghina 2012; Leshchenko 2008; White 2011). When he came to power at only 39 years of age, he was ‘viewed as an active sportsman and a strong man who could get things done’ and an excellent orator (Frear 2018: 65). As time passed, he became ‘a benevolent father of the Belarusians’ (Rohozinska 2020: 4). It has been suggested that Belarusian authoritarianism survived and prospered because it is adaptive. Matthew Frear (2018: 84) compares Lukashenka to a chameleon who can change his rhetoric and strategies according to the circumstances to stay in power unthreatened. Why then did those hundreds of thousands of people taking to the streets to protest his continued presidency, both before and after the 2020 election, seem to see Lukashenka as a symbol for everything wrong with the authoritarian system? The message they were sending – that not only had he lost his popularity, but he also even disgusted his population – seemed to indicate that a shift in people’s preferences had occurred overnight (Bedford 2021).

Whether this was truly the case is difficult to prove. According to Klymenko and Gherghina (2012) and others referenced above, surveys show that the popularity of the Belarusian president remained high at least until 2010. After that point, there are no reliable data as the country’s only independent polling center, Independent Institute of Socio-Economic and Political Studies (IISEPS), was forced to first reduce their activity and finally stop their work in Belarus altogether in 2016 (Douglas 2020; Frear 2018).¹ Nevertheless, Matthew Frear (2018:11) suggested that the continuity of Lukashenka’s rule was ensured through ‘the ability to adapt

and change as necessary’ and he also predicted this adaptive authoritarianism was ‘likely to guide the country through the upcoming 2019–20 election cycle.’ At the same time, Astapova’s (2021) anthropological research conducted between 2011 and 2018 shows a vast gap between the everyday reality and state-promoted narratives about the president and the Belarus he rules.

In retrospect, it is evident that already before the election, there were large pockets of the population who were unhappy with the kind of system their president represented and the services it was providing. This made the regime ‘substantially more vulnerable than the subservience and quiescence of their populations made them seem’ (Kuran 1991: 33). Below I outline the two long-term processes and one unforeseen event that analysts have suggested made the population shift from accepting Lukashenka and the authoritarian regime to seeing them as the problem: the erosion of the social contract, the modernization of society, and the authorities’ response to the COVID-19 pandemic. After that, I discuss the inherent informational insecurity of the Belarusian regime that made this already widespread disapproval invisible until it became impossible to miss.

The end of popular cooptation: Erosion of the social contract

A common explanation for Lukashenka’s authoritarian system being accepted by its citizens is the existence of a so-called social contract, which guaranteed the people economic stability and security in exchange for loyalty (Haiduk et al. 2009; Manayev et al. 2011; Wilson, 2016). By now, it is also established that due to the deteriorating economy during the last decade, there were fewer resources to maintain the extensive general social and welfare policies, which were the backbone of the social contract (Pranevičiūtė-Neliupšienė and Maksimiuk 2012). Attempts to reform the social security system in response to internal and external challenges led nowhere, and the current system has been described as ‘fragile and miserable’ (Chulitskaya and Matonyte 2018: 543). This led to a stagnating economy and an erosion of the social contract – Belarusians no longer trusted the authorities to deliver what they had promised (Bornukova et al. 2019; Douglas 2020; Guriev 2020; Kazharski 2021a; Krawatzek and Langbein 2022; Moshes and Nizhnikau 2021; Sjimanovitj 2017).

Some indicated that Lukashenka did not implement the reforms necessary to strengthen the economy because such reforms would have weakened his own position or even refused because he personally finds the market economy ideologically unacceptable (Astapenia 2020; Ivanou 2019; Kłysiński 2016; Moshes and Nizhnikau 2017). Even more so, as Lukashenka had come to embody the regime, regularly demonstrated his personal involvement in the resolution of social problems, and often spoke out against economic reforms and privatization, it seems inevitable that he would be blamed for the country’s economic problems (Astapova 2021; Goujon 2002; Kazharski 2021a; Marples and Padhol 2020).

A changing population but an unchangeable president

In parallel, analysts have suggested that the system that Lukashenka represented was increasingly seen as outdated and archaic among a generation of citizens who

had benefited from new travel, education, and work opportunities and therefore nursed less paternalistic societal values (Gapova 2020; Moshes and Nizhnikau 2019; Moshes and Nizhnikau 2021). One recent study conducted by Krawatzek and Langbein (2022) found that Belarusians, regardless of age, had become more liberal, both in political and economic terms. Most other research points to especially young Belarusians increasingly rejecting Soviet traditions, adhering to democratic values, and expressing a lack of trust in the societal and political institutions and the legitimacy of democratic processes of their own country (O’Loughlin et al. 2020; Sianko 2019). In addition, Lukashenka became particularly unpopular among young people by introducing the infamous so-called parasite law (a tax on unemployment), making legislation on drug possession stricter, and restricting young men’s right to postpone their compulsory military service (Douglas 2020).

Women were another group that was growing increasingly frustrated with the president because of his open male chauvinism and his habit of publicly trying to diminish women (Navumau and Matveieva 2021). This became obvious from women’s active participation in the protests, but it was also clearly visible in their activities in social media during (and before) the electoral campaign. For example, after Lukashenka in July 2020 (once again) proclaimed that women are not suitable to become presidents, 42 Belarusian women made a video dismissing some of his most infamous comments. ‘A woman’s calling is to decorate the world,’ and ‘If you weigh down a woman with the constitution, she will fall over – the poor thing’ are two of the phrases addressed in the video that quickly became viral.²

Uncertainty as a lack of information and a lack of meaning

So, society was changing, but it appears that Lukashenka was oblivious to this. The “dictators dilemma” discussed above is an important part of the explanation. Citizens, in fear of repression, tend to keep their personal preferences to themselves until they are sufficiently compelled to make them public. Another side of the story, however, is the impact of the authoritarian government’s attempts to establish total control over the flow of information. The regime has established a highly constricting media landscape and continuously made work more difficult for any independent actor, and more dangerous for those seen as sharing oppositional views. This has led to widespread practices of self-censorship among journalists (Herasimenka 2016). The access to quality national surveying and polling data was severely reduced when, after many years of harassment, IISEPS was forced to stop their work in Belarus in 2016, out of safety concerns for their contributors (Douglas 2020; Frear 2018). The few organizations still doing this kind of work are under tight state control and closely monitored to ensure that they are not asking the “wrong questions” about the “wrong topics.” If they do, they risk being closed (Gross 2017).

By only allowing political discourses and realities that fit their own hegemonic narrative, the authoritarian leaders create an information vacuum – a severe lack of real knowledge about the political and social situation that affects them, as well. As the opposition tries to get their political agenda across, they too tend to contribute

to this ambiguous informational situation where nobody really knows what is true, ‘everyone is playing theater, and everyone is watching theater and is trying to make sense of it’ (Schedler 2013: 50). Therefore, it is possible to see uncertainty in this context as both *a lack of information* and *a lack of meaning* (Matejova and Shesterinina in the introduction to this volume). This becomes an especially fitting description of the Belarusian context in light of Anastasiya Astapova’s (2021) stories about “potemkinism” – special preparations taking place before President Lukashenka’s official visits in different parts of the country. Basically, although they describe it as absurd, her respondents talk about their participation in the construction of a temporary reality that matches the way the president thinks it is or would like it to be.

Interestingly, the data she collected support the notion of Lukashenka’s waning legitimacy. The stories she gathered make it abundantly clear that Lukashenka already for many years prior to 2020 was not taken seriously as a political leader by many of his subjects – even though they did not publicly contest his leadership. Clearly, he no longer enjoyed the level of popularity among the population ascribed to him by previous research – if he in fact ever really did. Notably, the mere existence of this discontent was not enough to mobilize resistance against or convincingly raise the question about changing the status quo on a public level. This development was first activated by the COVID-19 pandemic and further triggered and facilitated by the election.

Extreme uncertainty as a trigger for mobilization

Against the background of a widespread – but not yet publicly noticeable – dissatisfaction with the current regime, the mishandling of COVID-19 crisis has been referred to as the straw that broke the camel’s back (Douglas 2020; Marples and Padhol 2020; Rohozinska 2020). To not put more stress on the already weak economy, Belarusian leaders chose to keep society open during the pandemic. Moreover, Lukashenka was joking and calling the pandemic a psychosis, which indicated to the people that he was not taking it seriously. ‘It is better to die standing than to live on your knees,’ he explained to a journalist when asked why he decided to participate in an ice hockey game during an ongoing pandemic. While he was recommending his citizens to take a shot of vodka every day, visit the sauna, and drive a tractor to stay safe,³ many of them saw the virus as a threat. Numerous joined the “People’s Quarantine,” initiated by the political opposition and civil society leaders, encouraging citizens to stay at home (Kulakevich and Augsburg 2021; Shingaryov 2020).

That the authorities were perceived as ignoring the situation gave rise to vast community mobilization. There were citizen initiatives like #byCOVID19 (a crowdfunding platform) collecting and distributing protective clothing and equipment to healthcare workers all over the country, neighborhood support platforms, and crowdfunding initiatives to garner funds for vulnerable groups and those affected by the disease (BelsatTV 2020; DW 2020; Petrova and Korosteleva 2021). Volha Kananovich (2022: 245) suggests the pandemic

became a critical juncture after which the defunct social contract became invalid, as it showed the state’s inability to live up to its end of the ‘authoritarian bargain.’ Following the analytical framework outlined in this volume’s introduction, the pandemic can be seen as an *extreme source of uncertainty* that took Lukashenka (like political leaders all over the world) by surprise and therefore made it difficult for him to predict which effect his actions, or rather non-actions, would have. It became the catalyst for a new feeling of Belarusian community that was essentially anti-Lukashenka (Petrova and Korosteleva 2021) and a revitalization of civil society that became crucial for the electoral campaign that followed (Astapova et al. 2022).

From elections for the sake of elections to a vote that made all the difference

In light of the discussion about uncertainty as both *a lack of information* and *a lack of meaning*, it is telling that in the midst of what many Belarusians saw as a major crisis, Lukashenka announced that the presidential election would be held on August 9. This was two weeks earlier than previously stated even though he could have easily postponed the voting with reference to the global pandemic. He simply did not foresee any problem. Since he came to power, elections had become “potemkinism,” held with the sole purpose of reinforcing authoritarianism and the stability of the state system (Bedford 2017).

Below I focus on how Lukashenka’s regime for 25 years successfully managed to neutralize any electoral insecurity and therefore did not see citizen opacity as a threat. Then, I explain why this time was different, by showing how a civil society reborn by the COVID-19 crisis and Sviatlana Tsikhanouskaya’s charismatic campaign managed to intensify and exploit the routine uncertainty of the authoritarian election. They did so by reducing the inherent informational uncertainty of the system by publicly revealing the true level of discontent with Lukashenka’s rule and capitalizing on the unpredictability of the voters by managing to convince them that this time their electoral participation could make a difference.

The “election game”: elections without electoral insecurity

Belarus is a prime example of what in the literature is called an “electoral autocracy.” Not only was the outcome of the elections known beforehand – because the current rulers control the counting of ballots and can ensure the result is correct – but since long-term systematic and extensive violations of the citizens’ fundamental liberal democratic rights and freedoms had stripped the vote of all credibility, the electoral process at large gave a strong impression of being a democratic illusion (Lindberg and Teorell 2013; Schedler 2013; 2006). The marginalization of political opposition is an important aspect of how electoral authoritarianism is sustained. Any party that opposes Lukashenka’s continued rule is described as opposition. Since he took office in 1994, no party has ever had power in the government or more than symbolic representation in the parliament.

Opposition parties operate under more or less constant repression and lack access to legal channels or platforms where those in power could be challenged (Charnysh and Kulakevich 2016; Minchenia 2020). The electoral campaign is the only time they are allowed access to the public space – because their participation is needed for the democratic facade. By joining the “fake” elections, their participation was deemed “fake” as well, and opposition became perceived as symbolic rather than relevant. Elections, in turn, became seen as a reoccurring game or a play with little relevance to most, except the initiated players, e.g., the state and the opposition (Bedford 2017).

The political opposition’s struggle against the authoritarian regime was also negatively affected by its close links to the struggle over Belarusian identity. Lukashenka’s civic version of Belarusian nationalism was skillfully juxtaposed against the ethnic one, promoted by the political opposition. Thus, the latter was at a constant disadvantage – by default seen as working against the state (Bekus 2010). Lukashenka could portray the opposition as threatening not only to the political order but also to the country’s national identity, and his rule as the antidote to this threat (Astapova 2021: 91). This development translated into a negative perception and a distrust of oppositionists and a feeling that there were no better alternatives to Lukashenka (Ash 2015; Korosteleva 2009; Marples 2006).

Society in general became increasingly disconnected both from elections and politics at large. In addition, by selective repression, targeting only those who openly wanted to change the status quo, the regime efficiently discouraged anyone else from engaging in political activism. At the same time, a certain controlled openness allowed individuals to act independently and actively participate in social activities within, for example, academia, the cultural sphere, or environmental movements – as long as these were seen as apolitical (Bedford 2017; Dinerstein 2019; Poleschuk 2015).

Not surprisingly politics became considered unattractive and meaningless and, importantly, something only the notorious opposition bothered with.⁴ Over the past 25 years, the authorities have successfully managed to turn politics into a “nonissue” for large sections of the population. This is why Lukashenka did not expect any threat from the 2020 election. Because people did not see how elections or politics mattered, they did not care about changing the government (Bedford 2017). Lukashenka thought that this political apathy would usually keep him safe. The problem, for him, was that this time, the dynamics changed. There were more latent threats against his legitimacy than maybe ever before, many people were already mobilized and in an antiregime mood after the pandemic, and, finally, Tsikhanouskaya’s campaign set mobilization further in motion, starting a fast-moving revolutionary bandwagon.

Routine uncertainty of the election: The Tsikhanouskaya effect

Before the election, the opposition parties had grand plans to hold “primaries” across the country to democratically elect a united candidate who would represent all oppositional actors. These were canceled due to the risk of infection, but few

seemed to care. The candidacies of Viktor Babaryka, former chairman of the board of Belgazprombank, and Valery Tsapkala, former ambassador to the United States (later founder of High Technologies Park in Minsk), and popular video blogger Syarhey Tsikhanouski were however received with anticipation. They were not associated with the conventional opposition that, for the reasons outlined above, was neither trusted nor respected by the population at large. This made the candidates more credible and relatable to many (Gapova 2021).

Unsurprisingly, the authorities tried to make sure that the threat these candidates posed was neutralized, by not approving their candidacies and even arresting Tsikhanouski and Babaryka. As they still needed someone to play “the election game,” Sviatlana Tsikhanouskaya, Syarhey Tsikhanouski’s wife who took over his campaign, got the approval to register as a candidate. This was surprising, as already during the collection of the signatures needed to submit her application it became obvious that there was strong support for her and her husband’s campaign across the country. It appears that Lukashenka’s administration underestimated her. Because she was a woman who lacked previous political experience, they assumed that they would be able to control the process – as usual. However, after Tsikhanouskaya had been allowed to formally enter the race, the administration lost control over the electoral process. Her campaign managed to take advantage of the routine uncertainty of the election to the extent that no opposition candidate had been able to do previously. She capitalized massively on the various instruments provided by the electoral platform: the collection of signatures, the campaign, and the voting. Her campaign reduced the informational uncertainty about Lukashenka’s position by confirming that ‘his popular image as either benevolent autocrat or acceptable “evil”’ was no longer enough for a large part of the population to support him’ (Moshes and Nizhnikau 2021: 161). The dynamics that evolved from this made the election regain its meaning for society.

Informational cascades starting a revolutionary bandwagon

The momentum that made Tsikhanouskaya’s campaign a success story was the collaboration with Maryia Kalesnikava (Babaryka’s campaign manager) and Veranika Tsapkala (Tsapkala’s wife). When they, in the words of Timur Kuran (1991: 18–20), openly crossed their ‘revolutionary thresholds,’ they started a ‘revolutionary bandwagon.’ Together they formed a photogenic and seemingly invincible trio that made it easy for citizens to be sympathetic to their struggle and to follow their conscience and support them in public. This determined the future of the protest movement (Garfias and Magaloni 2018). One important aspect was that they highlighted, both in images and action, that Belarusian women were ready to take the lead in the transformation of society. Thus, their messages and appearance especially encouraged and inspired other educated young women to take their civic responsibility and become politically active (Gapova 2020). The gender aspect subsequently became an important and integral part of the conflict between the protest movement and Lukashenka, which is not surprising given the underlying dissatisfaction with his chauvinism. Both the official campaign material

and unofficial images flourishing online convincingly presented the three ladies as beautiful, strong, smart, and invincible in contrast to Lukashenka who was compared to a cockroach and depicted as out of touch with reality, weak and lacking popularity (Shkliarov 2020).

After independent Belarusian media published the results of an informal election poll indicating that his support among the population was extremely low, the internet was filled with memes mocking Sasha 3% or Psycho 3% (a reference to Lukashenka's insistence that coronavirus is only a psychosis). As there is no reliable information on the level of support the authoritarian system has or does not have, these memes filled an important function besides making people laugh – they were reducing informational uncertainty, in this regard by conveying the message that the president's supporters were a minority. In fact, every step of the way Tsikhanouskaya's election campaign, on social media as well as in the streets and squares, served to counter the perception of Lukashenka as a popular president. During the collection of the 100,000 signatures to officially register for the presidential race, Belarusian voters were lining up in unprecedented numbers all over the country to sign for her candidacy and show their support for the campaign. When more than 60,000 people gathered in a park in Minsk on 30 July for one of her rallies, it was the largest political event in Belarus since 1991. This record was broken a week later when as many as 200,000 people met at the Stella Square in Minsk to oppose the election result (Navumau and Matveieva 2021).

It appears that Tsikhanouskaya's participation in the election helped overcome collective action problems by releasing an 'informational cascade' (Lohmann 1994: 44; Tucker 2007). When it became public knowledge that a large part of the population was unhappy with the political status quo, this spread hope that political change was within reach, which severely undermined the regime's position by making a large number of people take action against it.

Citizen agency wither the opacity of voters

Just as the other segments of the election process in 2020, the voting on election day saw much more activity than any other election in the country's history. Long queues wound up at the polling stations (in Belarus and at the embassies abroad) and a sizable number of those waiting were wearing the white bracelet that had become a symbol of support for Tsikhanouskaya's campaign. In some stations, the voting closed before everyone got to cast their vote. Still, the official election result gave Lukashenka 80% of the vote, compared to Tsikhanouskaya's 10%.

No independent international election monitors were present, and, in many cases, national observers were not even allowed in the polling stations, officially because of the pandemic. Despite this, there is no doubt that massive election fraud, as usual, occurred (Benedek 2020). Data from the various platforms where Tsikhanouskaya's supporters were asked to register their vote, such as Golos (Voice), Zubr, and Chestniye Lyudi (Honest People), show both that Lukashenka could not possibly have received 80% of the votes and that it is likely that Tsikhanouskaya was supported by a majority (Voice of Belarus, 2020). This

independent polling to some extent confirms that in this case, the ‘opacity of citizen preferences’ worked in Tsikhanouskaya’s favor (Schedler 2013: 126).

Still, the intensity and resilience of the protests are an even stronger indicator. One important distinction between 2020 and other elections is that since previously most people tended not to care about politics, they did not necessarily take part in the election. As a result, while those elections were no doubt fraudulent, they are unlikely to have featured a serious challenge to Lukashenka and that’s why the protests after those elections were much smaller in scale. This time, because people voted, they knew, for a fact, that their votes were stolen. As noted by Tucker (2007: 543), ‘electoral fraud, and especially major electoral fraud, can be a remarkably powerful device for solving the collective action problems normally associated with preventing citizens from taking action against a regime towards which they hold serious grievances.’ Elena Gapova (2021) even proposes that through the election and its aftermath, the Belarusians emerged as self-aware citizens and political subjects – free agents acting ‘exclusively of their own volition,’ not because someone else was trying to convince them to do so (Gapova 2021: 50).

To sum up, this outlook highlights the impact of what Matejova and Shesterinina (in this volume) call “human sources of uncertainty” on authoritarian political dynamics. Even more so, even though President Lukashenka played an important role in the story, the focus has mainly been on how ordinary people – the citizens of Belarus – became both subjects and agents in uncertain events, such as the COVID-19 pandemic and elections. Since true voter preferences were unknown, the major reason that this election became different from any other since Lukashenka came to power was that instead of shrugging their shoulders citizens became active voters. To explain why individual Belarusians decided to do so is beyond the scope of this chapter. Still, it is important to note that when their votes did not count, they protested to demand recognition of their voice and rights (Gapova 2021). The chapter shows how the hidden, and therefore unexpected, agency of the Belarusian voters turned the uncertainty of a usually predictable authoritarian election into a serious challenge to the political status quo – that until then appeared permanent. The 2020 developments have even been described as an awakening of society that made Belarusians ‘break with the very foundations of their cherished stability for the sake of dignity’ (Kazharski 2021a; Petrova and Korosteleva 2021: 128).

The future in Belarus is lined by uncertainty. Lukashenka refused to resign, and even to compromise, but his electoral autocracy has suffered heavy defeats both at home and abroad. The election result is not recognized by the European Union and many European leaders refuse to accept his presidency (European Council 2020; Joint Statement 2020). Events such as the enforced landing in Minsk of an international Ryanair Flight and the increased flow of irregular migrants into Poland and Lithuania from Belarus have contributed to a new European perception of Lukashenka as a regional security issue rather than just a local human-rights one (Kazharski 2021b). In addition, Lukashenka’s open support for Russia’s invasion of Ukraine in 2022 has made any reconciliation with the West impossible for the foreseeable future.

Also, at home, Lukashenka has painted himself into a corner. He launched a campaign of mass intimidation against the protesters because he needed to demonstrate that he was in control. Now he cannot risk stopping the repression because he has no other way to handle the situation. Repression is an effective but not a sustainable strategy. Using violence against its own people has severely damaged the regime's legitimacy and will likely continue to do so (Krawatzek and Sasse 2020). Moreover, the electoral process contributed to altering the fundamental dynamics and power relations between the regime and society. It is hard to imagine both that those who protested in 2020 would ever again accept the election game in its previous form, and that Lukashenka would risk exposing himself to the routine uncertainty of an election.

Conclusion

Until 2020, Aleksandr Lukashenka's authoritarian regime had ruled Belarus for 26 years without major challenges. The popular mobilization in connection to the 2020 Presidential Election came as a major surprise. It was by no means the first time an election was not fair, but it was the first time that a large part of the population openly reacted to it. Looking at the developments through the lens of uncertainty helps us better understand this unexpected outcome.

The Belarusian regime was haunted by *inherent uncertainty* – both institutional and informational. The lack of openness and mutual trust between the authoritarian rulers and society made it impossible to gauge the level of genuine support among the population in any credible way. This is what made the popular mobilization so unexpected and so impactful. Regularly occurring elections created *routine uncertainty*. In their attempt to make such elections seem democratic the authorities lost the ability to totally control their process and outcome. This time, the electoral situation opened the window of opportunity for latent threats to authoritarian hegemony to surface and become the backbone of antiregime mobilization largely triggered by Tsikhanouskaya's campaign. Most likely none of this would have happened – at this time – without *extreme uncertainty* generated by the COVID-19 pandemic. The perceived lack of governmental response to the crisis intensified the impact of the inherent and routine uncertainty to the extent that the situation resulted in an astonishing mass mobilization and repoliticization of society.

The Belarusian developments clearly illustrate what the “politics of uncertainty” in an authoritarian election can look like in practice. They highlight that the authoritarian leaders' ambition to uphold a democratic facade affects their ability to control the electoral process. The changing circumstances which led to a mobilization and politicization of society, in combination with the appearance of new credible players in the election game, managed to activate and intensify the uncertainty of the electoral process, transforming it from meaningless to meaningful.

Notes

- 1 It should however be noted that overall relying on survey tools of research in authoritarian contexts is notoriously difficult (Sadigov and Guliyev 2018).
- 2 The video is available on Instagram: <https://www.instagram.com/p/CDn1ixSniWy/>. Two other interesting examples are an ironic test where the reader, according to the editorial staff of *Studentskaya Dumka*, can check how much he/she knows about the president’s view of a modern woman: <https://dumka.me/test/lukashenko>. Another is a text produced by the NGO *Nash Dom* (Our House) where the word “women” is replaced by “men” in some of Lukashenka’s most infamous statements: <https://nash-dom.info/58678>.
- 3 Examples of some of his most memorable commentary can be found on YouTube: <https://www.youtube.com/watch?v=sqH41yL64m8>; <https://www.youtube.com/watch?v=sqH41yL64m8>
- 4 Widespread political apathy is common in authoritarian post-Soviet countries. See, for example, the edited volume by Erpyleva and Magun (2015) about this phenomenon in the context of the 2011 protest movement in Russia.

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II

Uncertainty and the state



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4 Arming up in uncertainty

Congressional response to missile defense test failures

*Leah Matchett*¹

One of the most basic decisions that states must make is how to arm themselves for the future. Uncertainty about the intentions of their enemies, the security needs of their state, and the future evolution of the international order make arming decisions difficult in the best of times, but these are compounded by the long timescales of weapons acquisition and the difficulty of knowing which weapons systems will best serve the state's needs. International relations (IR) scholars have examined how these unknowns affect armament at the international level (Jervis 1978; Mearsheimer 2001) but have often overlooked how domestic actors' own perceptions create uncertainty in the armament process.

This chapter examines how domestic actors respond to the armament dilemma, and crucially, how motivated reasoning affects the way in which new information is interpreted by political actors. In doing so, I demonstrate how human factors can be a source of uncertainty in the politics of armament. When a state is acquiring weapons, there is a regular influx of information both on the capabilities of the system (its ability to perform as advertised, or the "feasibility" of the technology) and the need for the system (the threat). Traditional approaches to uncertainty in international relations (see Matejova and Shesterinina in the introduction to this volume) treat these two characteristics as fundamental unknowns, which are gradually revealed as new information becomes available. This treats the information in question as neutral and overlooks the role of motivated reasoning and cognitive bias in individual interpretations. Instead, in this chapter, I approach uncertainty as a *lack of common understanding of the meaning of new information* on the need for and utility of weaponry. I argue that individual-level motivated reasoning affects how policymakers make choices on armament in a way that cannot be explained by rationalist models.

I examine the case of US missile defense policy from 1980 to the present. Since it was first proposed in the 1950s, the defense of the US homeland from ballistic missile attacks has been an elusive technological goal. To this day, there is debate about whether the USA's current missile defense technology would "work" in a meaningful way in a conflict (Grego 2018). Consequently, the fate of the US missile defense program – whether to proceed with research and development despite issues or to cancel the program – has spurred decades of Congressional debates.

This chapter examines how members of the US Congress respond to new information on both the feasibility of and need for missile defense. In both cases, I use

ordinary least squares regressions on Congressional roll call votes, and evidence from the Congressional record. On feasibility, I examine how new information on the feasibility of missile defense – in this case how the system performs in tests of its capabilities – affects how an individual member of Congress votes on funding for the system. I find that individual members of Congress reduce their support for missile defense in response to test failures. This effect is concentrated in members of Congress who have an incentive to be open to new information. In contrast, members who have a stake in missile defense policy do not change their opinion on the system in response to test failures. Instead, they go out of their way to explain the test failure to their colleagues. On the need for missile defense, I examine how the threat a state faces from ballistic missiles – operationalized as the ballistic missile tests of adversary states – affects member support for missile defense. Surprisingly, I find that new information on threats has no effect on member’s support for missile defense, largely because individuals’ minds are already made up. I demonstrate these findings in a brief case study of the Gulf War.

The rest of the chapter proceeds as follows: first, I review the literature on uncertainty and motivated reasoning to demonstrate how individuals within a state can be an important source of uncertainty in how they process new information. Next, I outline the data sources and analytic approach of the chapter. The fourth section tests the hypotheses of how members of Congress respond to new information on missile defense systems, based on their own interests. The fifth section examines these dynamics in a case study of the Gulf War. I conclude with a discussion of how some members of Congress interpret missile defense test failures as negative signals of feasibility while others interpret test failures as a signal of the need for continued investment. I also outline the lessons that the focus on individual human-generated uncertainty in this chapter has for future research on uncertainty in IR.

Our own facts: Uncertainty in armament and individual-level responses to new information

Traditionally, IR scholars have treated uncertainty as a lack of information (what I will call an unknown) that is rectified with the introduction of new information. In this paradigm, states making the decision on what and how much to arm themselves with face two key unknowns: uncertainty about adversaries’ intentions and uncertainty about the relative offensive advantage of (new) weaponry (Fearon 1995; Jervis 1978; Mearsheimer 2019; Pu 2019). If we understand these dilemmas as a lack of information, it follows that when actors gain new information, they can adjust their beliefs and behaviors accordingly (see introduction to this volume).

However, this approach ignores the process by which states understand and incorporate new information into their belief systems. It is often the case that states operating under the same information will have different responses. For example, a state may try to signal its adversary about its peaceable intentions but fail because of credibility problems (Kertzer et al. 2020; Rathburn 2007). Likewise, the characteristics of a weapons system and its battlefield implications are rarely clear initially (Gladwell 2021). Within a state, advocates of a system may emphasize

its benefits, while others may push forward a view focused on its flaws. Between states, weapons that to one state may be purely defensive, to another state may be offensive (Jervis 1978; Mearsheimer 2001). Take for example the US plans to install missile defense radars in South Korea in 2017. The USA intended the deployment to defend South Korea against the threat of missiles from North Korea. However, in China, the decision was seen as a threat to their own nuclear deterrent and a sign of US aggression (Banka 2020).

In contrast to the above uncertainty-as-unknown approach, this chapter deals with what Matejova and Shesterinina define as *uncertainty as a lack of meaning* (see the introduction to this volume). In this view, uncertainty comes from the lack of shared agreed-upon meaning to new information (Katzenstein and Seybert 2018). Contrary to the uncertainty-as-unknown approach, this suggests that actors with different social and normative contexts should react differently to the same information. As Matejova and Shesterinina note, this happens for a variety of reasons, one of which is the idiosyncrasies and cognitive biases of the humans involved. This chapter focuses on human sources of uncertainty in a state's armament choices.

Most studies of armament do not address how information is received and incorporated. In doing so, they assume that individuals within a state receiving the same information will react the same. However, more recent work in psychology should make us skeptical of this. Increasingly, we understand that at an individual level, humans are subject to a complex array of cognitive biases. Individuals are only likely to look for or incorporate new information into their worldview if it agrees with their prior beliefs – a phenomenon known as confirmation bias. They are also likely to argue against facts or opinions that contradict their own while uncritically supporting those that agree with them – a disconfirmatory bias (Taber and Lodge 2006). Each of these biases suggests that what individuals within a state believe about the desirability of particular weapons and the intent of adversaries affects how they receive new information. One way this can occur is through a process called motivated reasoning.

Motivated reasoning is a phenomenon where individuals, faced with two contradictory values, construct a reasoning chain that makes the values congruent (Mutz 2007). Although reasoning can be motivated by a desire to form accurate opinions, it can also be motivated by a desire to support preexisting values (Taber and Lodge 2006). This, in effect, prevents an individual from incorporating new information in the way that a rationalist model of uncertainty would expect. Many authors have noted how partisanship can lead to motivated reasoning, where individuals interpret new information in ways that benefits their party (Bolsen et al. 2014; Dancy and Goren 2010; Lavine et al. 2012; Slothus and de Vreese 2010). In survey experiments, respondents' support for a policy depends on which party proposed it (Druckman et al. 2013). Elliot (in this volume) demonstrates a similar mechanism at work in different interpretations of financial risks across actors with different interests.

An important caveat to this work is that while individuals generally seem to apply motivated reasoning in a variety of circumstances, they are often able to also incorporate new information if properly motivated. Taber and Lodge (2006)

distinguish between directional goals of motivated reasoning (when an individual adjusts her beliefs to make them more congruent with her values) and accuracy goals (when an individual is motivated to seek out and consider evidence to reach the right conclusion). When motivated to form accurate conclusions, individuals are generally able to incorporate information counter to their existing beliefs, as Bullock et al.'s (2013) work on partisan opinion suggests (see also Peterson and Iyengar 2021).

If we know that individuals are likely, but not certain, to incorporate information through a filtered cognitive lens, how individuals respond to new information then becomes a question of the trade-off between their motivation for accuracy (accuracy incentive) and their motivation to protect their preexisting value system (directional incentive). On the one hand, elite decisionmakers may have a high incentive to accuracy for assessments that affect national security. On the other hand, partisan concerns may create sufficient directional motivated reasoning that individuals interpret new information in a way that most accords with their preexisting views. The limited existing work supports the latter view, at least for foreign policy elites (McDermott and Kugler 2001; Steinbruner 2002).

On Congress specifically, the bulk of previous research has focused on how members of Congress make decisions with limited information rather than on how members interpret the information they receive (Bimber 1991; Krehbiel 1992). There is very little work on the extent to which members themselves are subject to motivated reasoning concerns. One key reason for this is that it is very hard to distinguish between a politically motivated statement and a cognitively motivated statement.

I expect members to be subject to motivated reasoning for three reasons. First, political actors are no less prone to cognitive biases than other individuals. Second, more so than the average person, members of Congress have a personal stake in their initial opinions and stated values. Because their values are developed with care and restated often and publicly, it is likely that they are strongly attached to them. Previous studies suggest that individuals with more information and strongly held beliefs are even more likely to fall prey to motivated reasoning because they can effectively argue against new information (Taber and Lodge 2006).

Finally, it is not clear that members of Congress face accuracy incentives in the same way that survey respondents who are paid to correctly assess the state of the US economy do. If we assume that members are generally motivated by reelection (Mayhew 2004), then there is little incentive for them to rationally incorporate new information that might show that something they previously supported is wrong. There is almost certainly a degree at which this effect fails but it is hard to know where precisely this is.

That said, it is almost impossible to separate political reasoning entirely from motivated reasoning, since political success is a strong form of motivation. However, the suggestion that responses are only political implies that actors receive new information, update their personal opinions but persist in alternative external displays for political reasons. This entails a level of cognitive work that I think most members are incapable of maintaining consistently. Even if this happens, the

construction of the political response must follow similar reasoning pathways as motivated reasoning. For the sake of this study, I take actors' political statements as largely sincere representations of internally constructed logic chains, even if there may be internal misgivings. This allows me to reference members' own statements to understand how they are interpreting new feasibility information (test results) and connect this to their behavior demonstrated in the regressions.

This chapter examines the extent to which members of Congress engage in motivated reasoning and resulting actions in response to new information on a specific area: armament policy. This is, in many ways, a hard case to examine motivated reasoning among members of Congress. National security enjoyed significant partisan consensus throughout the Cold War and arguably has the greatest incentive to member accuracy of any issue.

Uncertainty in missile defense policy: Two key unknowns

When making choices on whether to acquire a proposed new weapons system, members of Congress must consider both the feasibility of the proposed technology and the seriousness of the threat which it is meant to address. These two factors are best thought of as unknowns. What happens when policymakers receive this new information? The rationalist approach to uncertainty would suggest that policymakers should update their prior beliefs in predictable (and similar) ways. In contrast, the understanding of uncertainty as a lack of shared meaning would suggest that how individuals respond to new information is moderated by cognitive biases.

This, of course, is partly determined by the source of the information. There is evidence that Republicans and Democrats in Congress use information from different sources in their speeches in Congress (Lerner 2018). Institutional approaches to uncertainty as complexity often focus on this conflicting information problem. However, as this chapter focuses on the human source of uncertainty, I leverage the importance of information which is largely unfiltered through institutional channels: direct observation.

Testing as a signal of system feasibility

One important signal of a weapons system's feasibility is the results of tests carried out during its development. Missile defense tests are often reported in news sources and crop up regularly in the Congressional record (Klimas and O'Brien 2017; Stone 2017). However, we have no systematic understanding of whether these tests influence Congressional opinion or whether partisanship or other factors win out.

Hypothesis 1 (H1) suggests that as negative feasibility information accumulates, members become less likely to vote for a system. This is a within-congressperson effect: it predicts how a single Congress person's vote changes through time when presented with new information. If H1 is supported, this would suggest that members are mostly influenced by accuracy goals in their votes for missile defense – they want to support the system if it is working and curtail it if it is not working.

H1: Feasibility: As the number of failed missile defense tests in the previous year increases, a member of Congress will become less willing to vote in support of missile defense.

Members of Congress also face significant uncertainty on the intentions and capabilities of adversary states with ballistic missiles. As with domestic missile defense programs, Congress can observe adversary states as they test and develop ballistic missiles. I analyze the effects of missile tests by North Korea and Iran on the support for missile defense among individual members of Congress. If members are largely driven by accuracy incentives, I would expect them to conform to hypothesis 2 (H2).

H2: Threat: As the number of enemy missile defense tests in the previous year increases, a member of Congress will become more willing to vote in support of missile defense.

However, the literature on motivated reasoning suggests that Congress may not respond to feasibility and threat information uniformly. Members who have a particular motivation toward accuracy – for example those who are vulnerable to re-election challenges – may update more along the lines laid out in H1 (reducing their support for a system in response to test failures). In contrast, members who have strong directional goals – those whose districts have a strong defense industry presence, or who are ideologically more extreme – are likely not to update their beliefs in the same way. This leads to three additional hypotheses, outlined below.

More than almost any other weapons system, missile defense – and its failures – have a public audience (Clearwater 1999; Dillin 1986; Roberts 1986). Although generally the public supports missile defense when asked if they want to be protected, these numbers decrease when the technological problems are highlighted (Moore 2001). Therefore, electorally vulnerable members of Congress have a strong accuracy incentive to match their support of missile defense to its feasibility as a system and the threat posed by adversaries. This should make their support for the system largely contingent on its performance. This expectation is outlined in hypothesis 1a (for feasibility information) and 2a (for threat information).

H1a: Members of Congress who are in competitive seats will be more responsive to feasibility information (more likely to vote against missile defense in response to test failures) than members in relatively safe seats.

H2a: Members of Congress who are in competitive seats will be more responsive to threat information (more likely to vote for missile defense in response to enemy tests) than members in relatively safe seats.

In contrast, those members with a significant personal stake in missile defense should have the opposite incentive.

H1b: Members of Congress who are in congressional districts that receive more Defense Department funds will be less responsive to feasibility information (less likely to vote against missile defense in response to test failures) than other members.

H1b: Members of Congress who are in congressional districts that receive more Defense Department funds will be less responsive to threat information (less likely to increase their votes for missile defense in response to enemy missile tests) than other members.

If H1a and H1b are supported, it would support the hypothesis that members with a strong directional incentive do not update their response to a weapons system in response to new information. However, because these representatives stand to personally benefit from future defense contracts on this system, they may also fail to change their behavior regardless of their personal beliefs. As noted above, it is unlikely that even in this case, there will not be some internal motivated reasoning; however, the regression cannot distinguish from motivated reasoning and a representative's pursuit of interests in this case.

For this reason, I also analyze a final group of members who are likely to have a strong directional incentive in their response to missile defense tests – those who are already committed to missile defense. These members are less likely to update their beliefs in response to new information where that new information differs from their original position. Since, in the period I examine, the Republican Party was more supportive of missile defense (it is featured in every Republican Party platform during the period of study) (e.g., Republican National Convention 1996), I examine the responsiveness of pro-defense members by examining those which are more conservative to determine whether they are more resistant to new information than their less pro-missile defense peers.

H1c: Pro-defense members of Congress will be less responsive to new feasibility information than other members.

While support for only H1b and H2b runs the risk of conflating material interest and cognitive biases, support for these hypotheses and H1c provides a stronger case for the influence of directional biases on Congressional action. Furthermore, the qualitative evidence from debates over the meaning of tests will provide further evidence whether the change in Congressional action laid out in the regressions are connected to a motivated reasoning chain. Table 4.1 outlines these hypotheses and how they apply to different subgroups within Congress.

Table 4.1 Summary of expectations for each hypothesis

<i>Hypothesis</i>	<i>Group</i>	<i>Expected effect of test failures (H1)</i>	<i>Expected effect of adversary missile tests (H2)</i>
1/2	All members	–	+
1a/2a	Electoralley vulnerable members	–	+
1b/2b	Defense districts	.	.
1c/2c	Pro-defense members	.	.

Taken together, these hypotheses represent a nuanced test of how individual members of Congress respond to external information and the capacity of this new information to resolve uncertainty. I directly compare a rationalist model, in which members of Congress uniformly respond to new information, and a cognitive model, in which members' response to new information depends on their relative motivations for accuracy and partisan directional goals. The comparison between how members react to feasibility information (in the form of domestic test failures) and threat information (in the form of enemy missile tests) allows for comparison of the effects of different kinds of new information.

Methods

Data sources

This chapter is primarily based on the analysis of roll call votes on amendments to the Department of Defense Authorization bills from 1980 to 2019. Before 1980, Congress did not receive systematic reports on the outcomes of missile defense tests. Although this time period spans many political changes, I use session fixed effects to account for through time changes. The number of each type of votes per year is shown in Figure 4.1. Each vote was hand-coded as being either in support of the hawkish (or pro-defense) position or opposed to it, where votes were coded as hawkish if they advocated an increase funding or a decrease in restrictions. Votes on missile defense were separated out through a manual review of the Congressional Quarterly articles on defense bills from 1980 to 2019.

Using these votes, I constructed a data frame defined at the member of Congress-vote level, with variables at the vote level, the member level, and the bill level. At the vote level, I coded whether the vote involved funding (as opposed to a policy change) (Funding), and if so the amount of that funding in millions of dollars (Amount).

To investigate the effects of feasibility information, I collected and centralized the test record for every major missile defense system in the USA since 1976 from historical documents published by the army (Walker Bernstein and Lang 2003) and test records stored in Encyclopedia Astronautica. Tests after 1998 were verified with the record available through the Missile Defense Advocacy Network.

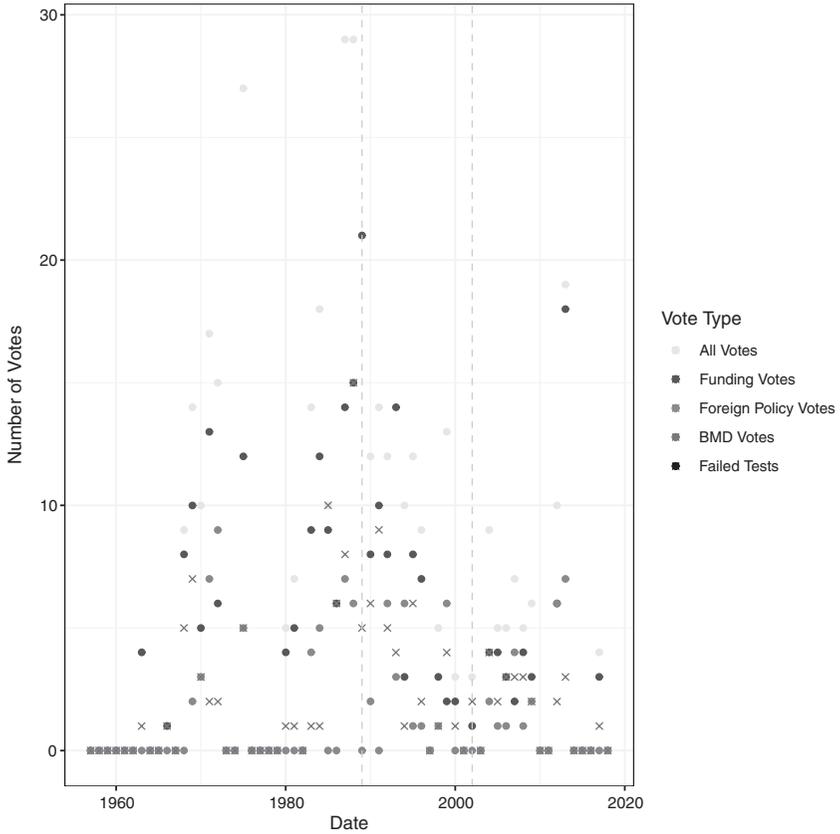


Figure 4.1 Foreign policy votes through time, with votes on missile defense shown as Xs

There is significant skepticism over how realistic some of these tests were since they are often carried out in environments that may not simulate actual conditions under which the system would be used. However, if Members of Congress assume the tests are slanted to succeed, a failed test should still provide a meaningful signal of feasibility. For each vote, I calculated the percent of missile defense tests that failed in the last year (Pct. Failed Tests). The percent of failed missile defense tests is plausibly exogenous from the result of Congressional votes. Although Congress funds testing, the test schedule does not seem to be determined by congressional action.

I added data at the member level to test the presence of heterogeneous effects of feasibility information. I used the first dimension of Poole and Rosenthal’s DWnominate scores to estimate member ideology (Ideology). I define ideologically very conservative members of Congress (Conservative) as those that fall above 0.5 on the first dimension of Poole and Rosenthal’s DWnominate scale. While this is a fundamentally arbitrary cut point, results are not sensitive to its

manipulation. Furthermore, the use of a binary variable allows me to more clearly present results in a subset of the sample.

To estimate the electoral vulnerability of members, I calculated the margin in every Congressional election since 1976, with data from the MIT Election Lab. I merged this with the vote data and created an indicator variable (*CompetitiveSeat*) for all members whose last election was within a margin of 5%. Although electoral chances may change in a district over time, any member of Congress that wins (re) election by a margin of less than 5% likely retains a sense of vulnerability and concern for the electorate that is distinct from members that win in landslides.

With data from the Federal Assistance Awards Data System (FAADS), I estimated a moving average of the percent of the federal awards in a congressional district that originates from the Department of Defense for 1980–2018. I consider all districts that are above the 95th percentile of this measure to be the most militarily dominant districts (*Militarily Dependent*).

Finally, I included several controls to account for other temporal changes that may affect a member of Congress' willingness to support missile defense relative to other defense issues. It is possible that members' response to feasibility is less a result of their political vulnerability or parochial interest than the economic state of the country. To address concerns over how the national debt influences these determinations, I included lagged yearly covariates for the size of the federal debt as a percent of GDP (*Ntnl Debt*) and the lagged total national defense outlays (*NtnlDefEx*) to account for structural changes in the federal budget.

To address the possibility that the politics of missile defense is changing through time, not as a result of new information but due to changes in the administration's goals for the system, I included the yearly military request for missile defense funds (*BMD Request*). Together this resulted in a database of 29,554 observations at the Member-vote level from 1976 to 2017.

Analytical strategy

Most previous scholarship on the determinants of Congressional defense spending has focused on between-Congressperson variation: what makes one Congress person more likely to vote more hawkishly than another (Fleisher 1993; Fordham 2008; Lindsay 1990). Instead, I investigate how members of Congress respond to new information to understand how directional and accuracy incentives affect their response to this information and ultimately the state's armament choices. I estimate the following model:

$$\text{vote scaledit} = \text{Perc Fails} + \text{xi} + \text{Sessiont}$$

Member fixed effects demean the influence of member-specific variables (e.g., party, age, gender). Session fixed effects help account for through time variation that is not caused by the percent of missile defense test failures in a given year, such as a general increase in support for defense spending in the wake of 9/11. I group standard errors on the vote and member level. To examine effects of moderating variables, I subset the data frame into groups of interest and reexamined the above equation. This subset necessitates the creation of cut-off points.

Finally, I include an event study to examine how large changes in Congress' understanding of the feasibility of missile defense affect the probability of voting for these systems and the reasoning behind these votes. I examine the impact of direct aftermath of the Gulf War on individual members of Congress' likelihood to vote for missile defense.

Within-Congressperson predictors of hawkish votes on defense amendments

Table 4.2 presents the results of a linear probability model (LPM) estimation of the effect of each type of information on the likelihood that a member of Congress votes for missile defense, over the whole Congress. These regressions include member and session fixed effects, with standard errors grouped at the vote and member level.

Models 1 and 2 present the impact of failed tests on member support. Both models have negative estimates for the effect of failed tests on support for a system. When the full suite of covariates is added in model 2, this effect is large and both substantively and statistically significant. A 50% increase in failed tests in a given year is associated with a roughly 24% decrease in estimated support for votes on missile defense within individual members. This suggests that members are reacting in strong and significant ways to feasibility information in weapons system tests, a story consistent with models of rational updating.

In contrast, models 3 and 4, which present the impact of adversary missile tests on member support for missile defense, show no significant relationship. There are many reasons why this may be the case. First, members may already have a high perception of threat from Iran and North Korea, and any additional missile

Table 4.2 Impact of test failures and enemy tests: whole Congress

	<i>Dependent variable: vote</i>			
	(1)	(2)	(3)	(4)
Percent fails	-0.118 (0.208)	-0.478** (0.218)		
Amount		0.0001*** (0.00003)		0.0001*** (0.00003)
Deficit, pct GDP, lag		0.005 (0.005)		0.006 (0.005)
BMD funds, lag		-0.001 (0.00005)		-0.0001 (0.00005)
Defense outlays, lag		-0.00000 (0.00000)		-0.00000 (0.00000)
Copartisan		-0.030 (0.034)		0.030 (0.034)
Enemy tests			0.004 (0.009)	-0.011 (0.011)
Member and session FE?	Yes	Yes	Yes	Yes
Observations	29,594	19,222	29,594	19,222
Adjusted R ²	0.420	0.462	0.420	0.462

p<0.1; *p<0.05; **p<0.01; ***p<0.001

tests may validate their existing threat assessment. If most members believe that North Korea and Iran already present a significant enough threat to merit support of missile defense, the marginal percent increase in perceived threat of a handful of missile tests is not likely to change their mind. The same logic applies to feasibility information, except for the fact that there is much more disagreement publicly over the feasibility of missile defense than there is in the fact that North Korea or Iran has a missile program. The information provided by failed tests therefore comes with greater uncertainty in part because of the lack of general agreement about the feasibility of missile defense. Second, members may predominantly get their threat information from other sources (like the Department of Defense) rather than from directly observed missile tests.

The results presented in Table 4.2 suggest that the prevailing pessimism over members' ability to rationally incorporate new information in periods of uncertainty may be premature. However, there is no reason to believe that these results are universal across members of Congress. Table 4.3 presents the results of the linear probability model (LPM) analysis of heterogeneous effects in responses to feasibility information, with standard errors grouped at the vote and member level.

The first two columns test the first subhypothesis (H1a) on the influence of members with electoral vulnerability, the second two columns test H1b, and the final two columns test hypothesis H1c. For each set of columns, the first is the bivariate relationship and the second is the relationship with the inclusion of covariates that change across members and through sessions.

The results are largely consistent with my expectations. Those members that have a strong accuracy incentive – in the form of electoral vulnerability – respond to missile defense failures by decreasing their support for systems. This effect is substantively significant: a 50% increase in missile defense failures in the previous year is associated with a 37% decrease in these member's support for missile defense.

In contrast, those members most likely to hold strong prior beliefs on the utility of missile defense do not appear to respond significantly to feasibility information in missile defense votes. In fact, the point estimate for pro-defense members is positive, rather than negative, although not significant. This suggests that some members may even increase support for a system after test failures. Likewise, those members from districts that receive a high percentage of military funding do not seem to respond to missile defense test failures in any systematic way. The same information results in different behaviors across members of Congress, suggesting that the uncertainty behind the feasibility of missile defense is not a product of a lack of information (in this case a lack of tests) but of a lack of agreed upon meaning of new information when it appears.

These different interpretations are clear in the Congressional Record: members of Congress observing the same event have opposite reactions based on their prior positions. For those that supported missile defense, a single test success was strong evidence the system worked (Spring 1999), while a single failure was commonly discounted as a challenge to be overcome. In contrast, those who opposed

Table 4.3 Heterogeneous effects

	Dependent Variable: vote_scaled					
	Electorally vulnerable		Defense districts		Pro-MD members	
	(1)	(2)	(3)	(4)	(5)	(6)
Percent fails	-0.390** (0.181)	-0.760*** (0.281)	0.232 (0.289)	-0.404 (0.449)	0.132 (0.355)	0.318 (0.610)
Senate		0.043 (0.122)		-0.008 (0.191)		-0.162 (0.137)
Amount		0.0001*** (0.00002)		0.0001*** (0.00003)		0.0001*** (0.00004)
Copartisan		-0.015 (0.080)		0.033 (0.092)		-0.215* (0.109)
Deficit, pct GDP, lag		0.007 (0.005)		0.009* (0.005)		0.002 (0.005)
Defense outlays, lag		-0.00000* (0.00000)		0.00000 (0.00000)		-0.00001 (0.00000)
Member and session FE?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,489	1,704	2,484	1,266	2,846	1,727
Adjusted R ²	0.357	0.417	0.416	0.459	0.360	0.281
Residual std. error	0.391 (df = 2402)	0.373 (df = 1313)	0.374 (df = 1884)	0.366 (df = 935)	0.266 (df = 2569)	0.248 (df = 1496)

p<0.1 ; *p<0.05; **p<0.01; ***p<0.001

the system were quick to cite any test failure as evidence the program was a bust and discount successful tests as “unrealistic” (Congressional Record 2003: 17154; Congressional Record 1999: 10304–10317).

Enemy failed tests have a relatively limited heterogeneous effect. I do not report the full heterogeneous table here for space reasons, but the only significant relationship is that a member in a competitive seat is slightly more likely to vote in favor of missile defense after an enemy test than before it. However, this coefficient is very small: the equivalent of five enemy missile tests in the last year would suggest only a 3.5% increase in the estimated likelihood that a member from a competitive seat would vote for missile defense. That there is any effect supports the possibility, presented above, that these members are concerned about avoiding public scrutiny in their votes.

Taken together, these results provide strong support for the heterogeneous influence of feasibility information on Congressional voting consistent with the motivated reasoning model. They demonstrate that members’ prior position on missile defense is a key factor to consider when determining how they will respond to new information. This provides support for the impact of human-generated uncertainty, and the view that information in this case is not a neutral factor.

Event study: The Gulf War as the ultimate feasibility “proof”

The use of US Patriot missiles to shoot down Iraqi Scuds during the Gulf War created an overall shift in Congressional support for missile defense. I present a brief event study of the votes and Congressional debate over this issue to suggest that changing estimates of system feasibility are a key part of the changing politics of missile defense after 1991.

During the Gulf War, US forces leveraged a suite of new military technologies to great effect. Initially, missile defense was thought to be part of this success; the military claimed that US Patriot missiles shot down 45 of 47 incoming Scud missiles. In the words of Senator Warner: ‘The American people, indeed the entire world, witnessed the Patriot system intercept Iraqi Scud missiles ... I believe this single example should be the necessary impetus to forge a bipartisan consensus on ballistic missile defense’ (Congressional Record 1991: 21075).

Of course, the Patriot missiles did not, in fact, intercept 45 missiles. A subsequent Government Accountability Office (GAO) investigation was able to verify only one successful intercept (Government Accountability Office 1994). However, this information was not widely available until mid-1992 at the earliest. The first hearing on the topic occurred in April 1992, and the relevant GAO report did not come out until 1994. Even early analysis critical of the system focused on the collateral damage fragments from intercepts rather than challenging the intercepts themselves (Postol 1991). Even though early claims of a near-perfect missile system were wrong, they nonetheless had a significant influence on feasibility estimates of members of Congress. This created a brief period of consensus about the meaning of the Patriot missile’s “success.”

The period directly before and after the Gulf War has a profusion of votes on missile defense. There are 14 missile defense amendment votes that occur from President Bush's 1991 State of the Union through the summer of 1992, which reflect a time when there was widespread public and Congressional discussion of the merits of the Patriot missile system. I compare these votes to 43 votes on missile defense from 1986 to 1991. However, the 1986–1991 period also saw a profound shift in the defense environment overall with the end of the Cold War. To address this, I pursue a difference in differences strategy, comparing within member support for missile defense votes as compared to other defense votes during the same period. For these defense votes, I include all those that propose funding changes, troop deployments or withdrawals, or make a statement of foreign policy. Moreover, the fall of the Soviet Union did not affect the strategic purpose for US missile defense. By 1991, Ballistic Missile Defense (BMD) was understood to be a tool for response against limited strikes, usually cast as accidental launches or attacks from rogue nations (Baucom 2004; Department of Defense 1991).

Table 4.4 presents the results of an LPM testing the effect of the Gulf War on missile defense voting in Congress. I find that those votes that occur after the Gulf War see significantly more support for missile defense than those that occur before. An individual member is 10% more likely to vote in favor of missile defense after the Gulf War, an effect comparable in size to being in the same party as the president.

This effect is so large primarily because, at the time, there was a brief agreement on the meaning of the feasibility information coming out of the Gulf War. In contrast to missile defense testing, the Gulf War seems to have sparked a (short-lived) consensus among members about what it meant for the feasibility of missile defense. This is supported by the evidence from the Congressional record.

