



# General Theory and Global Criminology: Childhood Environments, Problem Behaviors, and a Focus on Prevention

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## Abstract

General theories of crime and delinquency are tested in part by their ability to explain the empirical findings of cross-national research. Systematic research using comparable survey methods provides a rich body of data from many countries and settings that inform such tests. There are several aspects of the general theory proposed by Gottfredson and Hirschi (1990) that facilitate the idea of global criminology which, coupled with this growing research literature, support the idea of general theories of crime. These include use of a “crime-free” definition for dependent variables, disciplinary-free assumptions about human nature, appreciating the distinction between propensities and events in crime theory, incorporating the burgeoning empirical literature from many disciplines stressing the importance of childhood environments and self-control, and focusing on recent successful prevention efforts. A set of research needs stimulated by modern global criminology are also proposed.

**Keywords** Self-control theory · Childhood · Comparative criminology · Global criminology · Prevention · General theory of crime

## Introduction

To be valid, a general theory of crime and delinquency must be applicable to diverse settings, people and times, including differing societies, populations, and cultures (Gottfredson and Hirschi 1990, pp. 169–179). Not only must a general theory be able to account for correlates

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about crime and delinquency in diverse settings and times, but its principal causal assertions must find broad empirical support from research methods that are consistent with its logic and internal structure. The ever-increasing, substantial body of empirical criminology from around the world provides essential data to test the claims of our theories to generality and to measure the extent to which they reduce the complexity of the empirical world. Consequently, the theoretical significance for criminology of cross-national research has never been stronger.

It was at one time fashionable in criminology to argue that cultural differences in definitions of crime, in social structure, and in language preempt the possibility of a global criminology.<sup>1</sup> However, such arguments now need to confront the substantial body of empirical criminology from Asia, Europe, North America, and elsewhere showing consistency in many correlates of crime and delinquency, despite considerable variability in levels of crime, delinquency, and related problem behaviors, and despite important society-specific effects for some problem behaviors. When the structure of correlates is examined using comparable methods, many principal correlates behave similarly, and some major factors nominated by causal theories do so as well (Vazsonyi 2003; Vazsonyi and Huang 2010; Vazsonyi et al. 2018; Vazsonyi et al. 2004). As Liu (2009) has noted, research on patterns of crime and correlates has produced a large literature in international and comparative criminology and indicates that many findings appear to be general, in the sense that they are found by comparable methods in many nations. As a consequence, theoretical positions about the causes of crime, regardless of the source, can be said to be tested by their ability to predict these patterns and by their ability to offer credible accounts of the significant findings from comparative research.

To agree that theories claiming to be general theories of crime *must accommodate valid research from different societies, times, and places* is not to deny the importance of the differences in levels of crime and delinquency among countries, nor the differences among countries in the specific behaviors that are violations of criminal laws, nor even that there are substantial cultural factors that influence some causes of crime and delinquency. It is to say, however, that none of these circumstances presents theoretical barriers to a valid general theory, because none of them are inconsistent with the implications of every theory of crime. Comparative research does have very significant challenges, including development of consistent and valid indicators in each society tied to theoretical concepts, important issues of sampling comparability, and consistency in measurement techniques for dependent variables.<sup>2</sup> There is considerable variation in the availability and quality of “official” measures for crime and delinquency and everywhere these measures include substantial social/political considerations for their collection and dissemination. Indeed, “... the way political and legal systems deal with crime varies across time and place due to fundamentally different definitions, processes, and political climates that affect both definitions and process” (Vazsonyi 2003, p. 191). The burden for a useful theory of global criminology is to provide dimensions of the theory enabling general explanations *despite* these important research challenges.

What is clear is that to truly be a *general theory*, a theory should be capable of accounting for the established correlates and systematic causes of crime and delinquency globally. The scope of a theory is one essential element in judging a scientific theory’s value (along with such dimensions as validity, parsimony, and internal consistency). Testing our theories,

<sup>1</sup> See for example Vazsonyi’s (2003) telling critique of Christie’s remark (1970) that comparative criminology often turns “...out to be a waste of both time and money” since crime data can only be useful to understand systems of control rather than behavior and Newman and Ferricuti’s (1980) argument that crime is so culturally relative and context specific that universals are not possible.

