

# Introduction

The figure of the master detective can be traced back at least as far as the late nineteenth century. Arthur Conan Doyle's character Sherlock Holmes could deduce the whole of an otherwise unsolvable crime by focusing his keen intellect upon a single trifle ("there is nothing so important as trifles"). Thus, from a flake of ash and the uneven wear on the heel of a boot, Holmes could conjure the criminal in vivid detail: "And the murderer? Is a tall man, left-handed, limps with the right leg, wears thick soled shooting boots and a grey cloak, smokes Indian cigars, uses a cigar holder, and carries a blunt penknife in his pocket. There are several other indications, but these may be enough to aid us in our search."<sup>1</sup>

Like magic. Sherlock Holmes introduced the use of tobacco ashes, fingerprints, serology, and printed type just as they were being accepted as legitimate techniques of forensic investigation. It is a matter of some debate whether Sherlock Holmes was more product or source of early crime science.<sup>2</sup> But what is beyond debate is that in the 134 years since Holmes first appeared in print, generations of investigators and super sleuths—real and imagined—have attempted to emulate his ability to solve crime using trace evidence, artifacts found at crime scenes, and reason. In fact, the admixture of such elements has become a cliché. Turn on any crime drama, and there is a good chance that you will see one or more determined detectives crack an impossible case by finding a single shred of evidence—an overlooked fingerprint, a hair, a drop



FIGURE 1. Sherlock Holmes examining a cane. Source: “The Hound of the Baskervilles,” *The Strand* 22, no. 128 (1901): 124.

of blood, or a micro-expression—from which the whole of the case is revealed. It is such a seductive narrative that the exaggerated power of forensic science has become enshrined in the public imagination. Fingerprints, DNA, lie detectors, offender profiling, and magnetic resonance imaging scans are all new forms of magic, unabashedly invested with the power to resolve even impossible-to-solve crimes. But like other forms of magic, crime science depends upon a suspension of disbelief.

## CRIME SCIENCE

We understand crime science to be a broad, encompassing, discursive formation. That is, we understand it as a framework constructed from statements, categories, and relationships between concepts, all of which produce criminalized behavior and render it comprehensible in particular ways. This discursive formation of crime science is not monolithic. Rather, it is “rhizomatic,” functioning as a conceptual grid that underpins a variety of seemingly unrelated offshoots: biological evidence, actuarial assessment, security technologies, and so on. Thus, crime science operates like an archipelago, in which a single formation connects a mountain range, creating what from above the water line appears to be a chain of separate islands. Most scholars focus on the individual islands (manifestations) of crime science, and there are excellent reasons for engaging in such heterogeneous critiques. But it is also crucial to examine the unifying characteristics that interconnect these islands and to identify the central ideological tenets of crime science.

The contours of crime science remain inexact, which is unsurprising since the term “lacks a standard definition.”<sup>3</sup> Nevertheless, it is possible to eke out a general meaning. Ronald Clarke distinguishes crime science (which is narrowly focused on crime reduction) from mainstream criminology (which is interested in understanding and explaining crime). In his view, criminology strives to understand the *why* of crime (the “criminal”), while crime science focuses on the *how* of crime (the enacting of crime). Whereas criminology attempts to prevent delinquency and reform offenders, crime science seeks to inhibit crime. Criminology concerns itself with long-term social reform, but crime science is interested in immediate crime reduction. Criminology views crime as pathological and opportunity as a secondary consideration (against preeminent distant causes); crime science views crime as normal and opportunity as the central cause. Clarke suggests that the constituent fields of criminology are sociology, psychiatry, law, biology, and genetics; the constituent fields of crime science are environmental criminology, geography, ecology, behavioral psychology, economics, architecture, town planning, computer science, engineering, and design. Criminology draws upon the talents of stakeholders in the criminal justice system, social policy makers, social workers, university teachers, and intellectuals. On the other hand, crime science builds upon the talents of police and the security industry, crime policy makers, architects, town planners, city managers, crime and intelligence analysts, and design, business, and industry.

Several aspects of Clarke's description of crime science are noteworthy: its similarity to environmental criminology; the focus on immediate crime reduction through deterrence and environmental design, the weight given to description rather than theory, the emphasis on opportunity, the prioritizing of victims of crime, and the partnerships with interests exogenous to the traditional criminal justice system (e.g., intelligence analysts, security industry officials, architects, product engineers, and business leaders). But defining crime science by contrasting it with mainstream criminology overlooks key elements that inform both approaches. For example, both mainstream criminology and crime science assume that "crime" possesses an ontological reality. That is, they assume that crime is an unproblematic thing that exists independently of social construction. Similarly, both criminology and crime science believe that crime can be controlled, reduced, and managed, and both believe that science and technology necessarily play a key role in the control of crime. Although some crime scientists posit that crime should be controlled through biological interventions (e.g., Lombroso), while others suggest it should be controlled through a rational, calibrated system of reward and punishment (e.g., Beccaria), there is near-unanimous agreement that crime can be, and should be, controlled. Therefore, instead of understanding crime science as a field that resides in opposition to mainstream criminology, we see it as subsuming most strains of criminology. Indeed, crime science is not merely one discourse among many. Rather, it occupies a place of prominence in our social, political, economic, and epistemic arrangements and has become the dominant narrative in matters of crime and punishment.