In debates over missile defense spending after the Gulf War, members were quick to vaunt the performance of the Patriot missile. In the words of Representative

Table 4.4 Event study: post-Gulf War

	<i>Dependent variable: vote</i>	
	(1)	(2)
Moderate		(fixed effect)
Competitive seat		−0.0003 (0.010)
Militarily dependent		−0.012 (0.009)
Post-Gulf War	(fixed effect)	(fixed effect)
BMD vote	−0.112*** (0.012)	−0.148*** (0.023)
Post-Gulf War: BMD vote	0.072*** (0.010)	0.107*** (0.025)
Member and year FE?	Yes	Yes
Observations	38,741	28,199
Adjusted R ²	0.312	0.326

p<0.1; *p<0.05; **p<0.01; ***p<0.001

Joel Hefley (R-CO): ‘It is not a question any more of whether or not we have the technology and the capabilities to deploy SDI. We do have those capabilities ... It has been proven that we do have the technology and we are capable of deploying a system ... the Persian Gulf War should have taught us something’ (Congressional Record 1992: 13714). Just as striking is the way that democratic members changed their discussion. While it is common for democratic members of Congress to question the feasibility of missile defense systems, during the early 1990s, these questions are muted. Representative Ronald Dellums, in criticism of the system, focuses on the cost of missile defense systems and the likelihood of the threat rather than systems’ feasibility (Congressional Record 1992). Textual analysis of the missile defense debate in Congress from the mid-1990s onward suggests that this trend becomes permanent. A common democratic response to republican support for missile defense after the Gulf War has been to emphasize the costs of the system rather than engaging in debate on its strategic value (Matchett 2021).

Initially, the case of the Patriot missile system seems to provide support for the uncertainty-as-unknown approach: members seem to be updating their beliefs in response to new information in generally uniform ways. However, this consensus does not last. In just a few years after the Gulf War, questions about what it really meant for the feasibility of missile defense began to emerge. By 1994, the GAO had published a report debunking almost all of the Patriot’s “successes” in the Gulf War (Government Accountability Office 1994). At this point, members sharply diverged on what the meaning of the information presented by the Gulf War was. Long after the GAO report came out, supporters of missile defense were still citing the performance of the system in the Gulf as proof that the system worked. This suggests that not only is information interpreted in different ways by individuals in the moment, but that this interpretation can also change through time.

Alternative explanations

Although there is textual evidence that the Gulf War served as a feasibility signal, it is worth considering other aspects of the war that could produce the same result. Rather than acting as a feasibility signal, the Gulf War could also change congressional vote patterns by increasing public support for missile defense or increasing the relevance of threats. The Patriot was sensationalized in the American media and hailed as a triumph of military technology (Stech 1994). Increased public support for missile defense after these displays could have pushed members of Congress to vote in favor of missile defense funding, even if their own estimation of its feasibility was unchanged.

Alternatively, the Gulf War could have increased the perception of the threat from ballistic missiles among members of Congress and therefore the need for these systems. However, there were many arguments before 1991 for the need for a small-scale missile defense to protect against limited strikes. Systems like the Patriot had been developed specifically for this purpose. At the same time, the urge for national missile defense did not die with the Gulf War and continues to shape the politics of US missile defense today.

Nonetheless, there are several reasons to believe that feasibility matters. First, members of Congress in debate over the viability of missile defense after the Gulf War actively use it as a proof of feasibility. Second, the above two explanations only hold if the Patriot is thought to work; otherwise, it would not be popular or a desirable response to ballistic missile threats.

George Likourezos (1993) acknowledges the impact of each of these factors (increasing perceptions of threats, increasing faith in the system, and the central public role of the Patriot after the Gulf War) to conclude that the Gulf War fundamentally changed the politics of missile defense in the United States. The evidence I have collected suggests that this qualitative assessment is discernible in the quantitative data on how individual members of Congress voted. The evidence also suggests that when individuals agree on the meaning of new information – as was the case directly after the Gulf War – they largely react in a similar way. However, once the consensus on the meaning of the Patriot's performance in the Gulf War falls apart, so do members' reactions.

Conclusion

Missile defense test failures change the politics of defense procurement by providing Congress with new information about the feasibility of these systems. However, the meaning of new information is not neutral but is interpreted differently by members of Congress depending on their relative incentives: those in a competitive seat are quick to abandon support from a troubled system, while those with stronger-held opinions do not. Backing up this finding, when new information is widely agreed to have a common meaning – as was the case after the Gulf War – it can result in large aggregate changes in Congressional support for missile defense. However, once this common meaning dissolves, so does the effect of the information. This suggests that members of Congress do not receive neutral pieces of information, which they use to update their beliefs in a uniform way, but instead weigh accuracy and directional motivations in a manner consistent with the expectations of the motivated reasoning literature. When members have strong accuracy incentives (as when they are electorally vulnerable), they appear to decrease their perceptions of a system's feasibility in response to new information about its failures. In contrast, when members have stronger ideological beliefs or a material interest in defense spending, they respond to the same information in different ways, calling for increased investment in response to test failures. Elliot (in this volume) reaches a similar conclusion in financial markets.

In comparison, adversary missile launches have little effect on the willingness of most members of Congress to support missile defense. Whether this occurs because Congress has other sources of information on threat or because they hold their beliefs about threat more strongly (and are thus less likely to change them) is difficult to know. At a minimum, this finding highlights the importance of feasibility information and Congressional reactions to it.

These results suggest that uncertainty over the weapons that states should develop, at least in this case, is not a product of too little information but of a lack of common understanding of the information provided. This holds at least in the

case of missile defense. In other cases, such as with orbital space (Bower in this volume), too little information may still be the governing factor.

In this chapter, I have examined how human factors in the form of motivated reasoning cause members of Congress to form different assessments in response to the same information and thus constitute an important source of uncertainty. This chapter demonstrates the utility of a more rigorous investigation into uncertainty. Moving beyond an understanding of uncertainty as a condition of not-knowing creates the possibility of a broader understanding of potential sources of uncertainty, including those at the human level.

Future research should apply a more nuanced approach to uncertainty to broader IR theories. How does an appreciation of the role of human sources of uncertainty affect, for example, our understanding of the conditions under which two states end up in an arms race or in deterrence? How might domestic political incentives, like those demonstrated in this chapter, lead states to misinterpret the actions of their adversaries?

Understanding where uncertainty comes from is also essential to furthering our understanding of policy. Treating uncertainty as an unknown implies that the solution is more information. How might arms control policy, where so often information sharing is a key goal, change if we thought more about the need for common meaning rather than only common information? This is a point that constructivist scholars have been making for years (e.g., Katzenstein and Seybert 2018), and one exemplified by the work of many scholars in this volume.

A better understanding of the sources and solutions to uncertainty is increasingly important in a complex world. On armament, the US military is currently considering a wide range of modernization programs, and Congress faces pressure to make appropriation decisions on an increasing number of advanced military technologies. Understanding how members draw on new information, and the nature of uncertainty in these choices, will be essential to anyone hoping to understand the future evolution of the defense budget in the United States.

Note

- 1 All statements of fact, opinion, or analysis expressed are those of the author and do not reflect the official positions or views of the U.S. Government. Nothing in the contents should be construed as asserting or implying U.S. Government authentication of information or endorsement of the author's views.

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5 “Why didn’t they see it coming?”

Ground-level diplomats, foreign policy, and unconstitutional regime change

Haley J. Swedlund

Since 2010, there have been 22 cases of unconstitutional regime change or a change in government that occurs outside the constitutional structures in place for political transition. In 2021, there were military coups in Chad, Mali, Guinea, Myanmar, and Sudan; attempted coups in Armenia and Nigeria; the dramatic takeover of Afghanistan by the Taliban; and the dismissal of the government and freezing of Parliament by President Kais Saied of Tunisia (which some have called a “self-coup”). In 2022, Burkina Faso faced not one but two military coups in a single year, and there were coup attempts in Guinea-Bissau and São Tomé and Príncipe, and a self-coup in Peru.

For international actors, the uncertainty of unconstitutional regime change presents unique challenges and opportunities. In the immediate aftermath of a coup or a revolution, states and international organizations (IOs) are expected to position themselves quickly and, in some cases, engage directly in resolving the constitutional crisis. In the months that follow, foreign actors can play a critical role in promoting stability and good governance, for example, by offering foreign assistance to incentivize certain behaviors or by punishing undemocratic behavior through the suspension of foreign aid or economic sanctions (Kapstein and Converse 2008). Thus, responses to unconstitutional regime change by foreign states and IOs strongly influence the likelihood that democracy will survive (or falter).

Given the importance of these moments, it is surprising how unprepared foreign states and IOs are for unconstitutional regime change, even when there are clear warning signs (Whitehouse 2020). In interviews I conducted in Burkina Faso in September 2015, foreign representatives told me that they were blindsided by the attempted coup against the transitional government even though it was the third coup attempt in less than a year. Similarly, foreign actors were unprepared for the 2021 coup in Myanmar despite clear indications that the military was unwilling to accept the results of the November 2020 elections (Crouch 2021). Mali has experienced three coups since 2012, yet each time foreign actors scrambled to respond.

The lack of preparedness for these dramatic moments means that instead of being proactive and well-coordinated, responses by foreign actors tend to be vague, uncoordinated, and even contradictory. In the case of Burkina Faso, for example, interviewees told me that they didn’t even know the proper protocols for a situation like this and instead were left scrambling to understand and position themselves on the rapidly changing events. In the case of Mali, observers noted that objections

to the coup from Mali's main security partners – France and the USA – as well as by the African Union (AU) and the Economic Community of West African States (ECOWAS) were 'tepid and ineffective' (Dion and Sany 2021).

In this chapter, I take a central question of this volume – why didn't they see it coming? – and apply it to the case of unconstitutional regime change, asking *why* decisionmakers fail to prepare for these critical moments and how this might affect related responses. What little we know about how international actors respond to unconstitutional regime change has focused on what states and foreign actors say after unconstitutional regime change, i.e., their public statements and declarations (i.e., Shannon et al. 2015). But these moments raise even deeper questions about why international actors fail to prepare for unconstitutional regime change, which although uncertain, is not necessarily unpredictable. Why do international actors often scramble to respond to events that analysts have been warning about for weeks or even months? Answering these questions helps us address key questions of this volume, including 'Where does uncertainty come from? What does it look like? And what does uncertainty "do" in global politics?'

Drawing on insights from delegation theory as well as observations of diplomatic practice, I theorize that understanding the role and incentives of foreign embassies and their staff helps us better understand the lack of preparedness of states and IOs for unconstitutional regime change. As the eyes and ears of foreign states and IOs around the world, it is the job of diplomats on the ground to inform their superiors about events abroad. When a coup takes place in Mali, it is the embassy staff who should have "seen it coming." It is also the embassy staff who are responsible for briefing key decisionmakers on events on the ground and providing guidance on what might happen next. However, ground-level diplomats are not just representatives of states, and they are also bureaucrats ultimately accountable to and rewarded by the organizations they work for. I theorize that diplomats' tripartite role as knowledge producers, representatives of their country, and bureaucrats in a hierarchical institution may undermine their ability to manage uncertainty effectively and efficiently (Cornut 2015).

In terms of the key themes and questions of this volume, the analysis of international responses to unconstitutional regime change clarifies the role of uncertainty in global politics in two important ways. First, echoing Kelman's (in this volume) reflections on disasters and uncertainty, this chapter demonstrates that international actors can (and should) be able to prepare for uncertainty. Like disasters, unconstitutional regime change is a case of *ontological extreme uncertainty* (albeit in this case perpetuated by humans), but that doesn't mean that it is entirely unpredictable. The question then becomes, given the challenges and opportunities that unconstitutional regime change presents, why don't international actors take steps to address and prepare for this uncertainty? Second, the chapter suggests that in order to understand how uncertainty is (un)managed in global politics, we need to open the black box of the state, in this case by considering the role and positionality of diplomats on the ground. Although they are on the front lines of managing uncertainty, key features of diplomats' practice may undermine their ability to respond to extreme uncertainty.

The chapter is organized as follows: in the first section, I define what I mean by unconstitutional regime change. In the second session, I examine what we know about international responses to unconstitutional regime change, noting that analyses of international responses to unconstitutional regime change have largely focused on what states and IOs *say* in these moments, not why international actors are so *unprepared* for these events and how this affects outcomes. In the third section, I contextualize unconstitutional regime change in the debates regarding uncertainty addressed in this volume, emphasizing that uncertainty is not the same as unpredictability. In the fourth section, I make a case for why, in these pivotal moments, foreign embassies and their staff are likely to play an important role, but how the system is not set up to support preparedness and in-depth analysis. I conclude by bringing the discussion back to the core questions of this volume: ‘How do we best study, understand, and address political phenomenon that is inherently uncertain? How do we define and theorize uncertainty in global politics? What can we learn from studying uncertainty in various forms and how can we use this knowledge to our advantage in individual planning, policymaking and global problem solving?’

What is unconstitutional regime change?

For the purposes of this chapter, I define unconstitutional regime change as a change of government that occurs outside the constitutional structures for political transition. According to Krasner (1983), regime change involves an abrupt change not only in rules and decision-making but also in norms and principles. Thus, regime change is not simply the succession of different governments following an election. Rather, it implies a rupture in the fundamental structure of the state (Lawson 1993). At the time of writing, unconstitutional regime change has occurred 22 times since 2010 (see Table 5.1), with several countries, including Burkina Faso, Egypt, Mali, and Sudan, experiencing multiple unconstitutional transitions in the span of just over a decade.

Beginning in the early 2000s, a number of regional organizations, including the AU and the Organization of America States (OAS), began to develop strong norms against unconstitutional regime change (Souare 2014; Tansey 2018). In the Lomé Declaration of 2000, the Organization for African Union – the predecessor to the AU – first defined unconstitutional regime government with reference to four situations: military coups against a democratically elected government; interventions by mercenaries to replace a democratically elected government; the replacement of democratically elected governments by armed dissident groups and rebel movements; and the refusal by an incumbent government to cede power to the winning party after free, fair, and regular elections (de Wet 2021).

These measures were consolidated by Article 4(p) of the AU Constitutive Act of 2000 – the founding treaty of the AU – which elevated the condemnation and rejection of an unconstitutional regime change to a founding principle. Moreover, Article 30 of the AU Constitutive Act establishes that ‘[g]overnments which shall come to power through unconstitutional means shall not be allowed to participate

Table 5.1 Cases of unconstitutional regime change 2010-2022

<i>Year</i>	<i>Country</i>
2022	Burkina Faso (January, October)
2021	Chad, Guinea, Mali, Myanmar, Sudan
2020	Mali
2019	Sudan
2018	Armenia
2017	Zimbabwe
2014/15	Yemen
2014	Burkina Faso, Ukraine, Thailand
2013/14	Central African Republic
2013	Egypt
2012	Mali
2011	Egypt, Ivory Coast, Tunisia
2010	Kyrgyzstan, Niger

Source: CSP/INSCR Coup Dataset and supplementary materials.

To compile this list, I used the CSP/INSCR Coup Dataset and its supplementary materials to identify all cases of successful coups and forced leadership change. I then excluded cases where a regime change emerged after a lengthy civil war and/or protracted settlement process (e.g., Rwanda in 1994); cases where there was an international-led campaign to remove the executive from power, even if this was based on widespread public dissent (e.g., Libya in 2011); and, cases where the executive was removed from power based on impeachment trials or in anticipation of impeachment trials (e.g., Brazil in 2016). Data are available at: <http://www.systemicpeace.org/inscrdata.html>.

in the activities of the Union.’ This suspension clause is also echoed in Article 25 of the African Democracy Charter, which (a) provides for governmental suspension in case diplomatic initiatives have failed; (b) allows for the possibility of imposing economic sanctions; and (c) prohibits the perpetrators of unconstitutional regime change from standing in elections held to restore democratic order (de Wet 2021).

What do we know about international responses to unconstitutional regime change?

Both comparative politics and international relations (IR) scholars have extensively studied regime change, including the role of international actors (Grugel 1999; Huntington 1991; Levitsky and Way 2010; Pridham, Herring, and Sanford 1997; Whitehead 1996). This literature tells us that (a) political transitions are critical junctures (Capoccia and Keleman 2007; Collier and Collier 1991; Mahoney 2001; Pierson 2004) and (b) that external actors can play a crucial role in these moments (Pevehouse 2002; Schimmelfennig 2010; Vachudova 2005). However, this doesn't tell us what determines international responses to these events.

There is also an emerging literature on when states and multilateral organizations are willing to sanction countries for violating norms related to unconstitutional regime change. As noted above, several regional organizations have developed strong norms against unconstitutional regime change, particularly military coups, since the early 2000s (Souare 2014; Tansey 2018). However, these norms have been inconsistently applied (Masaki 2016; de Wet 2021). For example,

in 2021, the AU suspended Mali, Guinea, and Sudan in response to coups in these countries, but it failed to sanction Chad. To explain this inconsistency, scholars have focused on normative concerns, such as the protection of democracy, and material or strategic concerns on the part of states, such as trade or oil interests.

Shannon et al. (2015) find that coups against democracies and wealthy states receive more attention. Counterintuitively, however, they also find that coups against heavy traders and oil-rich states do not necessarily receive more reaction, challenging traditional IR theories that would predict that reactions are closely tied to strategic interests. Looking specifically at IOs, Hardt and Sasley (2017) find that institutions that are less economically integrated and whose member states are more cost-sensitive are more likely to use suspension to encourage compliance. Von Borzyskowski and Vabulas (2019) find that suspension is less likely when the violator is geopolitically important to the regional power or the remaining member states; however, they also find that suspensions are more likely when IOs have certain institutional features, including lower voting thresholds and suspension clauses.

Taken together, this literature tells us that states and multilateral organizations play a central role in political transitions, but that established norms and policies are often overlooked when it comes to unconstitutional regime change. What it doesn't tell us is why international actors are so unprepared for these pivotal events, and how this lack of preparation affects the ability of international actors to influence outcomes.

Uncertainty is not the same as unpredictability

In the language of this volume, unconstitutional regime change is a case of *ontological extreme uncertainty* brought on by human-generated sources – it ruptures the existing order along with the practices and expectations associated with it. For both domestic and international actors, our knowledge and understanding of the present and the future are limited because the outcomes of regime change are far from certain. Even if there is certainty about the “success” of a coup or a revolution (which there often is not, or steps would likely have been taken to prevent it), what kind of government will emerge and how it will govern is often highly uncertain. Writing about political transitions more generally, O'Donnell and Schmitter (1985: 76) note that:

the high degree of uncertainty and indeterminacy which surrounds those who participate in a transition, both with respect to their short-term interactions and, even more so, with respect to the medium- and long-term consequences which ensue. It is not just that the actors are uncertain about the identity, resources, and intentions of those with whom they are playing the transitional game. They are also aware (or should be aware) that their momentary confrontations, expedient solutions, and contingent compromises are in effect defining rules which may have a lasting but largely unpredictable effect on how and by whom the “normal” political game will be played in the future.

Particularly in discussions of coups, uncertainty has often been equated with unpredictability. As Walter Laqueur wrote in a foreword to Luttwak's classic text, *Coup d'Etat: A Practical Handbook* (1979), unpredictability makes coups

annoying not only for practicing politicians but also from the point of view of the political scientist. ... [A]lmost by definition [coups] are mortal enemies of orderly hypotheses and concepts: how does one account scientifically for the political ambitions of a few strategically well-placed individuals? (quoted in Luttwak 1979)

And, for de Bruin (2020), it is the unpredictability of coups that makes it rational for individual leaders to engage in counterbalancing activities to try to prevent coups and ensure the survival of their regime. Because domestic political actors lack information on if or when a coup might happen, it makes sense for them to engage in counterbalancing to try and prevent losing their position of power.

However, although uncertain, coups are often not as unpredictable as they are made out to be. While it is difficult to predict when an unconstitutional regime change might occur (indeterminacy), there are always domestic antecedents – even if they are underreported or their catalytic potential is underestimated (i.e., there is a *lack of information*). For example, as Acuto (2011: 526) notes, international crises 'can be anticipated and yet unavoidable. It is rather the escalation attribute of disruptive relations and alleged menace that defines crises.'

Consider the case of Mali, which experienced back-to-back coups in 2020 and 2021. In both cases, there were clear warning signs of impending trouble. The first of these coups, which analyst Bruce Whitehouse (2020) even called a 'predictable coup,' took place in August 2020 after sustained and constant protests against the government of former President Ibrahim Boubacar Keïta in the country's capital Bamako. These protests, led by the M5 group, were largely tied to frustrations over the state's inability to provide either economic or physical security. Keïta himself came to power in 2013 in elections that followed an earlier coup in 2012. However, over the next decade, citizens became disillusioned with his government, particularly its failure to address systemic corruption and insecurity, especially in Northern Mali (Whitehouse 2020).

Thus, there was initially widespread enthusiasm for the political changes ushered in by the 2020 coup. However, popular fervor faded as dignitaries of the old regime went unchallenged. In May 2021, tensions again reached a boiling point when a cabinet reshuffle omitted two former members of the military junta responsible for the 2020 coup: Defense Minister Sadio Camara and Security and Civil Protection Minister Modibo Kone. Within two hours of the announcement of the new government, Mali's transitional president Bah Ndaw and his prime minister Moctar Oaune were arrested by members of the same military junta that had carried out the 2020 coup (Haidara 2021).

The events in Mali are clearly characterized by a high degree of uncertainty, but this does not mean that they were completely unpredictable. Writing about another 2021 coup, Smith and Moakes (2021) similarly note that the September coup in

Guinea ‘was both foreseeable and preventable.’ They go on to argue that ‘this current predicament could have been avoided had the right lessons been learned from other coups that afflicted the region more recently, in Mali (twice) and in Chad – successive events that registered as only a blip on the international radar and failed to elicit meaningful action.’ Writing about the coup in Sudan in October 2021, Kirby (2021) notes: ‘There were plenty of warnings that Sudan’s democratic transition was in danger.’

In the context of debates about uncertainty, this undermines the importance of not equating uncertainty with unpredictability, and – analogous to Kelman’s chapter in this volume – opens up interesting questions about why international actors seem to fail to prepare for uncertainty. If unconstitutional regime change is so catalytic, why don’t international actors take steps to prepare for potential trouble? Why do warnings of impending trouble often go unheeded?

Looking beyond the state: The role of foreign embassies and ground-level diplomats

To better understand the lack of preparedness for unconstitutional regime change, I theorize that we need to open the black box of the state, analyzing foreign policy organizations and the individuals who work for these organizations. In particular, I theorize that we should pay more attention to ground-level diplomats, that is, representatives of states and multilateral organizations posted abroad, including ambassadors, deputy chiefs of mission, and political advisors.

In the event of a coup or a revolution, diplomats are the key link between events on the ground and the foreign state. It is the embassy staff who should have “seen it coming.” Diplomatic analysis, or ‘the attempt to convey an understanding of how authority and power relations operate and evolve within and between governments and between government and society,’ is the central function of foreign embassies (Smith 2011: 1). All but the smallest embassies have a political section (Rana 2013: 38), and the fact that embassies produce policy-oriented analysis tailored to the needs of their foreign ministry means that diplomatic missions remain ‘the home country’s best source of comprehensive information on the country of location’ (Rana 2013: 53). As Neumann writes, ‘today’s field diplomat is first and foremost an information gatherer who writes dispatches back to her foreign ministry’ (Neumann 2012: 33).

During crises, such as unconstitutional regime change, the role of embassies is likely to be even more important. Writing about the response to the revolution in Egypt, Cornut (2015: 385–386) notes that ‘changes in Western government’s political postures in January and February 2011 required reliable on the ground information and accurate, timely political analysis, for which governments relied heavily on embassies to produce.’ Time pressures and *a lack of information* force politicians to rely on bureaucrats (in this case, diplomats) who are closer to events on the ground (Rosenthal et al. 1991; Hart et al. 1993), while *incomplete information* provides an advantage to those that are more knowledgeable (Milner 1997: 21).

In the case of unconstitutional regime change, events unfold rapidly in places that are often considered peripheral. Diplomats are the ones who are supposed to have local connections and access to inside information. They are also the link between other states and multilateral organizations operating in a particular national context (Hardt 2014; Swedlund 2017). As a result, diplomats become a central node in how states and international organizations respond to coups and revolutions.

In this way, diplomats are on the front lines of managing uncertainty, but they also face a great deal of uncertainty. Diplomats in the field are there to build bridges between sending and receiving countries. Suddenly, however, they find themselves without a host government to engage with. Should diplomats work to quickly establish strong ties with the new (likely transitional) government? Or should they continue to engage with members of the previous regime who may eventually return to power or at least remain influential in the future? What if the new regime is highly undemocratic or has a history of atrocities? Should they recommend a change in foreign policy goals? For diplomats in the field, uncertainty in this case can be understood in different ways. Because the outcomes are far from certain, there is likely to be *a lack of information*. But there is also likely to be *a multiplicity of interpretations* that diplomats will have to sift through and, given their positionality, may struggle to make sense of.

According to Cornut (2015), the defining characteristic of diplomats' political work in embassies is the simultaneous management of three social roles: knowledge producer, representative of their country, and bureaucrat in a hierarchical institution. This tripartite role means that diplomats are constantly managing pressures to produce accurate and informed analysis, to represent the needs and interests of their country, and to respond to the needs and demands of the bureaucracies in which they are embedded. In what follows, I theorize that diplomats' positionality as bureaucrats in complex foreign policy organizations may, at least at times, make diplomats less likely to prepare for the *extreme uncertainty* of unconstitutional regime change and may even undermine policymaking during periods of such uncertainty.

A narrow field of vision

First, there is ample evidence that although diplomats are supposed to be their country's eyes and ears on the ground, they tend to rely on a limited number and type of sources. As Cornut (2015) shows in the case of the Egyptian revolution, information from official sources carries a disproportionate weight in diplomatic analysis. As one ambassador told Cornut (2015: 393, emphasis added), 'diplomats often prefer to talk to government counterparts, because "there are established channels, there are established protocols of communication. *It is much easier.*"' Moreover, diplomats tend to rely heavily on the briefing notes of their predecessor. While this helps preserve institutional memory, it can also reinforce existing analytical frameworks.

Foreign diplomats also tend to gravitate toward similar interlocutors who speak and communicate in certain ways. As one diplomat working in Tanzania told me, diplomats flock to domestic informants that speak their language (referencing, in this case, both their English language skills and their ability to understand international development terminology), ‘like flies on a piece of poop.’ They also tend to move in relatively tight-knit circles, relying on their counterparts in other embassies not only for information but also for camaraderie and socialization – a reality that is apparent to anyone who has lived or worked in a place with a high concentration of international diplomats (Autesserre 2014; Mosse 2011).

Finally, there is also a reluctance within diplomatic circles to express dissenting views. As one informant told Cornut (2015: 393), ‘We do not like to dissent. So if everybody is saying that the regime is very stable [...] we are almost embarrassed to say otherwise in the end. When we see that everybody is going in one direction, and everybody has the impression that it is very stable, we are embarrassed to say “Yes, but still be careful because there is this and that.”’ Similarly, Laura Seay (2011: 77) observes that expatriate circles in the Democratic Republic of Congo resemble ‘a giant echo chamber in which the opinions of international actors are largely in line with one another, but far removed from those they intend to help.’

Taken together, these norms and established practices mean that, rather than hearing a diverse range of voices, diplomats often get their information disproportionately from certain sources, and their working and personal environments are similar across contexts. As early as in the 1970s, Hedley Bull (1977: 17) worried that this would undermine knowledge of complex political environments, writing that ‘diplomats’ knowledge comes from day-to-day personal contact with the leading political strata in the country to which a diplomat is accredited, sometimes to the detriment of his understanding of society at large in that country ... such knowledge alone can be misleading.’ Similarly, in an insider exposé of the failure of the UN to intervene in the 1994 Rwanda Genocide, Michael Barnett (1997: 556) writes: ‘A good cable, I learned, is not only clear and succinct; it also offers an account that is consistent with the interests, both personal and bureaucratic, of one’s superiors. [...] [B]ureaucrats will often privilege the needs of, and take their identity from, the bureaucracy rather than the society that they ostensibly represent’ (Barnett 1997: 563).

Of course, some diplomats may seek out professional and personal relationships with a more diverse set of actors, while others might strongly dissent (Autesserre 2014). The point, however, is that there are limited professional incentives for them to do so. Indeed, diplomatic work is explicitly designed to prevent diplomats from “going native.” For example, the rationale behind relatively short diplomatic assignments is to ensure that diplomats act in the best interest of their home countries rather than their host countries. However, a limited or narrow understanding of certain contexts is likely to be particularly problematic when there is *extreme uncertainty* that ruptures a preexisting order. In the case of unconstitutional regime change, if diplomats have a narrow field of vision, they may not see the “writing on the wall” or be sensitive to the level of popular unrest in a particular context. And, even if they do catch wind of it, they may not feel empowered to express an alternative viewpoint.

The pressure for normality

There is also good reason to believe that the bureaucracies in which diplomats work are not designed to respond adequately to events that, by their very nature, disrupt the status quo. Diplomatic structures are highly routinized and mechanized (Cornut 2015; Liska 1975; Neumann 2005). The bread and butter of international diplomats is “routine diplomacy,” or the ‘daily business of diplomats and governments officials engaged in communication processes of an international nature’ (Acuto 2011: 529). The main task of ‘habitual diplomatic relations is to perpetuate the inertia that assures the existence of their state or organization within the global arena ... this task derives mainly from the social need to maintain a common set of rules and institutionalized practices that assure a certain degree of predictability’ (Acuto 2011: 529). While useful for maintaining structure and order in complex bureaucracies, the routine nature of diplomatic work not only means that diplomats are likely to struggle to respond and adapt to uncertainty but also that when moments of uncertainty occur, they are likely to prioritize a return to normality over a fundamentally new approach to engagement.

At the individual level, diplomats’ careers depend on demonstrating their usefulness to their superiors. Writing about the different accountability structures for politicians and top-level bureaucrats, Alesina and Tabellini (2016: 179) note that while politicians want to please voters and win elections, bureaucrats are motivated by career concerns: ‘They want to fulfil the goals of their organization because this improves their external professional prospects.’ Unconstitutional regime change puts these relationships at risk. At the same time, if normal diplomatic relations are suspended or if the new government has new priorities, unconstitutional regime change can also jeopardize projects that diplomats have been working to implement. As a result, diplomats often prefer to quickly return to the status quo. Acuto (2011: 531), for example, argues that the pressure for normality means that the goal of crisis diplomacy becomes about ‘reinstating the habitual inertia of international process,’ as quickly as possible.

While this may be useful for quickly restoring organizational missions and functions, it can also encourage a tendency to prioritize organizational needs or personal career incentives over a meaningful response to the changing political context. I saw evidence of this in Burkina Faso. Diplomats pushed for quick and early elections despite the potential for electoral violence, because they feared that delays would stall the aid packages and programs that justified their presence in the country (Swedlund 2015). Similarly, diplomats told me that they avoided calling the coup a coup because they did not want to trigger legal requirements to suspend aid. Doing so would jeopardize projects and potentially their jobs.

Conclusion

In this chapter, I examined a case of *ontological extreme uncertainty*. Unconstitutional regime change ‘ruptures everyday routines and expectancies in major ways,’ in the language used in this volume. These effects are evident not only for the citizens of the countries in which these events take place but also for

the foreign diplomats assigned to these countries. However, I have also argued that while these events are highly uncertain, they are not necessarily unpredictable and that the lack of preparedness by states and IOs for these events is both puzzling and detrimental to their ability to respond effectively and efficiently to these pivotal moments. To better understand this lack of preparedness, I theorized that we should turn to foreign embassies and the men and women who staff them. Although they are at the front lines of managing uncertainty, key features of diplomatic practice may undermine the ability of diplomats to respond effectively and efficiently to extreme uncertainty.

As Matejova and Shesterinina point out in the introductory chapter of this volume, uncertainty is a given in global politics, but what it looks like and what it does in global politics varies. Unconstitutional regime change highlights two important implications for the study of uncertainty in IR more broadly. First, unconstitutional regime change underscores the need to avoid conflating uncertainty and unpredictability. While unconstitutional regime change is uncertain, we know a great deal about the domestic conditions that foster it and – at least in hindsight – there are often clear signs. The question then becomes: Why don't international actors take steps to address and prepare for the possibility of unconstitutional regime change?

Second, the chapter suggests that in order to understand how uncertainty is managed (or unmanaged) in global politics, we need to open up the black box of the state, in this case considering the role and positionality of diplomats on the ground. Diplomats are often on the frontlines of uncertainty, but their triple role as knowledge producers, representatives of their country, and bureaucrats in a hierarchical institution may undermine their ability to manage uncertainty effectively and efficiently.

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III

Uncertainty in international policy and law



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6 Legal uncertainty and the making of maritime boundaries

Umut Yüksel

Uncertainty – be it understood as lack of information, lack of shared meaning, too much information, or inherent ambiguity of global politics – has often been cast in a negative light, as obstacles to understanding the world, fashioning appropriate policies, and avoiding conflict. In this chapter, I focus on a type of uncertainty that is habitually created in international lawmaking processes and manifests itself as either a lack of agreement on how an issue area should be governed, or multiple, and similarly authoritative rules and interpretations that compete to shape responses to specific legal questions. I argue that this *legal uncertainty* can indeed make cooperation more difficult for some actors by increasing the possibility of misjudgments and misrepresentations that prevent them from finding common ground. At the same time, it can encourage others to specify and lock in shared understandings, thereby insulating them to a certain extent from uncertainty. Uncertainty that arises in international law provides a unique opportunity to illustrate both possibilities.

In this chapter, I argue that both *multilateral lawmaking* (law made by states signing conventions) and *judicial lawmaking* (law made through the interpretations of international courts and tribunals) have effects that are often the opposite of what their makers intend. The diffuse nature of lawmaking authority and lack of hierarchy among the sources of international law routinely fosters *legal uncertainty*, which shapes state choices as well as patterns of interstate relations. This type of uncertainty has its roots in human activity – actions and decisions of actors involved in the making of international law, mainly states and international courts. It essentially stems from legal production, although it can be indirectly fueled by external developments insofar as these encourage actors to engage in further lawmaking. It is *ontological* in the sense that it concerns our inability to point to what the law is at any given moment in time, considering that different sources of law say different things.

I introduce and illustrate *legal uncertainty* in the context of maritime boundary making, which is the process by which a state defines the nature and extent of its jurisdiction in the sea by drawing boundaries between its maritime zones on the one hand, and the high seas and/or the maritime zones of a neighboring state on the other hand. The importance of law in the field of maritime boundaries, the variation in the sources of law as well as the various ways in which states used the rules and interpretations that became available to them, and the various ways in which states dealt with their boundaries under legal uncertainty make this domain

an ideal one to study. The multilateral and judicial lawmaking processes resulted in multiple rules and interpretations that coexisted and often conflicted with each other. While these rules and interpretations provided a basis for states to justify conflicting claims, some pairs of states still managed to settle their boundaries by settling on one of the possible rules. Using a case study of the boundary delimitation between Mexico and the USA, this chapter illustrates how legal uncertainty operates as states seek to define their maritime boundaries.

The rest of this chapter is organized as follows: first, I define the concept of *international legal uncertainty* as a routine byproduct of international lawmaking, distinguishing it from related concepts, such as imprecision and ambiguity, and laying down its main features. Second, I propose a way of measuring this concept in the context of maritime boundary making. Third, I illustrate how legal uncertainty may affect prospects for successful maritime delimitation by focusing on the case of the maritime delimitation between Mexico and the USA. The final section concludes by discussing implications and future research directions.

International law in global politics

Conceptualizing and examining uncertainty in international lawmaking processes is important as international law and features associated with legal order have become pervasive in global governance. States have created international institutions for purposes as diverse as the regulation of international economic activities, protection of the environment, and the prosecution of international crimes. In many issue areas, states have delegated dispute resolution to courts and tribunals and committed themselves to be bound by their rulings. Against this background, scholars have sought to catalogue and analyze this increasing presence of international law in international governance under the heading of legalization (Goldstein et al. 2000). They have looked at features like obligation, precision, and delegation to address the various ways in and degrees to which states rely on the law to sustain international cooperation in different issue areas (Abbott et al. 2000). The rational design of institutions literature has similarly examined how states set up international institutions to solve specific problems of cooperation (Koremenos et al. 2001).

These contributions and the work they led to have greatly increased our understanding of the different ways in which international institutions and law can further and sustain cooperation. Yet, they have given too much power to the actors driving the legalization – states as well as international courts and tribunals. They have implicitly assumed that law, treaties, and judicial institutions are fine-tuned instruments that sustain interstate cooperation in accordance with their designers' preferences. This assumption is problematic because law, and especially international law, evolves in ways that evade its designers' control – actors may come together to create new law in multilateral treaties, but they can seldom control how that law will be understood, interpreted, and used by other actors, including courts and tribunals.

Several attempts to assess international law and its potential role in sustaining cooperation have been limited to assessing treaties and specific provisions therein.

Legalization scholars have suggested that *precision* is an important feature of international law, with variation along this dimension expected to affect actor choices and behavior. For these scholars, a ‘precise rule specifies clearly and unambiguously what is expected of a state or other actor (in terms of both the intended objective and the means of achieving it) in a particular set of circumstances. In other words, precision narrows the scope for reasonable interpretation’ (Abbott et al. 2000: 412). The literatures on rational design of institutions and the subsequent Continent of International Law (COIL) framework similarly use *precision* to ‘refer to the exactness [...] of [an agreement’s] prescribed, proscribed, and authorized behaviors,’ where the interest is mainly on textual clarity, and as a subsidiary matter, on completeness, mainly conceived of as the degree of detail (Koremenos 2016: 160).¹

While precision may be well suited when talking about how specific and detailed treaties or provisions are, it is not adequate to describe a broader context of legal confusion where what the law requires is not self-evident to actors. Another group of scholars has suggested that this *ambiguity* is an important feature of global politics, including legal rules, with actors attributing meanings to concepts and obligations in a variety of ways (Best 2008; Widmaier and Glanville 2015). As highlighted in the introduction to this volume, such ambiguity brings along a multiplicity of interpretations. This may be fueled in part by textual underspecification, but other factors may well sustain divergent understandings of law.

Textually underspecified rules do not necessarily or immediately create a multiplicity of interpretations, however.² More likely to create such multiplicity are divergent authoritative interpretations that can be made of rules – which may be underspecified or not – or competing rules that may be championed against existing or emerging rules. Similarly, precise texts do not need to be coupled with a broader agreement on them. Although textually *precise* and *specific* rules may have a higher chance of commanding a consensus around how they should be understood, interpreted, and applied, this does not need to be the case. Rules that seem to be precise in the books may be muddled by incoherent application or become riddled with exceptions. What looks precise when it is agreed to may thus become subject to controversy over time. Ultimately, one needs an understanding of legal uncertainty that is not entirely – or even principally – determined by the text or attributable to unavoidable ambiguity. As I argue below, legal uncertainty mainly depends on how actors who have the authority to interpret and develop law may interpret and respond to the same text in different, inconsistent ways.

A more helpful understanding of the uncertainty of legal rules has been associated with the notion of *clarity*. Rules are considered to be *clear* when they allow states to ‘understand what is permitted, prohibited or required by the law’ (Abbott et al. 2000: 412). Huth et al. use the term *clarity* as a quality of a well-established rule (which can be a treaty rule or an international custom) – one that has seen consistent interpretation and application by states and other legal actors (2013: 94). Similarly, Franck makes reference to *clarity* in his definition of *determinacy* as ‘clarity of the message transmitted by a rule to those to whom it is directed as a command’ (1988: 721). The interest is in the clarity of a rule in light of what a

rule means to a specific audience, which may be affected by not only the textual expression of that rule but also commentaries and alleged applications thereof. These definitions seem to apply to messages contained in specific rules rather than a situation where there may be several clearly articulated rules, without it being evident which one is to be applied in a particular setting.

A related term that has been used in relation to legal uncertainty is that of *indeterminacy*. The question here is whether ‘the existing body of legal doctrines – statutes, administrative regulations, and court decisions – permits a judge to justify any result she desires in a particular case’ (Solum 1987: 462). When law is indeterminate, for every legal rule, one can find another that leads to a different, even the opposite conclusion (Solum 1987: 465). The implication is that rules are by themselves insufficient guides to the adjudicators. Projecting this to international relations, indeterminacy may plausibly have implications on how states will behave and justify their acts and legal stances. If indeterminacy is accompanied by a possibility of finding a counter rule for every legal rule, states may have a wide range of rules or interpretations to choose from to justify any course of action they may decide to take.

The concept of *international legal uncertainty* that this chapter proposes differs from these notions, as well as the conceptions of uncertainty in IR as laid out by the introduction to this volume. While it shares some common ground with uncertainty understood as too little information, too much information, a lack of shared meaning, and a multiplicity of interpretations, it is distinct from any of these ideal types. The conceptual discussion below will focus on this distinction, while preparing the ground for an example measurement and analytical strategy to assess the evolution and effect of legal uncertainty in the field of maritime boundary making.

Defining the concept of international legal uncertainty

A legally uncertain situation corresponds to one in which what the law requires is not evident. This type of uncertainty can be relevant in a domain of global politics that is not yet legalized to a sufficient extent. When this is the case, uncertainty stems from a *lack of shared meaning*, as discussed in the introduction to this volume. Moreover, what international law requires in a given question is also not evident when there are multiple, similarly authoritative takes on how international law governs that question. As legalization takes hold of an increasing number of issue areas, this form of legal uncertainty is more likely to arise. While legal uncertainty implies a *multiplicity of interpretations* that can be made of legal rules by states whose action is governed by those rules, what characterizes legal uncertainty as I define it is the fact that *authoritative* sources of law promote and interpret rules differently.

International legal uncertainty can thus be defined as the disagreement within and between various *sources of international law* with respect to what the law requires. The sources of international law have traditionally been recognized as the ones enumerated in Article 38 of the Statute of the International Court of Justice

(ICJ) (Kennedy 1987: 2–3), which enjoins the ICJ to apply the following when seized of a dispute:

- a. international *conventions*, whether general or particular, establishing rules expressly recognized by the contesting states;
- b. international *custom*, as evidence of a general practice accepted as law;
- c. the general *principles* of law recognized by civilized nations;
- d. [...] *judicial decisions* and the *teachings* of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

(United Nations 1946, art. 38)

From the perspectives of the actors subject to law – mainly states – legal uncertainty arises when these sources promote conflicting prescriptions. This can occur in a number of ways. First, different sources of law may disagree on how to interpret a rule, perhaps because the rule is textually underspecified or changing circumstances encourage a different take on a rule inherited from the past. Second, sources may disagree on which rule is relevant in a given situation. Old rules may be argued to lose relevance given changes in circumstances and patterns of state practice, and new rules may be proposed in their stead, both sets of rules coexisting for a time in different conventions, practices, and judicial decisions. Finally, a situation of legal uncertainty may also arise when legal rules are lacking in a novel domain of action. These legal gaps may generate uncertainty if they are accompanied by incoherent state practice suggesting different understandings about how the new issue area could be regulated. We may think of this as a potential conflict between different rules or a competition between emergent customs with inconsistent prescriptions.

As defined here, *legal uncertainty* has three important characteristics: its *systemic nature*, its *temporal variation*, and its *exogeneity* with respect to state practice in the short run. Table 6.1 summarizes these features.

First, legal uncertainty is a systemic feature. That is, it operates at the level of a legal system – in this case, the international legal system. Saying that legal uncertainty is a feature of the system does not mean that the entire system itself is uncertain; there may be specific domains of international law that may be certain and others less so at a given time. This depends on whether the authoritative sources of law have said anything about them and how consistent their pronouncements were with regard to particular questions. Thus, it will be useful to examine legal uncertainty in specific domains that are limited to the considerations of the states acting within them, as I do here in the domain of international maritime boundary making.

Table 6.1 Main features of international legal uncertainty

Systemic	Specific to a treaty, provision, or case
Time-variant	Not constant
Exogenous	Endogenous, generated or shaped by dyadic interaction

The systemic nature of legal uncertainty also reveals its primary concern for ontological uncertainty. In a given domain, uncertainty is about the actual (not hypothetical) difficulty of saying what law is, due to an objective legal void or a series of well-articulated rules and interpretations provided by the sources of international law. This difficulty is sustained by the lack of a final arbitrator of rules, interpretations, and meanings in international law. Instead, a variety of sources can make similarly authoritative claims about the law. This is the reason why multilateral and judicial lawmaking episodes can routinely generate legal uncertainty. As noted above, this ontological uncertainty is a feature of the entire system rather than a feature of an actor's difficulty in knowing or discovering what law is. Actors' primary concern is not in acquiring accurate knowledge about the law or discovering what the law is.

Second, legal uncertainty varies over time. In some periods legal rules emanating from different sources of law are consistent with each other. In others, new customs emerge while old customs erode; states take unilateral action or sign treaties reflecting different understandings of law, some of which may crystallize into new customs over time; and international courts and tribunals decide on cases in a manner that does not always follow treaty or customary law or in ways contradicting previous jurisprudence. Contradictions between some legal rules may be resolved over time and new contradictions may emerge. A lack of shared meaning and rules can be replaced by a multiplicity of interpretations as multilateral and judicial lawmaking attempts are made to bring order into state practice. Due to the lack of a clear hierarchy³ among international legal sources, new input in the form of a new rule or interpretation does not lead to the extinction of old understandings. Instead, new input increases the set of rules and interpretations that states can choose from. Understood this way, uncertainty is built up over time through lawmaking that gives different – even if slightly – answers to the same questions.

Finally, legal uncertainty is exogenous to the practice of and interactions between particular states. To be sure, legal uncertainty stems from human activity insofar as it is produced by human collectivities such as states and international institutions. State practice, which can be seen as the set of relevant state policies and actions carried out with the conviction that they are required by the law, creates and shapes customary law. States also make and interpret treaties. Thus, states are both the makers and receivers of international law. Institutions such as international courts and tribunals, for their part, use the authority delegated to them by states to interpret and develop law. Saying that legal uncertainty is *exogenous* is not attributing uncertainty to an external source, natural or physical. Legal uncertainty is *exogenous* with respect to any state or dyad taken individually precisely because it is a production of a collectivity over time.

Exogeneity does not mean that positions that states take do not feed into uncertainty. Berenike Prem in this volume shows how states that are against the development of a norm prohibiting autonomous weapons have sought to play up the uncertainty associated with the promises and risks associated with such weapons. As a result of an action of a group of powerful states, no prohibition against the use of such weapons has been codified. Uncertainty that is fostered here, however,

is not about what the law is. What distinguishes legal uncertainty from uncertainty about the effects of a weapon system is the former's insensitivity to actions or statements of states, which, on their own, do not have the authority to make international law.

Although lawmaking is insensitive to individual state opinions, a state's action can contribute to making law overall more uncertain. This, however, does not happen immediately. For instance, if a state adopts a new interpretation of a particular customary rule, it does not immediately make the law more uncertain. The law can indeed become more uncertain if this deviance changes state practice more widely, for instance, by being replicated by other states (Gould and Barkun 1970: 197). Similarly, an individual state can also play a role in filling a legal gap. Moore and Orchard in this volume provide an account of how this may happen in the case of norms about internal displacement due to climate change. When norms are not concrete enough to provide guidance to actors, some may be able to act as norm entrepreneurs and promote understandings to tackle this type of uncertainty. Rather than being mere norm takers, such actors can play a crucial role in challenging and promoting particular norms. More so than in norms, the production of international law is insulated from the actions of any individual state and often requires a formal intervention in the form of a treaty or a judicial ruling.

In short, what creates uncertainty is the production and promotion of different rules and interpretations by authorities that are entitled to provide them. These different rules and interpretations do not exist due to states interpreting the same texts differently. The texts and limited sets of established interpretations given to texts can be *objectively* inconsistent with each other. For instance, the provision "the default rule is X" contained in a multilateral treaty is clearly incompatible with a court ruling that holds that "there is no default rule." Both are clear statements that conflict with each other. States often choose between these two instead of adding their original interpretation; attempts to say "the default rule is Y" without any justification based on legal sources are likely to fail.⁴ The multiplicity of interpretations is not created by any state that wills it. Only the interpretations backed by the authoritative sources of international law – international treaties and court judgments⁵ – are part of the multiplicity, not individual views of the states. In the short run, then, states *endure* legal uncertainty.

Measuring legal uncertainty

If legal uncertainty is disagreement born out of legal sources being silent about what law is or different sources of law saying different things about what law requires, its measurement requires (a) the identification of relevant questions, and (b) coming to a judgment about the degree to which consensus existed with regards to each question in a given time frame. I focus on the question of the **maritime boundary delimitation methodology** that should be used to delineate areas subject to overlapping entitlements of two states. I approach this question by studying the prominent and tractable sources of international law – treaties, treaty negotiation records, and judicial decisions. I qualitatively assess the extent to which the

views identified in these sources are consistent with each other. I focus on instances of lawmaking where new responses were given to the questions concerning maritime delimitation as potential cut-off points for the degree of uncertainty.⁶

One category of potential cut-off points includes moments where *states come together to codify and further develop international law of the sea* on these points (such as the three UN Conferences on the Law of the Sea). Around such moments, we can reasonably expect disagreements to arise about what the current law is, how it is changing, and how it needs to change. Another set of potential cut-off points consists of *judicial decisions on maritime delimitation*. By interpreting and applying customary and treaty rules, courts and tribunals can create new laws that may conflict with the preexisting set of legal norms. A judicial decision may interpret a rule in a way that is clearly inconsistent with a treaty, with a previous ruling or with what legal scholars or practitioners think to be the correct interpretation. In addition to creating laws that may conflict with the law coming from other sources, judicial decisions can specify what customary law requires. The written statements of what custom is given by courts and tribunals may then clash with other interpretations implied in treaties or suggested by legal scholars.

In general, then, moments of lawmaking (multilateral or judicial) are especially susceptible to changing the coherence (or the degree of agreement) in law. I identify such cut-off points to create three periods, covering low, medium, and high uncertainty. At the higher end, we have a *high level of legal uncertainty*, when there are important inconsistencies within the set of rules and interpretations that make up the law of maritime delimitation, often accompanied by intense debates within the international legal scholarly community over how these inconsistencies should be resolved. At the other end, we have *low level of legal uncertainty*, where legal rules and interpretations emanating from various sources of law are broadly consistent with each other on the content and application of the law of maritime delimitation. In between these two, we may have a *medium level of legal uncertainty*, where certain areas of convergence are identifiable within the sources of law, but some more or less important questions remain debated. Table 6.2 summarizes these descriptions, and a narrative of the changes in the level of uncertainty follows.

Table 6.2 Ranking according to disagreement over the delimitation of maritime areas

Level	Low	Medium	High
	Sources agree on the default delimitation method and the factors that need to be considered in maritime boundary delimitation.	Sources disagree less and less over the delimitation method and relevant factors, coming to similar conclusions each time they make new input.	Sources disagree significantly over the delimitation method and/or factors that should be taken into consideration in maritime delimitation.
	1958–1969	1993–	1969–1993

1958–1969: *A default delimitation rule and low legal uncertainty*

The cut-off event in terms of changes in the legal uncertainty is the adoption of two of the four conventions resulting from First United Nations Conference on the Law of the Sea (UNCLOS-I), the Convention on the Territorial Sea and the Contiguous Zone (TSC), and the Convention on the Continental Shelf (CSC). Both the TSC and CSC contained similar provisions that suggested that a median/equidistant line would be drawn if parties did not agree otherwise and in the absence of special circumstances (or historical title, in the case of the territorial sea) (TSC 1958 Article 12, CSC 1958 Article 6). This rule of delimitation came to be known as the ‘equidistance plus special circumstances rule’ (Churchill and Lowe 1988: 184).

1969–1993: A rival delimitation rule and high legal uncertainty

The cut-off event preceding these times of high legal uncertainty is the 1969 ICJ judgment on *the North Sea Continental Shelf Cases*, where the ICJ rejected the obligatory nature of the equidistance rule for states that were not party to the 1958 CSC. It also came to more general conclusions about how maritime delimitation should be done, ruling that ‘delimitation must be the object of agreement ... arrived at in accordance with *equitable principles*’ (ICJ 1969, para. 85, emphasis added). The core principles governing maritime delimitation thus became subject to inconsistent answers from two authoritative sources – treaty law, the 1958 CSC, clearly gave predominance to equidistance/median line, whereas the ICJ put forward a more flexible – and unpredictable – method of equitable principles. The ruling arguably prevented the equidistance rule from becoming customary and certainly gave arguments to a number of states that could benefit from a different rule.

Another important source of disagreement in these first years of the 1970s was the beginning of a great effort to produce a new multilateral treaty. The Third United Nations Conference on the Law of the Sea (UNCLOS-III) convened in 1973 with a mandate ‘to adopt a convention dealing with all matters relating to the law of the sea’ (UNGA 1973, para. 3). UNCLOS-III held 11 formal sessions between December 1973 and December 1982, during which all the questions related to the law of the sea were discussed with a view to adopting a unique document. Several disagreements arose during the negotiations, and although the nature and extent of maritime zones were agreed upon relatively early in the process, the disagreement over the delimitation rule lasted until the final years of the conference. In the end, states could only agree to a very vague rule, which shows the extent to which there were disagreements between those that supported “equidistance” as the method to use and those that looked for a more flexible rule in line with what the ICJ had ruled in 1969 – equitable principles (Tanaka 2015: 200–201). The text adopted in UNCLOS in 1982 did not help arbitrate between the two contending methods – equidistance and equitable principles. The provision included in the treaty concerning continental shelf delimitation was as follows:

The delimitation of the continental shelf between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution.

(UNCLOS, Article 83, para. 1)

An identical statement was adopted concerning the delimitation of the exclusive economic zone (UNCLOS, Article 74, para. 1). Instead of naming a specific, practical method, these provisions only mentioned “equitable solution” as a result to reach. As the ICJ put it in its *Libya/Malta* judgment, ‘[t]he Convention sets a goal to be achieved but is silent as to the method to be followed to achieve it’ (ICJ 1985, para. 28). Consequently, it remained debatable whether this goal required the use of equidistance/median line at some point in the process or it was completely agnostic about the appropriateness of any particular method in the abstract.

In the years following the signature of the UNCLOS, the courts and tribunals seemed to take the second view. Throughout this period, when called on to delimit maritime boundaries, international tribunals would simply state that ‘the delimitation of a [...] boundary must be effected by the application of equitable principles in all the relevant circumstances in order to achieve an equitable result’ (see, e.g., ICJ 1985 [*Libya/Malta*], para. 45). Thus, this period could be considered one with *high legal uncertainty* as different sources continued to give different answers about what maritime delimitation required – with sources elevating equidistance as the default rule conflicting with authoritative legal pronouncements that reject this status and instead promote equitable principles.

1994–2016: Low uncertainty as conflict among sources leaves way to compromise

The cut-off event preceding this time of low uncertainty is the ICJ’s *Greenland/Jan Mayen* ruling in which the ICJ incorporated equidistance as the first step in maritime delimitation for coastal states with opposite coasts. It did so by noting that reaching an equitable solution required, as a matter of customary rule, beginning from an equidistant/median line, which could then be adjusted if relevant circumstances justified it (ICJ 1993, paras. 53, 54). From this event onwards, international courts and tribunals visibly began to coalesce around a method of maritime delimitation that helped resolve the disagreement between the hitherto contending principles of equidistance and equity and provided a more predictable situation for states seeking to delimit their maritime boundaries.

These decisions helped crystalize what came to be called the three-stage methodology (ICJ 2006, paras. 116–122). According to this, a court or a tribunal would first draw a provisional equidistant line. At the second stage, it would consider whether the existence of special or relevant circumstances would justify modifying the provisional line. Finally, at the third stage, the court or the tribunal would verify that the result of the two previous stages taken as a whole did not lead to any great disproportionality of maritime areas by comparison to the ratio of coastal lengths (Prescott and Schofield 2005: 25).

By being consistent with this method that poses equidistance as a first step in maritime delimitation, international courts, and tribunals have provided a degree of predictability to the law of maritime delimitation – predictability not only in the opinion of international law scholarship but presumably also from the perspective of negotiating states and their advisors.

Maritime delimitation under legal uncertainty

In times of *legal uncertainty*, it may well be harder for state expectations to converge around a narrow set of solutions that includes potential boundaries that do not fall far from either side's claims. Without such convergence, states may find it difficult to conclude delimitation agreements. Even when states are engaged in negotiations, they will first need to determine which legal principles are relevant to the drawing of their boundary before talking about other factors that may be taken into account to arrive at a line acceptable to both states. Thus, it may be expected that higher degrees of legal uncertainty are associated with lower rates of maritime boundary delimitation. However, it may also be the case that legal uncertainty pushes states to quickly delimit their boundaries so that they have a clear jurisdictional basis for their economic activities despite the uncertainties surrounding the law.