<sup>2</sup> These challenges are comparable to the challenges for empirical criminology whether comparative or not.

whatever their source, against the high-quality research throughout the world is, thus, an essential feature of criminology's search for explanation.<sup>3</sup> In fact, as Liu (2009) has also noted, “[d]iversity presents difficulties, but also advantages and opportunities” (p. 5). Such diversity is not simply an impediment to scientific work; rather it presents “... indispensable opportunities to develop modern criminology” (Liu 2009, p. 5).

Not only does research about correlates of crime inform general theory, but comparative policy work also provides important evidence about the generality of theory, since most general theories make clear predictions about the extent to which various state sanctions can be expected to affect the use of force and fraud to pursue individual interests. That is, clear predictions about the effectiveness of policies about crime and justice can provide additional evidence about a theory's validity (Gottfredson 2006, 2013). For all these reasons, as Vazsonyi (2003) convincingly argues, “... cross-national comparative criminology is not a particular branch or subdiscipline of criminology; it is criminology itself” (p. 204).

In describing our own general theory, we have been explicit about its ambitions for global criminology: “*In the context of the theory ... the claims for self-control are quite strong. As a general cause, it should predict rate differences everywhere, for all crimes, delinquencies and related behaviors, for all times, among all groups and countries ... In the context of the theoretical system within which it was developed, it should have direct effects and it should help interpret other major correlates of the dependent variable*” (Gottfredson 2006, p. 83, emphasis added).<sup>4</sup> All truly general theories must, and sometimes do, make similar claims (Wikström 2011; see the discussion in Messner 2015).

## Some Advantages of General Theory for Global Criminology

The question, then, for modern, global criminology is not whether such science is desirable, it is how best to advance it. With respect to control theory, it might prove useful to explore some of its features considering the objectives of global criminology. These features might also help ameliorate some of the conceptual difficulties often encountered by researchers engaged in the important science of comparative study and the construction of general explanations for delinquency and crime. Some advantages for comparative criminology consistent with our general theory include:

- A “crime-free” definition of “crime” for criminology.

<sup>3</sup> The once common view that a global criminology is inconsistent with the nature of crime derives, in part, from an historical idiosyncrasy in the development of American criminology—the dominant position of cultural, subcultural and structural strain theories in sociological criminology for much of the twentieth century. “Culture conflict”, the “subculture of violence”, and a dominate strain theory that emphasized strain associated with pursuit of the “American dream” as the principle causes of crime, all emanating from American sociology, provided little incentive to seek basic causes that transcend legal and culture-specific explanations. Control theories make contrary assumptions (Gottfredson and Hirschi, 1990) and finds evidence of the validity of these perspectives in the American context lacking.

<sup>4</sup> It is necessary to add the emphases about the context of the theory to these quotations, since reviewers sometimes miss the importance of evaluating a theory's claims in their context—in this case, our definition of crime and of self-control and the multiple causes of crime stipulated by our general theory. Some reviewers of the theory who are less careful about the nature of theory miss-cite the theory's claims (e.g., self-control is the “sole cause of crime” or that we argue that self-control “*completely explains* all crime,” ideas clearly inconsistent with our presentation of the theory).

- A disciplinary-free assumption about human nature pertinent to crime and related problem behaviors.
- A truly cross-disciplinary focus on problem behaviors, a focus that facilitates integration of accumulated evidence not only from sociology or criminology but also from education, health, economics, and psychology concerning the critical role of early childhood environments.
- The growing recognition of the importance of self-control in avoiding problem behaviors and enhancing lifelong successes across disciplines and across societies.
- The growing recognition of the importance of characteristics of events or settings as causes of crime. In our general theory, we characterized this as the distinction between crime and criminality (Hirschi and Gottfredson 1986; Gottfredson and Hirschi 1990). The distinction is at least implicit in research on opportunity theories and situational crime prevention, which study the event causes of crime. Research that studies both is important, but not common (see Wikström 2010, 2011).
- The accumulated evidence from policy research about the extraordinary benefits of focusing on childhood factors for the prevention of problem behaviors. In contrast to reliance on state sanctions for crime control, prevention research presents fertile ground for comparative research.

## A Crime-Free Definition of Crime

Comparative theory has long been plagued by what may be termed a “false theoretical problem”—the lack of identical criminal laws, both among societies and within societies over time. There is no doubt that criminal laws do differ among societies and do differ within societies over time. What is not axiomatic is that such differences preclude the validity of general theories of crime. The idea that cultural or temporal variability in legal definitions of crime make a true theory of global criminology impossible begins with the familiar lament that “what may be against the law at one time or place may not be against the law at another time or place.” This “problem” was based on the disciplinary idea that crime is *merely* a sociological construct.<sup>5</sup> Under this view, criminology is reduced to efforts to explain differences among societies in what is defined as illegal, to socio-political scholarship or the sociology of law, rather than the more ambitious goal of searching for general constructs capable of accounting for behavior that harms others by pursuit of self-interest, wherever it occurs.

