“Integration” has assumed a central role in criminological discourse. There are at least four types of integration – of theories (e.g., social learning and social control), methods (e.g., qualitative and quantitative), levels of analysis (e.g., neighborhood and individual), and disciplines (e.g., psychology and sociology). The majority of integrative efforts in criminology have aimed at the first type, the integration of theoretical models derived from classical schools of thought on the causes of crime – almost always sociological. Some oft-cited attempts at theoretical integration in this realm include Elliott, Ageton, & Canter (1979), Messner, Krohn, & Liska (1989), and Braithwaite (1989). In recent years the multi-level integration of data across levels of analysis has also come on strong, especially in the form of contextual analyses that purport to estimate “neighborhood effects” on individual behavior (for a review, see Sampson, Morenoff, & Gannon-Rowley 2002).

Despite the seeming consensus that integrative modes of inquiry are important, there is still no consensus approach and it is hard to identify concrete new discoveries or significant breakthroughs in criminology that have been made in the name of integration. Put simply, the benefits for knowledge remain largely a promissory note. Why is this so? A main reason, of course, is that the task is enormously difficult. Even in the so-called “hard sciences” integration is hard to come by – it takes lots of time and effort so there is no reason to expect a fast payoff. Indeed, efforts to create research collaborations that are truly interdisciplinary in practice are notoriously fraught with conflict. Another and perhaps more fundamental reason, however, is conceptual: criminology lacks an accepted and general theoretical structure for guiding integrative inquiry into the causes of crime. By this we do not simply mean adding up

1 A number of independent observers have come to the same conclusion on the general lack of progress with respect to integration in criminology, especially of the theoretical variety. See, for example, Kornhauser (1978), Hirschi (1979), Reiss (1986), Laufer & Adler (1989), Farrington (1993), and Jensen & Akers (2003).
theories “end to end,” formulating a specific hypothesis that combines prior theories, or even the implementation of an integrative method. Consider the increasing attention to “multi-level” integration. Most efforts in this area have simply taken the form of combining data across ecological levels and performing (often sophisticated) hierarchical statistical analyses rather than making concerted theoretical attempts to link individual behavior to higher-order contexts. Or take the more common approach to theoretical integration that consists of setting out to combine theories of delinquency that invoke contradictory assumptions. As Hirschi (1979) has astutely noted, it is not clear that we have advanced if we pretend to integrate what is fundamentally incompatible.

Recognizing these pitfalls, we seek to advance knowledge by providing a unified and focused approach to the integration of knowledge. Rather than attempting a Noah’s Ark theory that integrates anything and everything on the one hand, or that operates within the confines of a specific discipline or level of analysis on the other, we decided to concentrate intently on three key concepts – context, mechanisms, and development. We specifically argue that criminology lacks a coherent conceptual structure that systematically links social context and individual development with a theory of causal mechanisms. As explicated further in the pages to follow, we view a causal mechanism as explaining why a putative cause brings about an effect. Explicating mechanisms is largely a theoretical task because it involves positing a plausible process (often unobservable) that connects cause and effect through social action (Coleman, 1986; Bunge, 2004). According to a mechanism-based approach most correlates (or “risk factors”) of crime are in fact spurious associations that denote markers rather than represent mechanisms that actually cause a particular social action. It follows that an important task, one undertaken in this volume, is to evaluate known correlates for their potential as representing causal mechanisms in relation to the production of crime. As motivation, consider that the correlation of contextual characteristics (such as the concentration of poverty) with levels of criminal offending has been documented in criminological research for at least 300 years. Yet the causal mechanisms that link contextual features to the development of acts of criminal offending are poorly understood.