This empirical section briefly illustrates a way in which states may respond to legal uncertainty – by bilaterally settling on a rule and delimiting their boundary accordingly. I illustrate the workings of legal uncertainty in a case where states were able to sign a maritime boundary agreement in times of high legal uncertainty but were unable to ratify it until law became more settled.

Mexico–United States maritime boundary delimitation

The maritime boundary relations between Mexico and the United States are surprising in that they are marked by a series of delimitations agreed upon in an era of high legal uncertainty with regard to the extent of maritime zones and the rule for the delimitation of overlapping state entitlements in the sea. These delimitation agreements consisted of two treaties, signed in 1970 and 1978, and an exchange of notes in 1976. I will focus my analysis on possible factors that explain how states were able to keep their unilateral claims within limits that their neighbors would consider reasonable, averted potential disputes, and delimited a long maritime boundary over a period of 10 years marked by high legal uncertainty. I will also discuss how the ratification of the delimitation agreement was delayed by the interventions of actors who wanted to make the most of legal uncertainty by making more extensive claims.

In 1976, both Mexico and the USA extended their jurisdiction in the sea to 200 nautical miles. It is suggested that these two acts were the immediate drivers of the agreement that came later that year when the two states exchanged notes to establish provisional maritime boundaries (Sepúlveda 1983: 159–160).⁷ These provisional boundaries were reaffirmed with the signature of a maritime boundary agreement on 4 May 1978. Mexico ratified the agreement the following year. US

President Jimmy Carter submitted this treaty – together with two other maritime boundary delimitation treaties signed with Cuba and Venezuela – to the US Senate in early 1979.⁸ The Senate Foreign Relations Committee unanimously voted to transmit the treaty to the full Senate but requests for further study and concerns raised about the line drawn in the Gulf of Mexico delayed the process. The Senate finally gave its consent in 1997, and the treaty entered into force on 13 November 1997.

It is indeed surprising that a commonly and easily agreed upon maritime boundary emerged at a time in which states had a number of legal rules and interpretations to adopt, some of which would have given a broader area of jurisdiction to one or the other state in certain portions of the boundary. The 1978 treaty used the equidistance method and gave full effect to islands and low tide elevations, at a time when law was highly uncertain as to the appropriate method of maritime delimitation and the effect that should be given to islands. Smith and Colson (1993: 429) describe the apparent restraint of the parties as follows:

Notwithstanding that there were differences between the two countries concerning the juridical nature of the zones and fishing rights, they nonetheless agreed not to exacerbate these differences by making claims of maximum legal advantage which would have led to a boundary dispute. [...] Recognizing that pressing a maximum claim on one coast would work to the other side's advantage on the other, the governments agreed to adopt the same approach for each coast. This led to an overall agreement rather than a dispute on each coast.

The hearing before the Foreign Relations Committee while the treaty ratification was being discussed provides evidence that different delimitation methods were considered. A prominent scholar, Professor Hedberg, had proposed an alternative delimitation method that would have given the United States more in the Gulf of Mexico than what was agreed upon in the 1978 treaty. This method would have involved leaving Mexican islands off the coast of Yucatan not entitled to any continental shelf. Speaking against this suggestion, the deputy legal adviser reiterated the longstanding US policy in favor of the rule giving full effect to islands in delimitation:

I don't think there is any doubt of it: from the point of view of the national interest of the United States, the security interest, the resource interest, and *control over as much area as possible, this principle* serves our general boundary position very well.

(US Senate 1980, 21, emphasis added)

Speaking of the dangers of nonratification on the part of the USA, the deputy legal adviser pointed out that his 'greatest concern' would be that 'if left unresolved, [the matter] could become more contentious over time. [...] a change in Mexico's position which conceivably would make it difficult for us to obtain jurisdiction [in

the Pacific]’ (US Senate 1980: 21). Finally, he suggested that if the US position were to change in line with the principles laid out by Professor Hedberg, ‘[t]hat position would be rejected out of hand by Mexico as overreaching and not based on principles relevant to maritime boundary delimitation. We would have a serious bilateral dispute then in our relations with Mexico if we went in that direction’ (US Senate 1980: 21). Finally, in a final attempt to justify the treaty, the adviser talked of a “trade” that was made whereby the use of the same principle giving full effect to islands favored one side on one coast and the other on the other (US Senate 1980: 23).

In this case, then, facilitating the agreement was the fact that neither Mexico nor the USA could rely on one rule that, if applied to that entire boundary, would result in a clearly more favorable result for them. The relevant rule was that of islands generating full maritime zones, and this rule favored both sides. This suggests that if states are favored by the same rules due to their geographies, they can well sign agreements even though uncertainty is high. If the USA wanted to ignore islands and low tide elevations in maritime delimitation, it would have gained in the Gulf of Mexico but lost in the Pacific. The coincidence in the value both the USA and Mexico gave to the principle, no doubt helped by economic prospects, seems to have prevented the pursuit of contending claims. For other countries, this may not be the case, and they deserve further study.

Although the treaty went ahead, one of the reasons that is given for the significant delay between the signature and ratification is the objections raised by Professor Hedberg, as noted above. The achieved certainty in law seems to have voided the objections by the time the Senate took up the ratification issue in 1997. During this latter hearing, Senator Chuck Hagel notes that ‘[i]nitially, there was some controversy over the methodology used to delineate the maritime boundary [...] in the Gulf of Mexico,’ but that, as he saw it, ‘the delineation methodology [...] has now been accepted by all sides’ (US Senate 1997: 17–18). According to the 1997 hearing reports, the American Association of Petroleum Geologists (AAPG) also seems to have shifted its position and communicated this change by letter to the Foreign Relations Committee. It may be that the overall consensus over the delimitation rule obtained at the end of the 1990s left little opportunity for the AAPG to insist on Hedberg’s alternative proposals, and their change of position may have given impetus to the ratification of the treaty.

The fact that there were several alternative rules and proposals considered during the UNCLOS-III – “tentative thinking” as Professor Hedberg had called it – provided room for calling the delimitation method used in the Gulf of Mexico into question. It plausibly raised questions in the minds of several senators about why, if delimitation methods more beneficial to the USA are available, a treaty giving away much that could have been otherwise controlled by the USA should be ratified. Future studies should consider how the existence of various competing rules can be relevant in the entire process of treaty making, from initial contacts between state officials to the exchange of ratification instruments. It would also be interesting to think about the mechanisms that may lead to delayed ratification – for instance, as the ratification procedure gives the opponents of the treaty another

chance to exploit the uncertainty in law to push forward their preferred solution. Such inquiries could usefully consider the composition of interests that can be voiced within a state – such as the views held by coalition partners, opposition parties, and lobby groups.

The case study illustrates the three important features of uncertainty: its *systemic* and *time-variant* nature, as well as its *exogeneity* to the actors. Although states have opportunities to pick and choose from existing, available rules that are the hallmark of high periods of legal uncertainty, they are rarely able to introduce their own preferred rules into the set of available alternatives from which they can then legitimately choose. Professor Hedberg vehemently advocated for his *sui generis* delimitation method, but what made the most difference were interventions from treaty making periods as well as case law, which followed their own evolution at the level of the legal system. The case study highlights the working of legal uncertainty and law more broadly as a systemic feature under which states – even a hegemonic power like the USA – must operate with little expectation that they can by themselves and as they wish use or change the law to their advantage.

Conclusion

This chapter has posed legal uncertainty as a useful concept to understand how states behave in an increasingly legalized world. It has proposed that international legal uncertainty is often a routine byproduct of the very processes by which international law is made and evolves. It has shown how legal uncertainty touches on broader understandings of uncertainty, especially lack of shared meaning and multiplicity of interpretations, while differing from them in important ways. Future work can make this concept more useful by theorizing and measuring legal uncertainty in other legal domains and in a more disaggregated manner. It can also assess the conditions under which actors can individually or collectively shape this uncertainty or make it irrelevant to their relations with other states.

The chapter shows how lawmaking may plausibly result in competition between and among rules and interpretations, and how increased legal production in terms of multilateral and judicial lawmaking affects the way in which states define their positions and engage in bilateral negotiations over their boundaries. It invites further thinking into the impact of law on conflict and cooperation processes. Future work could usefully consider in a more fine-grained manner how the various political, economic, and strategic interests of states interact with the incentives, opportunities, and constraints provided by laws and institutions that subtend state action. Although developed in the domain of maritime boundary relations, the theory I propose has implications for other issue areas where distributional and zero-sum issues arise, sometimes concurrently, and where laws are being made to guide states to a peaceful settlement. While the success of new legal rules in providing more certainty and higher likelihood of peaceful dispute management should not be taken for granted, it is also important to assess how states can nevertheless cooperate despite legal uncertainty by fixing meanings and obligations in a bilateral manner.

Notes

- 1 Operationally, the coders in the COIL project give precision scores for treaty texts based on their judgments on how precise the provisions of the treaty are. Provisions that prohibit a certain course of action are deemed more precise in general. In terms of completeness, which seems to be another concern, treaties that contain specific quotas and those that seem to be more detailed are also deemed to be more precise than shorter, broader agreements (Koremenos 2016: 160–162).
- 2 That being said, imprecision and underspecification could make it easier for legal uncertainty to arise by allowing different interpretations. Also, underspecification could be a sign of law being uncertain in a way, because states have been unable to clearly articulate what rights or obligations are implicated in a rule. In many cases, however, underspecified provisions are a design feature that are included in treaties to provide flexibility to states when necessary. It may well be that states want to keep their options open if unforeseen developments require them to deviate from law temporarily.
- 3 This does not mean that, in practice, some pronouncements hold more sway than others. That one rule comes to be seen as more authoritative than another may have to do with which source promoted it, when it was proposed, how consistent it is with existing rules and practices, and so on. Rules that are perceived as more legitimate can also have a greater authority claim. Yet, while a new rule or understanding promoted by a court may be considered wrong by many states and hold less sway in state practice, this does not mean that the rule proposed by a court does not become part of the law, available to be adopted and used by other interested states.
- 4 To be sure, once they agree that there is no default using which the dispute should be resolved, states can still disagree on how to resolve their dispute. Here the disagreeing parties will make appeal to extra-legal reasons.
- 5 Custom can be added here, although what an individual state interprets the custom to be does not reach the same level of authority that is gained when the custom is codified in a treaty or interpreted by authoritative international courts – most commonly, the ICJ.
- 6 Talking about uncertainty in degrees does not suggest that there is inevitably some legal uncertainty in every issue. There will be no legal uncertainty if there is no law that can be subject to multiple interpretations. In the case laid out by Prem in this volume, for instance, there is no law prohibiting the development and use of autonomous weapon systems; thus, the law is quite certain in what it permits. Law can be quite certain as well in the earlier periods of its development, before other legal sources begin weighing in.
- 7 The USA itself declared a 200-nm fishery conservation zone soon after in its Fishery Conservation and Management Act of 1976 (US Senate 1997: 25–26).
- 8 See the letters of submittal and transmittal, available at <https://babel.hathitrust.org/cgi/pt?id=umn.31951d036683291;view=1up;seq=3>

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7 Governing uncertainty during the COVID-19 pandemic

Change in science–policy interfaces and gender-specific effects in Europe

Miao-ling Lin Hasenkamp

During COVID-19's consecutive waves between 2020 and 2021 in Germany, public anxiety rose both due to the *lack of information* and *too much information* related to a novel virus and its variants. The pandemic generated many uncertainties, including unknown courses of virus mutation, and scientific and policy uncertainty. Under such circumstances, the introduction of an Expert Council by the newly elected German federal government in December 2021 constituted a breakthrough in incorporating cross-disciplinary expert knowledge into decision-making processes. Still, such change in science–policy interface (SPI) raises questions about the effects of government's emergency responses, particularly on marginalized and vulnerable groups. In this context, it is crucial to examine the relevant science-policy boundary structures and clarify their interactions (van Enst et al. 2014). Two questions are therefore at the core of this chapter: How has the COVID-19 pandemic changed the relationship between policymaking and knowledge production/utilization in Europe under conditions of multiple uncertainties? What policy-learning effects in relation to gender differences can be observed in different European countries?

Several studies have addressed the ways in which relevant scientific evidence has informed policy processes and public debates about the features of COVID-19, and the necessity and effects of containment measures (Bylund and Packard 2021; Forster and Heinzl 2021; Kelly et al. 2021; Weible et al. 2020). While early research observed how experts produce practical knowledge in the service of policymakers, attention has been shifting to the challenges posed by fast COVID-19 science, role conflicts, knowledge crisis, and the use of new approaches that emphasize the process of knowledge production itself (Almeida and Bascolo 2006: 7; Caulfield et al. 2021; Colman et al. 2021; Hopf et al. 2019). The pandemic provides an opportunity to rethink scientific and political uncertainty and society's relationship with science and nature, thereby reflect on what Matejova and Shesterinina (this volume) call *epistemic analytical uncertainty*.

This chapter highlights and compares the dynamics of SPIs in three European countries whose efforts to contain the pandemic, informed by different institutional settings, approaches, and knowledge parameters, may have had different effects on vulnerable groups. I follow the most different systems design (Anckar 2008) and examine the UK, Germany, and Sweden, as each is characterized by a different subtype of democracy. I adopt a combined interpretative and instrumental case

study approach to analyzing and comparing SPIs' dynamics in these countries. The data sources include public statements, news coverage, open and anonymous expert interviews, and empirical studies. The timeframe of this study is between the first wave of the COVID-19 pandemic in March 2020 and the fourth wave with the Omicron variant and its subvariants in Spring 2022.

The chapter contributes to the discussion of institutional learning and knowledge utilization in governing pandemic uncertainty. I argue that despite variation in the changing SPIs in different European institutional settings, “pandemic politics” has resulted in similar gender-specific consequences and burdens. These findings expose the inadequacy of the policy frame and action in understanding and handling COVID-19 and its associated uncertainties. The chapter emphasizes the necessity of conducting anti-disciplinary research to promote a holistic mindset, deliberative policymaking, and reflexive learning and communication that are consistent, accountable, and gender sensitive. The adoption of these approaches may facilitate the development of an integrated perspective that transcends disciplinary boundaries in understanding uncertainty.

The chapter has three major parts. I first review pandemic politics and its gender-specific effects in the UK, Germany, and Sweden. Based on the assumption that the COVID-19 pandemic was neither an unprecedented nor an unpredictable threat, the second section compares the changing SPIs in these countries through a combined framework of complexity theory and tri-dimensional policy-learning approaches. The conclusion discusses the findings and implications for future research.

COVID-19 in Europe: Governing uncertainty

Multiple meanings of uncertainty surrounding the pandemic

In a situation of uncertainty, as defined by De Groot and Thurik (2018: 2194), actors face ‘an unknown outcome and an unknown probability distribution.’ This characterizes the COVID-19 pandemic well. Unlike, for example, uncertainty over war-related payoffs, or enemies’ preferences and tactics (Bas et al. 2017: 166), uncertainty caused either by a pandemic itself or by related policy responses challenges rationalist and constructivist assumptions. As stated by Dirk Brockmann (2021: 30), ‘a pandemic usually is a highly dynamical, complex, biological, socio-economic phenomenon, in which our contacts, behavior and mobility decide the rate of new infections.’

Pandemics highlight contradictions of modern human existence, which is shaped by both biological and societal conditions. While humans are participants in local ecological contexts, they are also globally interconnected. As such, everyone is subject to the risk of becoming infectious anywhere on the planet (Hornborg 2021: 4). Hence, scholars suggest viewing the COVID-19 pandemic as a ‘complex global catastrophic risk’ (Kreienkamp and Pegram 2021: 1) and a ‘total social fact’ that we all partake in (Marcel Mauss cited in Lévi-Strauss 2014: 45).

The outbreak of the pandemic exposed the risk associated with economic globalization and the vulnerability of human existence. Yet, it also opened a possibility of radical social transformation, which prompted people to rethink their socioeconomic life vis-à-vis uncertain outcomes of the pandemic. In other words, the pandemic resulted in *ambiguity* or ‘the simultaneous presence of multiple valid, and sometimes conflicting ways of framing a problem’ (Brugnach and Ingram 2012: 61). Discussions surrounding the pandemic are thus inevitably steeped in *epistemic analytical uncertainty*, which can be dissected at science-policy, gender-specific structural, and spatial levels.

First, the early lack of information on the origin and evolution of COVID-19 variants sparked scientific and policy uncertainty characterized by contestation and politicization of different values and assumptions (Kreps and Kriner 2020). Decisionmakers and experts across different contexts faced a dilemma of communication with the public on something on which they did not have complete information. They variously acknowledged the difficulties of developing reliable models to predict the virus’ spread and evolution (Klauth 2021). At the same time, they chose to downplay uncertainty, which could backfire in light of public trust in science and policy (Kreps and Kriner 2020: 3; Kim et al. 2021: e1017).

Second, due to the complexity and time-variant nature of diseases, the global health crisis exposed and exacerbated a variety of structural inequalities with gendered dimensions. From the prism of feminist political ecology and economic management, questions arise concerning existing power relations (e.g., domination, exploitation, and conflict between societies and nature) and how gender-specific economic activity (e.g., essential workers from Central and Eastern Europe), leadership, and workplace interactions are associated with gender differences in COVID-19 infections (Goméz Becerra and Muneri-Wanngari 2021; Fortier 2020; Kabeer et al. 2021; Maak et al. 2021; Marvin and Yusupova 2020; Paul 2020). The focus on “‘production” instead of the sustainable reproduction of human life, for example, devalues care work and those who perform it’ (Bahn et al. 2020: 695). As such, care work based on practices of distribution, exchange, and reciprocity is organized in a hierarchical gender-segregated structure (Goméz Becerra and Muneri-Wanngari 2021; Yarrow and Pagan 2021). The pandemic increased women’s care burden and the risk of domestic violence, reduced reproductive health services, and exacerbated gender inequality (Adams-Prassl et al. 2020; Davies and Wenham 2020; Oxfam 2020; Phillimore et al. 2020; Tahir et al. 2021; van Rensburg et al. 2021).

Furthermore, women are mostly absent or invisible within the policy space in health regimes such as the International Health Regulations (Merianos and Peiris 2005) and the World Health Organization Blueprint on R&D for Health Emergencies (Davies and Wenham 2020). These and other regimes deepened uncertainty by not adequately considering ‘the likely gendered and other inequitable consequences of mobilizing care’ (Branicki 2020: 877). Derived from rationalist crisis management that reinforces a hegemonic legal order, gender relations reverted to traditional models despite the need for the participative and relational style of women’s leadership in combating COVID-19 (Harris 2020; Elsesser 2020). Consequently, the

pandemic constituted both a crisis of health and a crisis for feminism as it helped accelerate the embodied risk of inequality and justify paternalistic discourses and practices (Gómez Becerra and Muneri-Wannari 2021; Yarrow and Pagan 2021).

Third, as literally no one could escape uncertainty, uncertainty itself prompted the emergence of new spaces for adaptation, learning, and innovation. The disruption of old orders and systems (organic, political, social, and cultural) exposed the drawbacks of mainstream approaches that disregarded marginalized and vulnerable populations in policy responses and could not proactively tackle the new reality.

Pandemic politics and the anti-technocratic populist tendency in the UK

Although the British government claims that its policy action follows the science, there is an increasing discrepancy between knowledge use and policy action, resulting from anti-technocratic populism that underlies pandemic politics. The government's action shifted away from traditional centrism and towards 'polarized factions defined not by party, but by cross-spectrum contempt for technical governance' (Foster and Feldman 2021: 117). Analysts have observed that the adopted countermeasures reflect the change in the ethos of the ruling Conservative Party from restrictive intervention to unprecedented intervention in people's everyday lives as a "party of war" (Foster and Feldman 2021). It follows that, despite a robust research infrastructure quick to conduct evidence-based COVID-19-related studies, experts from a range of disciplines encountered increasing hostility. The SPIs showed a decoupling tendency between science and policymaking.

Shortly after the outbreak of the pandemic, Prime Minister Boris Johnson downplayed the seriousness of COVID-19 and opposed introducing draconian lockdown measures both for economic and political reasons (in defense of citizens' rights). His position was supported by some experts with scientific motivations who saw the merits of "herd immunity" as a health strategy. However, shortly after the publication of a working paper in mid-March 2020, that predicted a worst-case scenario with possible 550,000 deaths in the absence of any control measures, Johnson switched his strategy, announced a series of lockdown measures, and justified his policy action as scientific data changed. In spite of the initial confusion and belated decision to introduce lockdown measures in March 2020, the government rolled out an early vaccination campaign (in comparison with its European counterparts such as Germany). Most UK-constituent nations saw this as a positive development (University of Bristol and King's College London 2021).

At the same time, expert interviews and pandemic experience studies highlight how systemic failures found in the UK government's pandemic response generated scientific and policy uncertainty and (collateral) harm (Atkinson et al. 2020; Murphy et al. 2021; Phillimore et al. 2021; Williams et al. 2021). Experts like Allyson Pollock regretted not openly speaking against the government's measures to close schools during the first blanket lockdown in March 2020, 'because it was too politicized' (Devlin and Davis 2022). At that time, children were among the vulnerable groups, whose fear, ties with the school as a place of safety, and education were neglected.

Joeli Brearley, founder of the campaign group “Pregnant Then Screwed,” blamed the government to have failed to prioritize pregnant women as a vulnerable group for vaccines, thereby causing unnecessary death cases among pregnant women due to the lack of protection (Devlin 2021). Family members of COVID-19 victims in vulnerable groups accused the government of announcing “freedom day” in the pretence that COVID-19 was no longer dangerous. For them, “freedom day” was a politically motivated decision that left vulnerable people who trusted the government unable to make the right decision in response to breakthrough infections (Garfinkel 2022). Furthermore, during lockdowns, forced migrants with irregular status in the UK were reported to have particular difficulties as local charities and empowerment programs that supported them closed their doors and ceased to operate. Along with the uncertain duration of their asylum-seeking process, survivors of gender-based violence (such as human-trafficking) considered the pandemic ‘the worst thing that could happen to them after all the efforts they put into fleeing their countries as they became trapped by the lockdown without support’ (Phillimore et al. 2021: 11–12, 15).

In other words, despite the government’s decision to launch an early vaccination campaign to contain COVID-19, the gradual decoupling of scientific work from policymaking, tainted with an anti-technocratic populist tendency, brought devastating effects upon society, particularly for those vulnerable groups such as children, pregnant women, and asylum-seekers. Several bereaved group campaigns (e.g., the National Covid Memorial Wall and the Yellow Hearts to Remember) emerged due to the lack of transparency and consistency in the policy process, the erosion of political trust and expert authority, central–local tensions and coordination problems, and the neglect of psychological distress among vulnerable groups. Although such campaigning for justice saw its first success as political pressure followed the launch of government’s consultation work, the debates among different groups over how best to memorialize COVID-19 in the UK might run the risk of politicizing the pandemic and dividing the aggrieved (Booth 2022).

Confusing pandemic politics and policy-learning in Germany

Based on the joint decision-making and subsidiarity principles, Germany’s federal system is characterized by continual cooperation and bargaining between the federal government and the 16 state governments (Moore et al. 2008). The initial pandemic responses that centered on Chancellor Angela Merkel’s leadership were unanimously supported by state leaders. Later, however, some state governments deviated from Merkel’s restrictive position and strove to regain their autonomous governing competence, particularly during the third and fourth waves of the pandemic.

Germany’s COVID-19 responses reflected in the changing dynamics of SPIs can be summarized in four points. First, the concentration of executive power during the first and second pandemic waves led to a radical simplification of the relationship between politics, law, and science dictated by a single law – “the infection protection law” (*Infektionsschutzgesetz* (IfSG)) (Dostal 2020: 1). The use of

scientific expertise was limited to the application of epidemic and medical matters without broadly debating the appropriateness of the government's emergency action. Second, the third wave in Spring 2021 witnessed a mismatch of cooperation between the federal and state governments as Merkel insisted on the maintenance of hard lockdowns, whereas state leaders planned to drop the restrictions (Gammelin 2022: 2). Third, during Summer 2021, despite experts' warning, the federal government adopted an appeasement strategy to accommodate polarizing voices and protests linked to the impact of government measures on diverse human rights and socioeconomic issues. This strategy reflected policymakers' concern over voters' support in the upcoming General Election in September 2021.

From the fourth wave of the Delta variant to Omicron wave at the end of 2021, the federal and state governments were unable to jointly combat COVID-19 due to the lack of leadership in the transition period after the General Election and a concern over a protracted complex lawmaking process. Instead, old and new coalition partners of the federal government and state leaders assigned blame to their counterparts and justified their inaction with the excuse of avoiding further polarization in society (Seibt 2021: 4). Finally, following the formation of the new federal government in December 2021, for the first time, an Expert Council was installed to support the federal government's policymaking. However, the polarizing debates on compulsory vaccination and the failure to pass a related bill for citizens from the age of 60 in the Bundestag in April 2022 reinforced inconsistency driven by an ideology against state intervention in the fight against the pandemic (Becker 2022).

The weaknesses of Germany's federal system in tackling policy uncertainty, the resulting shift of the relationship between science and policy in favor of personalization and proliferation of expert authority, and the gendered effects of policy measures, particularly around school closures, came to the fore. The pandemic politics exacerbated existing dissatisfaction with Germany's federal status quo – its unbalanced lawmaking powers, revenue sources, and enforcement gaps due to growing complexity and density of regulations at various levels (Dostal 2020: 2; Moore et al. 2008). For instance, tensions arose between the application of IfSG and the protection of basic freedoms guaranteed by the German constitution. The German research infrastructure with long bureaucratic evaluation procedures and strict data protection laws hindered the conduct of comprehensive clinical studies whose results could have brought benefits for medical treatments and health policy (Bartens 2021: 23).

Public trust decreased in view of the government's inconsistent pandemic politics and lack of will to learn and openly communicate with the public. In September 2020, most of the population supported Merkel's lockdowns, but this changed during the fourth wave. The continual change and resulting lack of reliable regulations complicated local healthcare authorities' communication with the public. Debates about school closures, mandatory vaccination, and the accompanying social and ethical problems challenged policymakers to regain control over a highly dynamic disease while formulating strategies that could be implemented at calculable economic, societal, and political costs. Amidst such scientific and policy uncertainty, expert advice and judgments via diverse platforms emerged

as an important source for people to seek information and to orient themselves to a new reality. The increased visibility of expert authority facilitated personalization, proliferation, and connection of science directly with people's daily experiences. For instance, in February 2020, the "Coronavirus Update" organized by the Northern German Radio (NDR) became an important communication platform, where Christian Drosten as one of the leading figures in SARS research regularly answered COVID-19-related questions.¹

Similar to the UK, Germany increasingly confronted secondary effects of its health emergencies on women and other marginalized groups. Scholars began analyzing sex- and group-disaggregated data, detecting major gender-specific differences when it came to mental health: young women were considerably more likely (47%) than young men (33%) to say that their mental health deteriorated (Schnetzer and Hurrelann 2021). Surveys and news analyses revealed that children, elderly inhabitants in the caring facilities, mothers, and female employees were subject to collateral harms of policy uncertainty, inconsistency, and confusion. According to a Forsa survey published in September 2020, for example, a large majority of respondents believed that COVID-19 measures did not take children's interests seriously enough (58%) or at all (14%). In another Frontline 100 survey, 39% of women respondents reported to have experienced more intense domestic violence (Werner 2021: 8). Despite state governments' promise to keep schools open, many schools closed due to recurring outbreaks of COVID-19 (Saxony in November 2021). The teachers' associations worked to redress insufficient precautionary measures taken by state governments, specifically on the waiving of compulsory mask-wearing. Their complaints about the loss of control at school, the shortage of teaching staff due to the absence of many teachers who got COVID-19, and novel experience of giving legal advice to teachers who were skeptical of vaccination exposed tensions in many schools (Grill et al. 2022).

The Swedish outlier in pandemic politics

Unlike UK's "herd immunity" and Germany's executive enforcement measures, Sweden followed a voluntarist approach to slowing COVID-19 by emphasizing individual responsibility and mutual trust between the government and its citizenry. The role and influence of experts and knowledge use in Sweden also differed from those in the UK and Germany. Sweden's decentralized governance system, as defined by its constitution, involves a clear separation of government polity from the public policy process, in which experts and officials are employed within government agencies. Expert agencies are tasked not only with providing policy-makers with information and recommendations but also with implementation of policy decisions based on the formulation suggested by the cabinet (Byland and Packard 2021: 2). Given this structure, since the outbreak of COVID-19, the Public Health Agency (PHA, *Folkhälsomyndigheten*) has been in charge of designing policy responses through interdisciplinary collaborative work (with health economists and epidemiologists) that considers the overall impact of measures (Jonung 2020). The PHA, the National Board of Health and Welfare, the Civic Contingencies

Agency, and the government as major actors thus cooperated with county councils and regions to mitigate the harms caused by COVID-19 (Ludvigsson 2020).

The Swedish containment strategy resulted in the loss of lives of 0.06% of the population by September 2020, which was higher than Sweden's neighboring Nordic countries but lower than some European countries with hard lockdowns. In that sense, Sweden was an outlier and could have reduced cases and fatalities had it adopted flexible strategies (Baekkeskov et al. 2021; Gordon et al. 2021; Ludvigsson 2020). As a surge in cases hit Sweden during the second wave, the center-left government began to doubt the state epidemiologist Anders Tegnell's distinctive approach in handling the pandemic. For the first time, Prime Minister Stefan Lofven announced in November 2020 the most intrusive measures in "modern times" by banning public gatherings of more than eight people (Milne 2020). Later in January 2021, the government passed legislation that permitted more restrictions than allowed by existing laws. One year later, despite the soaring number of cases with the Omicron variant, as of 9 February 2022, Sweden celebrated the dropping of all restrictions with the slogan "Celebrate as if it were 2019."

Despite different intervention strategies, policy measures in Sweden and the UK caused the worst per capita mortality in Europe (Mishra et al. 2021). This evidence stirred domestic controversy in Sweden and brought its traditional science-policy relationship under scrutiny. The limitations of Sweden's technocratic response to the pandemic and its gendered consequences can be highlighted in terms of the danger of the "tyranny of experts" and Swedes' perceptions of uncertainty avoidance. Analysts warned against medical and technical solutions that were too slow to offer options based on public good (Baekkeskov et al. 2021; Bennett 2020; Bylund and Packard 2021). According to the 2019 Eurobarometer survey,² Swedes value effectiveness and honesty, accountability of elected politicians, the democratic process, and the rule of law. The PHA's decision to adopt a voluntarist method was thus initially supported by politicians and the public. Unlike other European countries whose lockdowns were enforced, the PHA trusted Swedes' self-responsibility and framed its approach as more tenable in terms of citizens' overall well-being, health, and fatigue 'rather than solely focusing on COVID-19' (Jasanoff et al. 2021: 94, cited in Laage-Thomsen et al. 2022). However, during the second and third waves, as cases and fatalities increased, particularly in nursing homes and marginalized residential neighborhoods, public pressure emerged around systemic shortcomings in elderly care and social services for migrant and refugee families. The pandemic exposed the deficiency of the PHA's "specialized knowledge" and the need for interdisciplinary research to improve care for neglected groups (Baxter et al. 2021; Bylund and Packard 2021).

Compared to Germany and the UK, Sweden did not confront large-scale anti-COVID and anti-vaccination demonstrations and the accompanying problems of polarization and social division. Swedes held an optimistic view of how the pandemic was managed, particularly the absence of hard rules in society (Shapoval et al. 2021: 3–7). Trust in technocracy underpinned the Swedish mitigation method, but the longer the pandemic lasted, the more ambiguous the Swedish model turned out to be. On the one hand, Sweden forged its own path derived from its experts'

assessments of the risks and trade-offs even in the face of contemptuous jeers from domestic and external critics. On the other hand, Sweden's hesitance to adopt strict lockdowns exposed its inflexibility to include alternative options that could have prevented the collateral harms from its policy responses.

Understanding the dynamics of SPIs in Europe: Complexity theory and policy-learning

In this section, I analyze and compare the dynamics of science-policy interfaces (SPIs) in pandemic politics in the UK, Germany, and Sweden. This analysis is informed by an integrated framework derived from complexity theory and tri-dimensional policy-learning with two explanatory factors: (1) actors' capacity to integrate cross-disciplinary knowledge and handle uncertainties and multiple, cross-scale dynamics; and (2) reflexive learning covering problem tractability, actors' certification, and making sense of knowledge use and policymaking.

Actors' capacity to address COVID-19 is a complex phenomenon. Complexity theory with its key concepts (e.g., cascade/tipping points and uncertainty/innovation) is useful for understanding the complexity of the pandemic and associated policy action (Amaral and Uzzi 2007; Brockmann 2021: 44; Feinstein and Waddington 2020). Drawing on Brockmann (2021: 44–47), complex systems can be addressed from a transdisciplinary perspective by using the method of complexity reductionism in order to discover common rules and principles. The adoption of an anti-disciplinary perspective is crucial as it engages with different perspectives and mindsets in relevant disciplines to avoid possible distortion of reality (Brockmann 2021: 44–47). As such, complexity theory suggests developing an integrated approach between health, social, economic, environmental, and institutional systems and building actors' capacity, for instance to minimize both policy and uncertainty costs through modelling uncertainty regularization (Henaff et al. 2019; Kuchenmüller et al. 2021; Wernli et al. 2021). In this sense, the practice of forging links between natural and social sciences and extracting mechanisms underlying different phenomena can help revise, extend, and repudiate traditional strategic planning ideas and practice (Amaral and Uzzi 2007: 1033; Brockmann 2021: 45–46).

Through this complexity lens as the first element of my analytical framework I assume that SPIs and their rationalities move between technocratic, decisionist, and pragmatic model of policy advice. Even though a technocratic model of using data-driven policy advice is highly desirable, the pandemic reality often saw both experts and policymakers facing different challenges. These ranged from the lack of data or, complexity and volatility of the available data (for experts), to the complex decision-making processes (for policymakers) marked by utilization of evidence and knowledge as well as power-seeking, consensus-building, compromise, and political feasibility (Sager et al. 2020 cited in Kuhlmann et al. 2022).

The evidence from the UK and Germany reveals that experts belatedly acknowledged the failure to combine and integrate different forms of knowledge and to develop contextually adequate measures. For instance, the chief advisor of the

Council of Ethics in Germany, Alena Buyx, admitted the Council's insufficient recognition of children's psychological burdens caused by school and day-care closures (Holl 2022). Researchers working for a joint pandemic socioeconomic panel had difficulties in gathering online data for generating reliable and representative research results, because they could not reach marginalized households that had no internet access (Dlf, 2022). The pandemic exposed the necessity and urgency of transdisciplinary research cooperation between social and natural sciences.

Policy-learning in pandemic uncertainty

Policy-learning in response to public confusion, frustration, and loss of trust and security provides a further useful lens for my analysis (Boin et al. 2020; Kelly 2021; Lavazza and Farina 2020). Policy-learning involves asymmetry of information with the expert as teacher vis-à-vis policymakers and the public, as facilitator to help policymakers reduce uncertainty and make sense of their decisions, and as agent whose activities are shaped by policymakers as principals (Rowe and Shepherd 2002 cited in Dunlop and Radaelli 2013). It also involves "bounded emulation" that takes place when policymakers copy somebody else's solution without learning (Lesch and Millar 2021). Such emulation occurs particularly in times of crises where the nature of policy problems and knowledge production is unknown. In such conditions, decisions can be driven by perceptions of "policy urgency" and can generate societal costs, including the erosion of mutual trust between policymakers and the public.

These different modes of learning are driven by three factors. First, *problem tractability* shapes the scope and outcome of learning by making technocratic approaches available and creating contestation spaces for policy debates (Dunlop and Radaelli 2013). Uncertainty is important here. When a community of experts in different areas produce and communicate knowledge to policymakers and the public in conditions of uncertainty, they become part of the decision-making process despite their disagreements. Absent uncertainty, their influence decreases as elected policymakers and their bureaucracies weigh the payoffs of different options to arrive at their decisions (Dunlop and Radaelli 2013; Weible et al. 2020: 231).

Second, the authority and legitimacy of key actors or venues identified as "teacher" facilitates learning. *Actors' certification* is commonly defined by organizational roles or institutional rules (Dunlop and Radaelli 2013). Yet, the COVID-19 pandemic revealed the limits of such expert authority, as experts proposed different public health policies based on concurring value systems. Such (incautious) assertions about scientific truth can in fact worsen the problem of the lack of information in the post-truth era and boost the spread of fake science (Feinstein and Waddington 2020).

Third, policy-learning is influenced by *subtle habit and attitudinal attributes change* in terms of information seeking, messaging, communicating, and managing crises. Education studies have shown the limitations of reasoned action in durable behavioral change (Schwanen et al. 2012). It may therefore be more useful to adopt a vigilant stance towards misinformation and emotional appeals to avoid cascading

effects and subsequent destabilization of social or other systems (Peters 2017). In the context of the COVID-19 pandemic, this means that it is important to contextualize and make sense of knowledge use through improving communication about uncertainty and its effects (Lowe et al. 2022). Managing COVID-19 then requires the engagement of highly certified groups of actors from different disciplines and specialized research organizations.

A comparative view of policy-learning through epistemic venue-shopping

The COVID-19 pandemic is characterized by the combination of low problem tractability, high actors' certification, and considerable habit change where epistemic, reflexive, and bounded emulation coexist. As I discuss below, the science–policy interactions (SPIs) during the pandemic have been indicative of these characteristics. As a result, the varying quality of policy-learning ranged from functional to dysfunctional to the adoption of myopic ad hoc emergency measures.

The science–policy interactions encompass *vertical venue-shopping*, *horizontal venue-shopping*, and *temporal–spatial venue-shopping*. Vertical venue-shopping involves an epistemic marketplace where decisionmakers, backed by public health agencies, apply scientific knowledge to policy deliberations. High level of scientific and policy uncertainty did not allow enough space for informed debates and contestation in the public space, leaving policy development susceptible to confusion and inconsistency driven by COVID-19's unknown mutation course. The cases of the UK and Germany reveal role conflicts, ambiguities, and tensions in interactions between scientific advisors and policymakers, which left hardly any room for exploring adequate pragmatic policy actions.

Horizontal venue-shopping captures interactions between policymakers, experts from different epistemic communities, and various social stakeholders. Policymakers tend to form myopic views due to policy urgency, information overload, and public pressure (Zaki and Wayenberg 2020). Emergency measures' (in) direct effects may be overlooked, not to mention the neglect of gender-specific socio-economic consequences of measures, such as lockdowns, risk perceptions, and communication of uncertainty among different agencies and actors. Serious harms may include the growing gender gap in essential sectors; failure to consider the needs and rights of vulnerable groups, including children, pregnant women, elderly groups, and socially marginalized groups; and the waning of public trust in governments' capacity to manage the crisis (Marvin and Yusupova 2020; Paul 2020; van Daalen et al. 2020).

Finally, the temporal–spatial venue-shopping considers sequences and scenes, based on which 'the cross-effects of ... dynamic changes' are elucidated (Ma et al. 2020: 499). Already in March 2020, following the outbreak of the COVID-19 crisis in Europe, experts' descriptions of possible scenarios made it clear that the pandemic has 'shaken the foundations of our social and economic co-existence – indefinitely' (Zukunftsinstitut 2021). The experience of an uncontrollable collapse of our daily lives as well as the world as we knew it exposed human

vulnerabilities and our limited capacity to capture the complexity and resulting uncertainty surrounding COVID-19 (Arias-Maldonado 2020; Kreps and Kriner 2020). Anticipation of possible recurring waves revealed the fragility of policy responses and knowledge use in light of COVID-19 whose nonhuman agency dictated human affairs.

In the UK, Boris Johnson's populist centralization strategy enhanced politicization and instrumentalization of knowledge use, eroding expert authority and posing challenges to policy-learning. The UK government's policy responses failed to engage with gender and neglected the differential secondary effects of the pandemic on vulnerable groups (i.e., children, pregnant women, the elderly, and asylum-seekers), leaving these groups disproportionately burdened by policy uncertainty and insecurity. Such neglect reveals the systemic drawbacks of the UK's health polity to timely design appropriate policy options.

In comparison, despite the cacophony of state and federal leaders, scientific and policy uncertainty in Germany was handled with gradual institutionalization, personalization, and proliferation of knowledge use. The pandemic politics exposed the existing structural deficiency of federalism and prompted the emergence of novel communication and school initiatives. Policy inconsistency due to policymakers' myopic views and limited learning capacity from the past pandemic experiences further hindered evidence-based knowledge generation. Due to persistent policy ambiguity, public trust sank particularly between the third and fourth waves.

Regarding Sweden, despite public pressure and critiques of its monopolistic discourses, the Swedish technocracy enjoyed broad trust both from policymakers and the public. Sweden's trust-based model, derived from its cultural self-identification, did not meet the pattern of "bounded emulation" and faced the problem of social polarization and division less in comparison to the UK and Germany.

There are two commonalities in pandemic politics in these cases. The path-dependent policy-making style and ideology-driven leadership found in rationalist crisis management represented a major pattern regardless of different institutional settings. All three countries failed to appropriately include gender-specific preferences and interests in their policy deliberation processes, not to mention the evaluation of uncertainty costs triggered by confinement measures. As the pandemic evolved with new variants, the three countries continued confronting a recurring scenario: the surge of cases and fatalities; the adoption of *decisionist* emergency action without conducting precautionary agent-based modeling and experiential assessment, changing COVID-19-related criteria and regulations, or making sense of knowledge use through clear and adequate communication strategies; and the passing of laws driven by the populist (the UK) and liberal (Germany) ideologies at the expense of public health. In other words, these cases exhibit limited and contingent epistemic policy-learning with a low level of bounded emulation: although lockdowns were imposed and removed, different institutional structures and approaches to coordination resulted in diverging policy-learning effects.

In view of the weaknesses shown in each SPI, the UK's government has been asked to rethink its libertarian "herd immunity" approach to address health inequalities and the consequences of long COVID cases for society by considering their

structural determinants and by taking seriously the implications of new variants' immune-evasive nature. Recent collaborative cross-disciplinary studies revealed the fragile protection of "herd immunity" shaped by a complex mix of exposures through infection and vaccination (Altmann 2022; Iwasaki and Ko 2022; Reynolds 2022). Such differentiating anti-disciplinary research provides evidence-based findings that can help overcome the anti-technocratic populist tendency and restore mutual trust between policymaking, epistemic communities, and the public. In doing so, the UK's preparedness systems can be improved through efficient planning and designing appropriate responses to future pandemics.

This study also points to the urgency of reforming Germany's federal system in terms of power-sharing, law-making, and competence definition in key policy fields and sectors. This includes the slimming of bureaucracy for medical and service research activities, adequate expert staffing in scientific boards, better data management in the public health sector, enhancement of public health services in marginalized neighborhoods (e.g., through health kiosk stations), and educational reforms adaptive to disruptive measures (e.g., school closures and childcare-policies). Sweden's technocratic governance, too, should be adapted to be more flexible, which is necessary for democratic legitimacy and long-term response efficacy (Baekkeskov et al. 2021; Bennett 2020; Pierre 2020).

Conclusion

This chapter highlighted how pandemic uncertainty reshaped SPIs in relation to gender differences in Europe. Despite the variation in changes of SPIs in pandemic politics in the UK, Germany, and Sweden, my empirical findings reveal similar gender-specific negative consequences and burdens resulting from governments' lockdown measures. The actors and agencies in examined cases fell short of regarding the pandemic as an opportunity to reframe uncertainty backed by an anti-disciplinary approach in transformative, gender-sensible, and inclusive ways (Leach et al. 2021: 137).

These findings prompt the question of if and to what extent democratic systems are ready to approach future outbreaks with a more precautionous and innovative mindset. Three key challenges can be identified for policy-learning and trust building and one suggestion for future research in global politics and policy science when addressing uncertainty.

First, we need to be open about how evidence-based approaches can support the status quo through institutionalization, particularly when policy ambiguities dominate and conditions are adverse due to politicization. Second, the COVID-19 pandemic revealed the inadequacy of institutional settings and structural deficiencies in old democracies in tackling multiple uncertainties. New models of public health governance and new forms of politics and communication initiatives are needed – their cores should be transformative, gender-sensible, and inclusive. Third, despite its policy ambiguity and the high level of mortality, Sweden's trust-based model highlighted the relevance of trust-building for an effective response. As governments rely on citizens foregoing multiple freedoms to facilitate

sustainable problem-solving, communicating uncertainty in a transparent manner and making sense of policy action prove to be a big challenge for robust democracies that need to accommodate different forms of public trust (i.e., trust, mistrust, and distrust).

Finally, the application of the theoretical framework introduced in this chapter revealed the limits of policy-learning caused by the policy urgency problem under high levels of uncertainty. Still, under such circumstances, various innovative communication and solidarity initiatives have emerged. Future research can expand this framework by considering gendered leadership and communication science accounts that argue for the adoption of alternative ways of managing uncertainty through reflection and empathy in global politics. New empirical and theoretical fronts with innovative ideas, such as a “world theater” attitude toward nature (Federal Cultural Foundation 2021), and practices of collaborative and participatory policymaking (Almeida and Bascolo 2006; Brugnach and Ingram 2012) serve as a powerful reference for how to best govern uncertainty with a robust preparedness in times of multiple crises.

Notes

- 1 See NDR, “Coronavirus-Update: Der Podcase mit Drosten & Ciesek,” <https://www.ndr.de/nachrichten/info/Coronavirus-Update-Der-Podcast-mit-Christian-Drosten-Sandra-Ciesek.podcastcoronavirus100.html>
- 2 Available at <https://europa.eu/eurobarometer/surveys/detail/2253>

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8 Whitewashing green swans

Sustainable finance and the epistemic foundations of policy paradigms

Christian Elliott

In January 2020, the Bank for International Settlements (BIS) released a report called, “The Green Swan: Central Banking and Financial Stability in the Age of Climate Change,” with a follow-up paper in *the Bulletin de la Banque De France*. Inspired by Nassim Nicholas Taleb’s notion of “black swans,”¹ the authors outline the confounding nature of climate change as a force producing ‘radical uncertainty, non-linearity, and cascade effects’ for the economy, challenging traditional means for modeling and addressing financial stability risks (Bolton et al. 2020a: 1). The authors recognize an ‘epistemological break with regards to risk management’ due to the underpowered ability of historical data, equilibrium models, and parametric inferences to anticipate green swans, i.e., the plausible, severe, yet difficult to predict impacts of anthropogenic climate change on financial markets (Bolton et al. 2020b: 3).

Central bankers are not the only concerned financial actors when it comes to climate change, and in fact, they represent a quieter corner of the global conversation on sustainable finance. Private banks, insurers, and investors have organized over one hundred climate-focused transnational initiatives in the last twenty years, often in partnership with international organizations and NGOs. Yet, among these initiatives, little to no attention has been paid to the radical uncertainty the BIS report so urgently highlighted, despite the longstanding recognition in scientific and policy circles that climate change is a source of dangerous, yet difficult to anticipate, consequences (Lempert et al. 2004; Schneider and Kuntz-Duriseti 2002). Uncertainty is altogether absent from the mission statements of transnational efforts developing new norms, rules, processes, and standards for addressing climate challenges in the financial sector. Instead, “climate-related financial risk” is the operative problem definition: initiatives aim to ‘assess climate risk’ (The Climate Resilience Principles), to ‘de-risk capital markets’ (Climate Investment Platform), to ‘identify and tackle growing risks’ (CDP), or to ‘learn about the benefits of environmental and social risk management’ (International Financial Corporation’s ‘FIRST’ initiative).

Separating the European central bankers and these investor initiatives are differing conceptualizations of what uncertainty means, which is all too reminiscent of some of the key debates in the lead up to and aftermath of the 2008 Financial Crisis (Best 2010; Nelson and Katzenstein 2014; Lockwood 2015). The investor perspective presupposes discrete adverse outcomes with discernible likelihoods,

where uncertainty entails either limited information or noise around estimates of how likely or severe climate-related disruptions might be. In contrast, the notion of green swans recognizes a “radical uncertainty,” where the distributions, parameters, likelihoods, and even the magnitude of adverse outcomes may not be reliably estimated – “unknown unknowns” associated with the emergent complexity of atmospheric, oceanic, ecological, and social systems are interacting over long time horizons.

I argue that these interpretive differences are political, cohering to potentially competing public policy agendas. Interest groups may have a vested interest in a set of prescriptions involving epistemological assumptions about the relevant types of uncertainty underpinning a problem such as climate change. Using the case of the Climate Finance Leadership Initiative (CFLI), a UN-convened group of global financial CEOs tapped to set the agenda on the financial sector’s engagement on climate change, I unpack the coagulation of interests and interpretations of uncertainty that motivate the offered public policy prescriptions. In analyzing the discourse in reports emerging out of the CFLI, I find evidence that a more substantial reckoning with radical uncertainty would threaten the interests of financial actors and the industrial sectors with whom they remain interdependent. I also find that the CFLI’s conceptualization of climate change as “a risk to be managed” is tacitly made possible by positioning public authorities as a backstop to more unexpected outcomes.

The chapter proceeds as follows. First, I briefly define and clarify the distinction between uncertainty and risk as it pertains to the consequences of climate change. I also summarize research that explores the conditions under which social and political groups decide to interpret issues as a matter of risk or uncertainty. Second, I revisit scholarship on the policy paradigm and use recent conceptual adaptations to Peter Hall’s framework as an analytical lens to center competing interpretations of uncertainty within policy debates. Third, I investigate the case of the CFLI, teasing out the ideational linkages between epistemology, problem conceptualizations, objectives, and instruments that the agenda-setting exercise unveils. Finally, I discuss these results more broadly and contextualize findings in light of contemporary discussions in the international political economy literature.

Climate change, uncertainty, and risk

While scientists are confident in modeling trends in future precipitation, surface temperatures, and extreme weather events resulting from anthropogenic climate change, several sources of uncertainty remain. First, the granularity of the predicted impacts in particular places and times remains currently limited. Second, global warming also threatens irreversible or unforeseen consequences that recent historical data would not predict (e.g., the ecological collapse of the Amazon rainforest, the slowing of ocean water circulations) (IPCC 2014: 73–74). The trends we observe now may exceed “tipping points” in the future, leading to cascade effects or runaway feedback loops (Steffen et al. 2018). The IPCC’s 6th draft assessment report on the physical science notes that tipping points are not well understood and

that increased warming multiplies the possibility of such *unexpected* change. Third, because the impacts of climate change are moderated by how humans respond to them, the interaction of social and environmental systems generate significant complexity that is difficult to account for.

To take finance as an example: will public authorities backstop a collapsing insurance market in a jurisdiction affected by an improbably large storm? Will new generations refuse to bank with institutions that lend money to fossil fuel companies? Might governments nationalize industries that are decarbonizing too slowly? Even if short-run biophysical consequences of climate change are reasonably predictable, the human sources of uncertainty – private information, misperception, and disagreement – often rear their head.

The inability to accurately assign probabilities to future events (or even know what those events ultimately are) is how the economist Frank Knight famously distinguished the concept of risk from “true uncertainty” (Knight 1921). In the oft-cited dichotomy, risk describes a situation where relative likelihoods can be estimated and reliably assigned to possible outcomes, whereas true uncertainty is mathematically indeterminant to the analyst. In a world of calculatable risk, as Matejova and Shesterinina write in the introduction to this volume, uncertainty is understood to be a problem of limited information – where more data is usually helpful, decisionmakers can nevertheless leverage tools like cost–benefit analysis, estimate expected utility across probable outcomes, and derive solutions within boundaries of confidence. These approaches become problematic when outcomes are not known, or likelihoods cannot be reliably assigned to outcomes.

Radical or Knightian uncertainty does not preclude an ability to act, and as Kelman (in this volume) argues, should not be used as an excuse for inaction. Instead, it suggests a different set of decision-making approaches. Decisionmakers can seek robust (as opposed to optimal) strategies that perform well across a broad range of plausible futures or worst-case scenarios (Lempert, Popper, and Bankes 2003; Matejova and Briggs 2021). They can also decide on safe operating boundaries for an activity given what is known (Rockström et al. 2009). In contexts where we recognize the possibility of severe outcomes but have a poor basis for assigning probabilities, the common logic across approaches suggests precaution: maximum feasible investment in safety to mitigate the possibility of hazard and/or to reduce vulnerability to said hazard, whatever its probability may be. The “precautionary principle” is not untested in public policy; it has significant legal, regulatory, and institutional precedent on policy issues ranging from pandemic prevention to antibiotic use (Gollier and Treich 2003; Van Asselt and Vos 2006). Though, as Prem demonstrates in this volume’s chapter on autonomous weapon systems, political challenges are common in the absence of certain consequences: actors may wield uncertainty strategically to hinder precautionary action.

If radical uncertainty and risk² are distinctive frames for conceptualizing problems and solutions, how is it that the political challenges of *uncertain* problems are often misread as *risky* problems? First, it is helpful to understand how uncertainty and risk can become interoperable. Misreading uncertainty for risk requires assumptions to give structure to an otherwise indeterminant analysis. To

take the example of conducting cost–benefit analysis regarding greenhouse gas emissions abatement, it requires defining a future damage function as well as a discount rate of future utility, despite both quantities ultimately being ‘terra incognita’ (Nordhaus 1991: 930). The problem arises when methodological assumptions become tacit ontologies, or assertions and beliefs about how the world works. The more heroic the assumptions, the more problematic the assertion is likely to become. Assumptions that substitute uncertainty for risk become an interpretative misstep when analysts or decisionmakers ignore the limits to calculative decision-making (Maechler and Graz 2022). Such a category error can direct our attention to the wrong class of solutions.

Maechler and Gaz (2022: 629) argue this misclassification is tied to our epistemologies: for example, mainstream economics ‘sees neither ontological nor epistemic limit in the ability of probability calculus, expertise and mathematical modelling to substitute risk for uncertainty ... this may even explain why mainstream economic scholars so often do not make any distinction between the terms.’ In other words, contemporary economists understand the world with a measure of faith in the ability to measure and predict, dulling sensitivity to the kind of distinctions Frank Knight articulated in 1921.

Other scholars find cause in more general psychological factors. One example is the “unavailability heuristic” that underemphasizes events which humans find difficult to conceive of (Wiener 2016). Precautionary responses to dangers that have yet to happen might lose out in the marketplace of ideas when subject to these cognitive biases. We also might experience motivated reasoning. A number of studies in the political science literature have documented how citizens and elites alike develop beliefs based on their policy preferences, selectively incorporate evidence that supports their point of view, and discount evidence or double down when encountering disconfirmation of their priors (Baekgaard et al. 2019; Strickland et al. 2011). As Matchett argues in this volume, motivated reasoning is often entangled with political interests; in her study of missile defense expenditure, members of the US Congress are more likely to discount failed missile tests if they represent districts that benefit disproportionately from federal military funding. Subconsciously or semiconsciously, misreading uncertainty as risk may conform better to the preexisting ideas that particular actors maintain.

What remains especially puzzling is that particular issues vary in terms of whether they are treated as risky or uncertain given looming unknowns, even across actors with reasonably similar epistemologies or coinciding cognitive biases. During the COVID-19 pandemic, many countries took precautionary public health measures with regard to viral spread and implemented lockdowns, trading off economic growth for public health safety given how little was known about the virus and its treatment in early months. Even in the environmental domain, instances like the Montreal Protocol historically demonstrated the ability of international cooperation to take precautions in the absence of definitive answers on the consequences of runaway ozone depletion (Haas 1992). Why then is uncertainty so readily substituted for risk in the domain of climate change and green finance more specifically?

While a full answer is undoubtedly multicausal, my contention is that part of the explanation involves the way political interests permeate the interpretation of policy problems and the kind of solutions they imply. Constructivist political economy has been instructive in making similar arguments, for example, in analyzing the use of value-at-risk (VaR) models as a means for banks to demonstrate authoritative and responsible management to regulators despite VAR's predictive failures and tenuous assumptions (Lockwood 2015), or the economic irrationality of fiscal constraint enforced by the European Central Bank in the Eurozone crisis (Matthijs and Blyth 2018). In the next section, I situate this argument in the scholarship on policy paradigms to examine how the interpretations of risk and uncertainty operate politically.

Revisiting policy paradigms

Peter Hall's policy paradigm framework continues to be a fruitful tool for making sense of ideas and interests in politics and, as I argue, offers a lens through which we can interrogate interpretations of uncertainty underpinning policy prescriptions – with some modification. In tracing the transition from Keynesian to Monetarist economic regimes in the United Kingdom in his seminal paper, Hall (1993) highlighted three ideational elements that cohere into policy paradigms: policy goals, policy instruments, and instrument settings. Goals specify the normative content of a policy paradigm (like low inflation or full employment), policy instruments describe the tools to actualize those goals (public spending limits or government stimulus), and settings describe the level to which instruments should be applied given the circumstances (budgetary size). A policy paradigm becomes authoritative when its adherents helm policymaking institutions, and when the logic of a paradigm is proven “correct” by external circumstances that validate its internal logic. When external circumstances are contradictory, advocates for particular policy paradigms will attempt to maintain the coherence of their approach, tinkering with settings or instruments to overcome “anomalies” in a process of “social learning.” Dominant paradigms exhibit path dependency and resist change until they reach a vulnerable state of incoherence, at which time they can be contested and replaced by reformers with competing ideas in a process ‘more sociological than scientific’ (Hall 1993: 280).

