

## INTRODUCTION

*From Theory to Practice*

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### Situating This Volume

I recall that first time I proposed this volume to Aaron Javicas, now editor-in-chief of Temple University Press. He had contacted me via email prior to the American Society of Criminology (ASC) annual meeting in 2014 to set up a time to discuss my recent work and my future plans. Unfortunately, due to our schedules, we were only able to meet very briefly to discuss the growing interest of wildlife crime within the field of criminology. Fast-forward to a couple of weeks before the 2015 ASC meeting, and I received another email from Aaron. We were able to finally to have an actual conversation during this conference, and I laid out my vision for the volume. After I finished describing my proposal, I was surprised (and still am) that Aaron was on board with my ambitious goal. Before I provide a more “traditional” introduction to the contributions of this volume and to the authors, I feel that it would be appropriate to provide a glimpse into the impetus for this edition—similar to what I told Aaron. Note the following are primarily my own reflections and do not necessarily represent those who have contributed to this volume.

### *Criminology within Conservation Science*

The following volume is intended to be a modest contribution to the growing literature on wildlife crime. Although this volume also includes scholars from other disciplines, the majority of contributors are criminologists, crime scientists, and criminal justice scholars (for ease, I’ll simply refer to the collective as

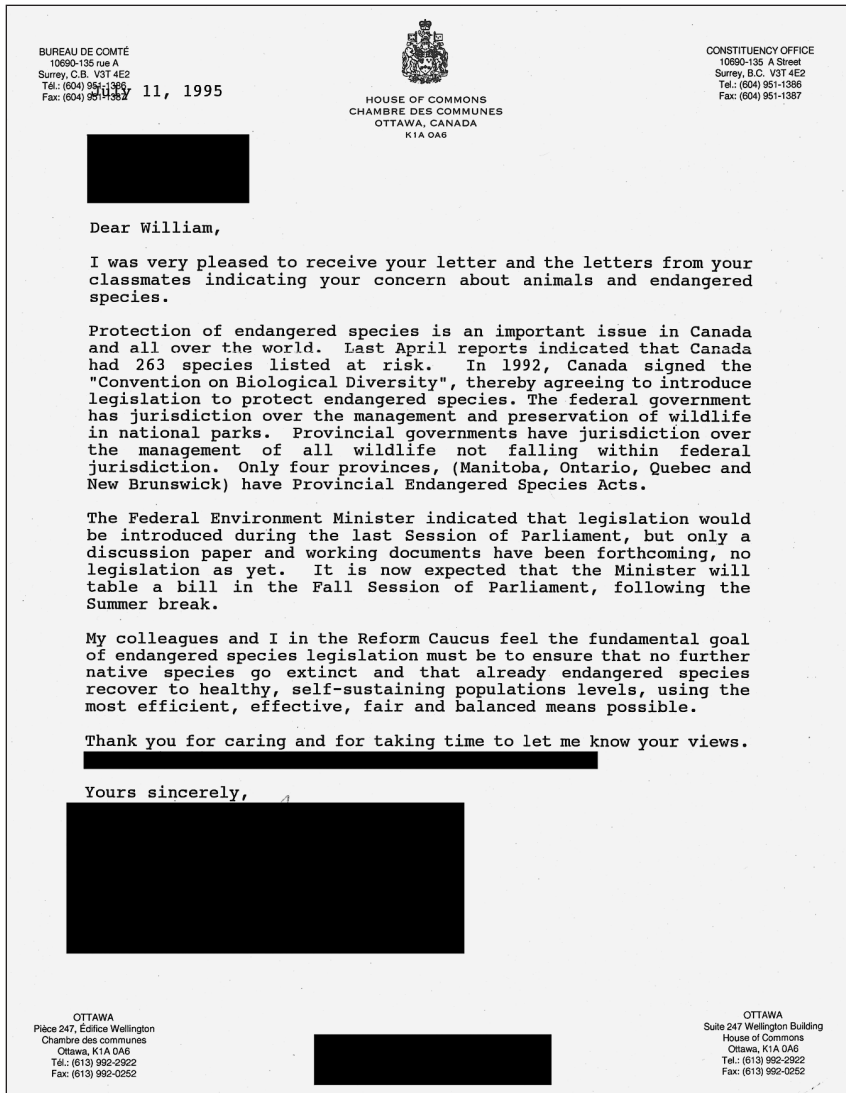
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“criminologists”). I admittedly reached out to authors with a background in criminology, crime science, and criminal justice to help solidify the explicit role of these fields in the study of wildlife crime and environment-related crime, in general. Indeed, while empirical criminal justice research on wildlife law enforcement can be found in the early 1980s (Charles 1982), the overwhelming majority of research on wildlife crime and wildlife law enforcement from criminologists has occurred within the past two decades. This is not to say that earlier research in other disciplines, including work done by sociologists (e.g., Palmer 1975; Bryant 1979), does not contribute to the foundation that current criminological scholarship is built upon (e.g., such work has been instrumental in the criminological assessment of animal abuse; Beirne 1995), but, rather, I focus attention on the more recent contributions by criminologists.