This assumption of seemingly infinite variation on legal definitions has often been presented as a roadblock to global scientific criminology. Variability in legal systems is, of course, indisputable. Examples are commonplace: just recently, personal use of cannabis was removed from the criminal law in some US jurisdictions; firearms laws differ among countries and between the various states in the USA; new forms of fraud are added to criminal laws as technologies and interaction patterns change and develop; market behavior is encouraged in some countries and made difficult in others; age of criminal responsibility differs among

<sup>5</sup> In American criminology, the most famous and influential statement of this supposed limitation was Edwin Sutherland, in his *Principles of Criminology* (1939). The idea that cultures differentially define crime is translated by such theorists into the idea that “culture,” as defined by this theory, must therefore be the principal cause of crime, a conclusion that substitutes the demands of a discipline for the demands of science (see, e.g., Gottfredson and Hirschi 1990). It is more likely that the absence of a belief in or commitment to a culture, including belief in a set of moral prescriptions, is a cause of crime rather than commitment to different cultures.

countries and so on. This variability has led some to conclude that definitions of crime must be *merely* social constructions. But there are many problems with a singular focus on violations of the criminal law as the object of our behavioral science theories, in relegating the critical theoretical task of selecting the proper domain for criminology simply to the study of political systems or a single discipline.

For present purposes, it is only necessary to note that this is a “problem” that is readily overcome, simply by increasing the level of abstraction for our dependent variable to include problem behaviors that satisfy the demands of a general theory. Vazsonyi (2003) frames the problem well when he notes that we need a conceptualization of crime and deviance that transcends historical periods, geographical boundaries, and different groups within national contexts to avoid tying our work to particular laws or legal systems. One solution to this problem is to adopt behavioral terms, not legalistic ones. The pursuit of near-term self-interests in light of subsequent negative consequences (by the state, or the school, or even from family or friends) can qualify—it will include much of what every criminal law system includes, as well as problem behaviors that are not criminalized but which have negative long-term consequence for the actors and, ultimately, society. All societies have such prohibitions, even if societies do vary somewhat in terms of what are regarded as collective interests and even if the opportunities for such behaviors vary considerably among societies. Similar behaviors can be studied cross-nationally, despite variation in legal codes. Control theories assume that general features of all societies will seek to ameliorate a common set of problem behaviors, including but not limited to the use of force and fraud to fulfill self-interests, when such acts incur harm to others. Societies seek to reduce the incidence of such conduct, according to control theory, to advance the collective welfare and to enhance individual liberties (Beccaria 1764; Bentham 1798).

Behaviors that provide present satisfactions, but which have longer term negative consequences, is a fitting definition for criminology for many purposes. Most legally defined crimes and delinquencies satisfy this definition, as do many other problem behaviors that often are not violations of criminal codes (but are harmful to longer term self-interests, such as school attendance and avoidance of substance abuse). This more abstract, but more inclusive definition, is, according to control theory, a proper subject matter for criminologists. Thus, we have argued that what criminology needs is a different, non-legal definition for the object of our causal work, a “crime-free” definition of crime (Gottfredson 2011). Once liberated from the constraint of a disciplinary definition of our study, cultural variability in laws and rules is no constraint to scientific criminology.

## A Disciplinary-Free Assumption About Human Nature

A further advantage of control theory as a source of global criminology is the reliance of control theory on the classical assumptions of choice and rationality. Unlike some criminological theories, control theories share with other behavioral sciences the assumption of human rationality as a guide to action, coupled with the assumption of pursuit of self-interest. That is, the theory assumes the pleasure principle drives much human behavior—in the main, all people seek to maximize pleasure and avoid pain via their decisions and actions. Of course, self-interest is not the same concept as selfishness (since acts of altruism or self-less helping of others can readily provide the actor with approval from others that is satisfying) nor is the self-interest assumption employed by control theory an assumption that people are naturally bad or

immoral (as is sometimes misconstrued in summaries of the theory). The theory requires no special motivation for crime and delinquency other than the general pursuit of personal gains and avoidance of pains that are built into the acts themselves.