Over the last several decades, scholars have revised the policy paradigm framework to resolve underspecification conceptually (what makes up a policy paradigm) as well as causally (how shifts in paradigmatic ideas explain policy change) (Blyth 1997; Howlett and Cashore 2007; Sural 2000). Three revisions are especially instructive for dealing with divergent interpretations of uncertainty. The first is definitional. As Daigneault (2014) cogently argues, Hall's framework obscured the philosophical bedrock that underlays incommensurability between competing paradigms (where incommensurability, in the Kuhnian sense, is critical to distinguishing paradigms in the first place). He makes explicit Hall's comment that economic policy paradigms ‘specified what the economic world was like, how it was to be observed’ (Hall 1993: 279) by adding to Hall's three-level framework:

- i) values, assumptions, and principles about the nature of reality, social justice, and the appropriate role of the State;
- ii) a conception of the problem that requires public intervention;
- iii) ideas about which policy ends and objectives should be pursued; and
- iv) ideas about appropriate policy ‘means’ to achieve those ends (i.e. implementation principles, type of instruments, and their settings). (Daigneault 2014: 461).

The “nature of reality” here is where interpretations of uncertainty play out: fundamental disagreements about how the world works and what kind of information we can get from it. That is, assimilating the same evidence and yet reaching different conclusions about problem definitions and solutions hinges, at least in part, on epistemology: how we know what we know.

The second revision is more methodologically inflected. Policy paradigms are not the same as public policies themselves (Daigneault 2015). Where policies often have material or institutional content, policy paradigms are made up of ideas, held intersubjectively by social groups. Those groups may or may not be contained within the hallways of state bureaucracies and often include nonstate participants engaged in public policy debates (Blyth 2013).

Third, the stability or instability of a policy paradigm is not the straightforward result of the accumulation of anomalies that undermine its credibility. Rather, policy failures have to be constructed as such (Blyth 2013: 201). In drawing a comparison with the 2008 financial crisis where paradigms of neoliberalism in macroeconomic policymaking remained largely intact, Mark Blyth notes that if the locus of authority and interests do not shift in tandem with the evidentiary weakness of a paradigm, social learning is less likely to be a sufficient condition for change (Blyth 2013: 211). In other words, social groups will advance policy paradigms in line with their interests and will work to construct interpretations of events around their views in ways that reinforce their authority.

As such, with some modification, the policy paradigm framework can help taxonomize some of the constitutive differences between risk (uncertainty as limited information/probabilistic variance) and (radical) uncertainty, including the kinds of problem conceptions, objectives, instruments, and interests that are implied and expected in each instance. Table 8.1 sketches two ideal types that illustrate my argument.

To summarize the ideal types, a “risk-based policy paradigm” treats uncertainty as the absence of data and assumes that the likelihood of various consequences of interest is fundamentally knowable and estimable. This informs a problem conception in a policy area whereby the challenge is fundamentally about learning and management. The objectives, therefore, are to make optimal and informed decisions on trading off risk for rewards where appropriate: accepting risk in areas where mitigation would be costly, hedging in others, and limiting risk where the costs of doing so are acceptable. This requires instruments that detect, quantify, and ameliorate undue risk-taking.

Table 8.1 Uncertainty and risk in policy paradigms: ideal types

<i>Element of a policy paradigm</i>	<i>The risk-based policy paradigm</i>	<i>Radical uncertainty-based policy paradigm</i>
Fundamental beliefs	A world of risk: The probability of adverse outcomes can be estimated through measurement and modeling	A world of uncertainty: fundamental limitations to calculating/predicting the probability of adverse outcomes
Problem conception	The phenomenon creates risks that need to be measured and managed	The phenomenon creates uncertain challenges that need to be prevented
Objectives	Optimize risk/reward trade-offs	Create safe operating boundaries
Policy instruments	Information gathering, incentive management, risk mitigation	Prohibition, restriction, precaution
Political interests	Disadvantaged by restriction and precaution	Advantaged by restrictions and precaution

In contrast, I outline the “radical uncertainty-based policy paradigm” where the deep uncertainty of a policy issue is recognized, and no amount of calculation and measurement is considered totally adequate for predicting fundamentally uncertain consequences. This leads to solutions predicated on mitigating the source of danger or vulnerability in the first place through the creation of safe operating boundaries. This paradigm demands policy instruments that prohibit or restrict hazards caused by human behavior or can reduce vulnerability to hazards. Perhaps most critically, I expect these paradigms to represent divergent political coalitions. That is, a victory for precaution is a loss for advocates of a risk-based approach: presuming you can impose a calculation of an optimal trade-off between risks and rewards, precaution represents a kind of risk aversion that leaves money on the table. Conversely, success for a risk-based policy paradigm means that society is gambling with the welfare of those most exposed to the hazards associated with a problem.

The Climate Finance Leadership Initiative

Before applying this modification of the policy paradigms framework, I first provide a brief introduction to the field of sustainable finance, as well as the case of the Climate Finance Leadership Initiative (CFLI) and my justification for its selection.

Sustainable finance is an increasingly mainstream domain of action and debate in global climate governance. As stated in Article 2.1c of the Paris Agreement, sustainable finance entails ‘making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development’ (UNFCCC 2015). The general premise is that if addressing climate change necessitates massive industrial, infrastructural, and technological change, the prerequisite investments

cannot be spanned by government coffers alone. Instead of playing a passive role in decarbonization, sustainable finance calls on asset owners, banks, and other members of the financial sector to play a catalytic and active part.

Undoubtedly, for private sector actors like insurance companies, asset managers, and institutional investors, climate change encompasses several challenges. For instance, swings in environmental regulations, climate-related impacts, or consumer preferences can lead to “stranded assets” whereby investments in particular industries become nonperforming and result in financial loss (Caldecott 2018). Regulators and central banks that oversee financial markets are increasingly recognizing that the impacts from climate change could create serious challenges to economic and financial stability and are considering how to respond (Campiglio et al. 2018; DiLeo 2023; Deyris 2023). More opportunistically, to the extent that climate mitigation and adaptation create growing client demand for environmental alignment in financial services, issue engagement also has positive incentives (Kotsantonis, Pinney, and Serafeim 2016; Orsagh et al. 2018).

Consequently, there has been an explosion in transnational initiatives addressing various governance dimensions of sustainable finance. Of these initiatives, one instance is especially useful for unpacking the policy paradigms at play in sustainable finance. In 2018, the UN Secretary-General António Guterres called on Michael Bloomberg, then UN Special Envoy for Climate Action, to lead an effort to ‘support a global mobilization of private finance in response to the challenge of climate change’ (Bloomberg L.P. 2020). Bloomberg convened a group including executives from Allianz, AXA, Enel, Goldman Sachs, HSBC, Macquarie, and Japan’s Government Pension Investment Fund. In September 2019, they released a report synthesizing existing perspectives across the financial sector in an agenda-setting process.

The case of the CFLI is a useful analytical entry point for at least three reasons. First, for the purposes of studying policy paradigms, the agenda-setting phase is where the core ideas of paradigms (fundamental beliefs, for example) are most likely to be articulated (Wilder 2015). Second, the actors involved are functionally diverse: having pension funds, investment banks, and insurance corporations all represented gives more leverage to draw conclusions about ideas in sustainable finance more broadly, as opposed to, say, reports from the Sustainable Insurance Forum. The geographical diversity of participants (headquartered in Japan, Germany, the United Kingdom, the USA, France, Italy, and Australia) also provides the basis for inferences about policy ideas that are not an artifact of specific country contexts.

Finally, the participants are highly embedded in broader networks of sustainable finance initiatives. For instance, AXA is a member of the Net-Zero Asset Owners Alliance, led the launch of the Net-Zero Insurance Alliance, were party to the Task Force for Climate-Related Financial Disclosures convened by the G20, is supporting a Task Force for Nature-Based Climate Disclosures with the World Wildlife Fund – and the list goes on (AXA Group 2021). This level of engagement is important because participants are highly versed in the discourse and ideas central to sustainable finance; there is more signal than noise comparatively. Further,

this makes the CFLI a “hard case” for my argument in that executives who have developed the greatest capacity to understand and address climate change should be the most familiar with scientific discussions of tipping points and nonlinearities that underpin radical uncertainty.

I analyze the discourse within the 95 pages of the CFLI’s flagship report published in September of 2019, “Financing the Low Carbon Future: A Private Sector View on Mobilizing Climate Finance,” but also consider press releases, statements, and the corporate reports of respective members within the same year. I code text for the elements of a policy paradigm discussed in the previous section (fundamental beliefs, problems, objectives, instruments, and interests), and analyze how they reflect or do not reflect the ideal types described in Table 8.1.

Unpacking the CFLI report

In the analysis of the CFLI’s reports and outputs, the objective is to understand the contours of the policy paradigm being presented and how it reconciles uncertainty. Interpreting these fundamental epistemological beliefs first requires identifying how the elements of a policy paradigm come together. As a result, in this section, I start by descriptively characterizing problem conceptions, policy objectives, and policy instruments. Then, I expound on how the ensemble of ideas reflects fundamental beliefs regarding uncertainty and risk as well as how this implicates constellations of particular political and economic interests.

The CFLI report largely focuses on two core policy problems that climate change consequences pose. First, the biophysical consequences of climate change are highlighted and conceptualized primarily as “physical risks.” These consequences have ‘impacts on human health and well-being, physical assets, and returns on affected investments’ (Climate Finance Leadership Initiative 2019: 14). Physical risks are presented as probabilistic adverse outcomes that become more severe and likely with increased warming. Second, the CFLI discusses “transition risks” as a core policy problem (the risks associated with addressing climate change in the drive towards a low-carbon economy). If policies move too quickly, say, to phase out fossil fuels, the consequence may be trillions of dollars USD of stranded assets and serious losses for the financial sector (Mercure et al. 2018). These two core problems inform the challenges that the CFLI authors identify and organize their report around.

The policy objective of sustainable finance is therefore focused on balancing or trading off physical and transition risks. This circumscribes particular assigned functions for private actors as well as public actors. Private financial actors, as critical authorities in risk management, ‘can play a key role in managing this process [of a low-carbon transition] in an orderly fashion’ (Climate Finance Leadership Initiative: 19). Because a large swathe of the financial sector maintains ownership positions in carbon-intensive companies, investors are argued to be key catalysts, supporting the transition of high-emitting sectors by engaging corporate boards and encouraging behavioral change (p. 4). In considering the balance of opportunities and risks, investors can decide which assets should be retired or nudged towards lower emissions trajectories (p. 20). In contrast, they warn that if major financial institutions

divest completely, assets can just be purchased by less scrupulous financiers: ‘it would be more effective for investors to identify and support relevant transition strategies while considering financial risk to help finance the transition of emissions-intensive industries’ (p. 84). In that sense, the defined policy objective with respect to finance has a delegative dimension: states should give financial markets space to efficiently manage risk, as opposed to regulating their risk-taking behavior.

The more affirmative policy objective for the state is actualizing an orderly transition by organizing the field of play to unlock private investment flows: ‘while private finance is well positioned to play a significant role in facilitating emissions reductions, it must do so profitably’ (p. 37). In addition to creating these investment opportunities, the objective of public policy is to induce a degree of predictability to preserve ‘investor confidence’ (p. 45). Though long-run predictability is deemed important for national climate policy pathways to avoid unexpected transition risks, predictability is also relevant in the context of emerging economies where macroeconomic stability, currency stability, investment incentives, and government capacity are all necessary ingredients of ‘investment readiness’ (p. 47). Corruption, political crises, and conflicting regulations undermine the quality of the investment environment in energy and clean technologies (p. 49) and therefore limit north–south financial flows.

Because the policy objective is to manage risk, one of the relevant categories of policy instruments entails gathering information to measure said risks.³ As the report states, ‘without widespread availability of information, financial decision-makers cannot assess climate-related impacts’ (p. 79). One major pillar of making risk legible is through voluntary and mandatory frameworks for climate risk disclosure, advanced by efforts like the G20’s Task Force for Climate-Related Financial Disclosures (TCFD), which the report references.⁴ The driving theory of change in climate risk disclosure suggests that if companies provide information on their vulnerabilities to climate impacts and their role in contributing to climate change, financial markets will have sufficient information to efficiently reallocate capital and mitigate climate risks across the economy. Disclosure is therefore critical to actualize the ability of the financial sector to act as a delegated authority in climate risk management.

On a global basis, climate disclosure is primarily governed through voluntary systems run by nonstate actors like CDP and the Sustainability Accounting Standards Board – even as public disclosure regulations proliferate, private standards are often still used as means of compliance (Elliott et al. 2023). The drive for better information is challenged by a number of obstacles: collecting and analyzing disclosed data in order to make informed decisions have high transaction costs (p. 82), in some part due to a multiplicity of unharmonized standards about how to identify and analyze climate risks in the first place. As a result, the report advocates for private and public governance-driven measures to improve information access and aggregation: the integration of climate risk into credit rating agencies’ methodologies, a drive towards standardized frameworks for risk assessment, and continued private engagement with corporations to encourage greater disclosure (p. 85).

On the public side, policy instruments to mitigate risk take numerous forms. In technology, governments are encouraged to subsidize innovation, set legal frameworks to assist low-carbon investments, and drive investment through sectoral standards in order to make low-carbon technologies commercially viable and bankable (p. 20). In the cited example of electric vehicle (EV) technology, pollution regulation and fuel economy standards were identified as being critical alongside incentives enabling investments in EV-charging infrastructure with self-reinforcing effects (p. 30). A panoply of other measures is suggested in mobilizing investment: states and public finance organizations taking on roles as cornerstone investors, making guarantees to private investors and offering political risk insurance, and other efforts to make risk or returns tolerable. The state is also responsible for smooth transitions for affected communities dependent on declining high-carbon industries, with the report's authors recommending income support for households as well as industrial strategies with retraining programs (p. 76).

How does this policy agenda, with its defined problems, objectives, and instruments, reflect fundamental beliefs about risk and uncertainty? All three levels of the policy paradigm described thus far point to a "risk interpretation," as outlined in the previous section. Climate change consequences, environmental and political, are characterized as fungible risks to be managed through measurement and hedging. Where uncertainty shows up, it confronts the financial sector as a lack of information or as a consequence of policy missteps, ultimately conquerable through telegraphed policy pathways and an abundance of information.

Uncertainty as a matter of complexity, or the kind of radical uncertainty that the concept of green swans imply, is not made visible here. There are no recognized limits to the ability of the financial sector to find an efficient and optimal balance between physical and transition risks, assuming the information is abundant and cheap. This ultimately conflicts with climate change as a deeply uncertain problem: if risks were considered incalculable, if damages were existential and not discountable, no amount of disclosure and data collection could endow financial markets the capacity to make *optimal* decisions about where to allocate capital given the unpredictable hazards we might expect (Christophers 2017). Even if it could, the logic runs aground when investors are reluctant to divest for the sake of corporate engagement.

Understanding this risk-based policy paradigm requires pulling back the curtain on the co-constitution of policy ideas with political and economic interests. The financial sector is deeply implicated in the financing of carbon-intensive industries such that rapid decarbonization, as they warn, threatens to offload stranded assets and losses onto private balance sheets. Carbon-intensive industries are thus "too big to fail right now" and more radical, precautionary approaches to emissions reductions in public policy might generate transition risks that threaten the ability of investors to clear profit. This interdependence is even reflected in the membership of the CFLI where Enel, a major multinational utility company, helms the initiative alongside HSBC and AXA.

Ultimately, the report's authors argue against disentangling their financial interests from the carbon titans. Certainly, nudging Exxon towards sustainability at shareholder meetings is much easier to justify when it clears \$23 Billion USD of

profit in 2021 and pays its stockholders significant dividends (Bloomberg L.P. 2022). For banks, ending relationships with fossil fuel industry clients overnight would similarly collapse revenues in commercial loans, banking services, and debt underwriting. It is certainly notable that engagement only seems to be relevant until a sector becomes uncompetitive. Coal companies are being divested from instead of engaged with, because, as in the case of BlackRock's divestment action, exiting an industry struggling to compete with natural gas as a provider of cheap energy boosts one's share price (Bassen et al. 2021). A more precautionary approach and a more rapid transition to a low-carbon economy might be beneficial for the climate-vulnerable but seriously disruptive to the earnings of financial corporations.

Beyond strict economic interests, emphasizing a problem conception predicated on risk arguably helps advance public delegation to private authority. In a worldview where calculatable risks are the central problem, financiers in the business of risk management are the "adults in the room." This framing mirrors the epistemic politics of financial stability more broadly, where private actors emphasize their ability to calculate and manage risk, preserving their autonomy from direct regulatory interventions (Lockwood 2015). Undoubtedly a precautionary approach would be inconsistent with the neoliberal predication that markets can independently identify, discipline, and correct for risk better than ham-fisted regulators, an idea that has largely persisted in the logic of financial regulation despite the miscalculations of the 2008 financial crisis (Helleiner 2014; Mugge 2013). In the CFLI report, this private authority is effectively extended to industrial transformation, where the financial sector argues for its role in nudging emission-intensive industries towards decarbonization.

We can also understand how epistemology, interests, and policy paradigms are co-constitutive in the articulation of the role of the state. In some ways, a neglect of radical uncertainty is made possible by public policy that can dampen shocks where they might arise. The job of the public sector is to *make* the world predictable; to construct a protected playing field of manageable risk in which the financial sector can comfortably operate profitably. This approach to climate change, as with international development, constitutes what Daniela Gabor (2021: 432) calls 'The Wall Street Consensus' and the advocacy of the 'de-risking state,' which she argues 'is an attempt to reorient the institutional mechanisms of the state towards protecting the political order of financial capitalism against climate justice movements and Green New Deal initiatives.' In fact, the state not only absorbs traditional forms of credit or default risk, but also insulates the market from the unpredictable. Despite encompassing relatively progressive policy positions like carbon pricing and fossil fuel subsidy removal in this report, it is the derisking state (or perhaps the certainty-making state) that fundamentally preserves the position of the winners in the current political and economic order.

Conclusion

Anthropogenic climate change poses consequences that are difficult to anticipate or predict. The sheer complexity and nonlinearity of global planetary systems imply

that grappling with radical uncertainty is necessary to fully understand the problem and come up with solutions. Yet, the world of sustainable finance puzzlingly persists with a conceptualization of climate change as a risk that can be measured, managed, and hedged.

In this chapter, I argued that to explain this epistemological choice, we have to understand how problem definitions and policy solutions build on fundamental beliefs about how the world works, and that those beliefs are co-constituted with political and economic interests. Using the policy paradigms framework as a lens, I examined the Climate Finance Leadership Initiative as a focal agenda-setting exercise in sustainable finance. I concluded that interdependencies between financial capital and polluting industries manifest perceived dangers that a serious engagement with uncertainty and rapid precautionary action would imply. As a result, the “green swans” that the authors of the Banque de France report were so concerned with (i.e., severe, plausible, but difficult to anticipate consequences) are whitewashed. This perspective on climate risk is made possible by the role of the state, which in many ways underwrites the shocks and uncertainties that climate change threatens. Without this mechanism of de-risking and insulation from uncertainty, the roles that the financial sector are willing to take on – including demanding corporate transparency and nudging large polluters to talk about their transition plans at annual general meetings – will likely lead to delayed action as financiers hedge their bets with (still profitable) emissions-intensive industries.⁵

While the case is illustrative of the argument, it does not exclude alternative explanations. A neglect of radical uncertainty may also relate to other ideational factors at play: the predominant epistemologies of financial actors as risk managers (Lockwood 2015), short-termism as a persistent cognitive bias in long-run collective problems (Levin et al. 2012), the common discursive treatment of climate change as a market failure (Paterson 2021), perhaps even scientists downplaying alarmist scenarios and “erring on the side of least drama” in public discourse (Brysse et al. 2013: 327).

However, consider this thought experiment: if major financial institutions were completely divested and unexposed to industries subject to transition risks, it would be reasonable to expect a more precautionary policy agenda that might better align with interests representing “climate-vulnerable assets,” for whom long-run climate change reflects existential stakes (Colgan et al. 2021). The logic aligns with the fact that the UK, French, and Dutch financial institutions (in countries farther along on their decarbonization pathway) seem to be on the leading edge of making net zero commitments in global covenants. At the same time, many American financial institutions (e.g., Bank of America, Vanguard, J.P. Morgan) have been defecting or demanding less stringent standards, as they continue to dominate global financial services to the oil and gas industry globally.

In defense of the CFLI, the report is far from a restatement of a neoliberal agenda. The authors advocate for industrial policy from innovation to infrastructure, discuss state interventions for winding down dirty industries, and see systematic carbon pricing and sectoral emissions standards as integral to managing

incentives. In some ways, this may represent the post-paradigmatic state of policy ideas surrounding green growth (Allan and Meckling 2023), the position of the financial sector as having diversified interests in both low-carbon and high-carbon industries, or perhaps a desire to head off public intervention in financial markets on climate issues while also demanding much-needed infrastructural transformation with bankable opportunities in the real economy. Nonetheless, the analysis suggests an incrementalistic agenda that largely preserves the economic stature of existing market actors, competing with paradigms that demand more immediate, precautionary, and transformative action.

One of the objectives of this volume is to explore how the study of uncertainty and its definitions can inform our understanding of global politics. The case of the CFLI and sustainable finance advances this goal by illustrating how the interpretations of uncertainty and tacit assumptions about the limits (or lack thereof) of human knowledge are co-constituted by interests in the construction of policy paradigms. As other contributors in this volume emphasize, to explore uncertainty in global politics, we first must understand who stands to gain or lose from reckoning with it.

Notes

- 1 Black swans are unexpected and rare outcomes that can only be fully explained after their occurrence. For a critical discussion of black swans, see Kelman (in this volume).
- 2 I use the risk-uncertainty dichotomy of Knight in the remainder of the chapter but recall that risk entails a *type* of uncertainty including limited information or probabilistic variance.
- 3 A number of financial innovations are discussed and are important but are less relevant to the definition of policy instruments per se. These include Energy Service Companies, Purchasing Power Agreements, green securitization, and green bonds.
- 4 Climate risk disclosure entails companies issuing reports on their GHG emissions and their sustainability footprint. The TCFD was an initiative also chaired by Michael Bloomberg and convened by Mark Carney under the G20's Financial Stability Board.
- 5 It should be noted that scenario planning analysis, which does engage with uncertainty more centrally, is a growing segment of process standards practice in sustainable finance and is recommended in the TCFD guidelines. However, compared to an issue like climate risk disclosure, it receives significantly less attention, and it remains an emerging frontier of practice.

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IV

Uncertainty at the global level



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9 **Uncertainty and Fiji’s role in shifting norms on state-led responses to climate mobilities**

Liam Moore and Phil Orchard

Climate change is reshaping pathways of climate mobility. Despite the dawning reality of how the effects of climate change will shape human movement, there is still a great deal of uncertainty around how states should respond to and assist those forced to move.¹ Looking specifically at cases of climate-related internal movement in a Pacific Island state like Fiji, there is an extreme level of risk and uncertainty surrounding the issue. While climate-related hazards pose risks to the physical security of states and individuals, they can also pose risks to their ontological security – their specific identities through time and space. The particular issue that exists around internal climate mobilities² is the uncertain nature of the response that is required. Uncertainty here is complex. It is driven both by external sources – the uncertainty due to a lack of information about how climate-related hazards will continue to displace populations and reshape mobilities – and by human sources – too much information about what could be done in response to climate mobilities domestically, and a lack of shared meaning at the international level about what responses are most appropriate. In the language of this volume, however, it is an instance of extreme ontological uncertainty.

Matejova and Shesterinina in this volume define extreme uncertainty as that which ‘ruptures everyday routines and expectancies in major ways.’ We argue that in the case of climate-related displacement, future uncertainties – or the lack of sustainable, long-term prospects for at-risk individuals and communities – rupture the future expectations and routines for people, communities, and states. While the disruption may not be as temporally acute as some of the other examples discussed in this volume, the absence of long-term security and safety for at-risk populations certainly manifests as an extreme form of ontological uncertainty.

Our case is Fiji, which is already experiencing such forms of uncertainty. The significance of the Fijian case is that the government has made strides towards regulating this extreme uncertainty by contesting normative understandings of how state-level actors should respond to cases of climate mobilities. They have done this by creating some of the first policies in the world to specifically address instances of climate-related displacement and relocation. By creating clear guidance where previously none existed, Fijian authorities have been able to mitigate and regulate uncertainty by clarifying how states should respond when populations are at risk of climate-related displacement.

The Fijian response can be divided into four separate processes. The first traces how local communities within Fiji first experienced extreme uncertainty and sought out government assistance. The second process sees Fiji draw on existing analogous international norms to craft a response that addresses the issues and manages uncertainty for communities and the state. The third process sees this response formalized in an attempt to relegate the extreme uncertainty to the more manageable level of routine and inherent uncertainty, whilst maintaining Fiji's material and ontological security. Finally, the fourth process sees the practices and understandings within the Fijian response promoted internationally as a new standard of acceptable behavior in response to domestic climate-related mobilities. This final process looks to secure the identity of the state in the eyes of the international community and to validate their actions by having the practices accepted as part of a nascent climate mobilities norm regime.

We begin by exploring how climate change and climate mobilities have created extreme ontological uncertainty for Fiji, driven by both natural and human-made causes. But, in Fiji's case, the government has responded to this uncertainty by engaging in a process of norm entrepreneurship, seeking to recast a mixed range of international normative understandings within the climate mobilities issue area into a clear set of prescriptions to help guide the behavior of other states and decrease ontological uncertainty, a set of prescriptions which has led to a nascent norm regime. To do this, we provide an overview of current theorizing around processes of norm entrepreneurship and norm contestation before turning to an in-depth exploration of Fiji's efforts.

Ontological uncertainty and security

In the case of Fiji, and many other similar places in the Pacific and around the world, the risks stemming from anthropogenic climate breakdown and the hazards associated with it have caused an increase in uncertainty. Climate change poses both a current and future risk to residents of the Pacific, particularly those communities who reside in low-lying coastal areas. The rising sea levels, more frequent and intense flooding and erosion from storm surges, and salination of soil from increased salt-water intrusion all pose potentially catastrophic risks for these communities. However, despite the doomsday discourse that dominates discussions of climate-related displacement, the process is often slow. Communities move over years. Additionally, the relocations conducted in Fiji to date are measured in the number of households, rather than by the thousand. For those affected, the results are dire, and the number of people who could be at risk is potentially extremely high. But in the short term, the number of people participating in these early relocations is relatively low. What is uncertain is exactly how many people will be affected, when they will be affected, and how long they will have to plan for their movement once staying in their homes becomes untenable.

External sources of uncertainty are reinforced by human sources of uncertainty: the lack of a clear framework for responses at the international, regional, and local levels. For those who do move, the majority of them will move within their state

of citizenship or habitual residence. Therefore, because they have not crossed an international border, the Refugee Convention will not apply (McAdam 2012: 43). Instead, the most relevant source of rights and protections for people who are internally displaced by environmental hazards and disasters are the Guiding Principles on Internal Displacement (Kälin 2010: 92–93; Kolmannskog 2012: 39). While not a legally binding international agreement, the importance of the Guiding Principles lies in their acknowledgment of the nexus between human-made and natural hazards and forced displacement (Kälin 2008: 2).³ While these protections form the basis of a nascent internally displaced persons (IDP) protection regime, the protections are informal. Without formal protections, states and other actors are not legally bound to observe these rights (Orchard 2018: 7). Further, there are open questions about whether those uprooted by slow-onset hazards such as sea-level rise, as opposed to sudden-onset hazards such as tsunamis, are covered by the Principles and what the threshold is between voluntary and involuntary movements (Cohen and Bradley 2010: 108).

To add to this uncertainty, while the rights and protections owed to those forced to move are unclear, it is clear that states have an obligation under international law to do something to protect their citizens in these circumstances (Bellamy 2008: 619; Ferris 2011: 66, 203; McAdam and Ferris 2015: 158; UN General Assembly 1991; UN High Commissioner for Human Rights 2012: 226). Included within this is the obligation to take preventative action to protect rights, and assist when they are violated, as a result of exposure to environmental hazards (Ferris 2011: 212; McAdam and Ferris 2015: 158). Further, jurisprudence from the European Court of Human Rights has shown that states have a specific obligation to protect people from foreseeable harms that may occur because of environmental hazards (Burson et al. 2018: 384; Cohen and Bradley 2010: 126; Ferris 2009; UN High Commissioner for Human Rights 2012: 226). This forward-looking assessment of future harms has been reinforced by a 2020 decision by the UN Human Rights Committee, which found that states may have an obligation not to return people to situations in which their lives might be at risk because of climate-related factors (Human Rights Committee 2020).

This has created an almost perfect storm of issues and uncertainty for Pacific states to navigate. On the one hand, states lack basic information and cannot calculate exactly how climate change will alter environmental systems and processes, and what needs to be done to assist communities in adapting and surviving as these conditions precipitate more frequent and intense hazards. On the other hand, states also have too much information – a range of competing and ambiguous obligations that exist, driven by a range of different norms emerging from distinctly different contexts – which dilute shared understandings about what exactly should be done. It is the collision of these two factors that makes the continuation of politics as usual in Fiji almost impossible and breeds such extreme levels of uncertainty.

Uncertainty and climate-related disruptions can also undermine the ontological security of those at risk. Ontological security can broadly be understood as ‘how individuals, groups, states, and societies secure their sense of identity through time and space’ (Steele 2020). To remain secure in their sense of self, actors must

consider how their actions will affect their identity and gel with the autobiographical narrative they tell, taking account of traditional concerns like capacity, material costs, and interests (Steele 2008: 10, 68–72). The desire for ontological security can help us understand how and why states act as they do – particularly when they act in ways that clash with their interests, put their physical security at risk, or seem to be far beyond their means of implementation (Zarakol 2010: 19–20).

To preserve their ontological security, states use narratives to ensure autobiographical continuity is maintained during periods of upheaval and crisis. The stories that are told, both domestically and internationally, allow required policy changes to be justified and reconciled with the practices that have come before (Subotić 2016: 611, 616). While norms serve as a behavior guide for actors with a given identity, these autobiographical narratives serve to (re)construct the identity of the actors practicing the norms (Finnemore and Sikkink 1998). Crises can disrupt existing norms – as Legro (2000: 420) has argued, they can show ‘the old ideational structure is inadequate thus causing its collapse.’ But such periods can also create windows of opportunity when new norms can be created (Berger 1996: 331; Orchard 2014; Price 1998: 622). In such a situation, the state can weather a period of crisis by adapting its autobiographical narratives through a process of normative change, with new norms clarifying inconsistencies and establishing new behavior guides. Norm change can reanchor states’ perceptions of ontological security by making them surer about who they are, what they should do, and what processes to follow in similar crises.

For communities in Fiji that have important spiritual and cultural connections to land and place, the prospect of having to move is extremely confronting. Not only are there material issues and financial costs in moving, but there are also identity costs – at the individual, community, and state level – to consider. Therefore, managing the extreme uncertainty around what will happen to those who may have to move because of climate change is an issue of both physical and ontological security. A clear normative guide around how and when states should act in instances of potential climate mobilities would help routinize this uncertainty and give the actors involved the tools, knowledge, and meaning to be able to manage the issue now and into the future. But how can Fiji, as a relatively small Pacific Island state, create such normative guides to reduce its overall levels of uncertainty? In the next section, we explore how International Relations (IR) constructivism as an approach details the process of norm change before returning to the case of Fiji.

Uncertainty and the power of norm entrepreneurship

As a theoretical approach, IR constructivism has focused on the role that “social facts” – such as norms, standards, rules, and ideas – can play alongside material facts in explaining political decisions (Ruggie 1993; Searle 1995), leading to an understanding of structures and agents operating in a mutually constitutive manner (Wendt 1999). An early focus was on so-called norm entrepreneurship, with entrepreneurs seen as critical for explaining the processes of norm emergence and change. In Finnemore and Sikkink’s widely cited norm life cycle model, norm

entrepreneurs played an important early role as agents who would first place an issue onto the international agenda through their efforts to call ‘attention to issues or even “create” issues by using language that names, interprets, and dramatizes them’ (Finnemore and Sikkink 1998: 897). Framing was crucial for these calls, ‘the conscious strategic efforts by groups of people to fashion shared understandings of the world and of themselves that legitimate and motivate collective action’ (Benford and Snow 2000: 614; McAdam et al. 1996: 6). These frames need resonance, determined by the frame’s own credibility and the credibility of the actor using them, and salience with the receiving audience to be effective (Benford and Snow 2000: 620–622).

These initial accounts of entrepreneurs, however, quickly proved to be problematic. The conception of agency is narrow, with entrepreneurs playing a role only in the process of norm emergence before being replaced by early adopting states who become ‘norm leaders’ and socialize other states to follow them through a variety of mechanisms that can include legitimation effects, self-esteem effects, and the pressure for conformity (Coleman 2013: 166; Finnemore and Sikkink 1998: 901–902). The third stage was similarly dominated by states. Once a critical mass of states adopts a new norm, it passes a threshold or tipping point (Finnemore and Sikkink 1998: 896–906). After this point, the new norm is so widely accepted that it is ‘internalized by actors and achieve a “taken-for-granted” quality that makes conformance with the norm almost automatic’ (Risse and Sikkink 1999: 15).

Norm entrepreneurship also presumed an outside-in process, with outside norm entrepreneurs seeking to influence states only at the early stages, rather than including a range of actors such as key figures within governments and even states themselves as playing such a role (Davies and True 2017; Orchard 2014; Orchard and Gillies 2015: 491). Finally, rather than being led by interests, early accounts conceptualized norm entrepreneurs ‘as altruistic, principled actors who are not primarily guided by their own interests’ (Wunderlich 2020: 29), committed to the ideas and values embodied in the norms even if those norms had ‘no effect on their well-being’ (Finnemore and Sikkink 1998: 898). This idea of moral authority was seen as critical for the main set of actors that were being viewed as norm entrepreneurs: transnational civil society (Price 2003). But even such actors were found to operate out of self-interest as well as principled beliefs (Ron et al. 2005), engaging in “agenda vetting” to legitimate some new claims and ignore others (Carpenter 2011). Thus, Wunderlich argues norm entrepreneurs as well as other actors need to be understood as acting in both interest and norm-driven ways (Wunderlich 2020).

These accounts presumed that norm entrepreneurs acted as a positive force in another sense as well, providing unified advocacy to push new normative understandings. While this did occur in some cases such as with respect to the landmines convention (Price 1998), quite rapidly the literature identified these efforts as existing within a competitive environment. Norm entrepreneurs compete with other entrepreneurs with their own frames to convince states to adopt particular understandings (Krebs and Jackson 2007: 44–45; Payne 2001). Other groups, “antipreneurs,” may not put forward new understandings, but instead ‘defend the entrenched normative status quo against challenges’ by seeking to refute claims

and undermining any new norms (Bloomfield 2016: 321). A third group – norm saboteurs – may seek to undermine efforts to adhere to existing norms and thereby undermine the existing status quo (Schneiker 2021: 107). Such efforts may mean that wins are not possible. Opposition may cause potential changes to be stymied, stalled, or blocked (Bob 2012: 32).

Agency and norm contestation

So far, our critique has focused on the need for a more expansive understanding of norm entrepreneurship in theorizing norm creation and change. Equally important, however, has been a growing critique of how norm change itself is conceptualized. Initial constructivist work tended to assume that norms were created with a fixed identity, a ‘stability assumption’ in other words (Wiener 2014: 23), and that their process of emergence would lead to a clear endpoint, culminating in an internationally institutionalized norm that was internalized by states (McKeown 2009: 9). This notion of a fixed norm is problematic because it removes agency from other actors, particularly the capacity of societal agents at the international and domestic levels to understand, challenge, and recreate a given norm in different forms rather than just being norm takers, and it prioritized the international level over domestic level actors.

Instead, how norm change is conceptualized has changed, with Krook and True (2012: 104) arguing that all norms exist as ‘works in progress’ subject to contestation, cooptation, drive, accretion, and reversal. This reflects the “dual quality of norms” as Wiener (2007: 49) puts it: ‘they are both structuring and socially constructed through interaction in a context. While stable over particular periods, they always remain flexible by definition.’ In this way, norms can be considered to legitimize a range of policy options, goals, and means – not just one course of action (Klotz 1995: 461–462). This flexibility allows norms to ‘simplify choices’ and reduce ‘the complexity of choice-situations in which actors find themselves,’ without being narrowly prescriptive (Kratochwil 1989: 10). But, as the volume’s introduction notes, norms can also be an important source of shared meanings for actors and thereby contribute to lessened uncertainty. If norms are so malleable, then, how do shared meanings persist through change?

In brief, through the process of contestation, norms may change but also gain legitimacy and clarity. Let us first turn to how this process of contestation works at the theoretical level before illustrating it by exploring Fiji’s norm entrepreneurship around climate mobilities. Contestation, following Wiener (2018: 2), is a societal practice in which rules, regulations, or procedures are critically questioned. This can occur either explicitly, such as through contention, objection, questioning, or deliberation, or implicitly such as through neglect, negation, or disregard. Through contestation, stakeholders either object to or critically engage with norms. Objections, or reactive contestations, reflect activities such as protest, rejection, negation, or accusation. Critical engagement, or proactive contestation, by contrast, sees agents creating both normality and normative effects through that engagement. Proactive contestations, in other words, are constitutive: through the process

of contestation, legitimacy gaps can be identified and filled, thereby increasing the overall legitimacy of the norm (Wiener 2014: 2–3).

How a norm is implemented at the domestic level can become critical to how it is understood. The implementation process sees formal legal and policy mechanisms introduced to routinize compliance and practices, but this creates new arenas for interpretation and contestation of the norm by relevant actors (Betts and Orchard 2014: 3; see also Stimmer and Wisken 2019: 521).⁴ Implementation will shape how the actor understands the norm. In some cases, the norm will be accepted intact. In other cases, actors will fit the norm into their own specific understandings and then communicate it back up to the international level (Acharya 2013: 469; Job and Shesterinina 2014: 144),⁵ leading to either reactive or proactive contestations focusing either on its core validity claim or on how it should apply to a given situation (Deiteloff and Zimmermann 2020: 56–57; Wiener 2018: 13). It can also lead to a third type of contestation, interpretive contestation, whereby an actor has ‘*unknowingly* adopted a different interpretation of what a given norm means’ (Orchard and Wiener, forthcoming). As opposed to the other types of contestations, this is not deliberate and may remain hidden or opaque to other actors. Thus, we can understand the process of norm contestation occurring at two levels: at the domestic level within the state (or within other corporate actors such as international organizations) and at the international level, with the ability for specific contestations of a given norm to be transmitted from one level to the other. The process of contestation itself helps clarify the norm and increase the norm’s legitimacy. In turn, by serving as an effective behavior guide for states, such a norm reduces their level of extreme uncertainty.

Finally, so far, we have focused on how individual norms are introduced by norm entrepreneurs and contested. Yet, norms rarely exist in isolation. Other structures are needed in order to ‘emphasize the way in which behavioral rules are structured together and interrelate’ (Donnelly 2012: 625; Finnemore and Sikkink 1998: 891). Whether referred to as ‘norm clusters’ (Lantis and Wunderlich 2018: 571) or ‘regimes’ (Orchard 2014: 241), these structures matter because they bundle together what might otherwise be disparate norms. Such structures, therefore, provide a clear sense of the scope of international behavior required and how states and other actors *should* deal with a particular problem. Linkages created by a regime bring an increased regularity to state practices than would otherwise be the case; they ‘frame the nature and scope of a given problem and provide potential response scripts’ (Orchard 2014: 241). Thus, while we have previously referred to individual norms as serving as behavior guides for states, in practice it tends to be these wider norm regimes that states end up following, such as how the international refugee regime, rather than individual norms within it, offers a guide to how states should provide protection to refugees (Betts 2009; Orchard 2014).

While there are clear norm regimes around issues such as internal displacement, refugees, humanitarianism, a regime is yet to clearly coalesce around climate mobilities, and particularly those mobilities that occur within states. The lack of a clear norm regime means there is uncertainty due to a lack of directly applicable information, a wealth of potentially applicable information, and because there is

no clear agreement on how existing norms should be understood when applied to climate mobilities. Thus, the question becomes: how can a set of norms be created to lower this level of uncertainty?

Fiji, climate mobilities, and managing extreme uncertainties

The government and residents of Fiji are facing the confluence of risks exacerbated by climate change and the lack of clarity surrounding how states should respond to climate mobilities at home. The changes in everyday political practices that have already occurred at the state and community levels, plus the rupturing of future expectations, render this situation one of extreme ontological uncertainty for Fiji. While the uncertainty created by climate change itself is not something that individual states in the Pacific can control – despite their best efforts – Fiji has sought to shape a new understanding of norms around climate mobilities in order to reduce the uncertainty around acceptable and expected responses. The following section explores how, through a series of four processes, Fijian actors have attempted to manage and regulate this uncertainty – effectively acting as norm entrepreneurs and creating the foundations of a nascent norm regime on climate mobilities in the process.

The uncertainty around climate mobilities in Fiji is not just a future concern – it is already disrupting the patterns of everyday life for affected communities, creating extreme uncertainty. Fiji has already relocated – fully or partially – six communities because of climate-related factors. These include the much-publicized relocations of Vunidogoloa and Narikoso (Kumar 2021). In addition to these relocations, the government has identified more than 40 communities in need of immediate relocation and over 800 others who will need some form of assistance in the near future (Piggott-McKellar and McMichael 2021: 106).⁶ The drivers behind this mobility are not limited to sea-level rise but also encompass related issues like worsening erosion, salt-water intrusion into farming lands and water sources, and increasingly destructive storm surges.

The Fijian response to the extreme uncertainty created by climate-related hazards and their effects on human mobility can be broken down into four separate processes. These trace the process of how uncertainty is experienced and managed from communities first being affected by climate-related hazards and requesting assistance; through government actors stretching, translating, and contesting potentially applicable norms to craft appropriate responses; the formalization of this response to regularize previously extreme uncertainty; and finally the international promotion of this understanding of how states should respond to climate mobilities, marking the emergence of a nascent norm regime around state-led protection of those at risk of climate-related displacement.

Process 1: Community responses to extreme uncertainty

Unsurprisingly, the first Fijians to experience the extreme uncertainty of potentially having to leave their homes because of climate-related hazards were those living in low-lying coastal communities. The first two state-sponsored community

relocations due to climate change to be carried out in Fiji were the coastal communities of Vunidogoloa and Narikoso. In both cases, it was the communities that first reached out to government officials to request help.

Vunidogoloa is a village of around 150 people on Fiji's second-largest island of Vanua Levu. Originally, the village consisted of 26 houses located only meters from the shoreline of Natewa Bay. In recent years, the community had experienced widespread damage to homes, infrastructure, and subsistence gardens from recurrent inundation and saltwater intrusion. To adapt to the rising seas and changing weather patterns, the community had abandoned houses several times, rebuilding homes further from the shoreline and raising them off the ground, making them more resilient. Several sea walls were also constructed to protect the village; however, they were progressively broken down and eventually had a detrimental effect as they prevented water from receding during flooding events (Charan et al. 2017: 23–24; McNamara and des Combes 2015, 316–317; Tronquet 2015: 122–128). As one villager said,

We were trying to adapt by our own so that we don't have to leave our land and each time the sea came to our doorsteps, we moved a little away from it until it became so worse that we knew we had to relocate.

In 2006, community elders agreed they had run out of time and options for keeping the village in its existing location (Charan et al. 2017: 24). To manage uncertainty and ensure security, they decided to relocate the community, although they recognized that they did not have the capacity to do this autonomously and reached out to the government for assistance.

The story of Narikoso is a similar one. Located on Ono Island, Narikoso is a 27 household-strong village with a population of around 100. Between 2010 and 2016, the coastline receded around 15 meters due to erosion (Green 2016: 818). Numerous attempts had been made to deal with the changes wrought by rising seas in the past. However, actions such as the construction of a sea wall in the 1960s had detrimental effects on the community's ability to withstand hazards, as during construction mangroves and coastal vegetation that had provided a natural buffer were removed and struggled to recover. Similar to Vunidogoloa, once the sea wall collapsed, it exacerbated flooding in the village (Green 2016: 818). The community made a direct appeal to the prime minister in 2011 and a formal request to the government for assistance with adaptation works the following year (Barnett and McMichael 2018: 345; Edwards 2014: 214). Later in 2012, initial works to relocate the seven most at-risk households began – although this process experienced repeated and significant setbacks (Kürschner 2017).

Process 2: State-level responses to extreme uncertainty

The communities' requests for assistance set a second process in motion – the reaction of the state to the uncertainty created by a lack of clear, established legal or normative guidance around exactly how to respond to this emerging issue. In

2012, we see the first concerted efforts of the Fijian state apparatus to engage with and attempt to manage the uncertainty around climate mobilities. The initial work for the relocations of Vunidogoloa and Narikoso both began during this time. Fiji was also struck by Tropical Cyclone Evan in 2012, which displaced 8,400 people across the country (Internal Displacement Monitoring Centre 2013, 30). Cyclone-related damage wrought by storm surges led to 19 households from the community of Denimanu being slated for relocation away from the shorefront (Martin et al. 2018: 4), and a landslide also displaced the community of Tukuraki who required relocation assistance (Tabe 2019: 219).

These relocations have not run smoothly; communities reported frustrating and traumatic experiences throughout the process. In the flagship Vunidogoloa relocation, community figures claim they were forced to self-fund over half the cost of the relocation (Rika 2018). Additionally, despite lengthy consultations with government officials and contractors, the finished houses did not include kitchens as promised. Residents were left to build these themselves, repurposing equipment from the old houses (Piggott-McKellar et al. 2019: 140). There were similar issues in the partial relocation of Denimanu. While the new site was officially opened in January of 2014, residents claim the project was not fully completed until 2016 (Martin et al. 2018: 5; Bua Provincial Council 2018). Alongside the lengthy delay, the community expressed reservations that only around half of the community was relocated, as well as concerns about housing construction, drainage in the new village, inadequate sewage septic tanks, and the increased risk of landslides at the new site (Martin et al. 2018: 4; Piggott-McKellar et al. 2019: 8, 10–12). In response, the government acknowledged that it was learning from past mistakes as it moved forward on both the policy development and implementation fronts.

Setting the stage for the third process, the government also began building the groundwork for policy development in this space during this time. They held the first National Summit for Building Resilience to Climate Change in 2012, which identified the gaps, concerns, and challenges of managing climate-related mobilities – and specifically planned relocations – within their existing frameworks (Ministry of Foreign Affairs and International Cooperation 2012). Similar meetings and consultations were conducted throughout the drafting process of what would become Fiji's Planned Relocation and Displacement Guidelines. Here, the lack of a clear international framework was an important motivating factor – in 2017, Fijian Ambassador to the United Nations Nazhat Shameem Khan acknowledged that it had been difficult to develop country-specific guidelines when there was an absence of international experiences to draw upon (Khan 2017). In this case, rather than preventing action, the uncertainty of the situation motivated state-level actors to act in a way that would potentially reduce uncertainty in the future.

While there were no existing policies that could be directly drawn upon during the development process, Fijian authorities did lean on international expertise and support to help them write, promote, and implement their guidelines. Both the Planned Relocation and Displacement Guidelines were financially supported through European Union funding funneled through the German Federal Ministry for Economic Cooperation and Development and the German Development

Fund. Professor Cosmin Coredea, an advisor whose services were provided by the German Development Fund, played a leading role in authoring both guidelines. Further expertise across the two sets of guidelines was provided by UNHCR, the UN Development Programme, UN Women, UN Officer for Disaster Risk Reduction, International Organization for Migration (IOM), the Platform on Disaster Displacement, and several regional organizations like the Pacific Community, Pacific Islands Development Forum, and the Pacific Islands Forum Secretariat (Ministry of Economy 2018, 2019). Therefore, while Fiji was not able to wholesale implement existing international norms to create their policies around climate mobilities, there was a degree of translation, localization, contestation, and stretching of existing norms during the implementation process.

Process 3: Managing uncertainty on the domestic front

The finalization of policies like the guidelines shows how in the third process Fiji sought to formalize and routinize their response. The lessons from initial relocations and principles from existing applicable norms were combined into several key documents. Alongside the Planned Relocation and Displacement Guidelines, Fiji also established the Climate Relocation and Displaced People's Trust Fund in 2019, and wrote these policies, and others like them, into law with the passing of the Climate Change Act in 2021.

This formalization mitigated the extreme nature of the uncertainty. While climate change still poses the same risks, there is now a degree of certainty around how state actors will respond to them – now and into the future. Reducing uncertainty by developing regulated responses effectively reduces both the material and ontological security risks to the state. The material risk is reduced by having clear, effective plans in place to respond when hazards occur, or communities are at risk of harm. The ontological security threat is reduced as these plans reinforce and extend the self-narrative that Fiji has told itself domestically and others internationally.

Extreme uncertainty can create practical crises but also identity crises – state-level actors can have their identities eroded if they are not able to match policy and practice to the narratives that they have previously talked about themselves. In Fiji's case, they have framed themselves as leaders in the fight for climate justice and as strong advocates for setting emissions-reduction targets that would protect the future of low-lying communities, particularly in the Pacific. Inaction on domestic climate mobilities then would create a rupture in this identity, leading to a reduction in ontological security. The formalization of these policy responses to climate mobilities has allowed Fiji to create a degree of certainty in this area – to the extent that they know how state-level actors should respond to climate mobilities, and that the identity and history of Fiji make it likely they will continue to strive to protect climate-vulnerable communities in the future.

In addition to giving government actors guidance around how to engage with communities, this formalization also gives communities reassurances that assistance will be offered, and they will have a future, in some form, even if movement – whether relocation or migration – becomes inevitable. These policies have

established standards of appropriate behavior for Fijian government actors, and their associates, in situations of climate mobilities. By creating and formalizing this collection of practices, Fiji has taken the first steps towards establishing a nascent norm regime around climate mobilities and protection. This, in turn, has the potential to solidify understandings of how states should respond to climate mobilities, reducing the level of uncertainty from extreme to routine.

Process 4: Promoting norms and identity narratives internationally

The final process is how these formalized policies and practices are then promoted internationally. This promotion has a two-fold effect. Firstly, it secures Fiji's identity in the eyes of the world. Secondly, it floats the idea of these practices being accepted as the standard of behavior in this space.

Fiji has perhaps fortuitously promoted these understandings of how to respond to climate mobilities at a time when extra space has been created for actors of all levels to act as norm entrepreneurs, advancing contestations of how climate mobilities should be managed. The uncertainty of whether and how existing norms apply to the emerging issue area of climate mobilities created one level of opportunity to advance new norms and behavior guides in this space. The space opened up exponentially, though, when the USA retreated from its traditional position as a norm leader on issues of climate change and human mobility under the Trump Administration (Selby 2019: 471–473). It is in this context that Fiji has promoted its various policies to the world.

The Fijian government has been strategic in its promotion of these ideas. Key policies are always launched to coincide with major international events – both sets of guidelines were launched during the UN Framework Convention on Climate Change Conference of the Parties events, while their Trust Fund was launched during the 74th UN General Assembly in 2019. In part because of its advocacy for these issues, Fiji was invited to host COP23. UN Secretary-General António Guterres subsequently praised their 'leadership in addressing issues of human mobility and climate change' during a visit to Fiji in 2019 (Guterres 2019).

While the final process of norm promotion is still in progress, it seems that the international community is receiving these practices – and potential norms – well. For a practice to become a norm it has to be accepted as a standard of behavior by the targeted community of actors. Regionally, there is symmetry between the policies of Vanuatu and Fiji that shows a tacit endorsement of each other's paths of action. New Zealand was also the first state to contribute to Fiji's relocation trust fund, which can be interpreted as a signal of their endorsement of Fiji's policies and practices as well. Most significant, though, is the reception of these practices by the USA. Under the Biden Administration, the USA has committed to reengaging on issues of climate change and human mobility. A taskforce report responding to Biden's executive order on Rebuilding and Enhancing Programs to Resettle Refugees and planning for the Impact of Climate Change on Migration suggested that the US government should contribute to Fiji's trust fund in addition

to also working with IOM to replicate the Fijian model in the Americas where states are facing similar issues (Ober et al. 2021: 31).

The reception of and responses to Fiji's actions seem to suggest that a nascent norm regime around climate mobilities may be coalescing around practices such as those promoted by Fiji. Through a process of norm circulation, Fiji has acted as an entrepreneur to stretch and contest a range of existing norms and form them into a new regime to address an emerging crisis. Whether these become widely institutionalized and implemented remains to be seen, though initial signs show that the international community seems to believe it is the best of the behavior guides that have been advanced so far.

Conclusion

The climate crisis and its effects on low-lying communities in the Pacific has created a situation of extreme uncertainty. The uncertainty in the Fijian case stems not just from the lack of information around exactly how climate change will continue to impact states in the Pacific, but also the lack of clarity around how the wealth of existing norms around state protection obligations and the rights of displaced persons may apply in the context of climate mobilities. The collision of these underlying factors has resulted in an instance of extreme ontological security that has disrupted everyday political life in Fiji, ruptured future expectations, and reshaped patterns of behavior around how state-level actors engage with individuals and communities who are at risk of displacement from climate-related factors. In an attempt to manage and regularize this uncertainty, Fijian authorities have developed, implemented, and promoted a suite of policies on addressing climate mobilities.

This has been a bottom-up process, with local communities first accepting the need to relocate, leading to the implementation of national-level policies that Fiji has then promoted globally. Fiji has, therefore, used the mechanisms of norm entrepreneurship to create and promote new shared understandings of how actors should respond to issues surrounding internal climate mobilities. In doing so, they have effectively reduced the extreme uncertainty to regular and inherent levels. Fiji is not what would be viewed as a traditional norm entrepreneur. The challenges to its physical and ontological security mean it is very self-interested in improving the global response, rather than seeking to behave altruistically. Further, Fiji is a clear example of state-led norm entrepreneurship, which has given Fiji the ability to create and contest norms in ways no nonstate entrepreneur could have, including hosting COP23.

This is a process that remains in flux. Recent steps by regional neighbors like the Solomon Islands and New Zealand to adopt similar approaches, as well as endorsements from international organizations suggest that Fiji's norm-leading efforts have been well received by the international community. If these practices are widely adopted in the future, the establishment of these policies by Fiji could well become viewed as a critical moment in the birth of a now nascent norm regime around climate mobilities. Through its norm entrepreneurship, Fiji will have improved its

resilience capabilities and, therefore, its physical security, secured its identity as a climate leader, and developed a clear behavior guide to increase certainty around acceptable courses of action – potentially reducing future uncertainties to manageable, routine levels.

Notes

- 1 See Kelman in this volume for a broader discussion of uncertainty, climate change, and disasters.
- 2 We adopt the term climate mobilities rather than displacement, as it more fully captures ‘multiple forms, directions and multiplicities of human movement [and immobility] in the context of climate change’ (Boas et al. 2019: 901).
- 3 IDPs are defined as ‘persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border’ (Kälin 2008: 2).
- 4 In some cases, implementation simply does not happen, either because a state is unable to implement it due to domestic opposition or a lack of capacity, or because it has no actual interest in complying with the norm (Orchard 2018). Stimmer and Wisken refer to this as a form of behavioral contestation (Stimmer and Wisken 2019: 520–522).
- 5 This can be either in terms of the basic understanding that a norm creates, in terms of how they understand the application of the norm to a given situation, or the norm may be ‘stretched,’ either interpreting the norm as applying more widely to a specific situation than by another actor, or as being included in a specific situation for which the norm generally is not seen to apply (Betts 2013: 31).
- 6 As Piggott-McKellar and McMichael (2021: 106) note, the official number of sites identified by government officials for relocation vary according to source and change over time. Around 40 communities in need of relocation and 800 at risk of needing assistance in the future seem to be the most oft-quoted figures, however.

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10 Uncertain uncertainty in global disaster diplomacy

Ilan Kelman

We always saw it coming: Disaster as a political process

It is easy to lament after many earthquakes, and as with the COVID-19 pandemic among other disease outbreaks: “Why didn’t we see this coming?” The key to answering is another question: What is “this”? If “this” refers to nature, then it would be overreaching to expect that humanity could understand everything about the natural world and know exactly what it will produce and when. Nature always has uncertainties, producing surprises and never-before-observed-or-recorded phenomena; that is, the external, natural uncertainties described in this book’s editorial introduction.