As I explain momentarily, this is because I believe that criminologists have a place within the conservation sciences. In other words, I dedicate a volume to the criminological study of wildlife crime situated within the broader scope of conservation. As such, this volume defines wildlife crime as “the illegal exploitation of the world’s flora and fauna” (Interpol n.d.), including the poaching and trafficking of wildlife species. This definition is used in order to narrow the focus of the book and does not include other important issues, including animal abuse (see Maher, Pierpoint, and Beirne 2017, for a comprehensive collection on the topic). Increasingly, social scientists have become more involved within the conservation sciences, however, compared to geographers, political scientists, and economists, criminologists have not yet been able to establish a strong foothold.

In my assessment, this is in part because of the general lack of interest in the topic or perhaps even the perceived lack of legitimacy as a research area within criminology. For example, when I was a doctoral student, I discussed my research interests with an established scholar and I remember them asking me: “Where do you intend to publish *that*?” Admittedly, I was also guilty of this perspective when I first started my doctoral studies. I myself did not enter my Ph.D. program with the intention of pursuing wildlife crime research. I became *professionally* interested in the topic because my mentor, Professor Ron Clarke, was interested in applying environmental criminology and crime science approaches to the study and prevention of wildlife crime. Although Professor Clarke’s interest in wildlife crime was sufficient enough for me as I (a) was interested in environmental criminology and crime science and (b) went to Rutgers School of Criminal Justice to work with Professor Clarke, additional factors solidified my decision to dedicate my research agenda to this area. First, the complexity of the issue piqued my interest as a developing researcher. Second, the lack of criminological attention provided an opportunity to contribute to the development of an under-researched topic.



**Figure I.1** A letter I received from my local Member of Parliament after expressing my concerns regarding animals and endangered species.

The final factor was *personal*. I have always been concerned with environment-related issues, particularly the extinction of endangered species. In fact, I even wrote a letter, along with some of my fellow classmates, to my local member of Parliament when I was in elementary school to voice my concerns about endangered species—my 11-year-old self even received a response (see Figure I.1). As an adult, I was familiar with criminological research ranging

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from serial sex offender decision making to restorative justice programs in aboriginal communities to graffiti artists' motives and motivations—in other words, fairly broad. But I knew nothing about wildlife crime.

As I soon learned (and am still learning), much can be gained in the study of wildlife crime from a criminological perspective, including the adaptation, extension, and testing of criminological concepts and theory. Simply put: criminologists are well suited in the investigation of wildlife crime since it *is* a crime. Discussions on the development and definition of specific activities as criminal, the sociopolitical and cultural context by which some activities are criminalized while others are not, the situational characteristics that result in crime opportunities, and the resulting strategies for prevention, punishment, and rehabilitation (to name a few) are all within the purview of criminologists.

Additionally, criminologists who study environment-related topics have tended to publish primarily in criminological channels rather than conservation-based outlets. In my opinion, however, criminologists need to publish in avenues beyond those in criminology, whether they be peer-reviewed journals or practitioner-focused magazines. This will help ensure that criminological research is viewed as an integral and legitimate aspect within conservation science. Fortunately, criminological research has increased in appearance in recent years within conservation outlets (e.g., Gore, Ratsimbazafy, and Lute 2013; Petrossian 2015; Moreto 2016; Moreto, Lemieux, and Nobles 2016; Moreto et al., in press; White 2016).