All of the motives for human action thus can and are motives for delinquency and crime, as is the desire to avoid experiences seen as unpleasable *by the actor*. This desire to avoid unpleasant consequences of acts includes sanctions by the state, restrictions or unpleasant experiences in everyday environments (such as schools and the disapproval of valued parents, family, teachers, and friends). The desire for pleasure can include approval for altruistic behavior. Such acts, by definition, provide the actor benefits of the admiration and affection of those he or she cares about. As a result, there is nothing difficult about incorporating acts of selflessness or altruism into the choice model of behavior.

The rationality assumption is sometimes misconstrued or caricatured in depictions of control theory (not all acts appear to be rational by an independent balance of risks and rewards, errors in rationality are commonplace, and so on) or simply by ignoring research on the variety of pleasure and pain mechanisms. For modern control theories, including our own, the concept of rationality is the same as employed by modern theories of opportunity in criminology. As Clarke (2018) puts it, in his description of situational crime prevention:

“(o)ffenders always seek to benefit themselves by crime even if the choice is heavily “bounded” by limitations of information, by emotion, by drugs or alcohol, and by a host of other factors that result in offenders making less-than-optimal decisions. This is the theory of “bounded rationality” ... that underpins behavioral economics and many other social sciences ... , including environmental criminology. It implies that most offenders are much the same as everybody else.”

For present purposes, it is clear that by incorporating these classical-school assumptions control theory helps to construct a culture-free definition for criminology, one that sees some major constraints on human conduct everywhere as springing from some common sources (Gottfredson 2006). Specific acts that are considered to be consistent with self-interests are, in part, determined by culture and social norms, such that across societies the definitions of social harm and of collective interest vary to some degree. Intentional harm to others without defense or excuse for personal gain is a common image of crime, even as “defense” and “excuse” have cultural and legal expressions that vary among societies. The specific behaviors that are included as delinquency or criminal can vary and so too can the forms of formal and informal sanctions. At the same time, unrestrained pursuit of self-interest that harms others by force or fraud is problematic in all societies and each seeks to prevent it, through a combination of social (informal) and formal (legal, religious, or institutional rule-based) controls. These assumptions allow for a general theory based on classical principles to find application everywhere—at least that is the claim of the theory. They similarly allow a concept of “problem behaviors,” defined by a cluster of acts each of which satisfies momentary self-interest, but which also carry subsequent harm to self and to others, whether or not they are violations of the criminal laws. It also allows for an understanding of why these problem behaviors correlate across individuals according to levels of self-control.<sup>6</sup>

<sup>6</sup> As Moffitt et al. (2011) put it, “The need to delay gratification, control impulse, and modulate expression is the earliest and most ubiquitous demand that societies place on their children...” (p. 2693); Duckworth (2011) writes, “...the capacity to govern ourselves effectively in the face of temptation has profound benefits across every major domain of life functioning” (p. 2640).

## A Cross-Disciplinary Focus on Problem Behaviors, Early Childhood Environments, and Self-Control<sup>7</sup>

The inclusion of problem behaviors into our “crime” construct has two distinct, but related, additional advantages. It allows us logically to incorporate a substantial body of empirical work from education, public health, psychology, and economics directly into criminology. It also permits inclusion of many studies into criminology with research designs that are among the strongest available, including true experiments with random designs and active manipulation of the independent variables. They thus offer designs with fewer threats to validity from selection and the need for “statistical controls” than do passive observational studies with repeated measurements (i.e., the common “longitudinal design” favored by some developmental criminologists) which frequently end up with highly ambiguous findings.<sup>8</sup> It also fosters the study of delinquency early in life, *well prior to the time that variations in legal systems could impact behaviors*, thus enabling a truly cross-cultural, cross discipline criminology unimpeded by cultural differences in definitions of delinquency and crime.

The correlation between early childhood problem behaviors and crime (including violent behavior) later in life is one of the longest standing findings from systematic delinquency research (see, e.g., Glueck and Glueck 1950; McCord and McCord 1959; Robbins 1966). This relationship is reported regularly in studies from a variety of disciplines (for summaries, see Farrington 2003; Gottfredson 2006; Gottfredson and Hirschi 1990; Hirschi 1969; Loeber and Dishion 1983; Loeber and Stouthamer-Loeber 1986; Olweus 1997). Studies documenting this effect are found in laboratory-based research in psychology (e.g., Mischel et al. 1988; Tangney et al. 2004), in criminology (e.g., Hirschi 1969; West and Farrington 1973), in recidivism studies (e.g., Laub and Sampson 1993; McCord and McCord 1959), and longitudinal research (Farrington 2003; Glueck and Glueck 1950; Moffitt et al. 2011; Robbins 1966). Family variables, ranging from family structure, to child-parent bonds, and parental styles of supervision, monitoring, and affection are found to predict problem behaviors in every form of design, method of measurement, and in samples from around the world. Because of the extensive research base, family variables are listed as key variables to be explained by control theorists (Gottfredson 2006, pp. 86–91), general strain theorists (Agnew 2015), and developmental researchers (Farrington 2003).