Conversely, if “this” refers to the disaster, notably the social impacts, then we can hardly excuse ourselves today by claiming ignorance or uncertainty. Social changes and consequences have extensive analogies and precedents (Glantz 2003), while impacts are easy to discern by applying vulnerability theory to indicate who would be more adversely affected and why, irrespective of specific environmental phenomena (Hewitt 1983; Lewis 1999; Wisner et al. 2004). Nature has uncertainties, but that does not mean that disasters do.

Because we have the knowledge available to avert disasters if we choose so, then by definition, a disaster is a political process. One long-standing and ongoing area of research linked to global politics is the extent to which politics is affected by disasters and dealing with disasters (Glantz 1976; Platt 1999). Could a hurricane end or cause interstate conflict? Could a regional building code for seismic resistance bring together or widen the gap between noncooperating countries? What uncertainties exist in aiming to answer these questions? One approach for addressing these questions is “disaster diplomacy.”

Disaster diplomacy investigates how and why disaster-related activities do and do not influence conflict and cooperation (Kelman 2012; 2016). Much of this interaction potentially occurs through multiple tracks of diplomacy, including the private sector, the nonprofit sector, science diplomacy, sports diplomacy, cultural diplomacy, and individuals. Plenty could also possibly be achieved through formal diplomatic channels at bilateral and multilateral levels, with the latter defining this chapter’s focus. Within the context of the scoping and categories of “uncertainty” in this book’s editorial introduction, this chapter explores some forms of uncertainties – and especially those that are assumed – that do and do not emerge for disaster diplomacy at the global level.

It does so in three main sections. First, the next section reviews existing work by detailing disaster diplomacy and understandings (as will become clear “un”-understandings) of disaster, focusing on the United Nations (UN), hence the highlighting of “global.” Then, two specific examples – climate change and outer space phenomena – illustrate this background in the context of different uncertainty types from this book’s editorial introduction. These two examples are connected for discussion that indicates how and why different types of uncertainties are not necessarily negative, nor need they necessarily inhibit needed action. The conclusion answers this book’s underlying questions and suggests future investigations.

This chapter supports this book’s purpose ‘to engage scholars in a constructive and practically oriented debate on the nature and effects of uncertainty in global politics’ in two main ways (Matejova and Shesterinina, introduction to this volume). First, it adds to the understanding of different uncertainty forms by relating two practical examples to two specific disaster theories: disaster diplomacy and disaster “un”-ness. Second, it provides constructive ways of engaging with, working through, and obtaining advantages from where, how, and why uncertainties do and do not emerge within these contexts. As such, this chapter contributes to this volume’s ‘systematic analysis of the concept of uncertainty in global politics as it manifests itself’ specifically with respect to global disaster diplomacy (Matejova and Shesterinina, introduction to this volume).

Disaster causes, diplomacy, and “un”-ness

Disaster causes

This chapter combines two theories to explore uncertainty in global politics: disaster diplomacy and disaster “un”-ness, covered respectively in the following two subsections. They both emerge from foundational disaster theory that disasters are not caused by environmental phenomena such as hurricanes, earthquakes, landslides, rockfalls, rainfall, volcanic eruptions, or droughts, but instead emerge from vulnerabilities (i.e., where and how people live or are forced to live) (Hewitt 1983; Lewis 1999; O’Keefe et al. 1976; Waddell 1977; Wisner et al. 2004). Disasters arise from human choices, or lack of choices, not from the environment or nature. Because disasters are human-caused, they are not natural and so the phrase “natural disaster” is a misnomer and is discouraged in disaster-related research, policy, and practice.

For instance, properties and communities can be designed so that flooding does not lead to much damage (Szöllösi-Nagy and Zevenbergen 2005), plus people do not necessarily need to live in places prone to flooding. While some people choose infrastructure that is easily damaged in floods or choose to live in floodplains, most people in flood-vulnerable situations do not make those choices. Reasons that they end up in these circumstances include not being able to afford to live elsewhere, being forced to live near their work, not having had educational opportunities permitting them to investigate flood topics, lack of legal recourse to improve their living circumstances, and being discriminated against to prevent them from tackling known problems. Wildfires/bushfires are a similar example – in terms of making

infrastructure fire-resistant and people making choices (or not having choices) about living in fire-prone locales without fire resistance through social and technical measures (Smalley 2005).

While environmental phenomena have traditionally been labelled with words such as “hazard,” “threat,” “peril,” and “danger” – leading to the standard mnemonic of disasters arising from a combination of hazard and vulnerability – disaster circumstances occur only due to the existence of vulnerabilities. The forces and energies from nature are not denied and obviously exist. For instance, surviving pyroclastic density currents (hot, fast gas and ash clouds from explosive volcanic eruptions) and jökulhlaups (glacial outburst floods) is not easy, even in robust infrastructure. Given the knowledge available about nature, without denying the knowledge gaps and uncertainties, people with power and resources could make decisions to avoid these forces and energies, through varied techniques including place selection, adequate infrastructure, warning, and evacuation. Analyzing vulnerabilities, notably the lack of uncertainty regarding who and where are most vulnerable to disasters and why, explains why vulnerabilities are tackled in some contexts and not addressed in others. The focus on vulnerabilities and the lack of “natural” disasters also provide the starting point for the two theories applied in this chapter: disaster diplomacy and disaster “un”-ness.

Disaster diplomacy

Disaster diplomacy investigates how and why disaster-related activities do and do not influence conflict and cooperation (Kelman 2012; 2016). Entities enacting or inhibiting disaster diplomacy can be individual (e.g., heads of government, celebrities, or philanthropists) or collective (e.g., organizations and governments), at any governance level, all interacting through formal and informal mechanisms. Here, the focus is on global disaster diplomacy, which means considering multilateral and multinational high-level collaborations and disputes across all sectors.

Thus far, disaster diplomacy analyses at these levels have not shown any new, lasting diplomacy achieved from disaster-related activities (Kelman 2012; 2016). The reason is that political and diplomatic decisions are made for numerous reasons, not always with the goal of saving lives and reducing suffering. Instead, where cooperation was already sought, disaster-related activities can support further cooperation. Where conflict was already preferred, disaster-related activities including humanitarian aid are used as an excuse to pursue continuing conflict.

North Korea provides an example of disaster diplomacy not yielding positive results despite decades of efforts. In 1953 at the end of the Korean War, North Korea shut out most of the rest of the world. Nonprofit groups from the USA would offer medical diplomacy and typhoons would hit both Koreas, yet nothing produced long-lasting improvements in North Korea’s relations with other countries – or even in the country’s abilities to deal with environmental phenomena and disasters (Kim et al. 1998; Yim et al. 2009).

Mismanagement of North Korea’s agriculture was illustrated in 1995 in a significant famine leading to international relief efforts to support the country. These

initiatives did not produce significant results in improving North Korea's situation or furthering dialogue to end the country's isolation. Then, the year 2000 witnessed further food aid given to North Korea and discussions about engaging with the world. Nonetheless, North Korea threatened violence, tested missiles, criticized South Korea, and initiated military incursions into South Korea. In 2001, North Korea became part of US President George W. Bush's "Axis of Evil," augmenting hostility between the two countries.

Flood risk in 2002, a major explosion after a train crash in 2004, swine flu in 2009, and a famine and typhoons in 2012 repeated the pattern. Aid was offered, sometimes accepted and sometimes declined, but North Korea never opened up. Diplomatic negotiations started, sometimes progressing and sometimes faltering, but never producing a solid, long-term agreement. Weapons tests in and belligerence from North Korea continued. Science diplomacy through an international collaboration on the explosive potential of Mount Paektu (Changbaishan/Baekdusan) on the China–North Korea border did not produce any high-level diplomatic results (Hammond 2016). Disaster diplomacy for North Korea over decades has ended up with some useful disaster-related activities but few substantive peace-related results.

As a different disaster diplomacy example, the COVID-19 pandemic starting in 2020 led to extensive efforts at international cooperation alongside multi-country disputes. Early in the pandemic, China, Cuba, France, Germany, Russia, Taiwan, and the UK sent bilateral aid to other countries in the form of medical supplies and personnel. The pandemic also led to bickering, with Italy complaining that the European Union was not providing enough assistance while several countries tried to punish China diplomatically because the new virus had originated there.

Once vaccines were available, little new was witnessed in terms of vaccine diplomacy. Before vaccines had been approved, an international initiative called COVAX aimed to find, produce, and distribute COVID-19 vaccines globally and equitably. By October 2020, over 150 countries representing almost two-thirds of the global population had signed on, including many expecting to provide vaccines, not just those expecting to receive them. As vaccines became available, many countries focused on vaccinating their own populations. Even within countries, subnational jurisdictions such as provinces and territories in Canada followed their own vaccination routes and prioritized their own populations, which is understandable given the politics surrounding lockdowns and health systems. China provided its own suite of vaccines to allied countries or countries it was hoping to become close to, mirroring Cuba's intentions as it developed vaccines.

All these responses led to debates about the extent and appropriateness of effective international cooperation, especially within the ethics of COVAX (Sharma et al. 2021). For instance, some states might be reluctant to donate vaccines to countries that spend excessively on the military and lack robust health systems, such as the USA and Ethiopia.

Consequently, it is not clear that "vaccine justice" or equitable vaccination means equal vaccine distribution or widespread donations of vaccines needed for

one's own population. A further implication is that no assumption can be made that disaster diplomacy, health diplomacy, and vaccine diplomacy through COVAX or other mechanisms will achieve the desired vaccine distribution goals.

These examples, and all the others from the wide array of disaster diplomacy work (Kelman 2012; 2016), show how much of disaster management relates to people and politics, even where people and politics do not necessarily show interest in being influenced by a disaster or disaster-related activities. From the book's editorial introduction, different understandings of uncertainty may emerge with regards to disaster diplomacy:

1. A lack of information: Information regarding politics and decisions can never be complete, so explanations of disaster diplomacy must be framed within this type of uncertainty.
2. A lack of meaning: People and politics are core to disasters and disaster diplomacy, so norms and identities diverge.
3. Too much information: To fully understand the origins of vulnerabilities and political structures, and hence their intersections, detailed analysis from multiple perspectives across space and time scales is required, leading to an extensive amount of information to process and synthesize.
4. A multiplicity of interpretations: The large ambiguities within knowledge about people and politics for addressing vulnerabilities means that many incompatible interpretations are feasible.

Disaster “un”-ness

Disaster “un”-ness refers to Hewitt (1983) challenging predominant notions of disasters that describe them with “un” words, especially “uncertain” as well as unexpected, unprecedented, unpredictable, unusual, unmanageable, unscheduled, and unstoppable. Hewitt (1983) evidences how these adjectives are inaccurate since the fundamental causes of disasters are vulnerabilities. Vulnerabilities emerge from long-term political processes that remove people's options and resources to improve their own situations, so they cannot choose to handle environmental phenomena and to avoid disasters. These processes are understood and identifiable by analyzing vulnerabilities – disasters could be avoided if the causes were admitted and redressed.

Analyzing vulnerabilities is, in effect, the politics–disasters link, but in the opposite direction from disaster diplomacy. Disaster diplomacy examines how disaster-related activities might or might not influence politics; that is, disasters to politics. Vulnerability analysis examines the politics behind creating, ignoring, or dealing with disasters and disaster risk (Hewitt 1983; Lewis 1999; Wisner et al. 2004); that is, politics to disasters. Vulnerability is fundamentally the process by which people and places end up in situations in which they cannot deal with environmental or social influences and so disasters result.¹ These processes take a long time to develop and to be maintained, meaning that vulnerability is a long-term political process.

Vulnerability is frequently exposed when an environmental phenomenon manifests, yet it is always available to be documented and analyzed if someone chooses so. Claims of uncertainties in vulnerabilities emerge mainly from, as this book's editorial introduction labels, human sources of "uncertainty making" in which information is withheld, misrepresented, or ignored.

Since vulnerabilities can be examined, explored, analyzed, and redressed, the explanation is clear for how and why disasters occur: people forcing vulnerabilities on others and, less frequently, choosing vulnerabilities for themselves. This statement is not claiming a full understanding of nature or of the environmental phenomena typically implicated in disasters. Conversely, the baseline of disaster causes accepts the ever-present natural and physical uncertainties while showing that the vulnerabilities are typically similar and cause disasters.

As an example, Haiti suffered over two centuries of vulnerability creation and perpetuation by internal and external politics, which meant that disasters occurred with hurricanes in 1954, 2004, 2008, and 2016 (among others) and with earthquakes in 1751, 1842, 2010, and 2021 (among others) (Mika 2019). Even if environmental phenomena had been tsunamis, heat, or others, disasters would have resulted from these vulnerabilities of exploitation, oppression, inequity, inequality, and marginalization leading to poverty, inadequate governance, poor livelihood opportunities, and lack of healthcare and education for everyone. With the known vulnerabilities – or the ability to know them – the disasters in Haiti were the opposite of "un" words (Mika 2019). The disasters were not unexpected, unpredictable, uncertain, or unstoppable because the people and country's situation was long known. Many initiatives in Haiti recognized the challenges and aimed to solve them, whether through the UN, science, or direct actions from governments, international agencies, and nongovernmental organizations (Candell 1975; COUC 2008; Dorn 2009; USAID 2009). Recent disasters in Haiti were neither unprecedented nor unusual, because they had happened previously, while the country was known to experience all manners of environmental phenomena. Using "un" words circumvents Haiti's long history of vulnerabilities and, in effect, sets up the country for more, similar disasters.

As such, Haiti exemplifies disaster "un"-ness distracting from a disaster's characteristics and causes. Overcoming disaster means overcoming "un"-ness by avoiding the "un" words and accepting the real causes of disasters in order to tackle them (Hewitt 1983; Lewis 1999; Wisner et al. 2004).

Realities of climate change and outer space phenomena

The two theories of disaster diplomacy and disaster "un"-ness from the previous section are now applied in the following two subsections to examples relevant to the global politics of disasters and hence global disaster diplomacy: human-caused climate change and outer space phenomena. A *double entendre* with "un"-ness emerges in the context of global politics that "un"-ness can appear to be "UN"-ness, relating to the UN which attempts to address many topics including climate change and outer space phenomena. Any parallelism could be challenged by those

who expect “UN”-ness to overcome “un”-ness, particularly uncertainty, leading to an exploration of the effectiveness of “UN”-ness for uncertainty in global disaster diplomacy.

Climate change

The Earth’s environment has always changed at all time scales, from immediate to aeons, and at all space scales, from individual to international. Today, one major concern is the rapid speed and large extent to which human activities are changing the world’s climate. Since Europe’s Industrial Revolution began in the eighteenth century, human activities have released increasing amounts of several gases, such as carbon dioxide and methane, into the atmosphere. A significant (but not the only) source of these gases, called “greenhouse gases,” is from combusting fossil fuels, such as coal and petroleum. Simultaneously, major ecosystems that absorb these gases have been destroyed, with deforestation being especially prominent. The overall impact is a substantial increase in the atmospheric concentration of greenhouse gases, which then trap the Sun’s heat around the planet.

As the atmosphere heats up, the weather changes. “Climate” is defined as average weather, historically often calculated over 30 years, but with no consistent timeframe. When the weather changes, the average weather obviously changes, which means that the climate changes. This is “climate change,” and the UN provides two different definitions.

First, the Intergovernmental Panel on Climate Change (IPCC) is the UN body responsible for providing a synthesis and assessment of climate change science, to be accepted and signed off by member state governments, making the final documents political. The two main sources of uncertainty, as noted in this book’s introduction, are evident in the IPCC’s work. External uncertainty remains from the climate and its influencers while human-based uncertainty is introduced from the politics. Full IPCC assessments began in 1988 to publish the first one in 1990, leading to the sixth assessment report in 2021–2022. This sixth assessment report (IPCC 2021) defines “climate change” to be any change in the climate over decades arising from both natural and human influences.

Second, the UN Framework Convention on Climate Change (UNFCCC) was signed in 1992 and defines “climate change” as ‘a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods’ (UNFCCC 1992, Article 1, Paragraph 2). The UN secretariat responsible for this convention is now referred to as UN Climate Change and it organizes international negotiation meetings, called a Conference of Parties (COP), seeking binding agreements for countries to tackle the causes of climate change and its impacts.

The two definitions differ in that the IPCC considers all contributors to climate change, both human and nonhuman, while the UNFCCC centers on human-caused climate change. Nonetheless, the IPCC tends to be viewed as the epitome of climate change science with the UNFCCC being the policy body. Overlaps

exist, such as the IPCC Assessment Reports producing a ‘Summary for Policy Makers’ (SPM), which is described as ‘the potentially least robust aspect of the Assessment Report process’ (Ghaleigh 2016: 65), because it typically misrepresents many of the scientific conclusions. Similarly, agreements are reached at the UNFCCC negotiations, which are invariably presented as successes, yet none of the major ones (Kyoto in 1997, Copenhagen in 2009, Paris in 2015, and Glasgow in 2021) achieved their goals or substantively tackled human-caused climate change.

The IPCC and UNFCCC’s processes on the world stage represent classic disaster diplomacy, classic “un”-ness, and classic “UN”-ness. The standard disaster diplomacy conclusions are affirmed in that the suggested adverse consequences from human-caused climate change have not led parties to succeed in joining together for new, lasting, global measures. “UN”-ness through the two UN processes presents inconsistent material, such as the definition of “climate change” and the (mis)-synthesis of science through the SPM, evidencing uncertainties as a lack of meaning and a multiplicity of interpretations. These uncertainties contribute to both top-down monolithic processes failing to achieve their goals.

How do these issues relate to “un”-ness? No matter which definition of “climate change” is adopted, influencers of climate change are complicated, including sources which are entirely natural, which are entirely anthropogenic, and which are a combination. An example of an entirely natural source is variations in the Earth’s orbit around the Sun inducing the planet to move into and out of ice ages (Hodell 2019). Entirely anthropogenic sources include fossil fuel combustion releasing gases as well as ecosystem degradation reducing their uptake (IPCC 2021). A combination emerges from wildfires/bushfires, many of which are typical ecosystem processes and many of which are fueled by human mismanagement of the ecosystem and ignition sources including discarded cigarettes and arson (Miller et al. 2011). All fires burn vegetation, releasing greenhouse gases. A lack of information about all the influencers and their interactions brings this form of uncertainty to climate change science and politics.

Meanwhile, a decades-long campaign of misinformation and disinformation, especially from fossil fuel companies, obscured the origins and consequences of human-caused climate change (Oreskes and Conway 2010). Politicians supported by these companies or seeking votes in places depending on fossil fuel industries, opposed legislation to discourage or reduce shifts toward less harmful (and cheaper and safer) alternatives. What started in the nineteenth century – a later publication is from Arrhenius (1896) – and became consolidated through MIT’s (1970, 1971) scientific analyses was morphed into a political process designed to fabricate external, natural uncertainty and concoct debate about science and scientists. Too much information about all the influencers and their interactions, invented through a multiplicity of interpretations, brings uncertainty to climate change science and politics. Part of the “un”-ness thus surfaces. Human-caused climate change has long been the opposite of the “un” words. Instead, concerted efforts manufactured uncertainty and other aspects of “un”-ness in order to prevent needed action.

Simultaneously, some of those accepting the science behind human-caused climate change as a major concern have migrated to the other extreme, far beyond what the science states. They refer to climate change as an “existential threat” to humanity, potentially leading to human extinction, despite a lack of scenarios demonstrating a complete wipe-out. Phrases such as “climate crisis” and “climate emergency” have been normalized, thereby shifting away from the crisis and emergency being human behavior and choices. Although the intention is to highlight how human behavior and choices change the climate, emphasizing “climate” reinvigorates paradigms of environmental determinism and the environment (even if human-modified) as the real threat. This framing was overturned in the early days of climate change as a scientific field (Torry 1979; Waddell 1977), yet it persists today. Additionally, referring to “climate chaos” and “climate breakdown” (in the sense of them being dangerous anomalies) is unscientific. “Climate,” by definition, is a statistical calculation which has never been stable throughout Earth’s history (IPCC 2021; Tziperman 1997) and which has always displayed properties of mathematical chaos (Annan and Hargreaves 2004; IPCC 2021).

The words “chaos” and “breakdown” attempt to instill external uncertainty from nature as being detrimental when it is actually part of the system. No expectation should exist of certainty in the climate system. In the meantime, “crisis” and “emergency” evoke many other assumptions of “un”-ness. As with disasters, the environmental component – here, average weather changing – will always display “un”-ness, but the vulnerability component – here expressed by highlighting expected or possible impacts – does not need to. As with all environmental phenomena and processes, vulnerabilities are easy to identify and are typically the same, irrespective of how or why the environment changes (Enarson and Morrow 1998; Hewitt 1983; 1997; Lewis 1999; Wisner et al. 2004). “Un”-ness is contrived for climate change, both human-caused and natural, from those who support (as well as oppose) action.

Rather than focusing on science and examining the causes and consequences of the physicality of a changing climate, climate change’s “un”-ness and “UN”-ness have become social constructs and political sport. Climate change is used to represent a wide range of societal ills, including tsunamis (Bell 2006), representing hazards despite limited climate change connection, and injustices (Sultana 2021), representing vulnerability which existed in the same form long before human-caused climate change became a concern and which would exist irrespective of human-caused climate change. Too often, vulnerabilities are diminished in favor of blaming climate change for all difficulties witnessed, rather than society.

Further illustrating the “UN”-ness of climate change leading to “un”-ness and undermining disaster diplomacy, difficulties in separating rhetoric and reality occur for actions needed to address climate change. These actions are separated – rather than working together – into stopping human-caused climate change (i.e., “climate change mitigation”) and dealing with the impacts (i.e., “climate change adaptation”). Through the UN, mitigation is defined as reducing greenhouse gas sources while increasing sinks, and adaptation is defined as reducing adverse impacts while gaining from positive impacts (IPCC 2021; UNFCCC 1992). These two sets of

activities are typically examined separately, despite long-standing work explaining the importance of bringing them together (Dang et al. 2003; Kane and Shogren 2000) – which could have represented successful disaster diplomacy.

The UN also frequently separates climate change action from action on parallel endeavors. IPCC and UNFCCC exist solely for climate change instead of their mandates being integrated into wider environment and development initiatives. The Sustainable Development Goals (UNGA 2015) not only list an entirely separate goal for climate change (Goal 13), but also explicitly designate UNFCCC as the lead for this topic – with no other goal deferring to another organization. An opportunity to develop links and to set the stage for disaster diplomacy across sectors and interests was missed. Simultaneously, climate change mitigation applies exactly the same principles as wider pollution prevention (e.g., from Higgins 1995), while climate change adaptation offers nothing new to the broader and deeper endeavor of disaster risk reduction (Kelman et al. 2017).

Again, “UN”-ness might not be fully supportive of disaster diplomacy and ends up bolstering “un”-ness. Overall, for climate change especially caused by human activities, “UN”-ness has not been overly effective for global disaster diplomacy or for addressing the various forms of uncertainties identified (or other “un”-ness).

Outer space phenomena

Outer space brings many environmental phenomena to the Earth, namely objects and radiation, which sometimes overlap. Biota could be considered, namely extra-terrestrial beings. They could be intelligent life exploring the universe showing that we are not alone (and that we are not as intelligent as we think) but might instead be microbes that survive the aeons in deep freeze as they drift across galaxies.

Space objects, some of which are referred to as Near-Earth Objects (NEOs) when they approach our planet, could be asteroids, comets, other bodies such as moons or planets, dust clouds, other stars, and less usual phenomena including black holes or unknowns. Without a collision, a black hole, star, or planet could affect the Earth through gravity, heat, and radiation. Asteroids or comets skimming through the atmosphere without touching down produce shockwaves and heat blasts. Sometimes they strike the surface, leading to direct physical damage, shockwaves, heat blasts, tsunamis if hitting water, and dust clouds if hitting land.

Space radiation bombards the Earth continually. The solar wind is charged particles emitted by the Sun’s atmosphere and is diverted from hitting the Earth directly by the planet’s magnetic field. At the Earth’s two magnetic poles, the solar wind’s particles are able to get closer, resulting in the auroras. When the Sun produces intense activity, a geomagnetic storm or solar storm results with many more particles reaching the Earth, potentially knocking out power grids and communications networks including satellites.

International cooperation supports the monitoring of and response to outer space phenomena. For the UN, the space agency is the UN Office for Outer Space Affairs (UNOOSA). Others contribute to specific topics such as the UN Office for Disarmament Affairs (UNODA) supporting the use of outer space for peaceful

purposes, and the UN Office for Disaster Risk Reduction (UNDRR, previously the UN International Strategy for Disaster Reduction (UNISDR) ensuring that outer space phenomena are fully considered (UNDRR 2020).

For NEOs since 2014, based on UN recommendations and hence ‘UN’-ness, the International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG) have worked on coordination and action in what has long been termed “planetary defense” (see also Kofler et al. 2019). IAWN shares information and brings people together to study NEOs – namely, detection, tracking, and monitoring – while SMPAG plans and prepares for an international response to a NEO threat. Neither has formal UN status, complicating the relevance of “UN”-ness and introducing “un”-ness regarding who is responsible and how. In fact, many non-UN initiatives have examined planetary defense, for instance, Morrison (1992) for the USA.

For space weather, in 2009 the UN Committee on the Peaceful Uses of Outer Space within UNOOSA started the International Space Weather Initiative (ISWI), focusing on the science and science communication of space weather. Operational warnings and response recommendations tend to be from national agencies, such as the UK’s Met Office (Meteorological Office). Again, the relevance of “UN”-ness is undermined while “un”-ness is promoted in the uncertainties of a multiplicity of interpretations and a lack of information regarding who leads and acts. If UN member states do not support UN agencies, the effectiveness of “UN”-ness becomes limited. In other words, the standard disaster diplomacy conclusions are affirmed in that the suggested adverse consequences from outer space phenomena have not led parties to succeed in joining together for new, lasting, global measures.

Non-UN international contributors to addressing outer space phenomena include the International Astronomical Union (IAU), a member-based scientific organization working on international cooperation for astronomy, and private initiatives monitoring and issuing warnings for NEOs and/or space weather. Countries’ individual space agencies and scientific offices also collaborate internationally, bilaterally, or multilaterally. For an external observer aiming to fathom how humanity might respond to outer space phenomena, the main uncertainty might be who is in charge of a response and how decisions are made, as Bower and Prem demonstrate in this volume in the cases of satellites and autonomous weapons systems, respectively. Prospects exist for the world to come together to face a major threat or to recover from a catastrophe, but the lack of cooperation and coordination for prevention and risk reduction does not portend well for any collaboration to last beyond a specific situation. Any such situation could also end up with nationalism simultaneously with ad hoc cross-border collaboration, as seen for other global disaster diplomacy including COVID-19. Either way, optimism could be misplaced for global disaster diplomacy through “UN”-ness to overcome the “un”-ness of outer space phenomena.

This conclusion is illustrated further by outer space phenomena that have the potential to destroy the planet. Here, planet-wide vulnerability is 100% certain while the outer space phenomena have high external, natural uncertainty, leading

to the certainty of planetary destruction and species extinction, with little warning. Two key examples come from stars which, if nearby the Earth, could unleash devastation and which have been examined scientifically. The first example is a sudden burst of gamma rays (Palmer et al. 2005). The second example is a star's death throes as a supernova (Fields and Ellis 1999). The uptake of these concerns at the level of global politics and diplomacy is negligible, demonstrating another failure of global disaster diplomacy.

Nothing uncertain but uncertainty itself?

As with climate change, outer space phenomena display significant “un”-ness including uncertainty, but the disaster cause remains vulnerability and so lacks “un”-ness. Consequently, outer space phenomena yield a similar conclusion to climate change that “UN”-ness has so far had limited efficacy for global disaster diplomacy or for addressing uncertainty and other “un”-ness.” While the incorrect discourse of climate change being an existential threat to humanity is prominent globally in research, policy, and practice, even entering the UNFCCC's negotiations, real extinction threats from outer space phenomena could do with more attention outside of science.

The main result from the two examples can, thus, be summarized: for global disaster diplomacy, nature-related uncertainties are permitted to overtake decisions rather than available knowledge on vulnerabilities being used to bypass these uncertainties. Examples of external, natural uncertainties for human-caused climate change are wide ranges for possible sea-level rise over the coming millennia (Clark et al. 2016; Moore and Orchard in this volume) and the potential ecosystem impacts of ocean acidification (Doney et al. 2020). Examples of external, natural uncertainties for outer space phenomena are warning times for large solar flares (Petrakou 2021) and catastrophic, sudden events. Uncertainties for the vulnerabilities, however, could be overcome and resolved through investigating and acting on them, including through global disaster diplomacy, in order to obviate “un”-ness. For now, efforts to do so are perfunctory. Instead, nature's uncertainties are advanced as excuses for inaction based on human sources of uncertainty that could be resolved.

Since global disaster diplomacy and countering “un”-ness could be used to move past the uncertainties for successful actions, so-called “black swans” and “shocks” should not exist. Instead, by reducing vulnerabilities through global disaster diplomacy and by avoiding “un”-ness in order to accept and tackle baseline disaster causes, the uncertainties in the environmental phenomena should not lead to uncertainties in global disaster-related action. Consequently, the practical significance of combining the two theories in this chapter emerges for changing the policy and practice discourse of global politics in two ways. First, to highlight that environmental phenomena have significant uncertainties but rarely cause disasters while emphasizing that vulnerabilities have much fewer uncertainties and typically cause disasters. Second, to explain how populist notions, namely black swans and shocks, misdirect policy and practice away from communicating and tackling these

fundamental disaster causes. They do so by accentuating the environmental phenomena as excuses for inaction and for claiming “black swans” and “shocks” exist.

These uncertainties certainly exist yet become an excuse for bypassing the certainty of vulnerabilities and of vulnerabilities as causing disaster. Using another example, an earthquake’s epicenter’s magnitude and depth present uncertainties, along with the exact timing and spatial extent of a specific tremor. It remains certain that poorly constructed and maintained buildings will collapse and kill far more frequently than those with seismic resistance measures – even as uncertainties remain regarding which specific structures will fail in which specific manners in which specific earthquakes (Spence and So 2021).

Such practicalities supplement the answer to the question “Why didn’t we see this coming?” which began this chapter. It becomes a practical and philosophical struggle to defend the thesis “because of (any form of) uncertainty” when the uncertainties within disasters are not the cause. Instead, the tendency is to shy away from accepting responsibility for what we do know or could know – i.e., vulnerabilities – irrespective of gaps in what we do not know – i.e., nature and hence environmental phenomena.

The implications apply to disasters which do not involve nature much. Perrow (1999), for instance, demonstrates technological design outcomes which seem to surprise based on extensive uncertainties. The recommendation is, thus, either (i) not designing in this way so that uncertainties are reduced and surprise is avoided or (ii) accepting the certainty of “surprising” catastrophic failure and hence disasters. If the latter is selected, the choice was considered and foreseeable meaning that it cannot be a “black swan.”

These discussions never imply or claim complete human control, knowledge, understanding, or power. They suggest abilities to analyze, understand, detail, and accept our own limits, being open about what we cannot and sometimes should not do alongside the potential consequences. Such issues have long been articulated as “known unknowns” and “unknown unknowns” (Campbell 1969), which segue here into “certain uncertainties” and “uncertain uncertainties” (Green et al. 1991) – continuing the “un”-ness theme. Ultimately, these practical discussions become a philosophical positioning. If we foresee that we cannot foresee, then is the “surprise” unsurprising and is the uncertainty certain (after Glantz 2003; Streets and Glantz 2000)? Since we now consider and foresee “black swans” as a general concept, how could they be surprising, unforeseeable, or uncertain?

This philosophical position segues into the political. It can be politically rewarding to blame surprise, black swans, and uncertainty by claiming “we simply could not have known, but now I am here to help, so support me” – and hence gaining through disaster diplomacy. Political benefits have been documented through popular political disaster response, such as German Chancellor Gerhard Schröder winning reelection in 2002 partly due to actions following catastrophic floods across the country (Roberts 2003).

Political advantages from averting a disaster – overcoming uncertainty and surprise – are much harder to achieve. More commonly, credit is received for continually visible projects such as sea walls and river dikes which tend to worsen flood

disasters (Fordham 1999; Tobin 1995). Effective measures for infrastructure, with examples being water-resistant paint in houses or base isolators to address earthquakes, are generally not directly visible, so people are not always aware they exist (see also Lewis 2003). Concurrently, risk reduction measures might not be tested during the term of office of the initiator or implementer, while any disaster can be responded to immediately.

The political process of vulnerability rewards the blaming of uncertainty while helping people when it is too late. Aiming to reduce disaster-related uncertainty and surprise would mean accepting the causes and consequences of vulnerabilities, in effect blaming oneself or one's country, from which it is hard to get political traction. Just as disaster diplomacy is often avoided for political gain (Kelman 2012; 2016), "un"-ness tends to be pursued because it yields political gain. Uncertainty in disasters and in politics can be desired and actively sought – or, at the minimum, the pretense of uncertainty is generated.

Underlying answers and beyond

This volume's underlying questions from this book's introduction are:

1. 'How do we best study, understand, and address political phenomena that are inherently uncertain?'
2. 'How do we define and theorize uncertainty in global politics?'
3. 'What can we learn from studying uncertainty in its various forms and how can we use this knowledge to our advantage in individual planning, policy-making, and global problem solving?'

With respect to disasters, all three questions are, in effect, answered by the truism that uncertainty in global politics must always exist. Rather than being feared or avoided, uncertainties should be embraced as part of producing and enacting constructive policy and action. The focus is on ensuring that people are helped and that disasters are prevented irrespective of the magnitude, scope, and nature of the uncertainties. The fundament remains that, while environmental phenomena have significant uncertainties, the causes of disasters as vulnerabilities are much more certain and, especially, dealing with them is much more certain than dealing with environmental uncertainties. Uncertainty does not preclude effective disaster-related action.

As Matejova and Shesterinina (introduction to this volume) note, 'there is not one but many forms of uncertainty' with lengthy science and operational practice available on identifying different forms of uncertainty and acting within them, including 'the meaning of uncertainty and the relationship between this concept and such associated terms as risk, complexity, and ambiguity.' Added to this list are "ambivalence" (Seeman 1953), "fuzziness" (Bellman and Zadeh 1970), and "surprise" (Streets and Glantz 2000). Within disaster research, decision-making analyses have long differentiated various forms of uncertainty, for instance, for volcanoes (Geomatrix 1996) and hazardous substances (Brennan 1990). Examples

are aleatory uncertainty, epistemic uncertainty, causation uncertainty, and attribution uncertainty.

This book's three questions are, thus, answered by ensuring that global politics learns from how uncertainties are defined and managed across different fields. These fields include disasters and disaster diplomacy, noting that the global level is seldom the most successful. That is, uncertainty does not seem to produce or be resolved by UN-certainty through "UN-ness" with global approaches instead often reinforcing "un"-ness. The "un"-ness within "uncertainty," however, is not necessarily detrimental, including for dealing with disasters, even when the uncertainties are uncertain. The key to global disaster diplomacy, and for wider global politics, is to have the skills and interest to work through these uncertainties for preventing disasters, without relying on "UN"-ness, global diplomacy, or global governance, but going far beyond.

Note

- 1 As noted earlier, sometimes, people make choices to do so, but other times they are forced into these positions through choices of others, not their own. They might fear harassment, assault, or robbery in a disaster shelter, so they choose not to evacuate. They might lose their job if they travel to a safe location for a few days. They might be denied education or health care, reducing their opportunities to help themselves. They might have been lied to about the safety of the property in which they live. They might be governed by a totalitarian dictator amassing personal wealth.

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11 Orbital uncertainty and the governance of outer space activities

Adam Bower

Space technologies are an increasingly vital backbone of modern information-centric societies, providing unprecedented information about the natural environment and human activities on Earth. Since the 1960s, the leading space powers (initially the Soviet Union and the USA, but now also others like China and European states) have used satellite-based sensors to detect military maneuvers, assess compliance with arms control agreements, and provide early warning of intercontinental ballistic missile launches. Ultraprecise position, navigation, and timing (PNT) systems enable everything from geolocation and just-in-time logistics to banking transactions. The US LANDSAT, EU Copernicus, and China High-resolution Earth Observation System monitor environmental conditions in the atmosphere, on land, and the oceans, and support security and emergency management services. Commercial satellite operators including Capella, Maxar, and Planet now collect vast amounts of data daily and are increasingly employing machine learning to provide tailored geospatial analysis to clients.

As a result, states, private companies, intergovernmental and nongovernmental organizations, academics, and citizens can access information of a previously unparalleled scale and depth. For example, optical and synthetic aperture radar imagery can help uncover clandestine military activities and human rights violations; infrared and hyperspectral imagery is employed to track agricultural practices, and measure greenhouse gas emissions energy use; and radio frequency analysis can be used to assess global transportation networks and detect activities (like illegal fishing) in hard-to-access areas. The rapid growth in data sources, quality, and processing power has led some analysts to suggest that we are approaching an information “singularity” where even private citizens will have access to pervasive real-time Earth observation data and analytics (Koller 2019).

But while satellites have radically expanded our knowledge of terrestrial phenomena, information regarding the nature and operation of these space-based systems is comparatively limited because near-Earth (orbital) space poses unique challenges for the effective monitoring and management of space assets. This chapter contributes to the volume’s theme by examining the sources, implications, and means of ameliorating uncertainty regarding orbital space activities. The first section conceptualizes “orbital uncertainty” as the product of limitations on the quantity and quality of measurable data and its utilization – what Matejova and

Shesterinina characterize as *ontological uncertainty* in the introduction to this volume. I argue that space operations experience both external (environmental and technological) and human (interpretive and political) constraints on the accuracy, precision, and timeliness of information concerning artificial space objects.

The present case study reflects elements of three generic theoretical accounts identified by Matejova and Shesterinina (in the introduction to this volume). The convergence between the physical properties of outer space, diversity of actors and activities, and technical and human constraints generates *information deficits* that are central to rationalist approaches. In this context, there is enduring uncertainty concerning the position and trajectory of discrete satellites as well as the intentions of their operators, especially in instances of political or commercial competition between spacefaring actors. The development of technologies to detect, identify, track, and predict the future locations of objects in orbit around Earth – known as space situational awareness (SSA) – is vital to improving the monitoring and management of the space environment, but also has the perverse effect of multiplying the sources and quantity of information, which, in turn, risks overwhelming space operators. In this respect, the problem of *too much information* – as noted in institutionalist accounts – is an increasingly prevalent challenge in the space domain, requiring coordinated responses to standardize, curate, and disseminate data concerning spacecraft. Finally, while the chapter focuses primarily on these first two types, the picture is further complicated by the *absence of shared meanings* – associated with constructivist perspectives – that emerge from inherent cognitive biases in human or machine interpretation of data as well as differing views concerning the appropriate limits on space operations.

Space technologies serve human needs on Earth and are deeply embedded in the fabric of global politics. The inability to accurately identify all space objects, determine their precise location, and predict their future behavior has led to growing concerns for the long-term sustainability of orbital space, especially in light of the proliferating scale and complexity of space activities and corresponding congestion in primary orbital zones. The second section, therefore, examines how orbital uncertainty impacts the conduct of contemporary international affairs. The absence of clarity concerning actor capabilities, operations, and intentions introduces sources of misperception and mistrust that can undermine effective coordination and exacerbate conflict. Gaps in timely and precise information also increase the risks to space assets from accidental or intentional interference and collisions, or deliberate attacks. In turn, accumulating space debris could generate a negative feedback loop which renders key orbital zones unusable, with catastrophic consequences for societies on Earth.

Orbital uncertainty thus represents an important global governance challenge since improving information concerning outer space activities is increasingly vital to managing interactions between spacefaring actors and preserving the outer space environment.¹ The third and final section traces current and proposed pathways to mitigating uncertainty in orbit, highlighting technical, diplomatic, legal, and economic mechanisms to improve transparency. However, while the governance of space activities can be enhanced, the physical, technological, and human sources of

uncertainty can never be fully overcome. Attempts to reduce orbital uncertainty to a finite calculation of risk based on known quantities are, therefore, illusory; uncertainty must be managed, rather than eradicated.

Uncertainty in orbital space: Information and its limits

There are now over 5400 active satellites orbiting our planet, a figure that has tripled in the last five years and is predicted to grow 10- to 20-fold over the coming decade (Oltrogge and Christensen 2020: 432; Union of Concerned Scientists 2022). The growing ubiquity of satellite-based services has generated widespread recognition of the need for detailed knowledge of satellite characteristics and operations so that operators and regulators at national, regional, and international levels can identify and potentially mitigate hazardous or threatening activities. In this context, space traffic management has emerged as a multifaceted governance effort directed towards ‘the planning, coordination, and on-orbit synchronization of activities to enhance the safety, stability, and sustainability of operations in the space environment’ (Oltrogge and Alfano 2019: 72; Sorge, Ailor, and Muelhaupt 2020). The international community has developed a range of initiatives to support this objective, involving contributions from states, intergovernmental bodies, commercial operators, and civil society.

The 1967 Outer Space Treaty (OST) provides a general obligation for spacefaring states to inform the international community ‘to the greatest extent feasible and practicable, of the nature, conduction, locations and results’ of their space operations (United Nations General Assembly 1966: Article XI). More concretely, the 1974 Registration Convention requires states to register space objects under their jurisdiction and provide the United Nations (UN) Secretary-General with basic information concerning the satellite’s state of registry, registration number, launch time and location, orbital parameters, and general purpose (United Nations General Assembly 1974; Jakhu, Jasani, and McDowell 2018). The UN duly maintains an international Register of Objects Launched into Outer Space containing data voluntarily furnished by states (United Nations Office of Outer Space Affairs, no date). A myriad of multilateral institutions (e.g., UN Committee on the Peaceful Uses of Outer Space, International Telecommunications Union, and Inter-Agency Debris Coordination Committee), industry consortia (e.g., Space Safety Coalition), and scientific bodies (e.g., Committee of Space Research) provide fora for information-sharing, dialogue, and standard-setting. Official information sources are supplemented by nongovernmental organizations, academics, and space enthusiasts who provide open-source analysis of space activities (McDowell 2021; Weeden and Samson 2021). Finally, much of the tangible regulation is conducted at the domestic level by national agencies which are responsible for licensing space launches and satellite operations and reporting these activities to the UN.

These institutions are supported by rapidly expanding SSA capabilities ‘to provide decision-making processes with a quantifiable and timely body of evidence of behavior(s) attributable to specific space threats and/or hazards’ (Jah 2020: 964). Major spacefaring states and commercial providers maintain networks of

ground-based and space-based sensors and associated analytical capabilities to collect, analyze, and disseminate data concerning space objects.² This wealth of information is further aggregated and presented by commercial member bodies (e.g., Space Data Association), scientific networks (e.g., International Scientific Optical Network), and private initiatives (e.g., AstriaGraph and Celestrak). Dedicated communities of hobbyists also identify and track space objects (often clandestine spy satellites) and share their findings via social media and the Internet.

Despite these advances, ‘the population of Earth-orbiting space objects is still neither rigorously nor comprehensively quantified, and the behaviors of these objects ... are inadequately characterized’ (Jah 2020: 962). Fundamentally, therefore, the state and nonstate space operators experience systemic forms of ontological uncertainty that stem from the *absence* and *overabundance* of information as well as the *lack of shared meanings* concerning underlying behaviors. Data regarding the nature and operation of artificial satellites is incomplete, derived from multiple and often incompatible sources, and requires human and – increasingly – automated interpretation based on a partial understanding of the objects and their relationship to the natural environment as well as the intentions of their operators. These limitations, in turn, are attributable to three principal types of challenges: the physical properties of outer space, the growing complexity of space operations, and the technical and human constraints on information acquisition and processing.

While the universe is effectively infinite, the usable orbital zone around Earth begins at approximately 160 km above the Earth’s surface – the minimum altitude where an object can sustain itself in orbit – and extends to nearly 36,000 km, encompassing a volume of roughly 312 *trillion* cubic kilometers. This immense scale poses distinct challenges for identifying and tracking space objects, which increase with distance from Earth. Low-Earth orbit (LEO) extends to 2000 km, though most satellites operate below 1000 km. Proximity means that LEO is easier to monitor but objects at these altitudes move very rapidly – 7.8 km a second, or 28,000 km per hour – and are only briefly in view of a static point on Earth in a given orbit. This requires a network of sensors distributed around the world to maintain regular monitoring. By contrast, satellites in geostationary orbit (GEO) are much further from Earth (at 35,786 km) and thus appear as smaller and dimmer objects for Earth-based surveillance systems (Jakhu, Jasani, and McDowell 2018: 414).³ This is mitigated by the fact that GEO satellites orbit at the same rate as the Earth’s rotation, meaning they always remain visible at the same point in the sky.

Despite this enormous scale, orbital space is becoming increasingly crowded. Roughly 84% of active satellites are located in LEO (Union of Concerned Scientists 2022). Existing proposals envision the deployment of nearly 100,000 satellites by the end of the decade, the vast majority of which will be operated by private companies (Messier 2021). This ambitious target will not be reached, but even a fraction would still represent many times the total payloads placed in orbit over the entire Space Age to date, with a corresponding growth in orbital debris absent substantial mitigation measures. These satellites will increasingly be concentrated at particular orbital altitudes as part of large constellations.⁴ The shift to

smaller and cheaper satellites presents additional difficulties since these systems are designed for shorter life spans and may experience higher failure rates than expensive bespoke satellites (Muelhaupt et al. 2019: 83–84). They are also harder to detect with existing SSA sensors.

This growing satellite density in LEO reduces the distances between objects and multiplies the frequency with which distinctive satellite orbits intersect, increasing the prospect of near-misses and actual collisions. Satellites owned by the single largest operator, SpaceX, were recently estimated to be responsible for at least half of all collision risks. The expansion of their Starlink constellation may lead this proportion to grow to as much as 90% (Pultarova 2021). The testing of anti-satellite weapons constitutes a further challenge. The Russian Federation's deliberate destruction of one of its own satellites in November 2021 generated over 1500 pieces of trackable debris that have subsequently generated punctuated surges in the number of potential collisions between debris and active spacecraft; one commercial SSA firm has predicted up to 40,000 close encounters in a single week (Foust 2022b).

While the GEO region is not experiencing the same rapid expansion in activities, here too there are concerns for spacecraft congestion and potential collisions (Oltrogge et al. 2018). Despite its distance from Earth, the actual operational GEO belt is highly constrained: satellites must be positioned very near to the 35,786 km altitude and along the plane of the Earth's equator in order to remain stationary relative to the ground. And since the demand for GEO satellite telecommunication services is concentrated in certain high-density areas of the globe, orbital slots are a limited resource. The challenges of spacecraft operating in relatively close proximity are further complicated by extensive orbital debris that crosses through the GEO belt.

These congestion and collision risks in LEO and GEO have, in turn, radically increased the need for satellites to perform regular evasive maneuvers (Oltrogge and Alfano 2019: 72–74). At present, however, most satellites have limited maneuverability, as propulsion is finite and costly and orbital adjustments are time consuming and require actionable information regarding the appropriate response. The adoption of more efficient electrical propulsion and automated collision avoidance technologies will greatly improve spacecraft responsiveness (De Selding 2021). But these capabilities further complicate the operational environment since more regular orbital maintenance and collision-avoidance maneuvers make it harder to anticipate the precise position of a satellite into the future.

This growing operational complexity has radically increased the volume of tracking and identification requirements for SSA systems. Yet, current sensor technologies can only detect a tiny fraction of all artificial space objects: as of March 2022, the United States Space Surveillance Network identifies approximately 44,000 objects larger than 10 cm in diameter in Earth orbit but only tracks 25,600 of those due to insufficient data on the remaining objects (United States Space Command, no date). There are estimated to be between 500,000 and one million unidentified items ranging from 1 cm to 10 cm in size and between 100 and 330 million objects smaller than 1 cm.⁵ Improvements in sensor capabilities will

greatly expand the number of trackable objects but will still only cover a modest subsection of the total – and growing – population. This is problematic because ‘an impact in LEO with an object 1 cm or larger will cause damage likely to be fatal to a satellite’s mission. Therefore, there is a large latent risk from unobserved debris’ (Muelhaupt et al. 2019: 81).

Incomplete adherence to international reporting requirements further restricts the known space object population (Jakhu, Jasani, and McDowell 2018). While compliance with the UN Registration Convention is generally high, more than 10% of all spacecraft launched into orbit are not currently listed in the UN catalogue (United Nations Office of Outer Space Affairs, no date). State authorities submit only basic orbital data (often long delayed) without supplemental descriptive information that can help assess a satellite’s functions. Notably, major space powers typically do not publish technical details and orbital parameters of clandestine military and intelligence satellites. This opacity is symptomatic of the prevailing secrecy that surrounds national security space programs – an issue that is explored in detail in the next section. Much of the orbital debris created during launches or subsequently is also not reported.

Among the population of catalogued objects, there are important constraints on the accuracy (the degree of fidelity between the calculated and actual position) and precision (the extent of correspondence between independent measurements) of available data. The most common format, known as two-line element, provides only basic information concerning orbital parameters and lacks a contextual indication of the uncertainty associated with measurements (Jah 2020: 967; Oltrogge and Alfano 2019: 76). More sophisticated Special Perturbations data are usually not shared in their complete form. In addition, space object catalogues do not record the size, shape, material properties, or functions of satellites; this information has to be inferred indirectly from data sources. Even the most advanced models derived from cutting-edge astrodynamics express an incomplete understanding of how space objects interact with their environment and thus how small changes affect movement into the future. Hence, while an object’s basic orbital route can be defined with some precision, its present and future positions can only be predicted within a margin of error which grows as a function of time (Jah 2020: 979–980).

There are also no universally accepted practices for calibrating SSA sensors and a lack of standardized protocols for reporting and distributing SSA data to end-users. Indeed, since SSA systems are used by states to manage their own space assets and identify, monitor, and attribute potential threats, the underlying technologies and the resulting data are a national security capability subject to restricted distribution (Borowitz 2019: 19–20; Weeden and Samson 2021: xxxi).⁶ Equally, commercial SSA operators are keen to guard their proprietary analytical capabilities and business case by restricting the availability of high-quality data to paying customers. The bottom line is that spacecraft operators lack a complete picture of their operational environment and often cannot rely on the same basic data when designing and executing missions or evaluating the relative risks posed by their activities or those of others.

While the above discussion has focused on information gaps concerning space activities, an *overabundance of information* from expanding SSA capabilities generates its own forms of uncertainty. The lack of SSA standardization noted above means that different systems frequently report divergent measurements for the same space object (Jah 2020: 969). The multiplicity of SSA sources poses substantial challenges to the effective management, curation, and integration of often incompatible data streams that can be translated into actionable guidance. The increased capacity to identify and track objects, coupled with a relatively large margin of error in object detection systems, has led to a proliferation of notices – known as “conjunction warnings” – alerting spacecraft operators of potential collisions with another space object. This risks overwhelming operators’ ability to assess relative operational risks and implement evasive maneuvers (Oltrogge and Alfano 2019: 75). Improvements in the accuracy of SSA data will allow analysts to isolate more dangerous close approaches and reduce the rate of false alarms (Sorge, Ailor and Muelhaupt 2020: 5). But this still only applies to the small fraction of dangerous space objects that have been identified and tracked.

Finally, orbital space operations are also subject to a *multiplicity of meanings* problem identified by Matejova and Shesterinina (in the introduction to this volume) (Jah 2020: 966–967). On the one hand, sensors and computers render useable information based on hypotheses derived from an inherently incomplete understanding of the outer space environment. On the other hand, human interpretation of raw data is influenced by forms of bias stemming from imperfect scientific models and SSA practices – as discussed above.

The broader challenge is that both state and commercial space operators currently lack detailed intersubjective agreement concerning proper conduct and the nature of risk in orbit. International space law provides aspirational values and an institutional framework for space exploration but imposes only modest restraints on the military and commercial uses of outer space (Jakhu and Dempsey 2016).⁷ The OST and subsequent space treaties lack regular diplomatic meetings of State Parties as well as verification and enforcement mechanisms. Space diplomacy instead takes place in venues like the UN Conference on Disarmament, Committee on the Peaceful Uses of Outer Space, and General Assembly First and Fourth Committees with specialized mandates that prevent holistic consideration of the myriad intersections between military, commercial, and scientific space operations and which largely exclude nonstate actors. Most actors accept that terrestrial international law – including the UN Charter’s prohibition on the use of force and the law of armed conflict – applies in space, but this has not been elaborated in detail. Different actors, therefore, operate with varying fundamental operational perceptions, which may not be well understood by others.

In sum, more and better data regarding the approximate position and trajectory of space objects can reduce but never eliminate uncertainty concerning conditions in Earth orbit, for three key reasons. First, there are technical and political limits to data quality and completeness. Second, more data presents its own challenges in terms of information management and dissemination and its integration in subsequent decision making. Third, bias can never be expunged since human perception

is inevitably entangled with technical systems even as increasing proportions of the analysis are undertaken by automated processes. Indeed, SSA data does not reveal the *intentions* behind observed behaviors, which requires direct understanding of actor capabilities and objectives. Yet, such information is typically difficult to access, especially in sensitive high technology domains like space operations.

Orbital uncertainty and global politics

Orbital space is an extension of terrestrial political, economic, and social processes and, therefore, offers an important but thus far underexplored empirical context for assessing the role of uncertainty in contemporary global politics. While IR theoretical paradigms conceptualize and operationalize uncertainty differently, there is broad agreement that ambiguities regarding actor capabilities and intentions exacerbate competitive pressures and impede cooperation (Kaplow and Gartzke 2021: 307).⁸ This section sketches some implications of the incomplete understanding of the nature and behavior of space objects for national security, commercial, and civilian space operators.

Scholars have long been interested in how asymmetries and deficits of information underpin dynamics including security dilemmas, crisis escalation, and deterrence. As Kaplow and Gartzke (2021: 308) point out, some systems are inherently harder to accurately detect due to their size or operational location. Jervis (1978) famously argued that opacity concerning military technologies and doctrines can generate arms race dynamics and mutual insecurity. The military space domain is emblematic of this phenomenon. China, India, Russia, and the USA are developing and, in some cases, have already deployed a range of ground-based and space-based anti-satellite capabilities – including missiles, lasers and microwave energy, electronic and cyber warfare, and close proximity operations – and a number of other states are actively pursuing similar systems (Weeden and Samson 2021). On this basis, analysts with the UN Institute for Disarmament research have found that core conditions for an arms race in space – namely, rivalry between major space powers, broadly equivalent capabilities, and an acceleration in the development and deployment of military space systems – already exist (Silverstein, Porras and Borrie 2020: 15–20). This is reflected in a view among the major space powers that their adversaries are turning space into a warfighting domain despite each of these actors professing a commitment to the continued peaceful uses of space (Weeden and Samson 2021: 1.28–1.30, 2.38–2.40, 3.29–3.34).

In this context, the absence of clear information concerning the capabilities and precise location of satellites, and/or the intentions of their operators, produce worrying sources of instability. In his classic formulation of security dilemmas, Jervis (1978) emphasized the relative efficacy of offensive versus defensive technologies and, crucially, whether the two can be distinguished, as key drivers of conflict. On the one hand, it is very difficult to protect satellites since an object's orbit is regular and its future trajectory can be predicted with considerable (but not perfect) precision, and countermeasures such as shielding and propulsion are limited by weight and cost considerations. This has led some to suggest that space is an offense-dominant domain (Kopeć 2019: 124–125).⁹

On the other hand, the entwinement of military, commercial, and civilian satellite operations makes it difficult to differentiate between threatening and benign systems (Grego 2021: 274–275). States increasingly rely on commercial systems to supplement their own bespoke capabilities in areas like space launch, satellite communications, high-resolution imagery, and SSA data. Commercial operators may, in turn, offer their products to a range of governmental and nongovernmental end-users. The Russian–Ukrainian war has prominently demonstrated how commercial satellite imagery informs media and humanitarian organization’s monitoring of conflict; this imagery is also used by Ukrainian forces to identify, monitor, and target Russian military formations (The Economist 2022). The technologies themselves are, therefore, often inherently dual use. Emerging capabilities to service satellites or remove debris in orbit could also be used to disable or destroy an active asset. Even explicitly military systems may possess both offensive and defensive applications: ballistic missile defense interceptors can be repurposed for targeting satellites while recent proposals to deploy “bodyguard” satellites to protect sensitive national security space assets risk blurring the line between anticipatory and reactive actions.

Existing information sources cannot resolve these ambiguities. SSA data provides insights into a satellite’s mission since distinctive types of orbits are particularly suitable for certain roles. But these inferences cannot determine a satellite’s specific capabilities or the intent behind an observed action (Jakhu, Jasani, and McDowell 2018: 411). For example, evidence that a satellite maneuvered to rendezvous with another object does not provide an explanation as to why it did so. In recent years, US officials have raised concerns about Chinese satellites undertaking coordinated close approaches with unidentified objects in the GEO region and instances where Russian satellites appear to have ejected subsatellites at high velocity, which the US characterized as a ‘space-based anti-satellite weapons test,’ which Russia strenuously denied (U.S. Space Command Public Affairs Office 2020; Weeden and Samson 2021: 2.9–2.10). Similarly, experimental technologies like the US X-37B reusable spaceplane have generated concern from China and Russia that the system could be a test of an orbital weapons system – despite US insistence that it is a platform for scientific tests – precisely because of the lack of detailed insight into the nature and purpose of these operations (Weeden and Samson 2021: 3.5–3.6).