That was the first “hook” for the present volume: a volume that would be dedicated to examining wildlife crime, primarily from a criminological perspective. But there are other volumes that are similar in focus and scope. To differentiate the current volume from others, I wanted to develop a collection that crossed theoretical perspectives, incorporated explicit discussions on methodology, and provided an outlet for practitioners to contribute to. In sum, I wanted to develop a volume that addressed three “silos” I believe exist within the criminological study of wildlife crime.

### *Theoretical Silos*

Most volumes covering environment crime have originated from specific “camps.” Therefore, collected volumes often have similar underlying or overarching themes and often are developed to push forward a conceptual or ideological perspective. Moreover, editors are more likely to be familiar with scholars who share similar views and are therefore more likely to incorporate such work within their collections. This is evidenced by recent volumes operating from conservation criminology (Gore 2017), environmental criminology and crime science (Lemieux 2014), and green criminology perspectives (Beirne and South 2007; Brisman, South, and White 2016; Hall et al.

2017). I do not consider this to be inherently problematic. Indeed, an effective edited volume should display consistency in tone and demonstrate an appropriate flow among and between the chapters—I can only hope that this volume lives up to such expectations!

Unfortunately, this results in theoretical silos. Essentially, scholars become sufficiently familiar with work that adheres to their own theoretical and ideological perspectives, while ignoring, neglecting, or simply being completely unaware of the work of others. I admit that I myself am guilty of being intimately more familiar with work within my own silos (e.g., environmental criminology and crime science, and policing). This does not mean that I am not familiar with work from other perspectives, but, rather, I am focused on developing and utilizing a specific orientation in the study of wildlife crime.

Acknowledging my own bias while also being cognizant of the current academic landscape, I proposed this volume with the intent to bring together the main theoretical perspectives—green, conservation, and environmental—that have driven the study of wildlife crime within criminology into one collection. My hope is that the following collection will be useful not only for established scholars in the field but as an inclusive companion for students new to the study of wildlife crime. It is my opinion that each of the aforementioned perspectives provides a unique contribution to the study of wildlife crime. Moreover, each helps cover aspects of the topic that the other frameworks may not necessarily be tailored for or interested in. For example, environmental criminologists are known for focusing their attention on the spatiotemporal and situational (i.e., proximal) factors that influence crime events, while green criminologists are well versed in understanding the underlying sociopolitical, economic, and cultural factors (i.e., distal) that result in crimes and harms. Environmental criminology is associated with the applied, multidisciplinary field of crime science, while green criminology is often associated with critical, cultural, and radical criminology. In the end, each has a place in the study of wildlife crime and it would behoove those of us who study wildlife crime to be familiar with perspectives that do not necessarily align with our own (see also White, Chapter 3).

### *Methodological Silos*

To date, the majority of edited books covering environment crimes have focused on the presentation of theoretical and empirical works as opposed to an explicit discussion on methodology. Essentially, most edited volumes attempt to deliver a comprehensive overview of a topic rather than discuss methodological techniques. Again, this is not unexpected since detailed discussions on methods are reserved for research method textbooks. With that in mind, I believe there is considerable value in explicitly drawing attention

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to methods used to study wildlife crime. There are three main reasons I believe methods should be given more consideration: first, they provide researchers with an opportunity to “take stock” of quantitative and qualitative strategies that have been used, as well as nuances associated with conducting such research, including gaining access to agencies, organizations, or individual study participants, ethical considerations (e.g., institutional review board), and using novel analytical techniques.

Second, transparency in methodology may help bridge the gap between different perspectives, including more broadly the natural and the social sciences, thereby facilitating an environment that is interdisciplinary and multimethod (cf. Moreto 2017). In recent years conversation regarding the need to better understand the human dimensions of conservation science has highlighted the need for interdisciplinary scholarship, particularly the increased inclusion of the social sciences (Agrawal and Ostrom 2006; Adams 2007). Unfortunately, this is easier said than done. For instance, challenges associated with inherent differences in (and at times ignorance to) philosophical orientation and methodological approaches foster an environment in which it is difficult to assess and evaluate sound interdisciplinary research. One way to help counteract this reality is for “researchers [to] share their experiences with interdisciplinary research in practice,” which will result in “a wider body of knowledge for potential interdisciplinary researchers to draw on” (Campbell 2005, 576).