The research on family factors is consistent with a growing appreciation for the role of self-control in predicting problem behaviors, beginning at a relatively young age. Our own definition of low self-control (Gottfredson and Hirschi 1990) refers to the tendency to pursue short-term benefits for actions that have subsequent negative consequences and was derived from examination of delinquency and crime as actually revealed in systematic research. This definition also provides the associated benefit of focusing our attention on a wide range of behaviors that are in many respects similar to delinquency and crime (and which satisfy this definition), thereby allowing us to incorporate into our science the results of high-quality empirical research from allied disciplines. If the same definition is applied across many life circumstances, we can readily see that many behaviors can be characterized in same way: high self-control predicts school success (avoid truancy, do homework, sit still in class), better

<sup>7</sup> Portions of this section draw upon my articles in the Oxford Encyclopedia of Criminology and Criminal Justice (Gottfredson 2018) and the Cambridge Handbook of Violent Behavior and Aggression (2018).

<sup>8</sup> For recent evidence of how these problems can affect conclusions in criminology, see Skardhamar 2009; Skardhamar et al. 2015.

health outcomes (follow medical instructions, exercise, eat right, avoid smoking), higher income (stay in school, go to job every day, on time, avoid delinquency), more stable interpersonal relations (commitment to others), and fewer accidents and victimization (use seat belts, do not speed, do not drive intoxicated, do not text while driving).

The evidence about the role of childhood environments and parenting for the development of self-control is strong from research ranging from education to economics. As Heckman reports (2007): “The recent literature on ... preference formation...establishes causal impacts of parental inputs and other environmental factors on ... noncognitive skills .... These skills are important determinants of educational attainment, crime, earnings, and participation in risky behavior ... evidence on the importance of early environments on a spectrum of health, labor market, and behavioral outcomes suggests that common developmental processes are at work” (p. 13250). Heckman (2007) infers from the empirical evidence that these “noncognitive abilities .... have *direct effects* on wages (controlling for schooling), schooling, teenage pregnancy, smoking, crime, performance on achievement tests” (emphasis added: p. 13250). Systematic reviews of empirical work from criminology, economics, education, and psychology and from many countries support these conclusions (e.g., Baumeister and Heatherton 1996; Botchkovar et al. 2015; Caspi et al. 1998; Cho 2017; Cho and Wooldredge 2016, 2018; Cunha and Heckman 2007; de Ridder et al. 2012; Duckworth 2011; Engel 2012; Gottfredson 2006; Hirtenlehner and Kunz 2017; Junger and Tremblay 1999; Junger et al. 2001a, b; Kim et al. 2018; Kobayashi et al. 2010; Lu et al. 2012; Moffitt et al. 2011, 2013; Schulz 2006; Tangney et al. 2004; Vazsonyi et al. 2015; Weng and Chui 2018).

In fact, the concepts of self-control and self-regulation are now among the most widely researched perspectives in several fields, from psychology and public health to education and criminology. A good example of longitudinal research that investigates these connections is provided by Moffitt and colleagues (Caspi et al. 1998; Moffitt et al. 2011) from their 40-year study of a birth cohort of 1000 children in New Zealand. With multiple measures of self-control measured several times throughout life, they concluded that self-control predicted financial situation, substance abuse, general health, and criminal convictions as adults, something that they refer to as the “lifelong impact of early self-control.” Duckworth (2011) summarizes these findings in this way: “... self-control measured ... during the first decade of life predicts income, savings behavior, financial security, occupational prestige, physical and mental health, substance use and (lack of) criminal convictions ... in adulthood ... Remarkably, the predictive power of self-control is comparable to that of either general intelligence or family socioeconomic status” (p. 2639).