This is particularly problematic as major space powers increasingly operate in proximity. China, Russia, and the USA all regularly conduct close approaches of satellites – including sensitive military communications and reconnaissance assets – in LEO and GEO (Weeden and Samson 2021: 1.2–1.11, 2.5–2.14, 3.3–3.11). These operations are currently conducted to gain information on the local orbital domain, assess adversaries’ capabilities, and eavesdrop, but could be configured to interfere with or damage the target satellite. An accidental collision could, therefore, be interpreted as a deliberate attack, particularly if it occurred during a period of heightened tensions.

As this suggests, the ambiguity surrounding sensitive military satellites is especially dangerous since space systems are embedded as part of critical national security infrastructures. During the Cold War, the Soviet Union and the USA

established relatively clear expectations that satellites used to support military communications, nuclear command and control, and ballistic missile early warning were central to nuclear deterrence and, thus, would not be targeted due to the risk that such interference would be (mis)interpreted as the prelude to a larger attack (Acton, MacDonald, and Vaddi 2021: 61–69). In addition, bilateral arms control agreements like the Antiballistic Missile Treaty institutionalized understandings that prevented interference with space-based “national technical means” (a pseudonym for intelligence and reconnaissance) used to verify compliance.

However, this understanding may be breaking down for four related reasons. First, other space powers may not recognize this strategic agreement. For example, a 2013 Chinese ballistic missile test that reached an altitude of approximately 30,000 km caused great concern among US officials due to the relative proximity to GEO, where many sensitive military satellites are currently located (Weeden and Samson 2021: 1.14–1.15). Second, the integration of space-based sensors controlling conventional and nuclear forces within the same satellite systems risks blurring lines in crisis management. One recent report warned that the entanglement of nuclear and nonnuclear systems

could lead to an inadvertent escalation of a US–China conventional conflict into the nuclear domain were China, as part of its conventional military response or deterrence, to attack this key part of the United States’ nuclear infrastructure. The United States may interpret such action as a prelude to a nuclear attack, and respond with a nuclear strike of its own.

(MacDonald, Freeman, and McFarland 2023: 15)

Third, the expanding range of counterspace capabilities complicates assessments of intentionality and the threshold for determining the use of force. There is no international consensus, for example, as to whether nondestructive and reversible actions – such as temporarily dazzling a satellite’s optical sensors or jamming, hacking, or spoofing its data links – constitute an armed attack. These forms of interference are becoming commonplace presumably because they are perceived to be less threatening, but the targets of nondestructive and reversible actions may not be able to immediately determine the extent or reason for disruption to their satellites.

Fourth, the growing use of commercial satellites for conventional military roles can be further destabilizing as actors may hold different perceptions concerning whether a given satellite is actively contributing to military operations and whether that assumed activity is sufficient to justify an attack. For example, modern commercial communications satellites frequently handle signals for multiple customers that may include sensitive national security missions alongside (though typically separated from) civilian uses. Here again the ongoing war in Ukraine provides an illustrative example of how entwinement and resulting ambiguity can inform decisions regarding the use of force. Commercial operator SpaceX has reported regular – and apparently increasing – attempted cyberattacks against its Starlink constellation, which has been providing broadband internet links for civilian and

military users in Ukrainian-controlled territory. While not acknowledging specific attacks, Russia has declared that commercial space systems are legitimate targets when they effectively contribute to military operations (Russian Federation 2022: 7).

These same considerations hold potentially contradictory implications for deterrence (Bahney, Pearl, and Markey 2019). On the one hand, strategic ambiguity can enhance deterrence by leaving adversaries guessing regarding one's specific capabilities. Restraint could be further enhanced by the widespread recognition that armed conflict in space would increase the population of dangerous debris and, thus, degrade the ability of *all* actors to access and utilize Earth orbit. Interestingly, the very inability to accurately monitor all space objects and predict future consequences reinforces the sense of risk underlying caution.

On the other hand, uncertainty concerning the orbital environment raises the prospects of misperception and miscalculation that can generate pressures towards escalation (Grego 2021). The incentive to conceal or misrepresent private information regarding capabilities and intentions is a key impediment to effective bargaining and de-escalation in Fearon's rationalist model of war (Fearon 1995: 395–397). In a crisis, short decision-making timescales would be exacerbated by the limits on available data to inform judgements. For instance, if during planned NATO military exercises a sensitive Russian military reconnaissance or communications satellite were to malfunction, existing SSA systems may not provide sufficiently nuanced information by which to quickly and definitively identify the source of the disruption (they could not provide a complete picture of all possible space objects in the vicinity, especially untracked debris) or attribute responsibility to a particular actor or capability.¹⁰ In some cases, therefore, it would not be possible to distinguish between a deliberate attack and an accidental collision caused by debris or satellites operating in excessively close proximity.

Inversely, intentional but limited attacks – such as temporarily disabling a satellite with lasers, electromagnetic interference, or hacking – may have larger and more lasting effects than intended by the attacker and could be viewed by the target as part of wider military action including, potentially, the prelude to the use of nuclear weapons (Grego 2021: 273–274). In circumstances of actual or anticipated armed conflict, these factors may incentivize first-strike mentalities to degrade adversaries' known or suspected space capabilities (Bahney, Pearl, and Markey 2019: 135; Grego 2021: 272–273). In short, the forms of orbital uncertainty identified above pose substantial challenges for effective signaling in crisis management.

For these reasons, transparency can be used to convey capabilities, perceptions of threat, objectives (what behaviors one is seeking to deter), and resolve (Kaplow and Gartzke 2021: 307). According to one senior US military commander, excessive secrecy currently impedes US efforts to signal to adversaries: '[d]eterrence does not happen in the classified world. Deterrence does not happen in the black; deterrence happens in the white' (Hitchens 2021a). In 2014, the USA decided to publicly reveal the existence of its highly sensitive Geosynchronous Space Situational Awareness Program (GSSAP) GEO monitoring satellites in order to clarify their purpose and deter adversarial threats to US space assets (Klotz 2014).

But the information provided was extremely modest. Russian authorities have complained that GSSAP operations close to their sensitive military satellites have, in the words of Western analysts, ‘made it very difficult to estimate the current and future position of the GSSAP satellite and the other object, creating difficulty in determining safe approaches and ascertaining the intent of the approach, which could lead to misperceptions and mistakes’ (Weeden and Samson 2021: 3.8). At present, therefore, major space powers do not agree on fundamental features of an intersubjective deterrence architecture including what constitutes an attack against a space asset, the threshold that would generate a retaliation, and how the integration of space systems in nuclear and conventional domains contributes to these calculations (Bahney, Pearl and Markey 2019: 137–143). Indeed, in contrast to other security issues, states have comparatively little experience in dealing with space crisis management and thereby gaining appreciation for others’ perspectives (Grego 2021: 277).

While this discussion has mainly focused on state-based security dynamics, civilian and commercial satellite operators are also affected by uncertainty concerning their operational environment. Operators have only a partial basis upon which to assess risks to their space assets and the need – and proper amount and direction – for evasive maneuvers. They must also grapple with incomplete knowledge concerning the risk acceptance (how close is “too close”) and operational capabilities (especially conjunction analysis and collision avoidance) of other actors (Muelhaupt et al. 2019: 82; Oltrogge and Alfano 2019: 75). Commercial and civilian operators have different organizational cultures and decision-making structures and often disagree in their assessments of the probability of a conjunction and the attribution of responsibility. Intense competition for market share may incentivize nondisclosure of accidents and near-misses so as to preserve the company’s reputation and profitability (Oltrogge and Alfano 2019: 72). As a result, direct coordination between operators is impeded by the absence of clear communication channels and right-of-way rules regarding who should move their satellite in the event of a potential collision. Ontological uncertainty, thus, imposes economically inefficient material costs in the form of managing information flows, calculating orbital maneuvers, and expending propellant to move at-risk satellites.

In many cases, these are not merely commercial disputes but hold international political implications as well. In one recent example, the Chinese government complained that close passes by SpaceX Starlink satellites had endangered its crewed Tiangong space station and called on the USA to exercise its legal obligation to ensure safe conduct by commercial operators under US jurisdiction (Jones 2021). The USA disputed the claim and asserted that its own – implicitly superior – SSA system did not detect any unsafe close approaches between the identified spacecraft (Hitchens 2021b). A further response from the Chinese Ministry of Foreign Affairs highlights the challenges posed by uncertainty over data sources and operator standards: ‘China’s competent authorities tried multiple times to reach the USA side via e-mail, but received no reply [The USA] is not showing a responsible attitude as a space power. Moreover, it is in no position to unilaterally set a threshold of emergency collision criteria’ (People’s Republic of China 2022).

Mitigating orbital uncertainty

Effective space governance, therefore, depends on managing and, where possible, reducing uncertainty concerning space operators' behaviors and intentions. This final section briefly explores international efforts to enhance transparency across four broad thematic approaches.

First, as already indicated, there is a widely acknowledged need to improve the quantity, quality, and transmission of underlying data concerning space launch and satellite operations. Next-generation SSA systems like the US Space Fence and LeoLab's Costa Rica Space Radar are able to detect objects larger than 2 cm in LEO, greatly expanding the potentially trackable population of space objects (Shimkus 2020; LeoLabs 2021). State and commercial monitoring of the GEO belt is undergoing similar advancements. High-quality ultraprecise data regarding object positions and trajectories will be especially vital in reducing false alarm conjunction warnings and powering automated collision avoidance systems in satellite constellations.

Analysts have also suggested means of enhancing state compliance with the Registration Convention, including more detailed and timely reporting of satellite deployments (especially for short-duration small satellites), establishing clearer rules on the national responsibility for privately operated space systems, and developing verification mechanisms using ground-based and space-based platforms (Jakhu, Jasani, and McDowell 2018: 413–417). The discussion above also demonstrates the need for greater transparency from major space powers, especially in relation to their national security space assets. The USA has recently begun to include more SSA data in its public catalogue, but security sensitivities continue to impede more comprehensive information sharing (Verspieren 2021).

Yet, as argued above, more data alone is not a solution; instead, actors need to develop common standards for the collection, curation, aggregation, fusion, and dissemination of state, commercial, and nongovernmental data (Borowitz 2021; Jah 2020). In other words, effective SSA requires cooperation and coordination and is, therefore, inherently a global governance challenge. This reality has generated proposals, thus far unrealized, for new institutions including an international SSA sharing platform modelled on the air traffic control paradigm or even an international satellite monitoring agency (Quintana 2017: 95 and 98).

Second, since ambiguity concerning capabilities and intentions is a primary source of conflict, further international action is urgently required to develop shared understandings regarding acceptable and unacceptable activities in orbital space (United Nations Secretary General 2021: 7–8). This involves both clarifying military, civilian, and commercial actor perspectives on the legitimate uses of space as well as perceptions of risk and threat. This can take multiple forms. Cold War bilateral information and assurance mechanisms could provide a model for direct dialogue among the major military space powers of China, Russia, and the USA on issues relating to nonconsensual satellite close approaches and hostile interference with satellite systems. Despite intense competition and mutual mistrust, the Soviet Union and the USA developed a range of legal restraints on advanced weapons systems and confidence-building measures aimed at reducing

miscalculation and escalation in a crisis. For example, the 1972 Incidents at Sea Agreement provided operational means to deconflict and stabilize interactions between Soviet and US naval assets.

A range of potential initiatives appear possible even in this period of heightened geopolitical tensions. Recently, a senior US military commander proposed the creation of hotlines with China and Russia – similar to those employed for nuclear weapons and during military operations in Syria – to enable direct communication on space operations, particularly in instances where sensitive national security satellites may operate in close proximity (Erwin 2021). In the wake of its apparent near-misses with Starlink satellites, China issued a similar call for a bilateral communication channel with the USA to address matters of mutual space safety (Foust 2022a). Specific discussions could subsequently focus on discrete areas for mutual reassurance, such as the creation of “keep-out zones” around sensitive military communication and nuclear monitoring satellites (Acton, MacDonald, and Vaddi 2021: 61–69). Military space powers should as well specify how the UN Charter and international law of armed conflict apply to space operations.

The international community is also pursuing more inclusive dialogues that aim to foster consultation and coordination regarding best practices, norms, and legal rules to improve the transparency and safety of space operations. In 2013, a UN-sponsored Group of Governmental Experts (GGE) produced a final report that outlined a series of voluntary transparency and confidence-building measures including information-exchange concerning national space policies and operations; prior notification of potentially threatening activities such as planned maneuvers in proximity to another operator’s satellite, dangerous re-entries, or the intentional destruction of satellites; and limited access to national space launch and control facilities (United Nations General Assembly 2013: 13–18). The GGE process is a rare example of security cooperation among China, Russia, and the USA; yet, there is little evidence of national implementation of the GGE recommendations thus far. In 2019, the UN adopted a set of voluntary Guidelines for the Long-Term Sustainability of Outer Space Activities, representing another effort to ‘promote international cooperation and understanding to address natural and [hu]man-made hazards that could compromise the operations of States and international inter-governmental organizations in outer space’ (United Nations Committee on the Peaceful Uses of Outer Space 2019: para. 8).

The United Kingdom is currently leading an effort at the UN to foster multilateral discussions to characterize responsible and irresponsible behaviors in outer space (United Nations Secretary General 2021). Submissions from states, IGOs, and civil society have emphasized the importance of information exchange, consultation, and coordination as the basis for stabilizing interactions among space-faring actors and preserving the operational environment. In December 2021, the UN General Assembly created an open-ended working group to meet in 2022 and 2023 and assess current and future threats to space operations, evaluate existing legal and normative structures, and draft consensus ‘recommendations on possible norms, rules and principles of responsible behaviors relating to threats by States to space systems, including, as appropriate, how they would contribute to

the negotiation of legally binding instruments' (United Nations General Assembly 2021: para. 5(c)). In turn, these diplomatic efforts will need to draw on SSA data as the basis for verifying any resulting commitments.

Third, despite some modest progress at the multilateral level, the majority of governance will continue to operate through domestic regulatory structures that hold the primary responsibility for ensuring compliance with international reporting and operational requirements. In contrast to most domains of international law, in space law states, and not commercial or civilian operators, remain legally liable for damage involving space assets (Larsen 2019; United Nations General Assembly 1971). This provides additional incentive to ensure there are adequate restraints on the rapidly expanding commercial space sector. However, many national institutions are either underresourced or excessively bureaucratized – or both. For example, in the USA, the responsibility for regulating commercial space is spread across multiple agencies, depending on the activity. This has led to calls for regulatory rationalization and streamlining to improve responsive decision-making and oversight.

Fourth and finally, commercial space operators are themselves both the subject and initiator of governance mechanisms aimed at improving transparency. Given the scale of investment in space launch and satellite systems, operators have a clear interest in advancing best practices for the safe and sustainable uses of orbital space. This involves a range of technical improvements to satellite deployment, operation, and disposal; for example, there are proposals to utilize physical reflectors, or better still, high-precision onboard transponders to make satellites more easily trackable (Muelhaupt et al. 2019: 86). For our purposes, a particularly significant development is the increasing willingness of companies like SpaceX to share detailed data on satellite positions and maneuvers with other operators – including direct market competitors (Muelhaupt et al. 2019: 84–85). Standard-setting bodies like the International Standards Organization and Space Safety Coalition, and nongovernmental organizations like the Secure World Foundation, work to consolidate and disseminate voluntary best practices, which emphasize information-sharing as a key objective (Secure World Foundation 2017).

Financial and reputational incentives may also be brought to bear to promote compliance. Despite the fact that international legal liability attaches to states, commercial operators may still be subjected to scrutiny in domestic courts, which can award punitive damages (where this is permitted) (Larsen 2019: 110–113). In this context, liability insurance for commercial space launches and satellite operations serves as a mechanism incentivizing transparency and good behavior, especially when the policies are contingent upon oversight from relevant domestic agencies. This, in turn, can empower a relatively small group of insurance providers with *de facto* regulatory authority in mandating practices associated with space safety and sustainability (Harrington 2020). In a related vein, the World Economic Forum is working with academic partners to develop a Space Sustainability Rating, which will utilize voluntary questionnaires, coupled with external data, to evaluate space operations in terms of their alignment with international guidelines concerning space debris mitigation (World Economic Forum 2021).

Conclusion

This chapter has argued that the utilization and governance of Earth orbit is beset by limitations on the quality, quantity, and timeliness of information concerning space objects and the intentions of their respective operators. Put simply, this is a challenge of both knowledge and perception. Given the sheer complexity of space operations and the impediments to transparency under even optimistic conditions, ontological uncertainty can be reduced but never eliminated. As such, a holistic calculation of risk based on complete information is fundamentally impossible and spacefaring actors must, therefore, grapple with uncertainty as an inherent feature of their operations. This is the essence of space governance.

However, rapid technological advances are expanding the prospects for robotic and human exploration beyond Earth orbit. Recent years have witnessed a proliferation of scientific missions to the Moon, Mars, and beyond (Johnson 2022). Once fantastical, proposals for natural resource extraction on (comparatively) nearby celestial objects will soon be feasible. Perhaps most dramatically, entrepreneurs like Elon Musk of SpaceX explicitly aim to make humans a “multiplanetary species” by developing permanent human settlements on Mars (Musk 2017). And serious scientific programs continue to seek evidence of potential life-bearing planets and signs of intelligent life beyond our solar system.

While outside the scope of this intervention, it is worth briefly noting that deep space endeavors extend conceptions of uncertainty further still. On the one hand, the same dynamics of ontological uncertainty discussed above multiply in the infinite vastness beyond Earth orbit. The exponentially larger volume of space between Earth and Moon (known as cislunar space) poses even greater challenges to effective monitoring and communication between spacecraft and Earth-based operators.¹¹ Yet, current SSA capabilities are extremely limited beyond Earth orbit. China and the USA are, therefore, developing communication relay systems to support lunar missions, and the USA intends to deploy satellites to monitor the primary transit routes between Earth and Moon (Holzinger, Chow, and Garretson 2021: 15–17; Johnson 2022: 24). In the other direction, asteroid impacts are known to pose an existential threat to life on Earth but the total number of potentially dangerous objects, their sizes, and the probability of impacts – and, thus, the relative scale of risk – are not well understood and global cooperation is limited (Schmidt 2019).

On the other hand, the prospective development of the human species off of Earth would unsettle established social, political, and economic assumptions and introduce forms of epistemic uncertainty that are deeply existential in their implications for how we understand ourselves and our place in the universe (Deudney 2020). For example, the exploitation of essentially limitless natural resources in celestial objects raises complex questions concerning how these vast benefits should be allocated and distributed within terrestrial communities. In the longer term, interplanetary exploration will challenge our existing notions of sovereignty and citizenship. The extreme distances mean that space settlers would eventually develop conceptions of community that no longer recognize Earth-bound governments and

societies. Even more fundamentally, the effects of radiation and low gravity would alter our biological processes leading to physically different beings. In such a scenario, our off-Earth descendants may no longer regard themselves as “humans” at all. So, while uncertainty is an enduring feature of our terrestrial societies, these dynamics will also eventually follow us beyond our planet.

Notes

- 1 These challenges are further magnified when extending beyond Earth orbit to encompass the zone between Earth and Moon – an area of growing activity (Johnson 2022). However, in this chapter, I limit my analysis to Earth orbital space.
- 2 SSA networks are operated by China, the European Space Agency, France, Japan, Russian Federation, and the USA. The USA maintains the most advanced and extensive SSA capabilities through its Space Surveillance Network operated by the 18th Space Control Squadron of the US Space Command (Verspieren 2021). Major commercial SSA providers include LeoLabs, ExoAnalytic Solutions, and COMSPOC.
- 3 There is growing use of space-based assets (such as the US military’s Geosynchronous Space Situational Awareness satellites) to address this latter challenge, but most sensors remain on Earth.
- 4 For illustration, some of the largest currently approved constellations are SpaceX’s Starlink (11,943 satellites between 335-570 km and seeking approval for a further 30,000); Amazon’s Project Kuiper (3236 satellites at 590-630 km and an additional 4538 proposed); OneWeb (648 satellites at 1200 km and an additional 6372 proposed) and Chinese national GuoWang/SatNet (12,992 satellites in clustered sub-constellations between 500-1245 km) (Messier 2021).
- 5 The smaller and larger estimates are provided by NASA (<https://orbitaldebris.jsc.nasa.gov/faq/>) and the European Space Agency (https://www.esa.int/Safety_Security/Space_Debris/Space_debris_by_the_numbers), respectively.
- 6 The US Space Surveillance Network, for example, maintains both an advanced internal satellite object catalogue and a public version with more limited data that excludes US and allied military and intelligence satellites (Borowitz 2019: 23).
- 7 Most importantly, the OST enshrines a principle of free access to and use of outer space (Article I) and prohibits national appropriation of celestial resources (Article II). Moreover, OST Article IV insists that outer space shall be used for “peaceful purposes” and bans the placement of nuclear and other weapons of mass destruction in space (but does not address so-called conventional weapons), and military installations and weapons on the Moon or other celestial objects (but not in the voids between these objects).
- 8 My discussion of ambiguity refers to *contexts that are open to more than one interpretation*. This aligns with one sense of the term as described in Matejova and Shesterinina’s introduction to this volume.
- 9 For critique of assumption that space is offence-dominant see Townsend (2020).
- 10 The type of counterspace weapon matters for subsequent assessments. Ground-based ballistic missiles and lasers (if used directly against a satellite) and in-orbit interdictions are relatively easy to detect. Electromagnetic interference and jamming can be identified and attributed with varying precision. Cyber-attacks pose much greater challenges. Such information would not necessarily resolve issues of *intentionality*, however.
- 11 The outer edge of the most common orbits around the Moon are roughly 12 times further from Earth than the GEO orbit. When rendered in three dimensions, the volume of cislunar space is 1728 times larger than the volume of space encompassed within GEO Earth orbit (Holzinger, Chow and Garretson 2021: 4–5).

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12 Anticipatory norm-building and the (un) making of uncertainty

The norm against autonomous weapons systems

Berenike Prem

Since 2014, the international community has considered the issue of autonomy in weapons systems under the framework of the United Nations Convention on Certain Conventional Weapons (UNCCW). Despite hopes that 2022 would see some kind of a breakthrough, the 2019 eleven guiding principles remain the only international agreement regarding lethal autonomous weapons systems (LAWS or AWS) – systems that are able to select and engage targets without human intervention (DoD 2012: 13; ICRC 2021: 2). While some existing weapons systems already satisfy this definition,¹ most states agree that fully autonomous weapons will be different from today’s weapons, which operate in contained environments, are defensive in nature, and “merely” target objects instead of people (UNIDIR 2017: 9). The Campaign to Stop Killer Robots (hereafter the Campaign), a coalition of more than 180 individual NGOs, has worked hard to ensure that the threshold to *fully* autonomous systems is never crossed.

For the Campaign, a major impediment to norm-building has been limited knowledge about the issue. In the case of AWS, there seems to be uncertainty about the very nature and existence of the problem since the development and consequences of these technologies are still largely unrealized. Emerging technologies such as AWS also exhaust conventional modes of knowing to document the severity and nature of the problem (e.g., statistical evidence of widespread harm, photographs of victims, or testimonies of survivors).

How does norm-building proceed in the face of an uncertain future? Constructivist scholarship on norms has largely neglected the temporal dimension of norm emergence and change, and how uncertainty plays into these dynamics. This is not surprising given the strong empirical focus on what I would call reactive norms like the nuclear taboo or the norm against anti-personnel landmines (Price 1998; Tannenwald 2007) – i.e., norms that have emerged post-facto, after a problem has already manifested itself in one way or another. Insights from these studies may, thus, be of limited help to understanding processes of anticipatory norm-building.

Anticipatory norms intervene in the temporal space between the identification of a problem and its emergence as determinate (Prem 2022). This places extraordinary demands on norm entrepreneurs to make the case for regulatory action. If uncertainty features at all in studies on norms, it is frequently treated as an external factor (see Matejova and Shesterinina in the introduction to this volume) – as something that is

given rather than made. The academic debate on AWS shares this static conception, treating uncertainty – understood as a “lack of measurability” (because no harms are visible yet) (Carpenter 2014), “complexity” (Rosert and Sauer 2021; Solovyeva and Hynek 2023), or “elusiveness” (Bode and Huelss 2018) – as an issue-specific characteristic that stands in the way of preventive regulation. In doing so, the literature fails to consider that uncertainty is also an object of governance that can be strategically harnessed or actively built to avert progress towards (anticipatory) norm-building.

This chapter highlights the decisive role of uncertainty in anticipatory norm-building processes. I suggest envisioning uncertainty as both a limit to and an object of governance that can be contained, strategically harnessed, or actively built to drive or contain progress towards normative change. Uncertainty, rather than simply “being there,” is better understood as the outcome of an interactive and highly contested process. This directs our attention to the human sources of uncertainty (Matejova and Shesterinina in the introduction to this volume). It also speaks to a rich literature on ignorance and its strategic uses, which shares skepticism towards the taken-for-grantedness of uncertainty (Gross and McGoey 2015; McGoey 2019; Proctor and Schiebinger 2008).

Based on an analysis of the ongoing ban deliberations taking place within the GGE, the chapter shows how norm-antipreneurial states strategically mobilize uncertainty to thwart progress towards a ban of AWS. While pro-ban advocates have long grappled to frame AWS as unambiguously and intrinsically wrong, opponents of a ban have been able to magnify doubt about the negative consequences of using AWS and stress the need for further data and research to declare a ban as premature. This has enabled AWS-pioneering states to slow down the pace of discussions within the CCW, which traditionally relies on consensus voting, forcing state delegates into infinite talks (“we don’t know yet”). Norm-antipreneurial states have also pursued a strategy of agenda blocking to prevent controversial items from entering the reports of the group.

In advancing these claims, the contribution of this chapter is twofold. First, the study holds important lessons for the literature on AWS and norms. To understand how legally binding regulation of AWS can be brought about, scholars in the field have almost exclusively focused on the role of norm entrepreneurs in the CCW process by analyzing the agency of the Campaign to Stop Killer Robots (Rosert and Sauer 2021), states from the Global South (Bode 2019), and the UN Institute for Disarmament Research (Prem 2022). This focus on “agents of normative change,” however, tells us only part of the story of why regulation has failed (so far). The current stalemate in the CCW cannot only be attributed to the suboptimal strategies of the Campaign and lack of support from middle-power states but is also due to the active (and creative) *resistance* by norm antipreneurial states. Their filibustering strategy has implications far beyond the CCW; it propels the emergence of *de facto* norms about AWS by allowing AWS-related research, development, and test activities to continue unchecked under the pretense of uncertainty (Bode and Huelss 2018).

Second, speaking to the constructivist scholarship on norms more generally, the present study offers a new perspective to theorize norm resistance or contestation

(Bloomfield and Scott 2017; Wiener 2009). The socially constructed nature of uncertainty and its mobilization in the current norm-setting effort with regard to AWS implies that not only the meaning of a norm but also its ontological and epistemic foundations can be contested.

The remainder of the chapter is structured as follows. The first section introduces the theoretical argument by foregrounding the *role* and various *forms* of uncertainty at play in anticipatory norm-building processes. The second section presents my methods and data. In the third, fourth, and fifth sections, I go on to analyze the diverse practices of (not) knowing about AWS at the ontological level (Do AWS exist? What do we know/not know about the consequences of their use?) and epistemic level (How do we know about AWS?). The sixth section assesses the *effects* of uncertainty on the ongoing debate under the framework of the UNCCW, and the last section discusses my study's main findings and implications.

Uncertainty and anticipatory norm emergence

Most scholars agree that norms governing the development and use of AWS will be different from most arms control-related norms insofar as they will apply “*ex ante*” (Bode and Huelss 2022: 61) – that is, before these weapons have been (widely) used in combat situations and before there is definitive evidence or proof of their harmful consequences. The norms are anticipatory rather than reactive (for a detailed discussion, see Prem 2022). This future-oriented nature has important implications for the process of norm emergence. Other than in most previous norm-setting efforts, there seems to be future or potential uncertainty over how and even whether AWS will become a problem that would require immediate regulatory action. Uncertainty presents a genuine challenge for decisionmakers in the UN where states are considering ‘aspects of [a] normative and operational framework [for lethal autonomous weapons systems]’ (CCW 2019: 5).

While not explicitly framing their arguments in terms of certainty/uncertainty, scholars of norms agree that the successful emergence of a norm hinges on a shared perception that a problem exists and that it is grave enough to justify a change of the current normative status quo. As Hüllse (2007: 156) points out, ‘ontological persuasion’ is a precondition for normative persuasion. We first need a clear sense (certainty) about a problem before action is to be taken. Certainty about a problem is a decisive factor in any norm-setting efforts because it elevates the urgency of an issue (the perception that an issue requires immediate action) in the eyes of would-be regulators. With so many things on the crowded public policy agenda, why should policymakers expend the time and resources necessary to pursue new regulations? The very “mission” of norm entrepreneurs is defined in these terms: they “teach” states about a problem and provide information and expertise to further our understanding of it (Keck and Sikkink 1998; Price 2003; Wunderlich 2013).² Uncertainty, in this sense, is understood in a double sense: as a gap in knowledge that must be overcome by getting more (and better) information, and as a lack of meaning if actors do not share a common understanding about the kind of situation that they face (Matejova and Shesterinina in the introduction to this volume).

By treating uncertainty as something that is *already there* and that needs to be acted upon, these studies locate the source of uncertainty “beyond human control” (Matejova and Shesterinina in the introduction to this volume) – it is exogenous to the norm-building process. This tendency to exogenize uncertainty is also apparent in the literature on AWS. AWS are characterized as inherently unpredictable (“behavioral uncertainty”) to the extent that their behavior cannot specifically be foreseen (Bhuta and Pantazopoulos 2016: 287).

Others have argued that the regulation of AWS is impeded by their complex, technical nature and their elusiveness (Rosert and Sauer 2021: 19; see also Bode and Huelss 2018: 404). The CCW process has, therefore, been ‘plagued by confusion and definitional struggles’ (Sauer 2020: 4). Uncertainty, in these accounts, is treated as an issue-specific characteristic of AWS. It originates both in their ‘polymorphous character’ (Rosert and Sauer 2021: 19), which has led to diverging understandings of what AWS are and how to define them (lack of meaning), and their sheer technical complexity (Solovyeva and Hynek 2023), which by far exceeds the cognitive abilities of decisionmakers to cope with (too much information).

I agree that decisionmakers and norm entrepreneurs often experience uncertainty in these ways. Yet, this treatment of uncertainty as an external force overlooks that the various forms of not knowing or not understanding can also be “of our making.” If we take the core claim of constructivist social theory about the social construction of reality seriously, then uncertainty can be seen as *socially constructed*, too. Moreover, the prevailing narrative of uncertainty as ‘a limit to governance’ fails to acknowledge that uncertainty might well be *advantageous* for some actors – ‘a strategic asset for those who seek to govern through ambiguity’ (Best 2008: 356) and other types of uncertainty. As Yüksel in this volume reminds us, that does in no way imply that uncertainty can be attributed to any single actor.³ Rather, it emerges through the interaction of various actors who make sense of an issue or, alternatively, mobilize doubt, ambiguity, and disinformation.

The emerging field of agnotology (or ignorance studies) helps us take these ideas further. Scholars in this field invite us to conceive of uncertainty not only ‘as a precursor or an impediment to more knowledge but as a productive force in itself, as the twin and not the opposite of knowledge’ (McGoey 2012: 3). Most relevant to the discussion here is Proctor’s (2008: 8) notion of manufactured or strategic ignorance ‘as something that is made, maintained, and manipulated.’ It describes the deliberate attempt to generate or magnify uncertainty to avoid liability and accountability for past mistakes (McGoey 2019: 3). I argue that the concept is also useful to describe forms of *resistance* to an emergent norm. The idea of “strategic ignorance” is, in fact, vaguely echoed in the literature on norms. Bloomfield (2016: 323–325) explains that norm antipreneurs may defend the entrenched normative status quo against challengers by denying the existence of a problem, dismissing claims to the contrary as alarmist, and sowing confusion.

Methods and data

The instrumental and socially constructed nature of (un)certainty invites us to conceive of (anticipatory) norm building as an interactive and highly contested process. It is not only about the efforts of norm entrepreneurs to *contain* uncertainty. Anticipatory norm building also involves the deliberate attempt of norm antipreneurs to *construct* and *mobilize* uncertainty in the service of delaying action. Both the removal of uncertainty *and* its active construction are intermediate steps towards normative change (or stalemate). Thus, if we are to fully understand the complex process of anticipatory norm-building, we first need an account of how uncertainty is (un)made.

At this point, it is helpful to recall the distinction between ontological and epistemic uncertainty made earlier in this volume (see also Daase and Kessler 2007). *Ontological uncertainty* denotes the degree of empirical knowledge that we have or lack about a problem, its nature, magnitude, the causal mechanisms that bring it about, and its normative consequences. Does such a thing as AWS exist? Will it *ever* exist? And how, from a normative point of view, will these systems affect shared expectations of appropriateness in the conduct of war? *Epistemic uncertainty* concerns the process of knowledge production, i.e., the limits of what is methodologically knowable. Here the key question is: How can we know about a weapon that is not yet operational on a larger scale? In line with agnotology studies, I assume that ontological and epistemic uncertainty – not unlike knowledge or scientific discoveries – emerges through various *practices of (not) knowing*. In what follows, I study uncertainty through the ontological and epistemic practices of the key protagonists and antagonists of normative change in the GGE on LAWS.

While it is true that the distinction between norm entrepreneurs and antipreneurs is an ideal-typical one, with other roles situated in-between (Bloomfield 2016), it is nevertheless possible to identify actors that sit close to (or even come to represent) those extreme positions with regard to a potential norm against AWS (Hynek and Solovyeva 2021: 2). The group of norm entrepreneurs is represented by the Campaign to Stop Killer Robots and its individual members who have spearheaded the call for a preemptive ban on AWS.⁴ It also comprises actors closely aligned with the Campaign's broader goal of "stopping killer robots," even if they do not officially belong to it. This group of supporters includes the International Committee of the Red Cross and the Future of Life Institute, among others. Resistance to a ban or legally binding regulation of AWS comes from countries that have already invested in AWS-related research and development (e.g., advanced robotics or drones) and which are hesitant to give up the perceived military advantage of AWS (Rosendorf 2021). This study exemplarily focuses on the role of the USA and Russia at the norm antipreneurial end of the spectrum. Both states are similarly positioned towards AWS and have been some of the most active opponents of a ban in the GGE (Amnesty International UK 2021).⁵

I have collected statements delivered at the GGE by each group, advocacy material of the Campaign, and other types of interventions, which typically occur at side

events during the Group's meetings. I have supplemented this (publicly available) material with my own observations gained from participant observation of two GGE meetings in 2021. To access the ontological dimension of uncertainty, I look for strategies that aim at removing uncertainty as well as those that mobilize or actively construct different types of uncertainty. What we know or do not know about AWS depends in no small measure on how the issue is represented and framed. Norm entrepreneurs must first "designate" AWS as a distinct entity (Allan 2017). Another key challenge is to formulate a clear and unambiguous message in terms of "good" or "bad," "desirable" and "undesirable," "legitimate" and "illegitimate."

Norm antipreneurs, in contrast, can block attempts at fixing or categorizing AWS (lack of common understanding), deny the availability of knowledge, or disregard inconvenient information (lack of information). Another strategy is to advance competing knowledge claims to show that the issue is not yet settled but subject to diverging interpretations (ambiguity).

Epistemic practices, in turn, are about our instruments of measurement and perception. Even if factual knowledge about AWS may be sparse, there are methods for making future problems present. My analysis identifies four of them: weak signals, imaginations, analogical reasoning, and test and evaluation (T&E). These epistemic practices are also ontologically productive. They inspire us to think about AWS in a particular way, foregrounding some aspects of an issue while omitting others. In light of their reality-shaping effect, the various ways of knowing can be used strategically by norm antipreneurs to create ambiguity about the consequences of using AWS. Epistemic and ontological practices are, therefore, crucially related.

What are AWS?

Most existing arms control agreements rely on clear-cut definitions that clarify the scope of regulation (what falls within the remit of a norm?) and serve as the basis for verifying limits or bans on countable military units (e.g., landmines or warheads). It is, therefore, not surprising that the first years of the CCW process have been dominated by definitional issues, even though the traditional approach of defining and then regulating a discrete category of weapons may not be applicable to AWS (Sauer 2020: 5). After all, autonomy is an attribute that could be attached to any future and current weapon system. Moreover, it took long for the conversation to get focused and set boundaries for what was *not* under discussion, namely drones. Despite some progress in terms of conceptualizing the issue, there are still widely divergent conceptions of what autonomy in weapons means. While many state delegates urge to move talks further without first establishing agreement on a common definition of AWS, others insist on a consensual definition as a basis for negotiating a regulative framework, 'sometimes deliberately so in order to justify political heel-dragging' (Sauer 2020: 4). For example, the Russian delegation asserts that 'it will be problematic to achieve further progress in the work of the GGE without developing a common understanding on LAWS and their basic functions' (Russian Federation 2021: 3). Whether this should be read as a deliberate

effort or not, lamenting the lack of a consensual definition of AWS has had the *effect* of delaying progress; it justifies inaction for the sake of conceptual clarity.

Discussions at the CCW have been also plagued by uncertainty about the timeline for the expected development of these systems. Depending on one's definition, AWS have already existed for decades, or they never will. Whether AWS are conceived of as a far-off phenomenon or a very near-term issue has important implications for norm building. It underlies the urgency or "ripeness" of the issue – or the lack thereof – which is necessary to move states into preemptive action (Carpenter 2014). In this regard, it is noteworthy that many states have set the bar for what constitutes autonomy in weapons systems so high that they effectively define AWS out of existence – not only for now but also for the foreseeable future (Crootof 2015: 1847). For example, a recent publication of the French Defense Ethics Committee defines fully lethal autonomous weapons systems (FLAWS) as those being 'capable of changing their rules of operation and therefore ... likely to depart from the employment framework initially defined' – as opposed to 'partially autonomous lethal weapon systems' (French Defence Ethics Committee 2021: 4). The two-tier approach has also gained traction in the GGE. The Chair's revised draft paper for the GGE meeting in 2021 takes up the distinction between full and partial AWS, echoing the sentiment that only weapons falling into the first category should be prohibited (CCW 2021).

This narrow definition of AWS is problematic because it displaces the threat of AWS into the distant future – a future nobody wants anyway. At the same time, it (willfully) ignores the challenges associated with AI applications in the "kill chain" leading up to the use of force: AI-driven decision support systems that are not weapons in themselves but that ultimately enable the application of force by, say, assisting intelligence analysis and targeting decisions, or predicting an adversary's next move (Persi Paoli et al. 2020). As a result, discussions in the CCW and the media have disproportionately focused on the far end of the autonomy spectrum: the Terminator- or Slaughterbots-like scenarios. The science fiction feeling has in no small measure been nourished by pro-ban actors themselves, which have held the position that AWS generally do not exist today (Human Rights Watch and ICRC 2012).

What are the consequences of AWS use?

Discussions in the GGE have primarily revolved around the question of whether the use of AWS challenges (or conforms to) existing legal norms of international humanitarian law, most notably the principles of distinction, proportionality, and precautions in attacks. Proponents of a norm against AWS have long insisted on the limits of (current and foreseeable) technology to function within legal constraints (ICRC 2015: 3). However, such claims remain contentious in the absence of supporting evidence and have been actively challenged by ban skeptics on the grounds that technological fixes might render these systems at least as capable of discriminating between civilians and combatants (and as predictable) as humans.

From the beginnings of the GGE, ban skeptics have been mindful to foment doubt about the alleged hazards of AWS, pointing out a lack of information. The idea of “no proof” substantiates this claim. According to the US delegation in the GGE, it is impossible “to predict with *any real certainty* the true challenges and benefits of” AWS (McKay 2018a, emphasis added). The Russian delegation joins in this tune, noticing the lack of clear evidence “that the consequences of their [AWS] use would be so destructive and severe that in no condition could they meet the main principles of international humanitarian law.”⁶ At the same time, norm entrepreneurs have actively worked to create ambiguity by entertaining the possibility that AWS would render warfare more humane. According to the Russian delegation, AWS can provide an important corrective to human-related hazards in the conduct of war: ‘LAWS technologies can significantly reduce the negative impact of weapons use in the context of IHL [international humanitarian law] related to operator error, his/her mental or physiological state, ethical, religious or moral values’ (Russian Federation 2021: 2). In a similar vein, the USA has repeatedly touted ‘the potential for these technologies to save lives in armed conflict’ and ‘enhance the protection of the civilian population against the effects of hostilities’ (United States of America 2018: 1). For example, automating data analysis and object detection could increase awareness of the presence of civilians (United States of America 2018).

For opponents of a ban, the point is not to claim that these imaginaries are true but to keep the question of whether these systems will be able to operate in conformity with the rules of law wide open. Even if we do not have a definitive answer to this question right now, we might have it in the future. For opponents of a ban, it is, therefore, imperative that research and development of AWS continue to make sure that they will eventually live up to their full humanitarian potential (McKay 2018a). This techno-optimism has been prevalent in the discussions from early on, as the expert contribution of W. Boothby at the 2015 CCW Meeting of Experts exemplarily shows:

We do not know whether future technology may produce weapon systems that can out-perform humans in protecting civilians and civilian objects. It would in my view be a mistake to try to ban a technology on the basis of its current shortcomings, when in future it may actually enable the law to be complied with more reliably than now.

(Boothby 2015: 3)

If the yardstick for determining the rightfulness of these weapons is *future imagined capabilities* (rather than the actual technological state of the art), then any attempt at regulating these weapons *now* seems futile. As long as there is ambiguity about the effects of AWS (and hope attached to these systems), ban skeptics can declare their stigmatization as unwarranted and a ban as premature. They urge to avoid ‘hasty decisions’ (Russian Federation 2020) and call for more time and discussion under the CCW to ‘educate ourselves and deepen our collective understanding’ (McKay 2018a). In other words, the continual quest for more knowledge

and consensus can help keep the threat of regulation at bay. It keeps proponents of a prohibitory norm engaged in endless debates about whether or not AWS will ever be technologically advanced enough to comply with international humanitarian law and allows AWS-aspiring states to continue research and development activities that bring them ever closer to AWS.

Given the limitations of this technology-centered argument, campaigners have gradually shifted away from a consequentialist argument about the likely or unlikely effect of AWS to the taboo of delegating life and death decisions to machines. At the heart of this taboo lies the idea that the act of killing people based on data collected by sensors and processed by algorithms is wrong in and of itself even if AWS were capable of discriminating against civilians and combatants (Amoroso 2020; Rosert and Sauer 2019). It would further dehumanize warfare by reducing victims, whether civilians or not, to ‘stereotypes, labels, objects’ (KRC 2021c). The distinct advantage of this framing is that it sends an *unambiguous* message that AWS are intrinsically wrong. Framing objections against AWS in terms of human dignity can help pro-ban actors put an end to pointless discussions about future technological progress (Rosert and Sauer 2019). This is a fundamental concern that cannot be resolved through technological fixes: AWS *are* machines; they do neither see people the way a human does nor can they appreciate the value of human life (and the implications of its loss), no matter how technologically sophisticated they will ever be.

At the same time, concerns about whether AWS can be used in conformity with humanitarian law continue to persist. The Red Cross has reframed this issue in terms of the “innate” unpredictability in AWS. (Un)predictability refers to the degree to which the behavior of any system and its effects can be anticipated in advance (Holland Michel 2020: 4). According to the Red Cross, a degree of unpredictability is ‘inherent in the effects of using all AWS’ (ICRC 2021: 7). AWS, by definition, operate with reduced human involvement, over longer durations and wider areas, and in more dynamic and complex environments, which makes it impossible to foresee where, when, and which targets AWS will strike and with what kind of effects. This is problematic insofar as international humanitarian law deems inherently unlawful any weapons that cannot be directed at a specific military target or whose effects cannot be limited (Boulanin et al. 2020: 6; ICRC 2021: 7). What is striking about this reasoning is that it embraces uncertainty as a valid source for a norm against AWS. It means that instead of norm advocates having to deliver clear evidence of tangible and imminent threats to civilians, the burden of proof is now on those interested in the development of AWS to show that the effect of these systems can be sufficiently predicted. Moreover, this framing introduces categorical reasoning into the debate by stigmatizing unpredictable AWS as “inherently wrong” and “indiscriminate.”

How can we know about AWS?

As first-hand experience with AWS seems to be lacking, early advocacy work harnessed the power of *imaginative* ways of knowing. Consider the very detailed

description of the catastrophic consequences of “not stopping killer robots” as displayed in fictional movies such as *Slaughterbots*.⁷ *Slaughterbots* was produced by the Future of Life Institute, an NGO dedicated to mitigating existential risks posed by advanced technologies, and was shown in a CCW side event hosted by the Campaign to Stop Killer Robots in 2017. The video opens with an Apple-like keynote in which a new, revolutionary product is unveiled: palm-sized, autonomous drones equipped with facial recognition and AI piloting systems that are able to kill people with headshots via a small amount of explosives. It then goes on to depict a dystopian scenario in which swarms of these drones are dispatched to kill US lawmakers and political activists. The ease with which such harmful consequences can be brought to attention can increase the perceived likelihood of a problem and thereby increase its urgency (Weyman and Barnett 2016: 134). According to AI expert Stuart Russell, who assisted the Future of Life Institute to make the video, the film is also intended

to give people a clear sense of the kinds of technologies and the notion of autonomy involved: This is not ‘science fiction’; autonomous weapons don’t have to be humanoid, conscious, and evil; and the capabilities are not ‘decades away’ as claimed by some countries at the U.N. talks in Geneva.

(Russell et al. 2018)

The video shows the harmful consequences of integrating and miniaturizing technologies that already exist. Thus, while the plot is indeed fictional, the technological components that are weaved into the quadcopter are not. What is also familiar is the platform technology which comes in the shape of a micro-drone that resembles the ones sold for recreational purposes. Focusing on existing and well-known technologies, which (at least at the time of the movie) have not yet been cobbled together in the way the video depicts, mitigates against the futurism that is usually evoked by the AWS issue. The new video *Slaughterbots – If human: kill ()*,⁸ which was published prior to the 6th Review Conference of the CCW in December 2021, moves AWS further into the here and now by interweaving fictional incidents and recent headlines from companies producing these kinds of weapons. The movie shows, among other things, a bank heist carried out by rifle-armed quadruped robots that are reminiscent of the (nonautonomous) robot dogs presented at the 2020 annual Association of the US Army convention and a nightclub attacked by explosive-laden quadcopters similar to the UAE-developed versions recently shown at an arms fair.

While the slaughterbots movies clearly serve the purpose of giving the AWS debate a firmer grounding in real-world developments and technologies, they may end up diluting the message by overstating the technological capabilities of future AWS. In *Slaughterbots*, the threat of fully autonomous weapons systems is one of proliferation – AWS falling into the hands of terrorists, drug cartels, or bank thieves – bracketing out the question of whether AWS will ever be able to do what the videos suggest: working as intended by their users. The videos serve the argument that autonomous systems are reliable, precise, and controllable as long as they

remain in the hands of the good guys.⁹ Moreover, such apocalyptic representations of the future easily fall prey to the sensational and attention-grabbing – physical lethal autonomous weapons – while ignoring less visually stimulating applications of AI in the military.

In fact, the standard response among defenders of the normative status quo has been to dismiss dystopian visions of killer robots as alarmist, sensational, and speculative. The US and UK delegations, for instance, urge that discussions in the CCW should be ‘grounded more in reality than in speculative scenarios’ (McKay 2018a; United Kingdom 2016). How could such a “reality-based” assessment look like if AWS are not yet (widely) used? Anticipating risks and challenges of new weapons before they hit the battleground is not uncommon to modern militaries. The T&E phase is specifically dedicated to identifying, quantifying, and mitigating risks associated with the use of a new weapon or means of warfare. It is, therefore, not surprising that states in the GGE, most notably technology-pioneering ones, have put considerable faith in T&E to provide them with information about the potential risks of deploying AWS in a given context (CCW 2021: §49).

What is notable about this way of knowing is that it turns uncertainty about the effects of AWS into *risks*, as something that can be measured, quantified, and governed through risk mitigation strategies (Best 2008). However, such risk mitigation measures will remain blind to failures that have not been specifically foreseen or simulated beforehand. It is impossible to test any given autonomous system against all possible circumstances, no matter how closely the test perimeters match potential deployment scenarios (Holland Michel 2020: 19). This problem would be compounded by the integration of machine learning features into AWS. Such systems could acquire behaviors that cannot be tested in advance. To date, there is no reliable method to test and verify AI systems. Applying risk management approaches to AWS would, therefore, entail a significant degree of ignorance. It would operate on the basis of what we know and ignore what we do not (and possibly cannot) know. Elliot in this volume argues that such epistemological choices about how uncertainty is defined reflect distinct political interests. For those interested in keeping the door to AWS wide open, framing the issue in terms of risk is advantageous because it creates a false sense of confidence in the operation of these systems – in spite of the incalculable but still extant possibility that accidents will occur. It justifies (further) research, development, and experimental uses of AWS in order to anticipate and combat the risks associated with these systems.

Not all claims by campaigners about the potential consequences of AWS are imaginative. A common method to know about future AWS is to extrapolate from past or current trends to predict what is likely to happen in the future (Prem 2022). *Weak signals* fall into this category. Weak signals are pieces of information that may seem inconclusive at first sight but can reveal emerging issues in the future if interpreted in a certain way (Matejova and Briggs 2021: 77). They are the first indicators of change. Take existing weapons systems that have some degrees of automation/autonomy. Even if states insist that discussions in the GGE are not about systems already in use, campaigners emphasize that the latter ‘clearly show the trend of increasing autonomy’ (KRC 2020; PAX 2019). Automatic weapons

defense systems such as the US Navy's MK 15 Phalanx Close-In Weapons System, which is designed to identify and fire at incoming missiles, are interpreted as 'one step on the road to full autonomy' (Human Rights Watch and ICRC 2012: 9) – a foretaste of what is to come. Another example are robotic sentry guns like the SGR-A1. Although the SGR-A1 does not carry weapons, it can be easily designed for eventual combat purposes. Because they still have a human in the loop, are not specifically designed to kill people, and would operate in a relatively controlled environment, the above weapons systems are not, at least yet, fully autonomous. However, the Campaign warns that 'they are moving rapidly in that direction' (Human Rights Watch and ICRC 2012: 19). In isolation, these developments may seem insignificant, but in combination with other pieces of "evidence" they aggregate to a larger picture of how the future might look like.

Recent events, as activists claim, move us indeed closer to the age of killer robots. As first described in a UN report on Libya, the world might have witnessed the first use of a fully autonomous weapon – the Turkish-made Kargu-2 drone or loitering munition – hunting down and engaging Haftar Affiliated Forces in Libya (Kallenborn 2021). While, technically speaking, it remains an open question whether the drone has been effectively used in an autonomous fashion, what matters is that proponents of a ban can leverage the incident as a practical demonstration that the future is already here (KRC 2021d). Likewise, campaigners warn that the increasing use of loitering munition with autonomous capabilities in the war in Ukraine brings us down a slippery slope towards automated warfare (KRC 2022). These very tangible technological developments in weapons systems suggest that signals can move from "weak" to "strong" as time goes by and potential problems move into the here and now.

Existing tech and weapons are not only indicative of how far we are, temporally speaking, from AWS. They also serve as a lens through which we can explore possible implications of new technology and the need for normative change – through *analogical reasoning*. AWS were initially analogized to permanently blinding laser weapons which have been successfully banned before they have found their way into the military arsenal of states (Human Rights Watch 2005) or designated as modern equivalent of landmines (Article 36 2012). More recently, the Campaign has begun to focus on AI-driven technologies in the civilian realm, including facial and vocal recognition technology, that uses datasets and algorithms to classify new objects or people. AWS will most likely share this algorithmic core with civilian AI technology (KRC 2021c).

AWS use algorithms to respond to incoming data with a corresponding output without human intervention: i.e., to select and engage targets. Such analogies can acquaint decisionmakers and the public with an otherwise unfamiliar issue by suggesting that AWS – given their family resemblance as algorithmic systems – will have similar effects. Civilian AI such as face or voice recognition systems already harm people by replicating and reinforcing systemic inequalities (KRC 2021c). These concerns are only amplified when machines make life-and-death decisions. The difference, according to the Campaign, is only a matter of degree, with AWS standing '[a]t the most extreme end of the spectrum of increasing automation'

(KRC 2021a). Analogical thinking, thus, negates the notion of disruption. It is based on a vision of the future in which things remain more or less the same. By offering a practical demonstration of what is at stake in increasingly automated warfare, these analogies also provide a strong argument against a wait-and-see approach that some states would favor.

AWS-pioneering states, in contrast, invoke existing weapons systems with automated and autonomous features to illustrate the potential humanitarian benefits of using AWS. In the April 2018 GGE meeting, the US delegation delivered a presentation on Counter-Rocket, Artillery and Mortar (C-RAM) systems which defend against incoming missiles, rockets, and mortars. The delegation noted that, overall, C-RAM systems work as intended while also supporting humanitarian interests on the battlefield: ‘With C-RAM, military personnel were better able to implement the principle of distinction and to greatly reduce risks to the civilian population’ (McKay 2018b: 1). These examples clearly have the effect of sowing ambiguity. As long as there is disagreement about the humanitarian impact of AWS, there is no reason to rush and deprive humanity of the potential benefits of increasing autonomy in weapons systems. According to the US delegation, it would be ‘premature’ and ‘unwise’ to negotiate any particular legal or political instrument before there is ‘a shared understanding of the risks and benefits of this technology’ (McKay 2018b: 1).

Uncertainty as a tool of agenda blockage and filibustering

Under the pretense of uncertainty, norm antipreneurial states have successfully pursued a filibustering strategy to slow down the diplomatic attempts to develop any restrictions, regulations, or prohibitions for AWS. Their consistent call for more research and continued discussion has had the effect of delaying action at the CCW where states continue to engage in discussions about terminology as well as the *potential* challenges and benefits of using AWS. The failure of the recent Convention on Conventional Weapons Review Conference to mandate negotiations on a legally binding instrument on autonomous weapons is a case in point. After eight years of discussions, diplomats could not agree on a common approach towards the issue – notably after opposition from Russia and the USA – and decided to continue talks for the next two years in the GGE (Amnesty International UK 2021).

Apart from an agreement to keep talking, the only palpable outcome so far has been the adoption of 11 guiding principles in 2019. And even these principles are widely criticized for aiming low by merely reflecting the lowest common denominator among states (Chengeta 2020). This is no coincidence but follows a general pattern of agenda blockage by states like Russia, the USA, Israel, and the UK. They have been mindful to avoid any constraints on their ability to develop (and ultimately) use AWS by watering down the language of the GGE reports on the grounds that no common understanding could be reached. This concerns the inclusion of ethical considerations (like human dignity), challenges of social biases, and other elements deemed important by proponents of a norm against AWS (Reaching Critical Will 2021: 1).

These delaying strategies cannot be separated from the institutional context in which international discussions on AWS are taking place. The CCW is a consensus-based forum, meaning that each delegation possesses a *de facto* veto. This places norm antipreneurs in a favorable position to defend the normative status quo (no regulation) even if they hold a minority position. Russia, the USA, and others have been repeatedly chastised for using the consensus principle ‘to hold the majority of states hostage’ (KRC 2021b). The mobilization and active creation of uncertainty can legitimate states’ opposition towards a ban. As Bloomfield (2016: 314) points out, norm antipreneurs rarely issue blanket denials; instead, they offer justifications for their resistance towards normative change. The irony of this tactic is that laggard states can signal their commitment to the CCW process and ongoing deliberations, all the while they keep actively blocking efforts to produce outcomes in accordance with a norm against AWS. The CCW process gives them a cover to tacitly invest in research and development activities that bring them ever closer to the age of killer robots. According to Bode and Huells (2018), these practices create *de facto* norms about how much (or little) human involvement in the use of force is acceptable which may be difficult to reverse in legal venues.