#### DISRUPTING THE DOMINANCE OF CRIME SCIENCE

Premised upon a seemingly unshakeable conviction that crime can be "solved" with the right mix of scientific knowledge and technical know-how, crime science spreads throughout social space. We become bound by a cultural environment saturated by the belief that society could be rid of crime once and for all if only we had better practical strategies and technologies. In this, technology is imbued with magical properties, fetishized. A seemingly endless array of technologies and devices is developed and introduced, promising to keep criminalized behavior at bay.<sup>4</sup>

Despite its (epistemic, cultural, political, social, and economic) authority, crime science rarely appears before us as a neatly encapsulated entity. Instead, it is broken up and scattered in various ways, akin to

scriptural writings not yet compiled into a single, canonical text. Nevertheless, it can be traced via its discrete domains or divisions, such as “biological,” “actuarial,” and, among others, “security” science. It is precisely through a critical examination of these fragments—that is, particular branches and criminological writings—that we interrogate crime science as a master discourse for framing criminalized behavior and for legitimating specific approaches concerning the control of crime.

By no means are we the first to call crime science into question. It has certainly been criticized and problematized by others. Much of the extant critique, however, tends to be piecemeal and focused on specific technological developments within crime science. Therefore, there is a tendency to ask and answer particular types of questions. Much of the existing scholarship adopts empirical methods to ask whether a technological strategy (or strategies) significantly reduces crime. Another common approach entails considering whether specific developments within crime science can be squared with legal-ethical principles.

The former mode of critique is most evident in sociological narratives, which often construe technologies as destined to failure because they leave intact underlying structural relations that are thought to engender criminal motivations. Such arguments have been leveled against closed-circuit television (CCTV), target hardening, and, among other technologies, risk assessment instruments that purport to predict future behavior.<sup>5</sup> The latter mode of critical analysis seems especially prevalent among legal scholars. For example, those interested in post-9/11 forms of surveillance, the rise of security as a private industry, broken windows policing, biometric identification techniques, and the like tend to focus on the effects on civil liberties and constitutionally protected rights, thereby calling into question the state’s legitimacy.<sup>6</sup>

These critical approaches to crime science are certainly important, and we draw from them throughout this book. Both modes are, however, limited in at least two ways. First, they tend to treat the relationship between a particular technology and its effects as the fundamental problem posed by crime science. In empirical sociological critiques, there is a tendency to assume that the desirability of any given technology hinges on the extent to which it reduces some type of criminal offending. In legal-ethical analyses, the acceptability of a technological strategy increases the more it can be brought into harmony with juridical principles. Common to both styles of critique is the tendency to elide the possibility that crime science is *the problem* with which we ought to be concerned. In other words, very rarely does one encounter a *general*

*critique of crime science*. Instead, there is a propensity to examine some particular piece of the puzzle. This is understandable, of course, given the need to critically interrogate the emergence of new frameworks and practices concerning crime control. Nevertheless, we believe that crime science is a distinct object, one that warrants analysis in its own right.

Positioning crime science as a master discourse, this book argues that it is replete with “performative effects.”<sup>7</sup> Writ large, two broad effects are discernible. First, crime science inscribes criminality in particular ways. Most notably, it locates criminality in or on the body, especially those bodies that are compelled to live life at the margins. As a corollary to this, one finds a refusal to inscribe criminality on institutions or sociocultural structures. Second, crime science is key to understanding the very conceptualizations of “crime” with which we operate, and thus the types of crime control practices that will come to be regarded as “normal,” “natural,” or “self-evident.” To be sure, particular manifestations of crime science have discrete performative effects, but such effects are comprehensible as variations on these two themes.