Several systematic meta-analyses of the role of self-control in predicting delinquency and crime have found very substantial support in the empirical literature. Pratt and Cullen’s (2000) widely cited study examined research selected for rigor published between 1993 and 1999. This included 21 studies and 49,727 individual cases. They concluded that their estimated effect size “... would rank self-control as one of the strongest known correlates of crime”, and that “... future research omitting self-control from its empirical analyses risks being misspecified” (Pratt and Cullen 2000, p. 952). The recent study by Vazsonyi et al. (2017) substantially updates the Pratt and Cullen study and includes a larger number of qualified studies, published between 2000 and 2010. A total of 99 studies with over 200,000 subjects were included. They found random effects mean correlation between self-control and crime and deviance of .415 for cross-sectional studies and .345 for longitudinal studies (design difference was not significant). The strongest effects of low self-control in their study were

discovered for “general deviance” ( $r = .56$ ) and for physical violence ( $r = .46$ ). They conclude their study of some of the best available research,

“... provided strong and convincing evidence, based on about 100 cross-sectional and longitudinal studies, that a strong link between low self-control and deviance or crime exists and that it does not greatly vary across modes of assessment, across study designs (cross-sectional versus longitudinal), across measures of deviance, across different populations within the United States, *but also across samples across cultures*” (Vazsonyi et al. 2017, p. 30, emphasis added).

This research on the development and consequences of self-control in numerous disciplines and for a range of life experiences yield critically important implications for criminology. The research evidence about the consequences of self-control differences established early in childhood being a strong predictor of positive life outcomes suggests that it is an essential element in a general theory for global criminology. DeLisi (2005) has argued that “Empirically, the relationship between low self-control and various antisocial outcomes has been nothing short of spectacular” (p. 91).<sup>9</sup> These results provide connectivity among diverse disciplines, the opportunity for shared empirical results, and suggest profound policy implications.

The growing recognition of the critical role of self-control for life chances and success results in a strong claim for the concept of self-control that is disciplinary-free.<sup>10</sup> The definition of low self-control used in our general theory is fully applicable to a wide range of problem behaviors studied in public health, economics, and psychology<sup>11</sup>: “It is the tendency of individuals to pursue short-term gratification without consideration of the long-term consequences of their acts. Furthermore, people with this tendency will appear to be impulsive and risk-taking; they will be relatively indifferent to the interests of others and relatively unconcerned about delayed punishment, whatever its source. Because crime transcends national boundaries, criminality does the same” (Gottfredson and Hirschi 1990, p. 177). In other words, our theory expects the same concept to help explain delinquency and crime in global contexts. To date, researchers have found strong reason to agree and find self-control “... one of the most prominent and most researched theories of crime causation in international contemporary criminology” (Hirtenlehner and Kunz 2017, p. 37). Self-control has been shown to be one of the most robust correlates of a wide variety of measures of crime, deviance, and violent behavior. As stated by Hirtenlehner and Kunz (2017), “In the empirical literature, low self-control has been established as one of the best predictors of deviant and criminal activity” (p. 37).

<sup>9</sup> Among the outcomes predicted by self-control, DeLisi (2005) includes failure in family relationships, dating, attachment to church, educational attainment, and occupational status; risky traffic behavior; work-related deviance; having criminal associates and values; residing in a neighborhood perceived to be disorderly; and noncompliance with criminal justice system statuses; drinking alcohol; substance abuse; smoking; gambling; violent, property, white-collar, nuisance offending, and victimization (p. 91).

<sup>10</sup> Ren et al. (2018) have pointed out that the concept of self-control is common to both Chinese and Western societies. They note that self-control plays a major role in Chinese society “... in that the ongoing exercise of self-control for a common cause lies at the very core of Confucian philosophy” (p. 170).

<sup>11</sup> Our concept of self-control was derived from the properties of crime and differs somewhat from definitions commonly used in psychology for self-regulation or so-called “executive functions” that are sometimes adopted in criminology. For arguments about the merits of our definition over others, including the ideas of “criminality” and of “conscience,” see Gottfredson and Hirschi 1990, pp. 87–88. The definition we adopted for self-control is similar to the construct now employed by some economists who study the relation between personal characteristics and these same problem behaviors. Heckman (2006, 2007) invokes the idea of self-control for studies of educational success and its impact on other life skills, sometimes referring to self-control as part of his concept of “non-cognitive skills” (sometimes he refers to “character skills”).