Not only institutional factors have weighed in favor of norm antipreneurs, but the way civil society actors have initially approached the issue also plays into the hands of those who declare regulation of AWS as premature. Activists like the Killer Robots Campaign have long struggled to de-science fictionalize the issue and frame it as unambiguously wrong. This has made it easier for norm-resisting states to leverage a general sense of uncertainty and argue for prolonging the debate in the GGE. However, this dynamic could be reversed as norm entrepreneurs have started to change strategy midstream. First, the focus of the campaign has shifted from future technological capabilities to the intrinsic features of AWS – their unpredictability and algorithmic sensing of the world. This kind of reasoning has the potential to reduce the normative ambiguity that has so far prevented efforts to ban or regulate these systems. Second, the anchoring in real-world examples lends credibility to the claims of ban opponents and dispels the sci-fi aura that has plagued the campaign from the beginning.

Conclusion

For those who want AWS to be abolished before it is too late to stop them, uncertainty seems to be a major obstacle: we simply do not know enough about their potentially harmful consequences to warrant anticipatory action. This chapter has invited us to move beyond an account of uncertainty as a simple lack of knowledge that can be banished by getting the right (amount of) information. It conceives of uncertainty as the outcome of an interactive and highly political process that involves the agency of both norm entrepreneurs and antipreneurs. What currently hampers progress towards a norm against AWS in the CCW is not merely the absence of knowledge or the lack of a shared understanding of the problem at hand. My analysis suggests that even for an issue as elusive as AWS, there are ways to overcome ontological and epistemic uncertainty. However, the socially

constructed nature of uncertainty – its active mobilization by technology-leading states such as the USA and Russia – means that the challenges that norm entrepreneurs currently face in promoting an anticipatory ban of AWS are of a different kind. Uncertainty in this case is more persistent than the simple absence of information. This, together with the prevailing consensus principle in the CCW, explains why norm antipreneurial states have been quite successful at preventing progress towards a norm against AWS in the CCW.

Uncertainty is, thus, a useful analytical concept to unpack the current stalemate in the CCW, which is not only the result of false strategic choices of the Campaign, as the bulk of literature suggests. The strategic dimension of uncertainty also offers a promising route to theorize resistance to norms and the agency of norm antipreneurs, more generally. Practically speaking, my findings indicate a possible way forward in terms of advancing a norm against AWS. For one thing, the recent shift in framing the AWS issue – the focus on intrinsic properties and its grounding in current technological developments – may prove advantageous for the Campaign because it is less susceptible to exploitation by norm antipreneurs in terms of mobilizing uncertainty. For another, moving the process from the CCW to a different forum, as ban supporters have suggested, could indeed help overcome the kind of uncertainty encountered in the GGE. It would reduce opposition in the name of uncertainty by restricting membership status to a fairly like-minded group of states – i.e., those who share the consensus that “evidence” about the catastrophic consequences of fielding AWS is abundant and that the time for stopping AWS is now.

Notes

- 1 For a discussion of systems that already operate with degrees of autonomy see Boulanin and Verbruggen (2017).
- 2 The central mechanisms at work in norm emergence processes are, thus, (ontological) persuasion (Hülse 2007) and learning (Rathbun 2007: 543).
- 3 In his account, uncertainty is exogenous to any state or institution taken individually.
- 4 Available at <https://www.stopkillerrobots.org/a-global-push/member-organisations/>
- 5 Other candidates for norm antipreneurship are the UK, Israel, South Korea, and India.
- 6 Transcript from participant observation of the 2021 GGE Meeting, September 24.
- 7 Available at https://www.youtube.com/watch?v=HipTO_7mUOw
- 8 Available at <https://www.youtube.com/watch?v=9rDo1QxI260>
- 9 This echoes the US position that ‘adherence to ethical and moral norms will depend less on the inherent nature of a technology and more on its potential use by humans’ (Amirfar 2016).

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V

Embracing uncertainty in IR research



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13 Studying global politics in adverse conditions

The uncertainty spectrum

Stephen Noakes

Uncertainty is a normal and unavoidable feature of social scientific research. Yet, uncertainty can mean many things and affect what social scientists do in a variety of ways. The primary goal of this chapter is to call attention to an important distinction between the empirical phenomenon of uncertainty, which is the focus of most chapters in this volume, and the more practical, methodologically oriented understanding of the term that pertains to the ways in which researchers carry out their work.

The chapter makes the case for adaptability as a necessary and underappreciated virtue in social science researchers, including scholars of global politics, who would do well to cultivate that virtue with more intentionality, including in up-and-coming generations of scholars. Adaptability means recognizing uncertainties in advance wherever possible and minimizing any risks that may arise from uncertainties while at the same embracing the possibilities that uncertainties can portend for generating new knowledge. This argument rests in turn on the principle that uncertainties and risks are conceptually distinct.

Uncertainties can be found in any research setting, but not all settings are “risky” in the same way, and some risks are more perilous for researchers than others. Some can be anticipated and planned for while others cannot. Risks (understood here as material threats to research and researchers) may arise in uncertain conditions, but not all uncertainties present the same kinds of risks. As I argue below, the specific nature of uncertainties encountered varies according to the environment in which research is conducted. Whereas the introduction to this volume has discussed risk as “probability times impact,” this chapter examines risks as “impacts” and mostly leaves aside the question of probabilities, save to say that while both democracies and authoritarian settings can be uncertain, very grave risks are likelier to arise in the latter than the former, generally speaking. Moreover, the chapter concurs with the contention of Krystalli, Tripathi, and Hunfeld in this volume that we ought to get more comfortable or “make friends” with uncertainty, but argues that the lynchpin of such a shift is effective training, supervision, and mentoring of early career academics.

While our training rightly extols the importance of an incisive research question, robust theory, and rigorous methodology, the value of a well-honed project management skill set – one that prioritizes flexibility under uncertainty and an ability to alter a study as circumstances dictate – is seldom given at-par consideration,

and indeed, is rarely an explicit feature of postgraduate education. Yet, successful scholars understand the need to “pivot” and adjust their research programs to changing conditions as they arise. This chapter argues that this adaptability may be a particularly important requirement of those who study global politics in non-democratic, rights-violating, weak, unstable, or conflict-prone states. As such, this chapter is geared primarily toward those who study global politics using primary data collected in the field. Many of the chapter’s observations and recommendations derive from my own experiences studying human rights NGOs and activists in China, and more recently, Chinese development aid in a range of Pacific Island Countries (PICs). While not all scholars will relate to the contextual challenges encountered in these places, I anticipate that the nature of uncertainties arising from them will resonate broadly, most of all with those who do ethnography or have an area specialization in the Global South or work in authoritarian countries.

The literature review portion of the chapter that follows this introduction begins with a premise derived from the sociology of knowledge, namely that domestic social and political environments shape the research produced within them, including that of foreign scholars. For reasons elaborated more fully below, the uncertainties that researchers face are affected by both types of states involved (i.e., whether they are democracies or nondemocracies) and degrees of institutionalization, which can be an important predictor of effective, consistent, and stable governance. In general (but with some exceptions, of course), the practical uncertainties of data collection are more pronounced in authoritarian and low-capacity states and may be compounded where these traits overlap since such places tend to restrict the kinds of research that can be conducted within their borders and may present the most meager options for solving problems when these arise. Put another way, the conduct of research in settings such as these invites us to consider the distinction between uncertainty and risk. Not all of the uncertainties researchers encounter in the execution of their jobs present equal risk (at least in terms of the dangers they present to health or liberty), but many of the more extreme risks can be found more readily in nondemocratic states having poor infrastructure and limited capacity to deliver public services. Such states could be said to exist at the far end of a broader “uncertainty spectrum.”

The main body of the chapter is then given over to exploring precisely what kinds of uncertainties global politics scholars are apt to face in the field, what generates these uncertainties, and what (if anything) can be done about them. Such challenges may include:

- Restrictions on personal safety or liberty because of disasters, social instability, violence, or official surveillance;
- Inability to obtain or observe documentary evidence as expected, especially where official record-keeping is poor, or where available data sources are redacted;
- Lack of access to personnel as required for interviews, and/or the reluctance of interview participants to speak freely and openly, and problems building rapport or trust with prospective research participants;

- Problems ensuring the secure storage of data once collected, whether by physical or electronic means;
- Mismatches between the exigencies of research in the field and the requirements of university ethics protocols, which are often not built with the social sciences uppermost in mind, let alone those conducting social scientific studies in dangerous, impoverished, or illiberal locations.

After pointing out some key caveats, the conclusion then reiterates the need for preparedness and training, especially of new and emerging scholars, about the importance of developing contingency plans to identify potential uncertainties, mitigate dangers, or address unexpected challenges as they may arise, especially when conducting research in the field. The conclusion suggests that we adjust expectations, particularly of early career researchers, in light of uncertainties present in some research settings, and consider whether in some cases these may be sufficiently extreme to render research on some topics unviable.

Framing the contribution: How domestic environments shape global politics research

The chapter begins from the premise that research – any research at all – is shaped by the environment in which it is conducted (Engwall 2003; Giroux 1983). Domestic political, social, and economic circumstances found within states are especially important for charting research agendas, posing questions, collecting evidence, making observations, and communicating results. In a relatively open, transnational world, state preferences – reflected in laws, regulations, and even societal norms – can and do influence studies by both naturalized citizens and foreign visitors working within their borders (Cox 1983). Given its focus on power and topical proximity to national interests, we might expect research about politics to be susceptible to sway by state structures and accompanying incentives, perhaps more so than research in some other fields.

Two bodies of thought within the sociology of knowledge make claims about the precise nature of the state-scholar relationship. One of these, known as the moralist tradition, portrays intellectuals as an avant-garde class inherently in tension with the state (Karabel 1996; Konrád and Szelényi 1979). From this standpoint, the critical nature of scholarship, especially in the humanities and social sciences, means that domestic and foreign researchers may be regarded with suspicion by those in positions of power. This may explain some of the uncertainties sometimes associated with researching politically sensitive topics or coming to conclusions that run contrary to official state narratives. My own research on human rights dissidents in China is a useful case in point. It is difficult to imagine such a topic being officially welcomed or encouraged in any way by Chinese authorities. Indeed, traveling to China with the intent to research this topic invites a great deal of risk, though the specific nature and degree of any consequences are uncertain as, of course, are the odds of finding interview participants willing to talk.

By contrast, another prominent line of argument contends that a symbiosis exists between researchers and the state. Known as the structural-functionalist approach, this view contends that scholars may not only address state interests with their research but that the two support and serve one another. Why might this happen? The short answer is that state actors and researchers sometimes have overlapping interests. For instance, most states have at least some stake in evidence-based policymaking and the development of best practices in governance. Those that can afford it may bankroll research that serves this end or addresses some other aspect of the national interest. Meanwhile, scholars nearly everywhere wish to see their research funded and may tailor their agendas accordingly. The result can be a kind of codependence between states and researchers in which states push scholars towards research that is self-reinforcing or self-replicating (Farr 1993; Huntington 1988; Smith 1997).

Former President of the American Political Science Association Ted Lowi once referred to his discipline as a ‘product of the state’ due to the prevalence of state-centric approaches in US political science (1992: 5). Ultimately, the risk is the cooptation of researchers by states and a loss of autonomy in research. It is for this reason that Lowi cautioned that ‘consonance between the state and political science is a problem worthy of the attention of every political scientist’ (1992: 1). Other theorists too have warned against this slippery slope: ‘As the symbiosis of political and intellectual institutions advances, so does the eventuality of intellect speaking *for* rather than *to* power,’ [emphasis in original] (Hansen 1969: 328). Such concerns are justified. In cases where the autonomy of intellectuals has been compromised, researchers are not only limited in their ability to be critical but may help legitimize the status quo (Noakes 2014; Perry 2020).

Some states may hedge against the disruptive tendencies of scholars while others coopt them into useful partnerships. Still others may choose a blend of approaches that situates them along a continuum between these strategies, for any number of reasons (which may not always be certain or explicit). However, as students of global politics will surely recognize, states that adopt similar strategies do not necessarily do so for the same reasons. Just as state structures vary widely in form and function, so do the ways in which they affect research within their borders. There are two main points of differentiation, which I argue affect the nature and frequency of uncertainties for researchers. These are regime type and a state’s capability to provide public goods, enforce laws, and realize its preferences. In general, the less capable the state and the more authoritarian its character, the greater is the potential for uncertainties to arise that affect scholarly research projects. Why?

Broadly speaking, authoritarian regimes are less open, less law-bound, and less accountable than democracies. Of course, this has its limits – there is considerable variation within authoritarian and democratic regimes on each of these parameters – but the proposition is a reasonable one, and good place to begin imposing some intellectual order on why uncertainties vary from place to place. Openness refers to the regular availability of legal institutions for the expression of critical views, including those which speak against official positions, political leaders, or national interests. In authoritarian regimes, such opportunities may be absent,

underdeveloped, or idiosyncratic – present occasionally but irregularly, with no apparent rhyme or reason to their appearance or disappearance, as Bedford demonstrates in this volume in the case of Belarus.

On the other hand, liberal democracies are more open by nature, having fixed safeguards for free expression, including scholarly enterprise (Gagnon 1987: 6). In some cases, the rights of scholars to speak their conscience is explicitly enshrined in law – one example is the reference to academics as the “critic and conscience” of society in the New Zealand Education Act of 1989. Because they are more open and tolerant of critical voices, democracies also tend to be more pluralistic in terms of the perspectives and approaches to research reflected in political science scholarship (Goodin and Klingemann 1998: 23). This remains the case even as power dynamics shape control of narratives and research agendas in democratic states.

By law-boundedness, I mean that the state is formally restrained in its ability to silence critics, and in the exercise of power more broadly – often but not only by judicial independence. As used here, accountability indicates that processes are in place to publicize abuses and prescribe corrective measures when scholastic freedoms are breached. These may include commissions of inquiry, audits by nonpartisan ombudspople, or other watchdog functions by civic organizations, all of which are more established, prevalent, and respected in democratic states. Generally speaking, democracies come with meaningful guarantees that researchers can do their work without state interference, while these may be weaker in nondemocracies. This means that while nondemocracies and democracies can both present uncertainties, the kinds of uncertainties present are likely to be qualitatively different.

Aside from the character of state structures, the issue of whether or how well these structures work can also affect uncertainty in research. Here, I use a state’s “strength” or “capacity” (i.e., the ability to enact its will) as a proxy for two key attributes: accessibility and stability (Nordlinger 1981). Capacity refers to a state’s ability to execute its preferences. Strong states can enact their will readily and ably, while weaker ones may struggle to do so, with most states finding themselves at some point along that continuum, able to move back and forth over time. Accessibility is the ability of researchers to penetrate and function within institutions and carry out research tasks. Such institutions may be formal ones, such as court systems or parliaments, but can also be informal and pertain to patterns of everyday customs or social interactions. In the sense in which the term is used here, accessibility differs from openness which pertains to the reception met by certain lines of argument and the potential for critical perspectives. The more accessible a state’s institutions, the less uncertainty one is likely to encounter there. This also implies that, as a baseline, the institutions in question must exist in order for uncertainty to be minimized. Dire (or highly risk-prone) uncertainties are all but assured where no state institutions are meaningfully operational – collapsed or failed states, where police or security forces have been dismantled or overtaken by insurgent factions, for example, are most risky. These may include places like Somalia, Iraq, or Syria, where the prospects of corporal harm are escalated by armed conflict.

States with stronger structures also tend to be more stable, or durable. Being less vulnerable to fluctuations in stability means that they are generally less prone to human-made uncertainties and more able to provide self-correction when challenges arise. Thus, they can be important for ensuring the physical safety of researchers, whether by protecting them amid lawlessness or violence, by providing emergency shelter, food, or medical care, or by facilitating passage out of the country should the need arise by enabling access to consular assistance.

Before proceeding further, some caveats to this framework are in order. First, the notion that authoritarian regimes produce different uncertainties for researchers than democracies rests on a belief that a meaningful distinction exists between these binary categories (Collier and Levitsky 1997). For some, the explosion of literature on hybrid regimes may suggest an eroding authoritarian-democratic distinction (Carothers 2002). Yet, many maintain the view that a “line in the sand” separates authentic liberal democracies, which hold and protect genuine liberal values such as contestation and opposition from those which may have the institutional trappings of democracies, such as elections, but do not support open, free, or fair forms of political participation (Bogaards 2009; Diamond 2002; Levitsky and Way 2010; Morlino 2009). Such a view is taken here as well. However, it is worth remembering that regime types are fluid, and may at times be subject to change with little notice (Kuran 1991; O’Donnell and Schmitter 1986). As noted in Bedford’s chapter in this volume, electoral autocracies may be very fragile, but ostensibly democratic mechanisms in these states, notably elections, can create deep uncertainties of their own.

A second caveat concerns the points of overlap between the types and degrees of government. Some democracies, like Papua New Guinea, are not strong states and struggle to execute preferences, while some authoritarian regimes, like Singapore, are highly capable (Norris 2012). Given the malleability of these categories, it is perhaps best to think of a given fieldwork setting as situated along a continuum where low-capacity authoritarian regimes are most likely to present uncertainties, and strong democracies least likely. In the following discussion, I apply this premise to suggest how, when, and where varieties of practical uncertainty may arise.

Cataloguing uncertainties: The scope of practical research challenges

Restrictions to personal liberty/safety

Impingements to personal liberty are much more common in nondemocracies, but at a minimum require a working police force to present as credible threats. Returning to the notion of state strength introduced in the previous section, if a state is very strong, the level of uncertainty surrounding the legality of field research activities is likely to fall, since strong states invite fewer doubts about their ability to enforce their will. On the other hand, if state structures are barely functional, uncertainties may also be low – scholars need not fear a loss of liberty if laws are unenforceable. Hence, it is modestly capable authoritarian settings that are probably the most uncertain research environments from a personal liberty standpoint.

Jail time is the most obvious restriction to be named here. To be sure, there are plenty of instances where researchers have run afoul of local authorities, resulting in detention, with limited access to consular assistance or legal counsel. One of the more noteworthy in recent years is the case of Alexander Sodiqov, a PhD student at the University of Toronto, who in 2014 traveled to his native Tajikistan to research conflict management and was arrested by secret police. According to reports, Sodiqov entered the country at a moment when security services were especially sensitive and was initially to be charged with espionage, though these charges were later dropped and the rationale for his continued captivity became unclear. Neither he nor his family or anyone else associated with his research project saw the risks coming. Experts suggested that Tajik authorities had been deliberately opaque about their intentions, moving slowly to consider their options in the face of international outcry (Clibbon 2014).

However, the nature and severity of threats to personal liberty are subject to much variation across authoritarian systems and extend well beyond incarceration. Detention is not the modal means by which researcher's liberties may be restricted – Sodiqov's case grabbed headlines precisely because it is shocking and extreme, and generated a great deal of international attention. Though a graduate student in Canada, Sodiqov was also a Tajik national. While nonnatives are always subject to local laws and regulations, subtler and less sensational risks to liberty are the norm for these researchers. Such risks may include deportation, alterations to visa status limiting freedom of movement, prohibitions on recording in certain places or on carrying certain items or personal effects (such as publications with content deemed objectionable), vulnerability to digital and other forms of surveillance, and subjection to involuntary search and seizure.

Personal safety, which suggests a set of risks distinct from loss of liberty, is less assured in weak states. Detention implies the presence of law enforcement. However, the relative absence of law and order can generate uncertainties for researchers too, albeit in different ways and for different reasons. The risks may present themselves in any number of ways but are exacerbated when social services or infrastructure are of poor quality, or where social instability threatens to become violent. Hence, states such as Syria, Iraq, and Afghanistan probably present the most danger but are also less visited for research. Thus, in practical terms, it is states showing a median level of capability – in the wide gulf between affluence and outright collapse – where meaningful risks to personal safety are most likely to be found.

Some of these states may be at least nominally democratic, yet it is not the type of state but the degree of stateness which, I posit, determines the ability of security forces to restore social order once lost. Indonesia and Hong Kong, for example, have both in recent times shown a proclivity towards mass unrest with little advance notice, but demonstrations and riots in both places have met with swift responses by state officers. Similar conditions were present in 1970s Northern Ireland, where unrest was quickly quelled by the British military. On the other hand, new or weak democracies may be unable to respond quickly to these kinds

of events, especially if recent histories of intracommunal violence or civil war are present, and in some cases may show a protracted inability to stabilize themselves (Hegre et al. 2001; Mansfield and Snyder 2005; Snyder 2000). Some may show signs of semi-failure. Examples might include Colombia during the 1990s when the state's authority was supplanted in large pockets of the country by well-armed insurgent groups and subject to fierce fighting. Another may be Mexico in the early 2000s, after the fall of the long-ruling Partido Revolucionario Institucional (PRI), when the commonplace murder of judges and mass defections of police and other security forces to drug cartels caused the legal system to cease functioning and cities such as Juarez to descend into chaos.

Besides social instability, weak or emerging states may also be unable to assist scholars who find themselves suddenly in need of medical attention, or without access to food, water, or shelter. The latter situation may arise, for example, where disasters strike, whether these are earthquakes, tsunamis, tropical storms, or volcanic eruptions, though as Kelman notes in his contribution to this volume, uncertainties arising from natural hazards may be magnified when intertwined with human sources. Developed states experience these hardships too, of course, but are better placed to organize evacuation efforts, temporary accommodation, and food aid, while relatively weak states may be more reliant on international intervention, the difficulties of which may be compounded where essential infrastructure is damaged or never meaningfully existed in the first place.

Treating serious illness or injury may be similarly problematic for the same reasons, though healthcare in many research settings is uneven and many jurisdictions struggle to provide coverage for their own citizens, even without the added dimension of disasters. Moreover, warm climates where tropical diseases are more prevalent and immunization rates are low multiply uncertainties for field researchers. Medical preparedness, including an up-to-date immunization record and boosters for diseases virtually unheard of in the developed world, is an extremely important part of mitigating such uncertainties. Ultimately, it is researchers themselves who bear responsibility for awareness of any health risks they may encounter, and for acquiring any immunization required in advance of their research travel.

Poor or inaccessible documentary evidence

Scholars whose work relies on archival data know that some states keep better records than others. Some states are also more inclined to make those data available to researchers than others. In general, regime type is a reliable predictor of successful documentary research, and capacity is a stronger indicator of uncertainty. Why?

As noted above, liberal democracies are relatively open. Scrutiny by nonstate entities, including scholars, journalists, and concerned citizens, is a normal feature of such places, and hence access to official records is standard and commonplace. One notable exception is accessing material classified for intelligence or national

security purposes. Even stalwart democracies (i.e., Canada, Australia, Ireland, Taiwan, or France) withhold information that may have implications for public safety. For the most part, however, one can expect these kinds of political systems to allow access to archives and databases. Indeed, this arrangement would be the default, with exclusions or exceptions requiring unique justifications. Where democracies are also strong states, researchers face the least amount of uncertainty in gaining the required access to the information needed. Indeed, researchers can often expect to do their work in comfortable (i.e., air-conditioned) archival facilities, with state-of-the-art data storage techniques, digitization to facilitate remote access, and trained staff to provide assistance.

Access patterns may differ outside the liberal democratic world, but often predictably so. Nondemocracies can provide researchers with a great deal of certainty when they are clear about what topics or information sources they consider taboo. One may reasonably expect authoritarian regimes to restrict access, including access to official primary documents and figures, and for these restrictions to be well-known. It comes as no surprise, for example, that archival material attesting to historic instances embarrassing to the state is not available nor even advertised to researchers – something I have grown accustomed to in my own research on China. Similarities can be found across the postcommunist world. One cannot reasonably travel to Moscow, Hanoi, or Havana and express surprise over official suppression or censorship of information. Other kinds of authoritarian systems may act the same way but for different reasons. For example, it was reported in 2021 that many authoritarian regimes, including Saudi Arabia and Myanmar, were using the COVID-19 pandemic as a pretext to limit the free flow of information, lest it become a source of criticism against the regime, particularly online (Grothe 2021).

Uncertainties around documentary data acquisition expand as state capacities wane in both democracies and nondemocracies. Weak states may be more permeable than strong ones but frequently have only patchily collected records available. Democratic or authoritarian states that have experienced protracted wars or insurgencies may have had facilities destroyed in the fighting. Sometimes vital documents are lost or are deliberately destroyed in the process. The same outcome can result from disasters, after which rebuilding and replacing collections may be unaffordable or impractical. Those tasked with curating collections are often not well paid and may be unable to provide much assistance. If this problem is a systemic or long-standing one, it may also mean that complete and accurate records are impossible to obtain because high-quality record keeping has never been a spending priority for governments. Certainly, there will be limitations on the range of available formats – states with low levels of public spending may have neither the personnel nor the technology to host large digital collections. For this reason, it is extremely important that researchers educate themselves in advance on the availability of good quality data, either through discussion with colleagues who recently conducted research in the same settings or by forging knowledgeable local or in-country contacts.

Lack of access to data from human participants (interviews and surveys)

Those who rely on human research subjects as a source of data face uncertainties too, albeit of a different sort. This is true whether the researcher prefers to conduct large surveys, with questionnaires distributed to hundreds or possibly thousands of participants, or deep ethnography including interviews with just a few participants. Both types of data collection (and even blends and variants of the two) ultimately depend on volunteers for their successful completion (i.e., those who willingly consent to participate in a study) and a degree of person-to-person contact is usually needed to make that participation possible. Response rates are a key concern of social scientists everywhere, of course, but productive relationships with participants are easier to build in some locations than others. At the root of the matter is a participant's confidence in the nature and purpose of the research, something that may be more easily developed in capable, affluent democracies. Why may this be?

Democracies come with formal protections for individual liberties, and those democracies able to enforce these protections generally do so. This is important for ensuring participants' informed consent, which is sacrosanct. Almost always, prospective participants are given information about the study they are to be a part of in advance, apprised of any subsequent changes to it, and, crucially, given a right to opt out, often without specifying any reason. Participation in research must not be compelled – interviewees, survey respondents, or experimental subjects have a right to say no, and to withdraw their consent. In this sense, providing data in an academic context differs from legal testimony, which can be compelled under oath or subpoena. Because of the functional autonomy of the academy, research participants in democracies may also have stronger assurances that data will not be turned over to the authorities, and that it is not being collected on the state's behalf. More generally, human subjects can expect their private information to remain private, or that they will not be made personally identifiable by the information they provide, especially when they have signed a consent form outlining guarantees of privacy. The creation of a paper-trail, with signatures indicating consent (with some exceptions), is, thus, an important aspect of social science research in these settings.

Of course, the challenges of research with human participants in democracies have also been pointed out. For example, elites might worry about saying anything that is contrary to the official narratives. Just as conditions may shift periodically in authoritarian contexts, they may be subject to change in democracies in response to endogenous or exogenous conditions, such as an improbable but consequential elections results (for instance, the 2016 victory of Donald Trump), or international diplomatic rifts (such as Brexit). In both of these examples, some respondents may well have found themselves suddenly and unexpectedly vulnerable when they never used to be (Shesterinina et al. 2018: 11).

However, nondemocracies by and large do not offer the same guarantees (or do not enforce them as strictly), making the task of research more tenuous for researchers and their subjects alike. The risks may be high (but uncertainties quite low) in places where autonomy from the state has broken down, or where state authorities

are suspicious of social science research, viewing it as a potential source of insurrection. In high-capacity authoritarian contexts, formal and laborious bureaucratic processes may be in place, just as in democracies. One may need a special visa, an affiliation with a party or state-based entity as signaled in a letter of invitation, or other form of approval designed to facilitate supervision of research activities rather than to protect the rights of those involved. The goal may not be to compel researchers to turn over information in which authorities may be interested but to prevent potential challenges to rule from getting out of hand by preventing research on objectionable subjects from being conducted in the first place.

Such arrangements are common. Indeed, close supervision of academic research by state entities is often anticipated. However, the low levels of uncertainty about the role and presence of the state in directing academic research breeds uncertainty of a different kind, namely a pronounced difficulty faced by researchers in building rapport with prospective participants, and in the sheer amount of time and effort required to establish useful networks that make research on the ground possible. Qualitative researchers reliant on interviews, participant observation, and focus groups face the most severe difficulties since these often depend logistically upon collaborative, productive “working relationships” forged over time and face to face (Fujii 2017).

Regimes with a history of violent dictatorship can present some of the most daunting uncertainties for researchers (Wong 2016). Leninist-inspired party systems suffer from chronically low levels of social capital and public trust (Pehlivanova 2009; Rose 1994). There, ordinary citizens learned to be mistrustful of state supervision and, in some cases, their neighbors, too. Many were actively pursued by the authorities for their political views – perhaps the very same views into which foreign researchers now wish to gain insight. I have encountered this often in my own research on Chinese dissident communities, both in China and around the world, as have many others (Heimer and Thøgersen 2006). Approaching participants with a clear statement of a project’s intent and methodology, with the endorsement of a university ethics board, and often even a local affiliation, is not enough to assuage potential participants’ fears. One can expect their outright refusal to sign any consent forms provided. For understandable and historical reasons, participants may be loath to sign their names to any form that could later be used as evidence against them. Thus, consequential uncertainties apply not just to the physical security of the researcher or participants, but to data collection processes and the potential viability of the research itself. Depending on the research area in question, those working in nondemocratic regimes may find themselves wondering whether they will return home with any usable data at all, or with novel insights beyond what could have been gleaned from publicly available secondary sources (Cronin-Furman and Lake 2018).

Secure data storage challenges

Researchers in all jurisdictions face the task of what to do with primary data once it has been collected. The first priority is to ensure that data can be safely and securely stored to protect participants’ confidential responses and ensure its integrity for use

in any future analysis. This is especially important where data collection in the field goes on for long periods of time, leaving responses, in whatever format they exist, to sit untouched for weeks or perhaps months before they are revisited for coding or transcription. Good record-keeping is obviously essential, but even the most organized and reliable data requires secure storage since it may contain details of participants' lives or other sensitive information from which they may be identified. Indeed, the better and more complete the records are, the greater the need for their security becomes. In effect, written records and logs double up on sensitive information, creating a dual need for data protection.

Such record-keeping practices vary widely according to a researcher's training and conditions in the field. Many choose to record interviews electronically. This comes with the advantages of capturing participant statements verbatim, minimizing the potential for information to be missed inadvertently. If voice recognition technology is available, it may also facilitate easier transcription, and create an electronic timestamp for the recorded data. For cost and convenience reasons, electronic methods are frequently favored for survey data collection as well. However, these options are not for everyone. For reasons elaborated above, participants in some places are extremely reluctant to be recorded for historic and/or cultural reasons. Many will not want to be identified at all or are extremely uncomfortable with being quoted verbatim. A researcher's considerations, therefore, extend beyond the simple convenience of recordings versus hardcopy data. Ethical obligations to participants take precedence, and the ability to keep data secure is an important aspect of those obligations. At times, uncertainties that are a product of context and experience may feed uncertainties for research subjects, including uncertainties about a researcher's intentions, and fuel a sense that participating in the research may be risky. While researchers do not bear responsibility for the background of those they study, it is our job to provide participants with as much information about a project as they need to provide informed consent, and to be cognizant of any risks participation in research may present, including how their statements may be stored.

Most importantly, data cannot be seen, handled, or altered by anyone not authorized to have it. This, in turn, depends upon two intersecting factors – the environment in which the information was collected, and the relative security requirements of the format employed. If data is collected electronically, perhaps on a remote device, these may be uploaded to a laptop, or saved to a thumb drive or other storage device. Under ideal conditions, the storage device would be password-protected and stored in a safe when not in use (such as can be found in many hotel rooms), or in a locked office on a university campus with rigorous and exclusive access control if such arrangements can be made. It could also be emailed directly to a host server in another country, with solid assurances that it will arrive, complete and uninspected.

What about other, more uncertain situations? Suppose one is collecting hardcopy data using an old-fashioned notepad, either in an impoverished, thinly policed, or unstable place. Field notes or survey results could be transcribed in a hurry (i.e., the same day the data was collected) to an electronic device, and the hardcopy notes destroyed. This would minimize uncertainties arising from unclear notes made in a

hurry with messy handwriting or forgotten details and phrases. However, the new electronic record is no less vulnerable to loss or theft than was the notepad, or the researcher's other personal effects. If valuables, including laptops for research, are stolen, they are unlikely to be recovered. The situation may be different in highly capable autocracies. Security forces, including police, may have enhanced powers of search and seizure. I, along with many of my China studies colleagues, have learned through bitter experience that our simplistic grasp of encryption methods is no match for the surveillance state – indeed, one must assume that social media accounts will be monitored, emails opened, and sensitive data confiscated if discovered.

There are two possible lifelines available to researchers who find themselves in these predicaments. One of these, common among conflict journalists and those doing ethnographic fieldwork in unstable settings, is the “bug-out box” – a bag or other container that holds the barest essentials one must have in tow if the need arises to flee immediately. Usually, this is a small supply of cash, passports, return air tickets, and any unrecoverable data (i.e., the notebook, laptop, thumb drive, or camera). One need not be doing research of obvious or immediate sensitivity to need such a box. Bug-outs can be required by anyone at imminent risk from any threat at all. A colleague recently relayed a case from Egypt, where in 2010 he had been doing anthropological research on ruined architecture. The box came in handy on the day their site work was interrupted by approaching armed insurgents who fired upon them as they drove in haste to the closest airport.

A second strategy involves cultivating close ties to consular staff at one's own embassy. Legally, embassies and consulates-general are considered sovereign soil – anything that transpires on the property of the UK embassy is deemed to have happened in the UK, for instance. This is what facilitates the inviolability of information passed on at these locations, a key aspect of diplomatic privilege around the world. With the right contacts, scholars in possession of information of extreme sensitivity may inquire about the prospect of getting that information out of a country by placing it in the diplomatic pouch, along with other classified documents. Willingness to do so depends on the trustworthiness with which one regards both the consular staff involved, and the degree to which the secrecy of information in the pouch will be respected as it passes out of jurisdiction. It is not a privilege available to most foreign nationals visiting a country or to the general public and is only to be used as a last resort (of course, the request may not be honored). This is the advice I once received from my own doctoral advisor when I was being prepared for thesis fieldwork: “If you have to, you can always call the Embassy and see if your stuff can go in the diplomatic packet, but that's only if you have something that's extremely hot.”

Navigating ethics rules

On-the-ground conditions in the field shape certainties and uncertainties for researchers but interact with and may even be shaped by the needs and motives of researchers themselves. Professional expectations, including the rules and

regulations regarding research ethics in place at many universities, loom large in the design and execution of any research project. This is as it should be – adherence to ethics rules is paramount for operating safely and effectively in the field, and for maintaining data quality and transparency and the aforementioned privacy of participants. Ethics rules also serve to protect universities if something in the field goes wrong, either with the researcher (i.e., their employee or student) or one of their human subjects. In many cases, university ethics boards, therefore, serve two discrete but interrelated functions: compliance with broadly accepted research standards and legal indemnification (Haggerty 2004).

However, it is equally important that those conducting research abroad adhere to local ethics approvals and protocols. These may overlap with ethics rules at their universities, while differing from them in others. My own research on Chinese aid in PICs has required that I not only observe the standard rules such as those concerning obtaining consent and data storage, but also consult with local authorities in the field, such as tribal leadership, where appropriate, and that stakeholders in the field be apprised of my project, its purpose, and likely impacts.

Two further points are worth elaborating here. First, despite near-universal acknowledgement of the principles of good scholarship, university ethics regimes vary quite a lot from place to place. This is especially true when one compares regimes from different countries which may develop their own research cultures, often for idiosyncratic reasons. What is perfectly permissible in one might be viewed as a violation in another. For example, universities in Aotearoa/New Zealand have deeply entrenched norms and formal procedures in place for research engaging with (or relevant to) indigenous peoples, which is separate from and does not apply to any other groups of human participants (Rauika Māngai 2020). The framework, known as *Vision Mātaraunga*, is premised on a recognition of Māori as Tangata Whenua (original inhabitants of the land), and a key obligation of universities under the terms of Te Teriti o Waitangi. Failure to observe, comply with, or duly consult on the requirements of this framework is an offense, one likely to bring professional (and social) sanction. It has no parallel even in seemingly similar institutional settings, such as Canada or Australia, and applies both to researchers based in Aotearoa/New Zealand permanently, and any foreign scholars wishing to engage with indigenous persons, communities, or industries.

A second point to note is that university ethics regimes are seldom designed with the social sciences uppermost in mind. Overwhelmingly, the regulations in place were conceived to give oversight to clinical drug trials, experimental therapies, psychological assessments, and the like. Disciplines like political science and international relations were mostly an afterthought, grafted afterward onto existing frameworks without much consideration of the peculiarities of the field or any special conditions or needs of its members. In addition, because ethics approvals processes are usually centralized within universities, applications may be overseen by nonspecialists unfamiliar with the needs of political research in certain locales and are not easily persuaded of its value.

What has all this to do with uncertainty? The lack of a purpose-built ethics frameworks that takes account of the conditions confronting field research in politics leaves many of its practitioners in a difficult position, at once required by their employer to meet research output targets but unable to do so entirely within the bounds of the established rules (Fujii 2012). To take just one example, the impossibility of obtaining a signature from interviewees in unstable, war-torn, or strongly authoritarian countries means that “interviews” in such places must be done informally, off-the-record, or take place on the basis of implied oral consent rather than with participant’s written and informed approval. This can be risky because it tends to result in data that is not as transparent or may fail to comply with ethics board requirements at the home institution. Most of those who sit on ethics boards simply have not had to consider what it is to study dissident networks in China, women’s activists in Iran, narco-traffickers in Myanmar, or nationalist mobilization in Transnistria. For those who do, the need to reconcile commitments to ethics boards at their home institutions with the practical realities of fieldwork in challenging settings can create considerable uncertainty.

There are also broader challenges that can create uncertainties – perhaps even liabilities – for universities (it is not always researchers, but also those who employ them that need to consider uncertainties more carefully). The difficulties of obtaining ethics approval from frameworks not built to accommodate politics research may be a contributing factor in the flouting of these approvals entirely, something that can carry massive reputational and legal implications for scholars and their employers alike. It is impossible to say just how widespread this behavior is (probably rare), but some research suggests that political science and international relations academics may be especially prone to it. Referencing the infamous Lacour scandal of 2013-2014, in which data was fabricated and no ethics clearance obtained, ethicist Trisha Philipps found that:

Political science does not seem as committed to research ethics as do related disciplines, such as psychology. We judged this by examining indicators such as whether these disciplines’ US graduate-school curricula mention ethics in their curriculum requirements or course descriptions, and whether a discipline’s journals require researchers to note [university ethics board] approval, or to state in their manuscripts how they compensated and recruited subjects.
(Noorden 2015)

It is worth noting here that, following the Lacour scandal, debates about transparency were reinvigorated in political science, with a renewed emphasis on the implications for research ethics. The Qualitative Transparency Deliberations and resulting reports highlight key implications (Jacobs et al. 2021).

Conclusion

Given the range and severity of the uncertainties elaborated in the foregoing sections, it is important that researchers at all stages of their careers expect the

unexpected, and plan ahead as much as possible. This is especially important for those doing fieldwork in low-capability, authoritarian settings. However, those at more advanced stages of their careers are likely to have a more seasoned sense of what can go wrong, perhaps as a result of some unforeseen adversity they experienced at an earlier stage. I contend that the distilled wisdom arising from these hardships past is as valuable and necessary a part of scholarly training as any course in causal inference, statistical methods, or foreign language. Our duty of care to earlier career scholars includes an obligation to impart with frankness the sometimes-grim realities of conducting research in adverse and unknown circumstances. I recall from my own postgraduate training being taught to carefully weigh the trade-offs that inherently accompany any research design. Surely considerations of personal security, emotional and physical well-being, and the knock-on consequences for the researcher's families and relationships merit a place in that calculus, to say nothing of the quality of the data gleaned or impact of a study. Personal risk consideration may be a key factor in a larger decision about whether a project is "worth it," yet we rarely discuss such matters openly.

Anticipating uncertainties, and learning to think adaptively, matters because it can also greatly affect career trajectories, especially for those at earlier stages. When do the risks of a project outmatch its potential payoff? How much uncertainty, and what kind of uncertainties, can reasonably be justified or accepted? Early career scholars working on a shoestring budget may be hanging their professional prospects on dissertation fieldwork, which for many is a strong motivation to push ahead with a project, uncertainties notwithstanding. Is that always wise? Or would it be sometimes better to counsel graduate students to pursue other avenues, perhaps a more diversified portfolio of smaller projects, in case the dangers of a single large one become too great? What about sunk costs? At what point does a project in which resources have been invested become untenable, and need to be abandoned? On what grounds? Of course, uncertainties are not always a bad thing. Training early career scholars or colleagues to deal with uncertainties and even a modicum of risk that may arise from them might encourage a degree of self-reliance and creative problem-solving. This is especially true where uncertainties appear to be fixed and not subject to easy or spontaneous change, and where the risks are not so severe as to preclude research entirely.

As ever, caveats and limitations apply. First, not everyone does fieldwork, and certainly not everyone does so in weak authoritarian countries. Thus, it may not be practical to include a compulsory module or course on conducting research under uncertain conditions for an entire graduate cohort. Most doctoral programs simply do not have the raw numbers of students to make this consistently worthwhile, so targeted workshops or one-on-one exchanges may be more suitable options. Solid student-supervisor relationships are, therefore, crucial.

Moreover, individual results may vary. Just because one or even several colleagues experienced uncertainty or unpleasantness in the field is no guarantee that another will, even if they both conduct survey experiments in the same context. One possibility is that uncertainties, even in the most difficult circumstances, are

contingent as much on the issue area as institutional environment. It is possible that one of the two colleagues just mentioned had a much easier time than the other because they happened to be asking questions or creating experimental conditions of lesser political sensitivity.

Finally, it is worth noting that while the specifics of the risk profile may be heavily dependent on context – and therefore necessitate a long, deep dive into the culture and norms at play before one conducts fieldwork – context itself is volatile. Witness the sudden shift in the viability of field research in many places around the world as a result of COVID-19 and related lockdowns. Today's contextual conditions may be very different from tomorrow's and so high-quality, timely risk assessments can be more valuable than fieldwork experiences from years gone by.

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14 Making friends with uncertainty

Hopeful futurities in telling stories about global politics

Roxani Krystalli, Shambhawi Tripathi, and Katharina Hunfeld

Uncertainty causes epistemological anxiety in the study of world politics. Rather than assuming, as much of our education has taught us, that uncertainty is something to manage, measure, minimize, deny, control, or fear, this chapter starts from a different premise: How would our study of world politics be different if we *embraced* uncertainty in our academic work? Which important epistemological sacrifices result from the standardization of prediction and generalization in the study of politics and international relations (IR)? In response to these questions, we treat uncertainty not as a problem to solve or condition to overcome, but as a research ethos and epistemological practice that can shape knowledge, knowledge-making practices, and the knowledge creators themselves. After all, the pursuit of social science stems from the lack of certainty and from the relevance of genuine curiosity and open-ended inquiry; as a reviewer of an earlier version of this chapter kindly reminded us, social science would be pointless if researchers knew everything at the start with absolute certainty.

Though one of its aims is to challenge the reliance on typologies and strict systems of classification, this chapter also likely represents what Matejova and Shesterinina term “epistemic uncertainty” in the introduction of this volume. The first part of this chapter maps the disciplinary encounters through which we have each learned what relationships we ought to have with (un)certainty, while the second part discusses how we have sought to embrace uncertainty through our respective research and teaching.

Uncertainty, in both world politics and the study of it, is not merely a conceptual or theoretical matter. Rather, uncertainty is *felt*, experienced, and embodied. As Matejova and Shesterinina write in the introduction, ‘uncertainty permeates every aspect of social activity in profound – and different – ways.’ Relationships to uncertainty are learned and unlearned within and beyond the academy. It is these feelings, experiences, and processes of learning and unlearning that supply the raw materials and methodologies for our explorations in this chapter. In developing the reflections that follow, we take an (auto-)ethnographic, narrative, and affective approach as researchers, students, teachers, and subjects of world politics. We look to the classroom and to our experiences within it as both students and teachers, as a space in which students and researchers of world politics learn which relationships to (un)certainty are (un)desirable. We also examine other sites that discipline scholars’ relationships to knowledge and uncertainty alike, such as peer review

forms, conference feedback, and graduate student training. This methodological approach prompts us not to look for uncertainty “out there,” in a world of politics imagined to exist beyond our bodies, classrooms, texts, and universities. Instead, we reflexively look inward and “study up” (Nader 1969) by treating the academy as a site that rewards certain relationships to (un)certainly while marginalizing or discouraging others.

This kind of reflexive analysis must necessarily begin by considering the fractious fiction of our authorial “we” and the tenuousness of the time at which we write these words. We, the authors of this chapter, have come together to reflect on embracing uncertainty during the “long middle” of the COVID-19 pandemic between teaching online on Microsoft Teams and masked in classrooms, between caregiving for friends and family (of both choice and origin) and worrying about those on the other side of borders now closed to us, between processing losses and attempting to generate words, hopes, and knowledge. In some ways, these circumstances are fruitful for reflecting on uncertainty, because they ground us in the subject matter of this analysis in ways we cannot deny.

We are bound in many ways by membership at the same university at which we research, write, teach, practice care, and experience frustrations and delights. We also share some epistemological, analytical, and political commitments and curiosities, particularly when it comes to the value of critical, feminist, and decolonial approaches for understanding violence, peace, care, and justice in world politics. At the same time, each of us represents a different “I” and occupies a different rank, role, and position that shapes our relationships within both our university and the academy writ large. Where the “we” becomes too slippery to be analytically useful, portions of the chapter shift to an “I” voice or to a more conversational tone between different authors. Conversation, after all, allows us to move away from a declarative tone towards a more inquiry-based, curiosity-driven framework of arriving at insights. This narrative move represents one of our aspirations for embracing uncertainty in the study of world politics: recognizing the moments in which it is best to not hide behind the illusion of a stable “we” or a timeless discipline of IR (or the passive voice or the other devices by which scholars learn to eclipse ourselves in our narrations), and allowing the particularity of experience to become a site for exploring meanings, experiences, and emotions of world politics.

The anxieties of uncertainty

Academic disciplines discipline those who seek membership within them. They teach us, implicitly and explicitly, through formal training in the classroom and informal relationships in other spaces, how to perform authority, what kinds of questions (not) to ask, which expertise to rely on, and how to relate to selves, emotions, and others. In this section of the chapter, we ask: What are the moments in which we, as scholars and students and teachers and researchers of world politics, learn what relationship we ought to have with uncertainty?

To answer this question, we look to departmental research seminars and PhD training courses, to anonymous peer reviews on grant proposals and journal

manuscripts. These are sites of disciplinary and disciplining encounters (Duriesmith 2020), simultaneously signaling what kind of scholar one ought to (or could) become and conveying an academic field's systems of rigor and value. These spaces and encounters teach us – particularly early on in an academic career – ‘whom we want to be taken seriously by’ and what we have to do to achieve that seriousness (Krystalli and Enloe 2020: 2).

It is seductively easy to begin with the moments in which we feel the disciplining forces work on us. At the same time, we – as both researchers and teachers – also perform gatekeeping functions, and it is perhaps fruitful to start by reflecting on our own teaching practices as reinforcing particular relationships to certainty. This is readily apparent in moments when we directly teach students how to write.

Roxani: I am startled by the moments in which I have rewarded certainty in the classroom – or encouraged uncertainty without necessarily modeling ways of relating to it. Students in my undergraduate modules at the University of St Andrews attend a two-hour writing workshop in addition to their other module commitments. The aim is to help students learn and practice the skills required to carry out a research-based project on a question of their choosing, which they then pursue in the form of a 5,000-word analytical essay. Among other themes in the workshop, I caution students against what I call the “however” penultimate paragraph of the essay, which is often the only space that students dedicate to engaging with counterarguments, doubts, and dilemmas. The temptation to only do this near the end of the essay – and often only in one paragraph – is itself learned and taught, particularly for students whose prior education stressed the importance of having a Clear and Identifiable Argument for which they provide consistent evidence throughout the discussion. My instruction at the writing workshop, written feedback to students, conversations during Office Hours, and marking rubric – all of which are sites of learning and unlearning, as well as of teaching and challenging disciplinary belonging – reinforce this message. “Clear, identifiable argument,” scribbled in the margins of a student’s essay is a form of praise, carrying up to 4 points out of a maximum of 20 for this assignment.

The marking rubric does not contain any obvious reference to rewarding students for deftly navigating uncertainty, for embracing doubt. Likewise, though I try to encourage wrestling with the dilemmas of the research process openly and reflexively throughout the essay narrative (rather than “just” in the penultimate paragraph), students have often pointed out that they have trouble imagining what this might look like. “One of the more interesting things in your lecture this week,” one student told me in Office Hours, “was that feminists try to reflect the messiness of the human experience and to write about dilemmas and doubts. I realized I don’t know how to do that.” How can we teach students to be clear without assuming that clarity means fixity? How can we allow for a wider range of feelings and postures towards one’s own research process and findings to emerge in student writing?

Kat: Roxani, these questions about teaching practices very much resonate with my experience of trying to find my place in the academy as a student and researcher. During my doctoral studies, I also often found myself encountering both uncertainty and its denial. Questions like the following have fundamentally

shaped my research journey: “Is my work relevant? Are my arguments convincing? Am I missing something? Will I find what I am looking for? Will I be able to secure funding? Am I supposed to be here? Is this how it feels like to be working in academia, to be doing it properly?” In my experience, these emotional dimensions of engaging in academic work are often individualized by being treated as negligible instances of “personal development hiccups,” or seen as “natural” rites of passage in a person's academic journey.

This impression stems primarily from the language used in conversations with supervisors, mentors, and peers. Certainty is seen as the expected, plausible end goal: about the research findings, about one's arguments, about one's place in the academy or on the job market. The effect of these implicit assumptions is most obvious to me when thinking about the spaces within which I felt comfortable enough to express uncertainty: For me, these have mostly been informal, explicitly “nonprofessional” settings with people whom I trusted enough not to think of me as an impostor when voicing doubts about my work and place in the academy. “To a certain extent, it's normal to feel like you have no idea what you are doing,” my supervisors and PhD friends have tried to reassure me, while stressing, right after, “you are right on track though!”

According to the implicit narrative these encounters create, the performance of certainty is intimately linked to access to institutional credibility, status, and funding. Certainty is institutionally demanded and rewarded in terms of completion schedules, research goals, and “output” plans, as well as tenure and promotion trajectories. From this perspective, then, the performance of certainty has a kind of gatekeeping function in the academy, as it is connected to what are perceived to be legitimate routes of research and who is seen as a reliable researcher.

Academic institutions also rely on implicit norms around (un)certainty that facilitate raced, gendered, and classed exclusions in higher education in ways that tend to remain invisible, because we do not discuss them explicitly enough (Bhambra et al. 2018; Haggis 2006; Osman and Hornsby 2017). For example, I remember observing countless academic debates during which male colleagues were afforded more credibility and space than female participants for displaying argumentative definiteness.

The embodied and material effects of the implicit valorization of certainty in academia have been the topic of many dinner-table discussions with friends. On several occasions, we collectively examined the privileges that come with surety, a kind of confidence that my middle-class peers found much easier to display in academic spaces than my working-class friends. These conversations have also led to reflections on how my whiteness has impacted how often I have been told: “You seem to know what you are doing,” or “You have got nothing to worry about,” signals of epistemic respect and trust that my nonwhite peers hear much less frequently. To whom does the performance of certainty come easily and whom does it alienate, and how do performances of certainty shape notions of success within the academy? Who is allowed to articulate uncertainty? Is it possible to disentangle certainty from its connection to unequal relations of epistemic power?

Roxani: Your reflections, Kat, remind us that even public embraces of uncertainty require a safety net—it's okay to “not know what you are doing,” so long as “you are still on track!” so long as there is still an identifiable track in existence. These disciplinary practices of learning to value fixity and to fear or manage uncertainty have effects on the selves we are as researchers, the methodologies we employ to pursue our questions, and the kind of knowledge we bring into being. The performances of certainty you are discussing contribute to the reification of a particular voice of scholarly authority, oriented towards fixed canons, disciplinary identifications, and methodologies (Dauphinee 2010; Shepherd 2017). This is the Scholar as the Grand Expert – often white, often male, often in the Global North, arguing and showing, rather than feeling and doubting.

I am thinking back to how I learned to fear uncertainty in my own training. “You were not put on this earth to feel, you are here to *argue*,” a former colleague commented on my draft manuscript (emphasis his), crossing out the word “feel” at every opportunity and replacing it in Track Changes with “believe,” “argue,” and “hypothesize.” In this colleague's hierarchy of postures, hypotheses trump feelings. This former colleague is not alone in, well, feeling this way. In the second semester of my PhD education, I started keeping a notebook in which I tracked what I called “alien moments:” moments in which academia made me feel foreign or deviant. Looking back through that notebook now, with an eye towards inductively coding those moments as a form of data about (un-)belonging, most of them represent encounters in which someone privileged certainty over uncertainty, hypotheses, and their testing over narrative messiness and the coexistence of multiple truths. “This storytelling stuff is very interesting, but I would save it for after tenure,” a discussant at an international conference counseled, suggesting that narrative and the multiple worlds it can capture would jeopardize the possibility of a career. Several peer review comments echo this concern, drawing particular attention to how locating the self within a narrative – and narrating the dilemmas this self has faced during the research process – can be a risky endeavor that is best avoided (Krystalli 2019). “The first person does not match scientific conventions,” one editor wrote (neglecting to specify *which* scientific conventions). In these and other instances, (social or political) science is imagined to be fixed, pin-down-able, arrived at from a distance, and in the passive voice. Active and affective entanglement of the self within it is a contaminant.

The resistance to these kinds of more open, uncertain entanglements manifests in methodological disciplining as well. “I would consider adding an experiment to this, or something to make the findings a little more definitive,” a faculty member offered in response to an ethnographic project on the politics of victimhood. “I can't quite tell what your variables are: is victimhood the dependent or independent variable?” A fellow PhD student asked in a seminar, in response to the same project. When I clarified that the research relied on interpretivist methodologies which did not replicate the logic of variables (Yanow and Schwartz-Shea 2014), but instead traced meanings through language (Wedeen 2009), an uncomfortable silence descended in the room. “I guess we don't really know how to help you, but your work *is* very interesting,” someone said eventually.

* * *

The above highlights that uncertain work is interesting work – a delightfully *and* dreadfully ambiguous term. What we ought not conclude from above, however, is that nobody is doing the work of uncertainty or that there are no alternatives to thinking, feeling, teaching, writing, and practicing otherwise (Olufemi 2021). There are, after all, several feminist, interpretivist, and other communities that work in and from the margins of disciplines to challenge the norms of fixity and certainty that sometimes dominate the mainstream – and there is much kinship, community, and wisdom to be found in those spaces and encounters (see, indicatively, Ahmed 2017; Bleiker 2001; Doty 2010; Inayatullah 2010). But what the above narrated encounters have in common is that they are moments of reinforcement of what the mainstream values, of what one has to do to belong.

This construction of a particular scholarly figure and idea of belonging creates and reinforces what the feminist scholar Laura Shepherd calls ‘dimensions of silence around the constitution of selves’ (2017: 3). In practice, this means self-editing, siloing aspects of the self that do not fit into the performance of certainty and academic authority that stems from objectivity and distance from one’s subject matter and interlocutors. In turn, this siloing results in ‘an orthodoxy of knowledge production that works [...] to deny all traces of the self in scholarly writing’ (Dauphinee 2010: 804). These anxieties and the academy’s way of managing them can also lead to marginalization when one’s experience of uncertainty is at odds with the ways a discipline demands certainty of those seeking to belong within it.

In other words, the pressure to deny, manage, control, or measure – rather than embrace – uncertainty can make for lonely, fractured selves, and for anemic relations to our research subjects, participants, curiosities, and senses of belonging. These disciplinary moments are also moments of alien production, of signaling that being, doing, and imagining otherwise may leave one feeling lonely or illegible, both of which have emotional and material implications when it comes to people’s senses of belonging and their ability to make a secure living within the academy. It would be easy, in the face of these very real concerns, to abandon uncertainty – and the methods and narrative styles that embrace it – in favor of more fixed endeavors.

Hopeful futurities: Towards making friends with uncertainty

‘There is a space for radical possibility here,’ Elizabeth Dauphinee wrote (2010: 812), ‘in terms of how we understand ourselves and others in the course of our interactions with, and participation in, politics, history, and scholarship.’ Over a decade since Dauphinee articulated this hope, we continue to feel it. What fuels it is the realization that, alongside the disciplinary pressures to value certainty and deny uncertainty, there are communities of thought, practice, and care that help us imagine worlds otherwise. That is, we are not alone in seeking to forge a different relationship with uncertainty; there are already people whose practices of scholarship, theory, and pedagogy pave the way. In this section, we reflect on some of the promising practices that shed light on the possibility of making friends with

uncertainty in our research, pedagogy, practices of care, and understanding of selves as scholars and subjects of world politics.

Roxani: What does embracing uncertainty mean about how you have pursued your own project and related to your research? How has this relationship to uncertainty shifted the orientation of your research?