Finally, I believe detailed discussions on methodology within the scope of actual wildlife crime research provide an opportunity for students interested in the topic to see “the how and why” of the process. On a completely selfish level, I unabashedly must confess that I enjoy reading about the creative methods used by researchers to study a myriad of wildlife crime topics and I want this volume to include such reflections. On a more utilitarian level, I hope that by including explicit discussions on research methods the future generation of wildlife crime scholars will learn from the experiences of current researchers and will be able to develop their own innovative techniques.

### *Academic and Practitioner Silos*

The idea of a collected volume on wildlife crime initially came to me after I had conducted fieldwork in Uganda in 2014. I recall speaking with a number of commanders in the Uganda Wildlife Authority (UWA) and discussing their needs and the challenges they faced. Not surprisingly, they mentioned a number of practical, on-the-ground issues (e.g., lack of equipment) but rarely discussed the potential role of academia in helping with their daily operations. Notably, this fieldwork occurred after I had attended three sep-

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arate events dedicated to wildlife crime: the Wildlife Crime Symposium (hosted by the Rutgers School of Criminal Justice), the Wildlife Criminology Symposium (hosted by the World Bank), and Wildlife Crime Workshop (hosted by the University of Southern California). Academics, practitioners, government officials, and representatives from the private sector were in attendance. One question arose in all three events: “How do we bridge the gap between academics and practitioners?”

The following year, in 2015, I held a visiting fellow scholar appointment at the Netherlands Institute of Crime and Law Enforcement (NSCR). During a weeklong symposium with practitioners, academics, and the private sector, it became apparent that some of the most considerable problems in the study and prevention of wildlife crime were the varying (and at times incongruent) goals and objectives of stakeholders, challenges in establishing metrics for assessment and evaluation of interventions, and translating theory into practice. Since then I have presented at other events that brought together academics, practitioners, and public and government representatives, including former President Barack Obama’s Presidential Taskforce on Wildlife Trafficking and other proceedings hosted by the U.S. Department of Defense, U.S. Department of State, U.S. Special Operations Command, and Cornell University. Again, questions arose as to how to translate academia into practice.

These cumulative experiences (among a number of others that I will not further bore the reader with) solidified my belief that the bridge between academics and practitioners needed to be explicitly explored. In particular, practitioners’ viewpoints needed to be included and represented within academic circles. By doing so, scholars will be able to develop well-rounded “realistic evaluations” (see Pawson and Tilley 1997) by incorporating practitioner perspectives that would help draw attention to the context in which interventions are developed and implemented, understand the mechanisms that drive or hinder an intervention, and better interpret the subsequent outcome. In essence, incorporating the experiences and perspectives of practitioners will help contribute to the development of translational criminology (see Laub 2012; Sampson, Winship, and Knight 2013) and further provide a platform on which academics, especially those in the social sciences, can collaborate with practitioners within the conservation sciences.

It is important to note that it is not common to have practitioner perspectives in academic editions in criminology. This reality is not unexpected given that scholarly publications are not seen as pivotal for professional development for those “on the ground.” This lack of involvement may also be due to a lack of knowledge on how to contribute. Request-for-proposals may only be sent to academic mailing lists, organizations, or networks, which may not include practitioners. With respect to my academic colleagues who contributed to this



book, I admit that I was especially excited to have a part in this volume dedicated to practitioner experiences and practitioner-driven research.

## **A Brief Introduction to Wildlife Crime**

Before I introduce the different parts and chapters in this volume, I first provide a (very) brief overview of wildlife crime, specifically focusing on the drivers and resulting impacts. It is important to note that both the drivers and the impacts of wildlife crime are consistently addressed throughout the different parts of this book and what I present here is simply a teaser of what is to come. In general, there have been a number of different drivers identified within the literature, including the political economic perspective (Stretesky, Long, and Lynch 2014; White, Chapter 3), political motivation and rebellion (Naylor 2004), culture and tradition (Ellis 2013; Moreto and Lemieux 2015; Forsyth and Forsyth, Chapter 6; Leberatto, Chapter 7), supply and demand markets (Courchamp et al. 2006; Lemieux and Clarke 2009), and human-wildlife conflict (Treves and Karanth 2003), to name a few.