In short, this volume aims to advance integrated scientific knowledge on crime causation by bringing together scholarly approaches to causal mechanisms that operate across multiple social contexts and individual

[2] However, the Editors have recently conducted some tentative work with this aim (Wikström & Sampson, 2003; Wikström, 2004, 2005).
development. Eschewing the preset and typically rigid analytic boundaries that dominate most criminological studies, the contributions to follow range all the way from genetics at the level of individuals to family environments to situations to ecological behavior settings to the macro-level context of communities and social systems. The disciplinary backgrounds of authors include not just the usual suspects like sociology and criminology, but also neuro-psychology, theoretical physics, and the philosophy of science. Rather than a cacophony of incompatible sounds, however, the contributors attempt, each in their own way, to come to terms with how their approaches contribute to our understanding of the causal mechanisms that link social context to individual development. Before describing this threefold approach and its manifestation in the individual chapters, we turn to a brief description of the volume’s intellectual backdrop, followed by its organizational structure.

**Intellectual background**

The intellectual origins of this book can be traced to a pair of conferences held in Sweden in 1992 (Farrington, Sampson, & Wikström, 1993) and 1994 (Wikström, Clarke, & McCord, 1995) that posed as their main problematic the integration of levels of explanation in criminology (i.e., the linking of knowledge about individuals and their environments to the explanation and study of crime). The fundamental idea was to bring together scholars from different disciplines and research orientations within disciplines in order to promote interaction and thinking outside the box, with the hope of stimulating advances in cross-level theory and research on the causes of crime. In particular, it was felt that there was a need for greater interpersonal interaction and intellectual debate among scholars representing approaches that typically do not converge.

This idea was carried forward in 2002 with the establishment of the Cambridge-based international research network SCoPiC (“Social Context of Pathways in Crime”; see http://www.scopic.ac.uk/). The network includes researchers with an unusually diverse set of disciplinary backgrounds. SCoPiC finances new research, aims to stimulate cross-disciplinary collaboration among the members, and organizes workshops and conferences to address both theoretical and methodological problems in the integration of knowledge about crime and its causes. There is a strong continuity between the Swedish conferences and the work of the SCoPiC network. Indeed, many of the international scholars who participated in the two Swedish conferences are also part
Organization of the book

The chapters commissioned for this volume were asked to address one or more of the three key themes introduced above: the role of (i) social context, (ii) individual development, and (iii) the mechanisms (processes) by which social context and individual development interact to explain acts of crime. In Chapter 1, Bunge begins with a general approach to social context by criticizing the dominant individualistic and holistic approaches to the explanation of social phenomena such as acts of crime. He demonstrates their respective philosophical underpinnings and shortcomings and advances instead a systemic perspective that may serve as a fruitful basis for cross-level knowledge integration. Bunge also deals with the important problem of establishing causal mechanisms and as such provides an important philosophical background to some of the more specific discussions of the problem of causation and explanation dealt with by many of the other contributors. As an “outsider” to criminology we believe Bunge brings a fresh perspective to systemic thinking about mechanisms and explanation in the study of crime.

Bunge’s orienting framework is followed by three chapters that focus on a particular level of explanation and its role in crime causation – the **community context** (Sampson), **situations** (Wikström), and **genetics** (Moffitt and Caspi). Sampson (Chapter 2), building on his Theory of Collective Efficacy, explicates the social mechanisms that link community context to its level of crime. He specifically argues that to understand the impact of community context on individuals we first have to understand community social processes – and develop measurement schemes thereof – on their own terms. He also advocates a “counterfactual” approach to establishing causation.

In Chapter 3, Wikström presents advances in his Situational Action Theory of Crime Causation and discusses the situational mechanisms that link individuals and settings to their action, by engaging the literature on theories of action. He argues that without a proper understanding of situational mechanisms we cannot fully explain the influences of social context and development on moral actions like acts of crime. He champions an analytical approach to the identification of causal mechanisms and experimentation as the principal method of establishing causation.

Moffitt and Caspi (Chapter 4) address the disentanglement of genetic and environmental effects on behavior, promoting the study of their
interaction, and focusing particularly on behavioral genetics as a method to establish environmental effects on antisocial behavior. They argue that without a proper consideration of the influence of genetic factors it is difficult to prove conclusively the existence of environmental causation. It is rare that criminologists interested in social context consider genetics, much less a behavioral genetic design as a way to improve our estimation of the pathways through which social context operates.