To critically interrogate crime science, we utilize three broad strategies. First, we focus on the imminent contradictions and inconsistencies that riddle crime science. There are many contradictions, but one of the most profound and recurrent concerns how the technologies that crime science advocates typically presuppose the inevitability of what are regarded as self-evident manifestations of crime or criminal behavior. Often the technologies of crime science necessitate—and can only be further developed by—the persistence of the very crimes they promise to address. Biometrics such as fingerprinting and DNA profiling, for example, evince the first of these tendencies. Both require the construction of databases, tools to gather samples from crime scenes, matching techniques, and so on. But rather than eradicate crime, they must wait for it to transpire in order to be of practical utility. The prediction instruments associated with actuarial science aptly demonstrate the second tendency. Improving the accuracy of prediction requires more “data points,” such as recorded instances of crime or recidivism among those paroled from prison. This, however, is exactly what the instruments are supposed to prevent.

Second, and notwithstanding frequent assertions that it is value-neutral, grounded in the prescriptions of “objective science,” and so on, we explore how crime science is ultimately complicit with power asymmetries. This complicity is often embedded in its imminent contradictions, but it can also be discerned in the crime control practices it

endorses. Its primary objective is the regulation of what are perceived to be undesirable behaviors and practices in light of contemporary socio-political relations. Crime science is enlisted to serve the interests of those with wealth and power; to that end, it assists in the violent subordination of marginalized groups. This is akin to the engineer who hopes to develop a device that can trap carbon emissions but refuses to question the logic of manufacturing cars en masse and the normalization of automobile dependency. In this, crime science fails to entertain alternative narratives, especially those in which crime is understood as a product of defective social relations or a signifier that actively constructs our sense of reality.<sup>8</sup> On some occasions, it goes out of its way to disqualify such alternatives.<sup>9</sup> These latter narratives—sociological and constructivist—are not easily reconciled, but both operate from political standpoints that suggest different practices for the controlling of “crime.”

Third, we focus on the many and varied performative effects with which crime science is awash. Crime science inflects important concepts with new meanings or substantively reworks them. Sometimes, fundamental concepts and principles of justice are more or less made redundant. Ethically, if not legally, questionable practices are instantiated. To provide some brief illustrations of these tendencies, DNA technologies impact understandings of “beyond reasonable doubt” in legal contexts and the meanings attributable to other forms of evidence. In our view, DNA fractures the notion of beyond reasonable doubt, thereby skewing the public’s sense of when and where relative certainty in legal judgments is necessary. Furthermore, biotechnologies can sap the power from important legal concepts. DNA dragnets, for instance, are antithetical to “probable cause” and “freedom from self-incrimination.”<sup>10</sup> Risk prediction, especially when it is used in the context of informing the length of prison sentences, cannot but mean that an individual’s freedom is unjustifiably sacrificed. Were it not the state sending the individual to prison, such practices would readily be framed as “false imprisonment,” or perhaps “kidnapping.” On a related note, crime science often relocates behaviors under the rubrics of “crime” or “deviance.” In this sense, rather than eradicate crime, it actively creates new classes of criminal behavior. The Transportation Security Administration’s (TSA’s) criminalizing of jokes about bombs and weapons at airport security checkpoints evinces this possibility.<sup>11</sup> And, as we explore in chapter 2, some developments in DNA technologies construct as deviant those who insist upon the importance of civil liberties and rights.

Despite such limits, crime science remains popular and will be very difficult to dislodge. Much of its appeal resides in its ability to foster the preservation of contemporary power arrangements—arrangements that much of the public is ideologically invested in. Crime science panders to this. It also receives widespread support because it is able to draw from cultural narratives in which “science” figures as objective, efficient, and capable of mastering the natural world. On a more mundane level, it also occupies a prominent place in our epistemic universe because it can be exploited for economic profit. Somewhat ironically, the public may be heavily invested in crime science, but it is not well served by it. People are effectively asked to invest through taxation in a series of strategies and technologies that cannot deliver what they promise. In terms of society’s most marginalized members, crime science tends to reinforce, if not cement, their permanent exclusion from social life.

#### THE STRUCTURE OF THIS BOOK

The discourse of crime science is explored through five substantive chapters. Chapter 1 serves two important functions. It begins by charting some of the major positions in the debate over discourse and articulates the sense in which we deploy it to interrogate crime science. The focus is on radical constructivism, successor sciences, situated knowledges, and constitutive criminology.<sup>12</sup> All of these frameworks center discourse as an analytic category but push it in different directions. We suggest the possibility of a “suspended constructivism,” which would operate from the zones where the aforementioned frameworks overlap. In short, we are wary of the flight into “relativism” or efforts to return to “objectivity,” preferring to work from the premise that discourse and practice are always mutually embedded.