Like the factors that drive wildlife crime, the implications of such crimes are also wide ranging and can have considerable impact at the local, national, regional, and international level. Not surprisingly, much attention has focused on the ecological costs associated with wildlife crime, particularly as it relates to keystone species (Payton, Fenner, and Lee 2002). Moreover the potential introduction of invasive species (e.g., unwanted exotic pets like pythons) to environments that are ill-equipped to accommodate such species can also have devastating impacts on local wildlife populations and their habitats (Wyler and Sheikh 2008). Additionally, the financial losses associated with the poaching and illicit trading of wildlife can be particularly disadvantageous to local populations that could have economically benefited from such wildlife (Duffy 2010). Threats to public health and national security have been identified as well (Wyler and Sheikh 2008).

## **Introducing This Volume**

The present volume is divided into three parts: the first focuses on the theoretical foundations for the study of wildlife crime. The second centers on empirical and methodological developments in the study of wildlife crime. The third and final part offers practitioner perspectives from individuals with extensive ground-level experience. This volume is comprehensive in breadth and scope and includes firsthand experiences and research from a number of nations including China, Indonesia, Kenya, Madagascar, Morocco, Peru, Russia, South Africa, Tanzania, and the United States, to name a few. Additionally, the use of both qualitative and quantitative analytical strategies is demonstrated in this collection.



*Part I: Theoretical Foundations*

The first part begins with a chapter by Avi Brisman and Nigel South and provides an in-depth discussion on wildlife crime from both green and conservation criminology viewpoints. In particular, Brisman and South maneuver through the various nuances associated with different, yet interrelated, outlooks on wildlife crime, while highlighting the various characteristics associated with the dynamics of wildlife crime activities. Throughout the chapter the authors refer to a number of drivers that contribute to and perpetuate wildlife crime, including structural sociopolitical changes, traditional and cultural practices, poverty, and greed, among others. Notably, the authors provide a unique discussion on the role of emotions and passions as they relate to assessing wildlife crime from biocentric and anthropocentric approaches.

The following chapter is written by Gohar A. Petrossian and Nerea Marteache, and the authors utilize an environmental criminology perspective to examine illegal, unreported, and unregulated (IUU) fishing. Specifically, Petrossian and Marteache draw from concepts found in the crime concentration and rational choice perspective literature to provide a detailed overview and assessment of IUU fishing. In addition, the authors provide suggestions from a situational crime prevention approach for reducing or preventing IUU fishing.

Rob White follows with a chapter that explicitly addresses the theoretical silo mentioned earlier. In his chapter, White provides an overview of the strengths and limitations of three primary approaches in the study of wildlife crime: situational, contextual, and political economy. He then calls into question the perceived disjointed and even conflicting nature of these perspectives with one another. He concludes by describing avenues for compromise, as well as suggestions on how to approach wildlife crime from a collaborative and holistic approach.

The final chapter in Part I is written by Greg Warchol. Unlike the previous chapters, which provide an overview of established and well-known theoretical frameworks, Warchol introduces a new approach in the study of wildlife crime: theory of enterprise. Operating from this perspective, Warchol discusses the illicit ivory and rhinoceros horn trade and the potential involvement of organized crime as well as the facilitating role of corruption and globalization.

*Part II: Empirical and Methodological Developments*

The first chapter in the second part continues with an exploration of the illegal trade in rhinoceros horn and elephant ivory. Drawing from fieldwork conducted in South Africa and Tanzania, and supplemented by information obtained from several national- and international-level conferences, Louise

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Shelley and Kasey Kinnard provide an in-depth investigation on the convergence or intersection of wildlife trafficking and other types of criminal activity. The authors offer insight on trade dynamics and routes and the actors involved, as well as factors that facilitate the rhinoceros horn and elephant ivory trade, such as corruption.

The next three chapters are unique as they draw from ground-level interviews with individuals who are actually involved in wildlife crime. York A. Forsyth and Craig J. Forsyth draw our attention to the cultural historical context of poaching in Louisiana, in the United States. Reflecting on interviews conducted on poachers over a 26-year period, the authors apply two theories—Miller's Lower Class Culture and Gusfield's Culture Conflict—to demonstrate how offenders' justify and support their actions through personal and cultural expectations.