The following two chapters focus on the role of individual development. In Chapter 5, Loeber, Slot, and Stouthamer-Loeber present a new strategy for organizing knowledge about key correlates of antisocial behavior by age and domain. They advocate the importance of the development of cumulative risk and promotive factors in the explanation of developmental pathways in antisocial behavior and crime. In doing so, they stress the significance of dose–response relationships and the relative proportions of risk versus promotive factors for behavioral outcomes. They present a technique to visualize the relationship between cumulative risk and promotive factors and developmental pathways, which they argue has promise for the understanding of how antisocial behavior unfolds in different environmental contexts.

Le Blanc (Chapter 6) builds on his Integrative Multilayered Control Theory, and presents an approach to the problem of developmental mechanisms that draws heavily on the chaos order paradigm. He specifically argues that this perspective, described in detail in his Chapter, offers new ways of thinking about the probabilistic nature of development and its relationship to deviance. He also integrates self- and social control theory across multiple levels of analysis and links them to the developmental mechanisms implied by chaos theory.

One of the most topical, but under-researched, areas in developmental criminology is that of desistance. In the final chapter of the book, Bottoms takes on this important problem. He engages with some key literature on agency and explores how this concept can add to our understanding of processes of persistence and desistance in crime involvement. Bottoms’ engagement with some theoretical approaches on agency goes well beyond the traditional terrain of criminology and points to new insights on adult offending.

Coda

Although the SCoPiC network has the common agenda of promoting cross-level knowledge integration in the study of crime, members of the network clearly differ in their analytical approaches to how to theoretically and methodologically best achieve this goal. In the end, however, it is
only through critical discussion of these different analytical approaches and the empirical testing of competing ideas that we will learn more about the causes of crime – precisely what the Network aims to encourage.

Similarly, the contributors to this volume do not all necessarily agree, nor do we as Editors necessarily agree with the arguments in each and every chapter. Our overarching motivation is to stimulate new thinking and interdisciplinary engagement around the common intellectual goal shared by all authors and, we hope, readers – the need to better understand the linkage of context, mechanisms, and development. As Karl Popper (1983: 7) reminded us, what matters most in scholarly debate and ultimately scientific progress is not shared initial content but the shared wish to know and the readiness to learn from criticism. It is our hope that the fruits of this process, as reflected in the Swedish and SCoPiC conferences, and the published contributions herein, will push the boundaries of future research in unanticipated and novel ways.

References


Introduction


1 A systemic perspective on crime

Mario Bunge

Crime is the most harmful and yet the least understood of any kind of deviant behavior. A possible reason for this is that it comes in very many shapes, from plagiarism to fraud, from deception to betrayal, from shoplifting to corporate swindle and from homicide to mass murder. Another reason for our limited understanding of crime is the traditional view that it is a sin to be punished rather than prevented. This retributive attitude, rooted in the primitive desire for revenge, blocks both the search for crime mechanisms and the design of effective prevention and rehabilitation programs. Furthermore, it makes crime an exclusive subject for psychology, the law, morals, or religion, and thus it isolates criminology from the social sciences and technologies instead of placing it squarely in their midst.

The social sciences, in particular anthropology, social psychology, sociology, and history, teach us several important lessons about crime. One of them is that there are many types of crime besides theft and homicide. For instance, there are environmental crimes such as pollution, political crimes such as the suppression of dissent, and cultural crimes such as ideological censorship. Another lesson is that whoever is really interested in reducing the delinquency rate, instead of waging vociferous but ineffective “wars on crime,” should try and uncover the causes of crime with a view to redesigning social policies instead of focusing on punishment, particularly since the traditional jail has proved to be a school of crime. That is, we should try and unveil the crime mechanisms. And there must be several such mechanisms since there are several kinds of crime.

In the following I shall sketch the systemic alternative to the traditional social philosophies, suggest a typology of crimes, comment on some criminological hypotheses, and propose a model to explain the differences in the rates of small-scale crimes across cultures. It will also be noted that, fortunately, criminology is quickly becoming half

I thank Per-Olof Wikström and Michael Kary for helpful advice, as well as Dedos Brujos, the pickpocket with whom I shared a Peronist jail, and who taught me that some criminals are better men than their judges.
A systemic perspective on crime

inter-science and half social technology. Whether policymakers will take this progress into account remains to be seen.