The second part of chapter 1 describes the fundamental tenets of crime science. We map the broad parameters of crime science through an examination of Cesare Beccaria and Cesare Lombroso, two figures who are regarded as central to the emergence of criminological thought. Beccaria and Lombroso are often pitted against one another. They theorize crime in different ways, and their views on the purposes of punishment are, to say the least, disparate.<sup>13</sup> Given such divergences, they have imparted to criminological thought two distinct theoretical legacies. But despite their differences, Beccaria and Lombroso have much in common. These shared views can be regarded as the basic contours of crime science, and by excavating them from what are typically regarded as

competing accounts, we seek to show that although there are disagreements within the world of crime science, such oppositions can coexist within a single, overarching logic.

To be more specific, we employ Beccaria and Lombroso to show that the logic of crime science is constituted by three core tenets. First, crime is accorded ontological status and, from here, can be understood to follow from some defect in human nature. For Beccaria, it is the human capacity for reason; for Lombroso, it is something amiss in human biological makeup. Second, both figures fetishize technology and construe it as holding the solution to crime. We use *technology* in quite a broad sense to refer to the practical application of “scientific” knowledge. Beccaria suggests that a comprehensive body of laws—applied in objective or “mechanical” ways—will resolve crime problems; Lombroso posits that a scientific taxonomy of criminal types can be discerned and subsequently used to control individual offenders. Finally, both figures accept the state as a legitimate wielder of the power to punish. They thereby fail to interrogate the power asymmetries within which behaviors are constructed as criminal and regulated.

Chapter 2 begins our examination of what could be described as more particular, discrete offshoots of crime science. It examines bio-forensics and the renaissance of biological criminology.<sup>14</sup> Concerning the former, two specific technologies occupy center stage: fingerprinting and DNA profiling. The fingerprint is undoubtedly one of the most fetishized objects within crime science. It has successfully been constructed as unique to every individual and infallible as crime scene evidence; comparing fingerprints on file with those retrieved from a crime scene is generally regarded as a scientifically objective, and thus unerring, procedure.<sup>15</sup> DNA profiling has emerged in recent times as a “superior” biometric relative to fingerprints. Much like the fingerprint, it has quickly come to be surrounded by an aura of infallibility.<sup>16</sup>

But fingerprint and DNA technologies are far from “magic bullets” that will solve crime problems. As we suggest, they are plagued by contradictions that undercut the promises they make. Rather than eradicate the behaviors that they treat as self-evidently criminal, bio-forensics must “lie in wait” for them, their practical utility generally restricted to retroactive interventions.<sup>17</sup> Bio-forensics is also inconsistent in its assumptions about human reason. Inasmuch as bio-evidence is employed prospectively to deter criminal activity, it assumes a rational actor. These rational actors, however, are very possibly also rational enough to use countermeasures to defeat bio-forensics. And when

bio-forensics operates retroactively, it assumes an irrational actor: individuals who engage in crime despite a bio-surveillance infrastructure. Of course, assuming an irrational actor undercuts the notion that bio-forensics possesses deterrent value.

Concerning their relation to power asymmetries, the databases associated with bio-evidence are inevitably developed within specific socio-historical relations. As such, the profiles that they contain are skewed by class and race dynamics, which not only limits their practical utility but, more disconcertingly, intensifies control over marginalized populations. The nexus between bio-forensics and power asymmetries is further revealed when one considers how the former intersects with the legal notion of “beyond reasonable doubt.” Most notably, DNA evidence implies that particular standards for establishing guilt can govern those cases in which it has some utility, while other standards—typically well below the thresholds associated with “scientific truth”—can be applied elsewhere. Rather than “scientize” criminal justice, as some scholars have argued, the effect of this is to treat as tolerable erroneous findings of guilt in cases deemed “less serious” because DNA evidence has no bearing on them.<sup>18</sup>

In the latter part of chapter 2, the focus shifts to biological criminology, especially its most recent renaissance under the name “biosocial criminology.” Here we chart four equivocations endemic to biosocial criminology and how these correspond to, and thus reproduce, power asymmetries. Equivocation (or profound logical inconsistency) is discernible across biosocial criminology’s fundamental categories and axioms, such as “crime,” “victimization,” the relationship it posits between science and society, numbers and their objectivity, and “adaptation.” The problem of equivocation can be illustrated briefly with the notion of “victimization.” Biosocial criminology argues that victimization entails experiences that interfere with one’s ability to survive and reproduce. As such, “murder, rape and theft of resources” are inherently evil crimes.<sup>19</sup> Yet when it must be conceded that genocide and slavery fit this definition of crime, and that they have been committed by whites against Black people, new definitions are suddenly proffered. Slavery becomes “odious” but not necessarily “criminal.”<sup>20</sup> Black victimization is denied by consigning it to history and a pathological refusal to transcend the past. In short, white criminality is repressed to ensure the erasure of Black victimization.

The rise of actuarial science is the focus of chapter 3. Purporting to accurately predict future events on the basis of large data sets, actuarial