In his chapter, Antony C. Leberatto also provides us with insight on the perceptions of individuals actively engaged in wildlife crime. Based on formal interviews, informal conversations, and participant observations, Leberatto provides a detailed overview of the overlap between ecotourism, nature-based entertainment, and the illegal wildlife trade in Peru. Although the chapter is more empirical than methodological in its objective, Leberatto provides the reader with an engrossing discussion on the strategies he used to conduct research on multiple actors throughout the illicit market chain.

Next, Daan van Uhm outlines methodological considerations when conducting multisite research on the illegal wildlife trade. In this chapter, van Uhm provides the reader with thorough descriptions of his fieldwork in China, Morocco, and Russia. Having examined a number of different illegal trades, including caviar, Barbary macaques, and traditional Chinese medicine, van Uhm presents his experiences of gaining access to informants and study participants, encountering dangerous situations, and facing ethical dilemmas.

Meredith L. Gore, Gary J. Roloff, Alexander Killion, Jonah H. Ratsimbazafy, and Georg Jaster then deliver a unique methodological chapter guided from a conservation criminology framework. In their chapter, the authors advocate for the use of intelligence mapping in order to reduce conservation crime risk, specifically illegal rosewood logging in Madagascar. The authors detail their experiences using field-based participatory risk mapping as a means to gain a better understanding of the geospatial characteristics of illegal logging and present a methodology that other scholars can use to generate a nuanced exploration of space, vulnerability, and risk within the scope of wildlife crime.

In line with the prior methodological-focused chapters, Nicole Sintov, Viviane Seyranian, and Milind Tambe present their experience conducting ground-level wildlife security research in Indonesia. Accurately noting the

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challenges associated with the application of wildlife law enforcement patrol technology and issues that arise from technology adoption, resistance, and diffusion, the authors summarize their experiences on applying computational game theory and security games through a green security software referred to as PAWS (Protection Assistant for Wildlife Security). In particular, the authors detail how educational intervention may be useful in alleviating limitations associated with lab-to-field technological transitions.

### *Part III: Practitioner Perspectives*

The third and final part focuses primarily on practitioner-based experiences and practitioner-driven research initiatives. Keeping with the theme of technology from the previous chapter, Johan Bergenas offers his experiences attempting to develop and implement the use of technology for wildlife law enforcement initiatives in Kenya. Highly personal and engaging, Bergenas provides a distinct opportunity for readers to obtain some insight on the challenges, joys, politics, and realities associated with ground-level conservation initiatives.

Next, Madelon Willemsen and Rodger Watson present a discussion on utilizing a transdisciplinary approach to wildlife crime prevention. As I noted previously, there has been much discussion on the need to develop an interdisciplinary approach within the conservation sciences. In this chapter, Willemsen and Watson extend this discussion by differentiating between and arguing instead for a transdisciplinary approach in the study of wildlife crime. The authors contend that a transdisciplinary perspective is better situated to incorporate the needed divergent forms of thinking in order to reduce “wicked problems” like wildlife crime.

In the final chapter of this volume, Rohit Singh, Barney Long, and I present the preliminary findings from a practitioner-based study examining ranger perceptions of their occupational well-being and workplace conditions throughout Africa and Asia. Comprehensive in scale and scope, this study is the first of its kind and highlights the importance of research dedicated to examining front line protected area personnel. We also discuss the benefits of and the challenges associated with practitioner-academic collaborations and partnerships.

### **Concluding Remarks**

Let me end this introduction by first sending my sincere appreciation and gratitude to all the authors of this volume. As I wrote this Introduction, I kept referring back to the Contents of this book and I caught myself on numerous occasions surprised—nay, starstruck—at who actually agreed to provide a chapter to this edition. I am extremely humbled that you all not only

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contributed to this unique collection but took the time to develop and provide original manuscripts. I truly do hope you enjoy reading this collection as much as I have. To Ron Clarke, thank you for your continued guidance and mentorship. I also thank Aaron Javicas, Ryan Mulligan, Jamie Armstrong, Nikki Miller, Kate Nichols, Ann-Marie Anderson, and the entire team at Temple University Press for working with me throughout this entire process and for trusting my vision for this volume. I appreciated the feedback I received and the support you all provided. I would also like to thank the anonymous reviewers for their constructive and helpful feedback that led to a demonstrably improved product. Last, thank you to Jacinta and Ares for your love, patience, and understanding throughout this process. I appreciate you sharing me with this project.

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