## Theory-Sensitive Self-Report Surveys and International Victimization Surveys<sup>12</sup>

The creation and refinement of surveys measuring self-reported problem behaviors and victimization over the last 40 years is clearly one of the most significant advances in criminology permitting high-quality comparative work in the causation of crime and delinquency. Just as these developments have enhanced our ability to understand the meaning of official data about crime, they have at the same time provided a wealth of high-quality research findings in diverse settings on the correlates of delinquency and crime around the world. The important innovations and advances in sampling, instrumentation, and conceptualization of both indicators of delinquency and crime and of causal theories is nothing short of breathtaking. From early, tentative, studies of the ability to gather self-reported behavior on delinquency to the national and international level victimization studies, the provision of high-quality survey data has advanced criminology, and comparative criminology, immeasurably.

Once envisioned as tools principally for delinquency studies in limited settings or, in the case of victimization surveys, as a means to seek validation for official measures of the amount of crime, self-report studies of offending and victimization now provide strong evidence about global criminology. From individual studies that use surveys to test theories of crime in one or more countries at a time, to the international victimization and self-report surveys (Enzmann et al. 2018; Junger-Tas et al. 2012; Marshall and Enzmann 2012), global criminology now has developed enormous capabilities to test the validity of general theories of crime with data designed to provide relatively comparable information. Although the challenges of measurement and of sampling remain significant, and although there are ample reasons to be concerned about the comparative validity of the *absolute levels* of crime and victimization described in these surveys (for analyses of this issue, see Enzmann et al. 2018; Marshall and Enzmann 2012; Marshall and Maljevic 2013), these tools have significant implications for how we understand the major facts about crime and delinquency in comparative settings. And because these survey methods have been employed in many countries with diverse cultures and legal rules, they have very important implications for causal theories.

One methodological decision in the design of these surveys that has been of enormous importance to criminology is the adoption of common-sense, incident-based behavioral descriptions of crime and delinquency. This feature (pioneered in victimization surveys, where the technique is commonly used) allows flexibility in the creation of dependent variables and strips them from the traditional, narrow focus on legal or moral acts. As such, this method facilitates connections among otherwise seemingly widely disparate problem behaviors and enables comparisons among groups with differing legal or cultural ideas of delinquency and crime.

Survey methods have tremendous ability to measure the “event” side of causal theories so critical to assessing the validity of general theories of crime. Goods, victims, opportunities, and services vary from time to time and across societies and are among the most important explanations for rate differences across societies. The nature and frequency of interactions outside the home or the confines of other social institutions is among the most important factor in adolescent delinquency. International self-report surveys document fundamental facts about delinquency and victimization which transcend the various societies. These common facts

<sup>12</sup> Portions of this section draw from my preface to the book presenting results from the third international survey of self-reported delinquency (Enzmann et al. 2018).

about victimization, crime, and delinquency surely must now command the attention of valid scientific explanations. Just a few examples: they underscore the important role of parents, schools, gender, and peers everywhere; they reinforce the image of versatility of problem behaviors, of the victimization/offending connection, and the importance of settings in which delinquency tends to more frequently occur.

An excellent example of using surveys in comparative research for this purpose has recently been provided by Vazsonyi et al. (2018), in their test of routine activity theory with data from the international survey of self-reported delinquency. The study is important, not just for the use of systematic data across 28 countries, but for the method of analysis. The data, for teens, uses school samples with a common instrument and includes standard etiological questions about family, peer, school, and leisure-time activities. The self-report instrument as well as the set of independent variables has been subject to excellent methods work and the instrument is carefully crafted to allow examination of well-selected policy and theory questions. The Vazsonyi et al. study (2006) examined how cultural context conditions the link between routine activities and adolescent deviance across the 28 countries, using “person-context analysis.” Their findings are consistent with the routine activities theoretical framework, with a role for culture in a sample with highly variable levels of delinquency and crime, as well as for the role of a set of control variable (including self-control), across diverse samples, supporting the importance of the idea of “person-context” in cross-national work (see Vazsonyi et al. 2006, 2001 for discussion of person-context methods; for a study of both personal and situational effects, see Cho 2017).

Surveys of delinquency, crime, and victimization that use self-report methods to explore global criminology are certainly not without limitations. Some of these are limitations inherent in asking respondents to report on their own behavior and experiences and the differential validity associated with respondent characteristics. Methods research indicates that “...the idea of a survey that guarantees confidentiality is interpreted and understood very differently in different cultural contexts” (Enzmann et al. 2018, p. 66). Nevertheless, cross-national self-report studies attendant to these limitations also show that “... self-report survey items can play a central part in theory-testing that does not require precise volume estimates of crime” and that “... they can usefully differentiate between people who are more, or less, prepared to engage in offending” (Enzmann et al. 2018, pp. 66–67).