Kat: In my research, embracing uncertainty has helped the orientation of my project primarily in two ways: as a decolonial research ethic and a way to envision alternatives to Eurocentric knowledges and pedagogies. My research project engages with the global justice debate, a field that investigates the possibilities for justice beyond the political boundaries of the nation-state. My project specifically challenges the field's lack of engagement with thinkers and texts outside of Europe and North America, arguing that while global justice is a field with an explicit *global* outlook, it is in no way a *global debate*: scholars at the center of disciplinary theoretical debates do not hear or center non-Western voices. In other words, despite there being much written *about* the "global South," voices *from* that space are marginalized.

What does all this have to do with uncertainty? My research shows how ideas about certainty, underpinned by ontological assumptions and unquestioned epistemic privileges aligned with knowledge- and norm-entrepreneurs in the Global North, shape the field of global justice. The general ignorance of many Western academics towards scholarship from the Global South is not at all unique to the global justice debate, but perhaps especially problematic, since it is a field that aspires to universality and generality (Pogge 2002: 169). Caring about the politics of knowledge production in the academy has led me to confront many disciplinary certainties about the contexts within which concepts, arguments, and theories have been developed and advanced. My research, therefore, asks: Who gets to set the epistemological and ontological certainties of the field? How can we think globally about justice without reproducing the silencing mechanisms and erasures underlying much of Western political and philosophical theorizing?

In this context, the narrative of uncertainties as a problem to be overcome, as discussed at the beginning of this chapter and challenged in Roxani's segment above, can be seen as continuing the reproduction of coloniality. Contextualizing these power dynamics within the histories of empire and colonialism, the concept of coloniality offers an especially useful framework for making sense of this the 'global Apartheid in higher education' and its influence on what is researched, published, cited, and taught – the practices that establish a sense of certainty (Mbembe 2016: 38). The pervasive, enduring epistemic traces of the colonial experience have been conceptualized as the coloniality of knowledge, which refers to the unequal distribution of epistemic respect 'in a way that both reflects and reproduces empire' (Alcoff 2007: 83). Western epistemic hegemony reflects empire in the sense that it emerged during the process of European colonial expansion which began in the 16th century. My scholarship builds on critical race, post- and decolonial critiques of Eurocentric knowledge production, which often fixates on certainty. These critiques suggest that embracing uncertainty is an essential part of contestations over power and knowledge across the

Global North-South divide. In other words, embracing uncertainty is not only analytically appropriate, because it reflects how people experience global politics and global justice, but also theoretically necessary for making sense of those experiences.

Embracing uncertainty, then, as an analytical and theoretical framework and narrative practice has not only allowed me to investigate how contemporary knowledge production is complicit with ongoing colonial oppression, but also shifted my perspective in terms of the orientation of my research. Purposefully not seeking certainty in how I theorize and what I theorize about, I have tried to stay with uncertainties – in interpretation, in conceptualization, in engaging with literature – as necessary to avoid epistemic arrogance and epistemic violence. As a research attitude, embracing uncertainty can be seen as part of continued efforts for “epistemological justice” (Bhambra 2021).

Over the years, my project has turned into an ever-unfolding process of learning to unlearn the necessity for certainty. When theorizing about contemporary *global* challenges, I have found that a research ethos guided by uncertainty allows for a more open-minded, dialogical search for interpretive horizons that do not simply reproduce Western epistemic hegemony. In my work, I have specifically engaged with African *ubuntu* thought, a worldview that reflects the general tendency of African ethics to ‘define human-ness as the interweavement of self and other’ (Etieyibo 2017: 143; Ramose 2002). As a relational understanding of human existence, *ubuntu* calls attention to the importance of collective practices of care, community, and solidarity building. I argue that *ubuntu* can help us unsettle Western epistemological and ontological certainties about, for example, personhood and progress, assumptions which are historically linked to Whiteness (Allen 2016; Henderson 2013; Sabaratnam 2020).

Again, what are those certainties that *ubuntu* helps us challenge? In my study of global justice and the field of IR more broadly, I reexamine the often taken-for-granted distinctions between self/community, past/future, male/female, human/nonhuman, dualist logics that are often treated as foundational commitments in the global justice literature. *Ubuntu* offers a different perspective on what it means to be a human, beyond Western ideas about the human experience that have the tendency to treat White experience as universal. *Ubuntu* has, thus, helped me reimagine my relationship to uncertainty with regard to normative interpretive horizons that reflect on universal humanness in a way that does not reproduce exclusionary knowledge practices.

Roxani: What I see you doing here, Kat, is challenging the imaginations of the universal, while also inquiring about binaries and compartmentalizations that may not fully capture the relational nature of politics. In that sense, I see many echoes and resonances with Shambhawi’s work as well, and particularly with her commitment to engaging with fiction as a vehicle that allows for different relationships to uncertainty.

How do you think fiction does this, Shambhawi? What is it about fiction that allows for a different relationship to uncertainty, and how has that shaped and informed and reoriented your own work? And do you think this is necessarily a

trait of *all* fiction or do particular kinds of stories have to do this kind of work to allow for uncertainty to fill the frame?

Shambhawi: I love the metaphor of thinking about uncertainty as “filling our frame.” In answering your question, I would like to introduce the frame(s) of my own research, which I work hard to build as anxious yet hopeful, to glean the presence of uncertainty. In doing so, I will draw attention to the ways in which fiction allows me to reckon with the uncertainty that stems from going beyond “what we know” to encompass “how we know.”

The poet Mary Oliver beckons us to start with the hope that comes from extending ourselves and reaching out towards the unknown, beyond the fears of uncertainty that inhibit such extension, when she asks us: ‘Have you ever tried to enter the long black branches of other lives...’ (Oliver 1998). My own research reckons with the literary genre of magical realism in hope of gaining relational and emotional routes to highlighting the fragmented, incomplete, and uncertain lives of humans. Magical realism is a form of fiction that is especially attuned to emotional entanglements and uncertain futures of its characters because it makes possible the articulation of human experiences of pain without resigning them to it. In such texts, there is a melting of pain and hope, which can only be written according to space to anxious humans and the hopeful futures they can spell into existence.

Echoing Roland Bleiker’s (2001) concern about the risk of sounding like an amateur literary critic in the endeavor to read and learn from stories, I embrace the uncertainty that comes with approaching fiction without demanding from it a cohesive, disciplinary manifesto that can tell us “what can fiction do for International Relations?” Instead, I approach magical realism for its immanent capacity to relay experience, narrativize fact, and enjoin us to our subjects of study, thus transforming what “International Relations” can mean altogether. By starting from, traveling with, and leaving me with uncertainty, fiction allows my research to unburden itself from the focus on outcomes, to glean upon incredibly important voices and lives which cannot be articulated in a language other than emotion, and outside of uncertainty.

My PhD thesis theorizes the entangled and anxious living of human beings and the transformative potentials of an “imaginative international,” as distinct from the limiting “international imagination” that such emotional-relational humans make possible (Doty 2010). It is a project that starts from embracing the incompleteness that marks/makes us human, and the world-making that humans make possible while resisting IR’s disciplinary demands of wholeness. By gleaning moments of incomplete, fragmented, and anxious living in the characters of magical realist fiction, I hope to show that far from being hindered by their emotional entanglements, humans become magicians through their emotional incantations, which helps them resist a rationally limited and stultifying world, and spell alternative, surprising and emancipatory worlds into existence.

In thinking about and writing this project, I continue to be moved by uncertainty in two interrelated ways: First, in centering moments of incompleteness in human lives, by resisting ‘attachments to innocence,’ which attempt to capture and situate my work within disciplinary vessels that demand completeness (Ravecca and

Dauphinee 2022: 1). Second, and flowing from that resistance, the care-filled labor of situating of my (anxious) self in my writing aims to resist the vigorous denial of personal affiliations ‘in an elusive quest for objectivity’ (Beattie 2019: 230). While slightly different from the approaches to uncertainty articulated in the introduction to this volume, these meanings offer important complements to the multiple ways of making sense of uncertainty.

The first encounter with uncertainty occurs when the discipline of IR interacts with my project. This is felt most prominently in the uncertainty of “classifying” my project, despite my explicit commitment to defy habits of disciplinary and sub-disciplinary classification. Even though my research deals with emotions, humans, and fiction, I sense discomfort in those who encounter it – a discomfort stemming from not being able to condense the project to a “field” within IR. When I present my work, I make clear my investment in writing stories that center unfamiliar methods and uncertain subjects, in remaining with incompleteness and in-betweenness of complex emotional relations between fictional characters. However, even my most self-assured claims about my work generate uncertainties and anxieties about the “purpose,” “future,” and “aim” of my project, and by extension, of me. Amidst encouraging and appreciative nods at conferences, there are often nudges towards some “school of thought,” or “field of inquiry,” or “similar literature” within IR. The uncertainty sparked by the fusing of fiction and IR in ways that make it impossible to extract one from the other shapes and replenishes my commitment to *remaining* with this uncertainty of classification rather than *resolving* it.

My research fails (or is made to fail) the disciplinary ‘circulation of innocence,’ which denies examinations of relational and embedded entanglements between the self and other (Ravecca and Dauphinee 2022: 4). Fiction, on the other hand, by virtue of introducing characters as interwoven and enmeshed in the same fabric of contingencies and dilemmas, is more attuned to fragmentations and anxieties – in both form (methods) and substance (subjects). My movement towards fiction, specifically magical realist fiction, with its penchant for fusing the real with the imagined, brought me face to face with the disciplinary barriers to entry for subjects that cannot, indeed, would not identify themselves as complete, sovereign, and rational, as some mainstream IR standards may suggest – but instead depend on their emotional relationality to become visible within our research.

The power of fiction in embracing uncertainty is one that can help us make room for similar uncertainties in academic writing. In Gabriel Garcia Marquez’s *Love in the Time of Cholera*, the protagonists make sense of themselves through their feelings for each other, even though they spend most of their lives without even seeing each other. Fiction allows them to transcend the limits of their material conditions, through their emotional, magical invocations of love for each other. The incompleteness they each carry within is shaped by and assuaged through their relations to the other, in a way that makes it impossible to relay the story of one without giving away parts of the other. For Salman Rushdie’s humans in *Midnight’s Children* who are living through India’s Partition find within themselves a need to exist multiple times at once, to obliterate expectations of linear existence in the absence

of linear time. Though shaped through their collective experience of trauma, these humans refuse to be pinned down as victims, and demand that their untidy, simultaneous stories be heard, without the framing of linear time. Fiction makes room for listening to uncertainty, in ways that academic prose renders impossible. The disciplinary anxiety that comes from encountering fiction as raw material for political thinking stems from the disavowal of listening, and the equation of listening ‘to weakness’ (Ravecca and Dauphinee 2022: 10). Unlike the story of International Relations, which *tells*, fiction *shows*. By compelling us to listen for/to moments of uncertainty that mark the lives of its characters, fiction shows us the fallibility of trying to study such uncertain living with methods designed to deliver certainty. It shows us the burden of proving innocence laid squarely upon already shivering bodies, begging us to ask where does the discipline get its certainty, if not from the denial of uncertainty that marks the lives and experiences of those who inhabit it?

My second encounter will hopefully illuminate your later question about how I orientate myself to uncertainty in my own work: Most centrally, fiction allows me to infuse care by choosing alternative starting points, in hopes of finding and remaining with uncertain, anxious, and fragmented humans to whom I can relate. The almost necessary embrace of uncertainty in fictional stories helps me move towards encounters of care towards myself: by exploring my situatedness in the dilemmas, hopes, and relations of the fictional characters, and towards my writing: by allowing me to write in my emotional responses, not just in margins as private reactions, but as political responses to my subjects of study, who are the incomplete, emotional, and relational humans of fiction novels and their lifeworlds. Resisting the denial of self, to ascribe to disciplinary expectations of certainty and turning to encounters allows my writing to become as fragmented, interrupted, and hopeful as I am. In turning towards my research rather than standing apart from it, I can begin to ask if centering our responses to what/who/where we research can help us envelop uncertainty in ways that mainstream approaches could not.

In the same vein, the reflection of readers’ experiences and emotional dilemmas in the lives of characters who find themselves in entangled and relational quagmires closes the distance between the reader and the writing. Naeem Inayatullah (2010) contends that in stories there are possibilities, precisely because fiction lowers the guard of the reader and invites them in. This invitation into the messy and uncertain world of fiction is also an invitation to pause and remain with uncertainty, rather than doing away with it. Moving towards fiction and, by extension, towards uncertainty, as a way of feeling my presence within my work, and as a way for my readers to feel the other within themselves, has become a way to not theorize or conceptualize hurt in others without feeling that hurt within myself. In remaining with and being affected by both – the ghostly presence of other selves in my writing, as well as the haunting of others’ presence within myself as internal wounds – fiction has reworked uncertainty as a plural, reflexive, and imaginative methodology, which starts from exploring how the felt experience of our stories about the world is more significant than the outcomes attached to it.

We could not close our reflections in this section without considering the classroom itself is a site that orients our eyes towards the future in ways that hold the promise of hope. Making friends with uncertainty, then, can be a pedagogical commitment, shaping how and what we teach about world politics. Unsettling the fixation on prediction, certainty, and a particular kind of authority in the classroom is not easy; after all, the teacher relies at least in part on perceptions of expertise and authority to fulfill their pedagogical mission. Recent studies that conduct important gender and racial analyses of course evaluations remind us that notions of authority in the classroom are steeped in power in ways that create additional dilemmas and challenges for minoritized colleagues within the academy (Fan et al. 2019). In recognition of these dynamics, the practices for embracing uncertainty in the classroom that we discuss here are aspirational, rather than prescriptive. The hope we find in them is the possibility of a gentler, more generative community of thought, with more humble relations to the creation of knowledge, and more possibility for whole selves to feel they can belong as students, scholars, teachers, and subjects of world politics.

One way to harness hope in making friends with uncertainty is to openly encourage and embrace surprise. This is as simple as asking at the start of a tutorial or seminar: “What surprised you in the readings, lectures, and discussions this week?” ‘To be surprised,’ Cynthia Enloe writes (2004: 13), ‘is to have one’s current explanatory notions, and thus one’s predictive assumptions, thrown into confusion.’ She goes on to acknowledge that:

‘In both academic life and activist public life in most cultures, one is socialized to deny surprise. It is as if admitting surprise jeopardizes one’s hard-earned credibility. And credibility, something necessarily bestowed by others, is the bedrock of status’.

(Enloe 2004: 13)

Students feel the pressure of denying surprise, too – as is evidenced in the blank stares when we first find ourselves asking “what surprised you?” We have to offer a lot of reassurance: There is no one way to answer this question; indeed, we, the instructors, have no fixed answer in mind. Our own answer to what surprises us changes each time we teach the class, even if the material itself sometimes remains the same. There is no “excellent” surprise or “inadequate” surprise; rather, surprise offers us information about our expectations, reactions, and assumptions, and that information is analytically fruitful and exciting for us to collectively reflect on. In the early weeks of the semester, students are shy to share their surprises and are not quite sure how to articulate them. There is a tonal shift when students have to learn to move away, even for a moment, from articulating their reactions in the form of a predetermined, polished argument and experiment in the direction of embracing surprise. By the end of the class, we find that students make the language of surprise their own and, in reflecting on what surprised them, they allow for multiple truths to coexist, for contradictory feelings and reactions to the readings and themes of world politics, and for more expansive relationships to uncertainty.

Kat: These thoughts make me reflect on a related question: How much space does a classroom afford to stating “I do not know”? How do you keep open and create the space for not knowing, or for surprising oneself, in your own classrooms?

Shambhawi: I love this question, Kat. After all, our guiding logic for embracing uncertainty is the promise of surprise it holds for us and our students. If we beckon students to shift away from certain outcomes and embrace the uncertain surprises, we are inviting them to appreciate “not knowing” as the starting point of “alternative knowing.” As Cynthia Enloe writes (2004: 13), ‘to be surprised is to have one’s current explanatory notions, and thus one’s predictive assumptions, thrown into confusion.’ Surprise, then, is a friend of uncertainty, and embracing uncertainty, then, requires making room for surprise – in experiences of research, teaching, and learning about global politics. I would like to share a story – a non-fictional one this time – where pedagogical experiments that begin from collective moments of anxiety in the classroom might help us flesh out the immanent advantages of starting from uncertainty in spaces of learning, complementing Kat’s earlier insights on the same topic.

In the module about key concepts in International Relations that I tutor, my students and I found ourselves in one such anxious moment. The class was on a Monday afternoon, sandwiched between lunch and supper, allowing me to treat it as if it were an afternoon tea: relaxed, reflective, and among friends. After the mandatory exchanges about the Scottish weather(s), I posed a seemingly mundane question as a conversation starter that lent itself to multiple answers. The question I asked, as I often do, was: “How did you find the online recorded lectures for this week?” I shuffled through my papers as I asked the question, hoping for answers to fill up the room while I arranged the tea setup for the afternoon when a student said: “I really enjoyed it...for once it wasn’t theoretical!”

The exclamation mark here cannot do justice to the sigh of relief the student exhibited on recounting their joy at encountering a recorded lecture that did not present itself theoretically. Almost simultaneously, I saw that there were several heads nodding and murmuring in agreement with this comment. Realizing that the seemingly innocuous question had created a viral impact, I let the answer and its effects on the classroom wash over me. I sat down and asked, intentionally hiding my own reaction to the statement, another question – this time less innocent: “How many of you feel like that resonates with you – that there is dissonance between the theory and practice in the ways that you are approaching and being approached by the discipline?”

After a bout of silence from the students appraising how honest they could be and reassuring glances from me, encouraging them to be, there were some more nods: less certain than the previous ones, but uncertain nods are my favorite ones. A few students transitioned from nods to words: “Theory can get boring.” “It is so difficult to follow and apply – and specially to write.” “Where do we even begin with theory...” As these voices filled the room, as collective anxieties emerged about the disciplinary expectations and standards surrounding theory, I saw that as a moment where I could either go on with my class plan and continue with explanations of the locations, modes, and relations of power or I could try to reframe this point of uncertainty by bringing back my students from giving up on theory and

placing it outside themselves before even fully feeling it out. I glanced longingly at the certainty and wholeness of my now reshuffled papers, filled with well-laid, meaty plans for our weekly tea, and back at my uncertain students. The choice made itself. I dropped my class plan and invited my students to remain with the uneasiness of their articulations about theory, to try and see if we could start from feeling this uneasiness and charting it collectively, in hopes of surprising, uncertain outcomes. They looked at me, wide-eyed at the sudden change in tone that our restful afternoon rendezvous had taken and shut their books and screens.

Cautiously, I instructed them to write a sentence each on power: a sentence that could convey what they *felt* about power, rather than what they were *told* about it. My instruction/invitation hung in the air briefly, as my students gauged their own shifting position in the classroom, where they had to come into the fold of creating knowledge rather than having it be delivered to their notes through me. Encouraging them to think beyond the confines of the lectures, tutorials, and even the academy, to write one statement about power, I retreated from the speaking position and watched the students as they let the question wash over them. They struggled at first with the discomfort of being called on to think about knowledge without the usual tools to shape it, but gradually accepted the anxious starting point of the exercise. A few minutes later, I witnessed a powerful atmospheric change in the seminar room. The anxious expressions were transforming into excited ones; there were lightbulb moments on some faces, hurried scribbles on paper, and expectant looks at each other. I waited patiently and soothed my own anxiety by soaking in the thinking silence that engulfed the room. Finally, a student spoke, her voice ringing clear as a fine-tuned bell: “Power is subjective.”

I smiled and walked up to the whiteboard. Another eager hand went up: “Power doesn’t necessarily empower.” A third: “Real power is the influence we exert upon the world by building opinions and institutions.” And a fourth: “Power divides into few and many.” A student who is usually shy spoke: “Power is taught.” Many beautiful sentences came, as they often do, when students are allowed to think: “Nature is true power,” “Power is the ability to assert ourselves and determine our own lives.” Soon enough, the class was ringing with multiple bells, each articulation as moving as the previous.

I excitedly scribbled the sentences on the whiteboard, beaming at the incapacity of the board to be wide enough and the bluntness of the marker tip which could not keep up with the sharpness of my students’ articulations. I turned to face them, smiling and itching to unveil the end-goal of the exercise, but holding back to accord space to their powerful and much-needed resetting of the classroom tapes: it was their turn. Once the whiteboard was as black as it was white, there was silence in the classroom again – this time, of a different nature, a content silence stemming from the collective acknowledgment of having met the assignment, if you will.

I could not wait any longer to invite them to try to decipher, through my scrawny handwriting, what theoretical frames these “simple” sentences were speaking to or resonating with. Almost immediately, my students enjoined themselves in locating theoretical allies for their sentences: liberalism, feminism, post-structuralism, critical race theory, and ecological and green theory, among others. I watched in

delight, as my students claimed their rightful status as freshly minted theorists of power, without being explicitly tasked with coming up with theories. Slowly, in the glints and sparks that replaced doubts in their eyes, I saw the collective realization about the activity they had just participated in, which was to have them *theorize* power. There was a quickening applause: gentle and confident, which I joined in, applauding for each of them, for they had – by entrusting the class with their words – unknowingly spoken and felt theories, heard them with each other, and with critical, feminist, and aesthetic scholars who were in the room, clapping for them, too.

I witnessed my students lay out, reshape, and transform the uncertainty around theory-building and writing by embodying the reflexive and emotional potentials it brings with it. My students walked out of class beaming, with theories tentatively peeping from their pockets and hanging on their lips, instead of being tucked away in the “safety” of textbooks and reading lists. The uncertainty that was posed to us as a challenge, a barrier to engagement, became an opportunity to transform the way to *do* theory, offering a new definition of theory itself, which is otherwise hard to come by. Theory, in that classroom, for my students and I, and hopefully for readers of this chapter, was redefined as being safe homes for our felt experiences. This redefinition is powerful for many reasons, but most significantly, for its origination in a collective embodiment of uncertainty in the pedagogical and learning process, in hopes of finding ourselves with alternative, transformative outcomes of knowledge building and learning. For writers and thinkers who strive towards generating inclusive, entangled scholarships, uncertainty and surprise are both worth reckoning with.

In lieu of a conclusion: Is it friendship or surrender?

As our reflections draw to a close, we return to the title. Titles, after all, are sites of declaration: They represent moments in which writers tell readers what to expect. In revisiting our own title, we ask: Is *friendship* with uncertainty really possible? Or are we talking about a different kind of relationship – one of tolerance of uncertainty, or perhaps, of surrender to it?

In considering the above questions, we root ourselves once again in time and place: We wrote many of these words in Scotland as the climate summit (COP26) took place down the road. We felt, thought, and wrote during a devastatingly unsettling climate crisis. We also wrote these words during the COVID-19 pandemic, amidst other words we each had to produce to perform the kind of certainty that enables our professional lives to continue: We filled out annual review and development forms, confronting expectations to be “on track” with our research outcomes and goals. Some of us made PhD completion plans, others wrote letters to support the revision of those plans in light of – fittingly – uncertainties. As we prepare to submit the revised version of this chapter, our trade union is between periods of strike action, in part to protest the kind of uncertainties and precarities caused by casualization within the academy. These realities remind us that our goal is not to romanticize uncertainty; indeed, uncertainty feels different when we can navigate our own relationships to it than when it is systemically and structurally imposed.

In the spirit of putting some of the preceding analysis into practice, we had several conversations about uncertainty with friends, colleagues, and reviewers in the process of drafting and revising this chapter. In a supportive spirit, a few colleagues offered that some of what we are talking about here “might not be international relations” (IR) or mainstream “global politics.” Others have echoed that the conversational style of this chapter might depart from conventions around knowledge creation within the academy in general, or global politics in particular. We welcome these reactions, *and* we are comfortable with the ways this chapter might not comfortably fit within mainstream impressions of what the field and discipline are and do. Academic disciplines are constantly made and remade by those who see themselves as their members (or, indeed, reject tidy notions of single disciplinary affiliation). Making friends with uncertainty, in part, requires that we decenter the question of “what can uncertainty do for the study of global politics” – just as Roxani has argued for decentering “what can feminism do for IR” (Krystalli, 2022) and Shambhawi has called for moving away from “what can fiction do for IR” earlier in this chapter. The reason we call to reframe those questions is because they reify IR as singular, fixed, immovable, and unchanging. The whole point of embracing uncertainty is to allow it to change how scholars of global politics think, feel, theorize about, and experience our subject matter. If this requires a reimagination of who “does IR” or what the study of global politics can sound like, we welcome the breeze of possibility such an invitation represents.

Making friends with uncertainty is not an easy process. But it can be, as our companions remind us, a hopeful one. Wallerstein (2004: 58) writes that ‘we live in a very exciting era in the world of knowledge, precisely because we are living in a systemic crisis that is forcing us to reopen the basic epistemological questions and look to structural reorganizations of the world of knowledge.’ Arundhati Roy echoes (2020) that ‘the pandemic is a portal,’ which can prompt us to ‘imagine the world anew’ (see also Ndlovu-Gatsheni 2020). In this chapter, we have charted the kinds of reimaginings that become possible when we do not seek to resist or manage uncertainty, but instead befriend it, listen to it, and allow it to reorient what kinds of questions we ask, what methodologies we employ to explore them, how we tell stories, and how we approach teaching and learning within and beyond the classroom. The kind of world we imagine is not neatly summed up in the grant language of outputs and outcomes, or in the achievement boxes of performance reviews. It requires us to reimagine the boxes, to allow stories to overflow across compartments, to say “I do not know,” “I am surprised,” “I feel,” “I am curious.” These, after all, are the starting points of friendship, and we remain hopeful about what can grow from them.

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15 Conclusion

Responses to uncertainty in global politics

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This book was born of uncertainty. First, it was the uncertainty about answers – answers that may or may not exist, and perhaps answers that should or should not be sought and, when sought, may lead to multiple and even contradictory understandings, further complicating the original uncertainty that motivated the search. What is uncertainty and how are political actors affected by it? How does uncertainty shape their – our – experiences of everyday life, “normal” politics, and transformative events? What does uncertainty make us do, if anything? These questions popped up through our readings of the International Relations (IR) literature, our observations of the political world, and our discussions in classrooms and conference venues as well as our exchanges when writing this book.

In one exchange on the core question of the book – “why didn’t we see this coming?” – Kelman, for example, invited us to think about whether any disaster can be considered a surprise. ‘It is a philosophical struggle to defend the thesis “Because of (any form of) uncertainty,”’ he wrote to us,

It is also about what is (i) uncertain, e.g., earthquake epicenter magnitude and depth, and what is not uncertain, e.g., that poorly constructed buildings collapsed and those with seismic resistance measures did not, and (ii) surprising, e.g., that we did not bother learning from recent pandemics, including a coronavirus one. In other words, in “why didn’t we see this coming?”, what is “this”? Nature always produces surprises, aleatoric uncertainties, unpredictabilities, and never-before-seen phenomena. But social changes always seem to have analogies and precedents... At least, now we have enough to know. At what point in history did genuine “social uncertainty” morph into “can’t be bothered to learn”?

(Kelman, personal correspondence, 4 Aug. 2021).

The dialogue between the contributors in this book centers on these and other difficult questions and uncovers different answers that can help us make better sense of the varied nature and effects of uncertainty in global politics. We learn from these contributions that uncertainty manifests itself not only as a phenomenon that is inherent to human and externally produced contexts or routinized in everyday political processes, that shocks and confuses actors in extreme ways or presents as of yet unconceivable potentialities, but also as a feature of knowledge production, including our own.

This latter, epistemic uncertainty that involves questions about how to find answers, too, motivated the book. How do we know uncertainty when we see it? How do we capture it, analyze it, and present it? And should we try to understand it at all? These are the questions that scholars of (global) politics know well. They reflect the challenges of converting often abstract, directly unobservable forces behind “the political” into something that can be better imagined, measured, categorized, and referenced. Accepting uncertainty as a force in global politics defies the view of a fully comprehensible social world. The positivist training that many scholars of (global) politics have received dictates that categorization and measurement of the inherently muddled and complex world are indeed possible – we simply need the right tools to do so. Working on this book has shown us, among other things, that such categorization and measurement may not always be possible. Yet, this actual or perceived impossibility can help push the boundaries of our imagination on multifaceted and difficult-to-study concepts like uncertainty where different forms and understandings of the concept compete and overlap.

Time and again, the contributors to this volume pointed out that the neat categorization of the different forms of uncertainty that we arrived at by putting the chapters in conversation with the stories about uncertainty developed in different traditions of IR scholarship could be further nuanced or even challenged. For example, while our imagination placed the consequences of the development of space technologies in the realm of uncertainty about the future, writing specifically about satellites and their associated ground-based infrastructure, Bower insisted that

my focus is the various existing and near-term prospective uses of orbital space, rather than future technologies or human and robotic exploration beyond Earth orbit. So, the emphasis is more contemporary (what is happening now) than future-looking (what might happen in the future).

(Bower, personal correspondence, 15 Nov. 2021)

Further challenging our original analytical framework, Elliott highlighted that his chapter on sustainable finance tackles the intersection between epistemic uncertainty in the sense of competing interpretations of uncertainty in policy paradigms in this area and ontological uncertainty over possible and potential environmental consequences of anthropogenic climate change. Similarly, Bedford saw both the human sources of uncertainty in electoral authoritarian regimes and external sources given the importance of the COVID-19 pandemic for how the presidential election in Belarus unfolded in 2020 where inherent, regular, and extreme forms of ontological uncertainty were simultaneously at play.

The process of selecting and shaping the chapters in this volume thus challenged our own views of uncertainty, our own visions for this book as well as our understanding of the political world. So it did for the contributors to the volume as the authors responded to our and other contributors’ comments in multiple rounds of internal and external review and we incorporated the authors’ reflections into our analysis in an ongoing way. Through this iterative, dialogic process, the volume turned out to be a genuinely collective product.

One moment of coproduction, the contributors' workshop, for example, revealed that our audience need not be limited to IR, as we had originally envisioned, given that the contributors come from an interdisciplinary background and tackle questions about uncertainty from different theoretical perspectives. 'IR and CP [Comparative Politics] are two sides of the same coin,' Noakes evocatively argued about the need to include and recognize both international and domestic issues among the contributions of the volume, 'if we are talking to dolphins, we should be able to talk to porpoises as well. We are all here for world politics' (workshop transcript, 2 June 2021). This call to broaden the scope of the volume is reflected in our resulting coverage of individual and interpersonal psychological (biases, perceptions, beliefs) and emotional (hope, fear, resentment) dynamics, various internal and external actors' social interactions (conflict, cooperation, competition) in the context of domestic politics, international relations, and global interconnections, and processes of knowledge production. Analysis of these issues in the volume engages and intertwines the literatures on political psychology and sociology; institutional design, delegation theory, and complexity theory; international political economy and law; global governance, norms, and disaster diplomacy; sociology of knowledge; and critical, feminist, and decolonial approaches.

Through this interdisciplinary conversation, we found some answers to our initial questions, while stumbling upon new ones. What other forms of uncertainty are there and how can we capture those forms in our understanding of uncertainty as outlined in the introduction to this volume? For example, is legal uncertainty that stems from 'the diffuse nature of lawmaking authority and lack of hierarchy among the principal sources of international law' different from routine uncertainty in "normal" politics (Yüksel in this volume)? Is it useful to separate uncertainty from other, similar concepts like risk or (un)predictability? For instance, aren't potential existential risks posed by emerging weapons technologies that Prem discusses themselves are a source of uncertainty? Don't people experience uncertain or risky or unpredictable phenomena in the same way, as Bedford's and Driscoll and Savelyeva's chapters on ordinary people's experiences in situations of intersecting uncertainties, risks, and unpredictabilities suggest? And what can centering our own responses to uncertainty, as Krystalli, Tripathi, and Hunfeld do, help achieve in exploring uncertainty that mainstream approaches cannot?

Our final coproductive moment in the lead up to the publication of this volume, the two "Uncertainty in Global Politics" panels at the International Studies Association Annual Convention in 2022,¹ put further questions on the table. For example, can uncertainty in fieldwork that Noakes focuses on empower rather than merely limit researchers? How do we reconcile the destructive and productive effects of uncertainty evident in Moore and Orchard's analysis of Fiji's leadership as a global norm entrepreneur, which was made possible by the destruction of community livelihoods as a result of the rising sea levels? And how can we address the "dark side" of agency in actors' attempts to manufacture certainties and uncertainties to their own advantage, as Bedford, Elliott, Prem, and others in this volume demonstrate?

The authors in this volume agree that uncertainty cannot (and should not) be eliminated but embraced, transformed, and, in some cases, managed and reduced or, at the minimum, correctly identified. Uncertainty is temporal; it can be individually or collectively manufactured, whether intentionally or not. As Krystalli, Tripathi, and Hunfeld powerfully convey, certainty is a performance. It is an image we try to forge, a distorted reflection of the disarray of politics and the social world. Yet, many contributors in this volume suggest that uncertainty is to some extent controllable, directing us to the possibility of reclaiming some sense of agency. If humans create uncertainty – whether intentionally or not – and that uncertainty leads to suboptimal political choices and policy actions, then humans can also lessen, channel, or repurpose uncertainty to solve, address to the best of our ability and current knowledge, or, at least, better understand the complexity surrounding pressing problems. This pertains not only to academic and pedagogic practice that Krystalli, Tripathi, and Hunfeld address but also to practice and policymaking in different domains of global politics and simply everyday life that other chapters reflect on.

While in the introduction to this volume, we discuss the various forms that uncertainty may take in global politics, below we turn to questions of effects and responses to uncertainty: What does uncertainty “do” in global politics? How do political actors respond to uncertainty and how should they? These questions are interlinked and many contributors to this volume observe the various effects of uncertainty in different political settings, with implications for effective responses. We tease out these effects and responses and then illustrate the application of our uncertainty forms in the case of Russia’s 2022 full-scale invasion of Ukraine. We have chosen this case as an illustrative example of multiple, qualitatively different forms of uncertainty that can be traced in war but also across other global phenomena.

Responding to the effects of uncertainty

Political responses to uncertainty are based on a complex mix of factors that are determined as much by institutional environments as by individual experiences. Uncertainty depends on human perception – we both generate uncertainty through our “reading” of events and grapple with uncertainty when perceiving the world as uncertain. Therefore, as Matchett reminds us in her study of armament choices in the US Congress, an important lesson about uncertainty is that it cannot be addressed simply by information updating, because information is not neutral and information processing is shaped by idiosyncrasies and cognitive biases of individuals who are embedded in different social and normative contexts. Driscoll and Savelyeva come to a similar conclusion while focusing on difficult decisions that ordinary people make in wartime about whether to fight or not. In this politically charged information environment, the authors show, competing narratives about the war shape powerful emotions like fear that guide people’s actions. Such an individual perspective may help us better understand political or public policy decisions whether in missile defense, local dynamics of war, or other areas.

Yet, explaining responses to uncertainty is not a simple story of individual perceptions. Uncertainty, as Yüksel reveals, can result from collective as opposed to (and in addition to) individual human information processing. Uncertainty is as much about (collectively) acquiring knowledge as about (collectively) interpreting it; uncertainty accumulates and evolves, and if the conditions are ripe, it thrives. In both studying and teaching global politics, the potential for accumulation and evolution of uncertainty suggests the necessity to reflect on our own practices as scholars and educators: Do we – intentionally or not – perpetuate uncertainty in scholarship and classroom? What are the possible effects, whether positive or negative, of such practice? What lessons can we learn and pass on from working in and with uncertainty? While states and nonstate actors endure uncertainty as a pervasive condition, uncertainty may not be all encompassing, and it surely does not always signal trouble. Yüksel's case study of Mexico-US maritime boundary demarcation in the 1970s shows that states can in fact cooperate despite the obstacles to cooperation created by high (legal) uncertainty.

Perpetuating, or exploiting uncertainty, can also lead to socially desirable, if unexpected, outcomes. As Bedford shows in her discussion of the 2020 presidential election in Belarus, individual and collective processing of uncertainty works side by side and the interaction of individual and collective responses to uncertainty can sometimes generate change even in the least likely settings such as electoral autocracies. Here individual authoritarian leaders manage two kinds of uncertainty: one that results from them lacking a democratic mandate, and the other from regularly occurring, albeit superficially legitimate elections where voters' true preferences cannot be known. Regime challengers, nonetheless, can use elections as moments of uncertainty to convince citizens that their individual choices matter and that they, therefore, can (and should) collectively voice popular discontent. Bedford shows that challengers can succeed in these efforts, particularly during crises, such as the COVID-19 pandemic, which can motivate individual citizens to make their personal preferences public through collective action. When citizens respond with mass mobilization, change may become possible.

Hence, at the core of the interaction between individual and collective processing of uncertainty is the question of who stands to win or lose from uncertainty, and, more specifically, from particular interpretations of uncertainty. Whereas Bedford illustrates how uncertainty can underpin socially desirable change, for example, by creating windows of opportunity for undermining an authoritarian regime, it can also have perverse effects by benefiting those with narrow political interests and goals. We should, therefore, ask in whose interest it is to reject or embrace uncertainty. In his study of the financial sector's responses to climate change, Elliott tracks how uncertainty has been consistently and purposefully interpreted as risk. Unlike uncertainty, risk is calculable, orderly, stable, and thus desirable by those who depend upon that stability. Elliott's analysis suggests that rejecting and repackaging uncertainty in one area may have downstream effects for addressing problems that are often revealed only when uncertainty is acknowledged – problems like how to prepare for the unpredictable impacts of climate change. The most likely solution is regulatory action that tackles manufactured uncertainty that is

not perpetuated by private individuals but by institutions. Elliott shows that understanding uncertainty is an epistemological choice and that aligning interests of the involved actors may prove an effective way of making optimal policy choices.

Prem, too, examines uncertainty as a strategically manufactured condition. Working with the concept of “strategic ignorance,” Prem reminds us that uncertainty is socially constructed; it is an outcome of a process that is both interactive and contested. Like Elliott, Prem argues that the condition of uncertainty may be advantageous to some, specifically those who seek to delay problem-solving. Her study of norm antipreneurs in the creation of norms linked to autonomous weapons systems reveals a way forward in handling this kind of manufactured uncertainty. One may, for example, shift focus to a different aspect of the contested issue, an aspect that is less vulnerable to exploitation. Alternatively, one may move discussions to another forum and reduce strategic uncertainty by restricting access to those who seek to manufacture it.

In other contexts, in contrast, efforts to reduce uncertainty can be counterproductive to an adequate policy response. As Swedlund finds, some political actors, specifically ground-level diplomats, stand to benefit from a swift return to “business as usual” from extreme moments of uncertainty such as unconstitutional regime change. Foreign state and international organization staff located in these settings favor such a return to a critical assessment of the situation that could better inform policymakers due to the incentives for stability and routines embedded in their organizations. Policy responses to unconstitutional regime change that we see are as a result vague and even contradictory, and the analysis of these responses often focuses on statements made by states and international organizations in the aftermath. In turn, Swedlund clearly shows that introducing mechanisms of preparedness for unconstitutional regime change, including by shifting diplomats’ incentives to develop nuanced knowledge of the political context in which they operate, can help respond to these events in more effective and coordinated ways.

Uncertainty may also be transformed, as Moore and Orchard reveal in the case of climate mobilities and Fiji. As the citizens of the states at risk of sea-level rise face the existential pressures from climate change, their governments must grapple with the lack of a clear international framework for response. Much like Yüksel, Moore and Orchard reveal uncertainty as something that is not static, a condition that changes throughout time. Uncertainty today affects uncertainty (and life) in the future, while the shadow of future uncertainty shapes policy decisions today. Moore and Orchard suggest that government actors can manage extreme uncertainty through ‘stretching, translating, and contesting potentially applicable norms,’ which can then be formalized. This, in effect, transforms uncertainty that disrupts everyday lives into “normal” politics and what we call a routine form of uncertainty.

Kelman’s chapter also suggests the possibility – if not necessity – of uncertainty transformation albeit from a different perspective. Like others in this volume, Kelman believes that manufactured uncertainty prevents meaningful political action. In addition, he points us towards uncertainties that are not inherent or purposefully manufactured but those that are assumed. Kelman’s examples of climate

change, disasters, and outer space sudden catastrophic events demonstrate how sources of uncertainty that are out of human control often become the focus of human decisions – they are used as justifications for inaction. While there may be external uncertainties, focusing on these rather than on those we can influence is futile. What to do about uncertainties that political actors assume? Kelman argues that we should stop hiding behind the “un” (e.g., unexpected, unprecedented, unusual, and uncertain) and address the uncertainties that are within our ability. We should not take for granted any assumptions about uncertainty and we need to accept the responsibilities for both knowing and not knowing. If we scale down threats and reframe them back from seemingly unsurmountable to manageable problems, we take back some control to enact meaningful change.

One way to approach this question of strategically framing threats toward socially favorable outcomes is through reflective and deliberative learning in policymaking that can help political actors overcome preexisting institutional constraints and disciplinary boundaries within which decisions are typically made. Hasenkamp discusses the utility of this “anti-disciplinary” approach in the case of governing uncertainty during the COVID-19 pandemic. Hasenkamp shows that relying on dominant frames based on existing institutional arrangements and knowledge infrastructures limits policy development. Resulting policy overlooks the multifaceted, and commonly gendered, effects of emergency measures, above all on socially marginalized groups. What is needed, Hasenkamp argues, is a change in mindset of decisionmakers to meaningfully incorporate scientific advice into policymaking. Such change would combine an understanding of disruptive forces that require urgent response with that of underlying structural conditions that shape how any response may affect different groups in society. Policy issues can be framed and addressed in socially transformative ways, even if the impact of actual measures will not be known because of multiple confounding factors.

Uncertainty not only opens room for strategic framing (and thus potentially creates more uncertainty) but also for unintended consequences, misperception, and accidents with serious political consequences. Working through the examples of orbital space as an extension of terrestrial space, Bower emphasizes the well-known problem in global politics of the dangers of misperception and miscalculation due to the lack of (accurate) data. Like others, Bower comes to the conclusion that uncertainty, whether from external or human sources, can never be eliminated (and thus information updating is not the best response) – it must be managed. From a state perspective then, political actors must strive for transparency of behaviors and intentions to convey capabilities, perceptions of threat, and resolve. Other ways of managing uncertainty include improving the quality/quantity of data, setting clearer rules, especially in their application to new phenomena, pushing for a better enforcement of those rules, improving coordination in data collection, management, and dissemination, and developing shared understandings. Often, many of these goals can be achieved through consultations with involved actors, including governments, private entities, and civil society. This echoes and extends Hasenkamp’s call for an improved policy–science interface to include a multiplicity of social actors when navigating uncertain contexts and events.

Combined, the contributions in this volume show that responses to uncertainty are multiple; they are not predetermined and are instead actor and context dependent. As a result, they can be surprising from the perspective of dominant theories about human action. Individual and interpersonal psychological and emotional factors may drive some responses. Yet, collective dynamics of interpretation, manipulation, and transformation of uncertainty toward socially (un)desirable outcomes will intervene in how political actors (mis)perceive and act – or not – upon any information that they have at their disposal, receive, or actively seek, including about uncertainty itself. Underlining these responses, therefore, are complex processes of meaning making that variably translate into political actors’ decisions and courses of action, pointing to a nonlinear relationship between meaning and action and the general “messiness” of the political world where unexpected and changing circumstances are the rule rather than the exception.

The changing uncertainty during the 2022 Russian invasion of Ukraine

As we began writing the conclusion to this book in February 2022, the Russian military forces entered Kyiv. The Ukrainian president Volodymyr Zelenskyy pleaded with the West to help him save his country, while Kyiv’s subway stations turned into temporary bomb shelters and thousands began fleeing west in the country, away from local epicenters of danger, and into the surrounding countries. By the time we finished writing a few months later, over 10 million people were internally displaced or left Ukraine as refugees. Entire cities were demolished and some like Mariupol besieged. Hundreds were found dead as the Russian forces withdrew from Bucha and other towns. Attempts at peace negotiations were made in the face of mass killing and destruction.

The Russian full-scale invasion of Ukraine casts a long shadow of uncertainty over the stability of the international system as we have known it since the end of the Cold War. That uncertainty is terrifying, crippling, and dividing. Will the institutions and norms of the existing world order and particularly of European security survive? Are we facing a potential international war with the involvement of NATO or, worse, the third world war? Could nuclear weapons be used in any of the foreseeable scenarios? These questions about *potential or possible*, in other words, future *ontological uncertainty*, which we have seen in op-eds, social media discussions, and formal and informal talks, have at their core the extent of the global transformation that could result from the invasion (Mulligan 2022). Before the invasion, the Founding Director of the University of Toronto’s Munk School of Global Affairs and Public Policy Janice Gross Stein argued, for example, that NATO’s stance toward Ukraine was one of “strategic ambiguity,” giving the country false hope that the organization could not in fact deliver (CBC 2021). Since the invasion, NATO has faced “hard choices” between the continued loss of life in Ukraine and escalation to an even more dangerous war with Russia that Russia’s leaders warned would be nuclear (Stein 2022).

But this perversely transformative event is also characterized by other forms of uncertainty and responses to it by ordinary people, policymakers, and knowledge

producers that this volume can help grapple with. We offer a brief discussion of this uncertainty that is changing in real time as a way of illustrating the potential benefit of our approach in future analyses of uncertainty by academics and practitioners alike and of dealing with our own grief as we live through this tragedy that is personal as much as professional in different ways for both of us (one born and raised in Ukraine, the other one not too far from it).

As early as October 2021, warnings of a potential Russian military offensive against Ukraine were voiced by the international intelligence community based on evidence of Russia's troop movements and military build-up near Ukraine (Harris and Sonne 2021; Harris et al. 2022; Sonne et al. 2021). While these warnings prompted fears among Western leaders of a Russian invasion of Ukraine, which were not unwarranted given not only current evidence but also Russia's earlier annexation of Crimea and the war in Eastern Ukraine ongoing since 2014, *epistemic analytical uncertainty* was the order of the day before the full-scale invasion commenced on the night of February 24 (Sonne et al. 2021). As in the past, many analysts did not see it coming. There were too many risks involved in terms of domestic public opinion and the general unpredictability of war, Professor of Russian Politics and then Director of the Russia Institute at King's College London Samuel Greene explained this misprediction in the aftermath of the invasion (Peterson 2022). Thus, '[e]ven with more than a hundred thousand troops poised on Ukraine's borders, it was never certain to many observers that the Russian president would act on his threats to invade – until he did' (ibid.).²

This analytical uncertainty also affected policymakers. While US intelligence produced detailed information about Russia's imminent assault, convincing world leaders and diplomats about a full-scale invasion proved challenging, particularly in light of the failures of US intelligence on Iraq and the recent US withdrawal from Afghanistan. Hence, regardless of the availability of information, most European leaders were skeptical: 'the intelligence was narrated repeatedly, consistently, clearly, credibly, in a lot of detail with a very good script and supporting evidence' but launching a disastrous war appeared so irrational that especially those who had dealings with Putin could not believe this was a possibility (Harris et al. 2022).

After a period of analytical epistemic uncertainty that preceded the invasion, *epistemic practical uncertainty* over knowledge production emerged with the adoption of laws in Russia as soon as on March 4 that criminalized independent war reporting and anti-war protests with penalties of up to 15 years in prison. The ban also included the use of the terms "invasion" and "war" instead of the Russian state-approved "special military operation" and any other information that could be interpreted as "fake news" discrediting the Russian forces and government more broadly (HRW 2022). Numerous Western news media suspended their operations, pulling their staff out of Russia. Some like BBC resumed reporting from inside Russia despite the risks to journalists' safety associated with these laws and restrictions of access to BBC websites to audiences in Russia (BBC 2022).

This practical uncertainty over knowledge production dramatically decreased informed analysis coming out of Russia and the quality of information that ordinary

Russians could receive. It also affected research. Many Russian academics fled the country in the midst of an intensifying crackdown on free speech (Lem 2022). So did Western-based researchers whose institutions now severed ties with Russia on the back of prior legislation and bans such as the “foreign agent” law, first passed in 2012 and expanded a number of times thereafter to silence dissent (Burakovsky 2022). These laws will continue to impose constraints on fieldwork of the kind Noakes discusses in his chapter in the foreseeable future. This means that researchers will not be able to ask many questions that we desperately need answers to in light of the increasing isolation of Russia, which only deepens analytical uncertainty in our understanding of Russia. Furthermore, projects that commenced before the invasion will not be completed, which poses particular concerns for graduate students whose dissertations and possibly future careers will be at stake.

Russia’s efforts to marginalize and repress any opposition through these and other laws and wider controls over the information environment are a sign of *ontological inherent uncertainty* in this electoral authoritarian regime that Bedford so sharply articulates in her chapter. How likely this form of uncertainty – in this setting stemming from unknown true preferences of the Russian citizens – is to transform into opportunities for collective action is unclear given that those who protested were swiftly detained and otherwise repressed while Putin’s approval rating appeared to grow, according to the Levada Center poll conducted in March 2022.³ Could economic sanctions, future elections, or a currently unconceivable crisis bring people to the streets to challenge Putin’s regime, and if not by mass mobilization, could the regime be challenged from within, by the elite or a coup d’état? We did not have answers to these questions in the long term, but the likelihood of these options in the near future appeared to be highly unlikely as a result of repression and coup-proofing from inside of the regime (Casey 2022).

What we were observing, however, suggests that particular interpretations and manipulation of uncertainty that we discussed earlier in this chapter were central to meaning making and action – and inaction – in response to the war. While some experts in Russia anticipated the war, calling it ‘the most senseless war in history’ (Yudin 2022), the majority of Russians, including the elite, did not believe that there would be a war in Ukraine (Volkov 2022). Indeed, Putin himself appears to have expected blitzkrieg rather than a war that unfolded instead, likely due to his advisors’ optimistic forecasts (Casey and Gunitsky 2022). Once the war was in full swing, both the regime and ordinary people in Russia had to adapt to the changes from uncertainty over a potential war (or the continuation of the war in Ukraine that started in the east of the country in 2014), to uncertainty over what the now ongoing war might bring about, which transformed into *routine uncertainty* as the war dragged on. This adaptation entailed adjusting beliefs and narratives about key terms such as “Russian world” and “Great Patriotic War” and history writ large that lie at the heart of meaning making in this context as these have been continuously redefined and repurposed toward narrow political goals (Savelyeva 2022).

For ordinary Ukrainians, on the other hand, the first days of this war were marked by *extreme uncertainty* over their own safety and in the longer term the Ukrainian regime’s survival as well as the very existence of Ukraine as an independent state.⁴

While Ukrainians had been divided on whether Russia would attack, according to the Savanta ComRes poll conducted before the invasion in February 2022, many prepared by practicing air raid drills, packing emergency evacuation bags, and even undertaking combat training (Rainsford 2022). Reports of the first days of the attack, nonetheless, document people's shock from the news of the Russian forces crossing Ukraine's borders: 'people in Kyiv, Kharkiv, Odessa and other parts of the country woke to the sound of large explosions and air raid sirens. In disbelief, they turned on their TVs and radios to hear news that an invasion had begun' (Kottasová et al. 2022). Many Ukrainians fled and hid in response, while others joined the full-on Ukrainian mobilization led by Zelenskyy, transforming extreme uncertainty into an opportunity to defend their country *en masse* (Onuch and Hale 2022).

Extreme uncertainty also characterized the beginning of the full-scale invasion for Ukrainian decision-makers despite the warnings of a looming Russian attack in its advance, which the Russian elite denied. Reports establish that US policy-makers actively shared intelligence about Putin's plans with the Ukrainian leadership months before the invasion. However, Zelenskyy and his aides remained publicly skeptical about these warnings, viewing them as speculative. They instead sought to avoid panic among the population, not least to prevent destabilization of Ukraine's economy: 'Every comment coming from the United States about the unavoidability of war was immediately reflected in the [Ukrainian] currency exchange rate,' Ukraine's foreign minister said (Harris et al. 2022). The invasion, and the extreme uncertainty that it brought about, dramatically transformed this stance and the activities of the Ukrainian leadership as Zelenskyy mobilized the Ukrainian population, having decided to remain in Ukraine himself, and called on Biden to seek support for Ukraine from the world leaders. With time this uncertainty, too, took a routine form as the war unfolded and became part of everyday life and politics in Ukraine.

Multiple layers of uncertainty have, thus, intersected during the first months of this war and different forms of uncertainty affected ordinary people, policymakers, and knowledge producers. Uncertainty also changed over time, sometimes in the course of days, as a result of evolving circumstances and transformation by the actors involved. The ontological extreme uncertainty brought about by the invasion has also had some generative effects – it brought Ukrainians from different walks of life in an unprecedented collective effort to determine the future of their country, reinforcing the Ukrainian identity both at home and abroad (Bubola 2022).⁵ The initial Western cohesion unseen since the Second World War was another generative effect.

In Russia, the ontological inherent uncertainty that characterizes Putin's regime may sow fear among activists and ordinary people alike, yet such uncertainty generates 'creative ways to express dissent,' even if from abroad (Dixon et al. 2022). And while uncertainty also sprouts denial in the political world, epistemic analytical uncertainty creates space for discussion as it forces analysts, scholars, and decisionmakers into conversations that may be otherwise too difficult to have. Epistemic practical uncertainty, due to the limitations it imposes on researchers or experts in the field, brings on new, imaginative solutions to the problems of data collection and personal safety. In the end, this may lead to 'a scientific culture

defined by resilience and creativity’ as Ukraine’s history of knowledge production reveals (Poskett and Shaw 2022).

Living with, and in relation to, uncertainty

One of the initial guiding questions for this volume was: Why don’t we see it coming? This question suggests predictability, and associated foresight, as a desirable side-effect of studying uncertainty. As noted earlier, we have since unearthed several more questions, presenting an image of uncertainty that is much more intricate than simple unpredictability. Yet, as part of our concluding remarks, we return to that pervasive need to anticipate surprising events, since many chapters in this volume offer relevant answers.

As scholars of global politics, we may simply be looking into the wrong places. We strive for certainty, regularity, and generalizability; we admire patterns and predictions that come true, and in the process, we forget or ignore uncertainty that entails profound limits for our knowledge and understanding and, therefore, unintended consequences of our actions, even those that are seemingly well intended. Political actors tend to misidentify and shape uncertainty for own purpose and that purpose may not align with the “collective good,” however defined. Individuals, including decisionmakers, are often paralyzed with indecision in the face of uncertainty and prefer waiting until more information becomes available. Uncertainty, thus, justifies inaction and who then stands to benefit from uncertainty is all those who prefer the status quo, no matter how exclusionary, unjust, or destructive it is.

The authors in this volume show us how we can collectively move away from rejecting to embracing uncertainty. Noakes as well as Krystalli, Tripathi, and Hunfeld argue that scholars of global politics ought to embrace uncertainty – adapt to it, make friends with it. Crucially, adaptability implies not simply responsiveness in the face of uncertainty but preparation and training (especially for early career scholars) that emphasize flexibility of project management. In turn, making friends with uncertainty implies critically reflecting on and unlearning how we have been taught to think about and respond to uncertainty. This way we shape new possibilities for knowledge production and coproduction, including in our classrooms (and collaborative efforts such as this volume), that are rooted in learning from feeling, experiencing, and embodying uncertainty.

While it often carries negative connotations, uncertainty may help create knowledge. Noakes argues that uncertainty may both hinder and further academic work and knowledge generation, but minimizing the former requires preparation, planning, and even reconsideration of pursuing particular research topics. Krystalli, Tripathi, and Hunfeld then ask us to consider: What do we sacrifice when we try to tame uncertainty rather than embrace it? Uncertainty is not necessarily a problem but a condition in which we exist, professionally and otherwise.

As scholars of global politics, we must reexamine what we take for granted, step outside of the boundaries of the discipline to learn more, and even stop demanding the completeness and clarity of explanation. Instead of “describe,

explain, and predict,” as traditional politics, and more specifically IR, theorizing urges us to do, we may want to explore the unfamiliar, rethink the established, and challenge the necessity of knowing, at least in some issue areas. In other words, we may want to live with, and in relation to, rather than against uncertainty.

Notes

- 1 The panels' virtual format stemmed from uncertainty over travel restrictions that the COVID-19 pandemic presented to our international group.
- 2 Such uncertainty also characterized Ukraine's and other states' leadership view of a potential attack, which, as Driscoll and Savelyeva note in their chapter, Putin denied.
- 3 Survey results, especially those produced in wartime, should be interpreted with caution. For an analysis of earlier surveys on approval for Putin before and after Russia's annexation of Crimea, see Greene and Robertson (2022).
- 4 Driscoll and Savelyeva touch on this in their contribution to this volume.
- 5 See also Nobel Lecture given by Nobel Peace Prize Laureate 2022 Center for Civil Liberties, delivered by Oleksandra Matviichuk, Oslo (10 December 2022), available at: <https://www.nobelprize.org/prizes/peace/2022/center-for-civil-liberties/lecture/> accessed 16 December 2022.

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