**Systemic alternative to the traditional social philosophies**

Since crimes involve at least two persons, they are social facts. And all social facts involve people embedded in social networks that are in turn included in society at large. These are of course platitudes, yet they are at variance with the two traditional social philosophies, namely individualism and holism. Indeed, the individualists, like Max Weber, insist rightly that social facts result directly or ultimately from individual action. But they regard institutions only as placing constraints on such action: they deny the very existence of the social systems where every social fact happens. By contrast, the holists, like Emile Durkheim, regard individual action as only a reaction to pressures exerted by society as a whole: they are right in stressing the social embeddedness of individual action. But they deny personal initiative and responsibility, and they minimize the effectiveness of agency. Thus, as has been said, whereas the individualist person is under-socialized, the holist one is over-socialized. Hence individualists and holists are bound to regard social deviance, in particular crime, in very different lights. Indeed, whereas individualists tend to blame exclusively the offender, his character, education, or perhaps even his genes, holists tend to blame only society, and to regard the victimizer as only a victim.

The consequences of these two philosophies for social policy design are quite different: whereas the individualist criminologist will recommend correction exclusively, the holist is likely to propose social reforms with disregard for personal problems and habits. I submit that, while each of these two extreme social philosophies has a grain of truth, both miss the central truth, namely, that every individual, even the hermit, belongs at once to several social systems, such as family, network of friends and acquaintances, firm, club, gang, school, religious congregation, political party, or what have you. This explains why every social action elicits some reactions that propagate along several networks: “with the complex interaction that constitutes society, action ramifies. Its consequences are not restricted to the specific area in which they are intended to center and occur in interrelated fields explicitly ignored at the time of the action” (Merton, 1976: 154).

In other words, an individual’s actions cannot be understood without considering the systems of which he is a part, just as these cannot be understood except as being composed of individuals who maintain, reinforce, or weaken the bonds that keep them and others in their
systems. In other words, individual and society, or agency and structure, are simply two faces of the same social coin. In particular, the law-breaker is both victimizer and victim. Hence crime management should involve social reform and rehabilitation programs as well as social control, both formal and informal. In short, there are neither stray individuals nor social systems towering above individuals.

Regrettably, talk of social systems evokes some embarrassing memories, namely the holistic excesses and verbal acrobatics of Hegel and, closer to us, those of Talcott Parsons and his followers, in particular Niklas Luhmann, Jürgen Habermas, David Easton, and Erwin Laszlo. Therefore, I hasten to clarify that I favor a non-holistic notion of a system. This is the clear concept used in mathematics, the factual (“empirical”) sciences, and engineering. In all of these fields, a system is conceived of as a complex object, concrete or abstract, composed of interrelated items, and possessing some (systemic or emergent) properties absent from its constituents. A classical example is that of a body of liquid water, whose macro-properties, such as fluidity and transparency, are not possessed by its constituent molecules. Likewise, a nuclear human family consists of the spouses and their children, and it possesses the emergent properties of cohesiveness and harmony, of being a household and the primary locus of child-rearing and socialization, and of counting as a single entity for others.

Given the large number of kinds of system, as well as the dense fog surrounding much of the systems-theoretic literature, it will be convenient to adopt a general and fairly clear model of a system.

The CESM model of a system

When faced with the task of describing a system, one starts by asking the following four questions. What is it made of (composition)? What surrounds it (environment)? Which are the bonds that hold it together (structure)? How does it work (mechanism)? This is why the simplest model of a concrete system $s$, whether atom, cell, family, or what have you, is what I call the CESM sketch:

$$
\mu(s) = <C(s), E(s), S(s), M(s)>,
$$

where

$C(s) = \text{Composition} = \text{Collection of the parts of } s$;

$E(s) = \text{Environment} = \text{Collection of items, other than those in } s$, that act or on are acted upon by some or all components of $s$;

$S(s) = \text{Structure} = \text{Collection of relations, in particular bonds, between components of } s \text{ or between these and things in the environment};$