## **Characteristics of Events as Causes of Crime: Propensity/Event Theory and Situational Crime Prevention**

Findings from international self-report studies remind us that crimes and delinquencies are events—that they require for their occurrence both propensities of the offender or delinquent (or an individual disposed to act in ways that facilitates delinquent acts) and also “targets” and “opportunities.” This distinction, between crime and criminality, made both obvious and important by contemporary research, may go a long way in helping to understand the between-society differences found in crime data. Because the situational causes of crime—the distribution of goods, victims, interpersonal interactions and opportunities, and services—vary substantially from time to time and across societies, they are very likely important causes of variation in crime, delinquency, and victimization across societies. For our own general theory, both people and situations matter a great deal:

“In our theory, crimes have minimal elements over and above their benefits to the individual: for example, they require goods, services, victims, and opportunity, elements that do vary from time to time and place to place and therefore do much to account for cross-national differences in the rate at which crimes are committed . . . .A major factor affecting cross-cultural crime rates is of course the absolute quantity of goods or people available for theft or victimization. Fortunately, again, crimes require more than individual tendencies for their performance. They also require goods, victims, physical abilities, and the absence of threats of immediate punishment (Gottfredson and Hirschi 1990, pp. 177–179).

Research findings that in many ways are consistent with the ideas of self-control theory are provided by studies of situational crime prevention. According the Clarke (2018):

“Central to this enterprise is not the criminal justice system but a host of public and private organizations and agencies—schools, hospitals, transit systems, shops and malls, manufacturing businesses and phone companies, local parks and entertainment facilities, pubs and parking lots—whose products, services, and operations spawn opportunities for a vast range of different crimes.”

Research from a variety of countries that has studied the consequences for crime reduction attendant on efforts to alter opportunities or elements of situations that enable delinquency and crime provide a good complement to the work on self-control. The list of situational factors that help explain crime is growing; in addition to routine activities of adolescents, it includes factors that range from making criminal events more difficult, to enhancing supervision, and making targets less attractive. Studies of the effectiveness of such strategies are, in effect, validation studies of the theory underlying the situational crime prevention programs. Freilich and Newman (2018) provide a catalog of these techniques and review research consistent with them.

Of course, differences in self-control are themselves predictive of individual differences in opportunities as they are associated with daily activities and settings. Untangling selection from the opportunities themselves is a challenging and sometimes a forgotten element of situational crime studies. As Wikström et al. (2018) have demonstrated with data from Britain, the interplay of propensities and situations is an important matter for opportunity explanations of delinquency. Clearly, situational crime explanations are not well specified when they leave the offenders out of the theory, as is sometimes advocated (e.g., Clarke 2018) and theories that stipulate both important causes (propensities and events) provide stronger general theories for global criminology.

## **Self-Control Theory Emphasizes Prevention Strategies Focused on Enhancements of Childhood Environments Rather than a Focus on State Sanctions**

In reviewing research about the causes of crime and delinquency, we have argued that a focus on early childhood socialization and on the family provided a clear public policy alternative to the criminal career focus on incapacitation and deterrence in the criminal justice system (Gottfredson and Hirschi 1990, 1995). A large body of research in the USA, both on the effects of criminal sanctions on crime rates and on the benefits of enhancements of early childhood environments for reduction of problem behaviors, largely confirms these inferences

(see, e.g., Gottfredson and Hirschi 2016; see also Heckman 2006, 2007). The development of self-control relatively early in life is predictive of less delinquency, less involvement in the juvenile and criminal justice systems, better success in school, higher wages, and more stable interpersonal relationships. At the same time, research strongly suggests that remote criminal justice sanctions (that is removed from the acts themselves), especially variation in their severity, has little impact on crime rates. As our general theory predicts, variability among people in their tendency to focus on immediate gains with inattention to harmful consequences is a major cause of delinquency and crime. Individuals at the lower range of self-control are not deterred by far removed sanctions. Certainty and celerity may surely have effects, as situational crime prevention research shows. At the same time, our general theory predicted that the ubiquity of the age effect (crime declines rapidly and continuously after the peak age of late-adolescence or early adulthood) makes substantive incapacitation effects implausible (Gottfredson and Hirschi 1990). The combination of plausible and large consequences for prevention of crime and delinquency by elevating levels of self-control in childhood and the inconsistency of criminal justice sanctions with the known propensities of delinquents means that a strong focus on early childhood is warranted.

Competent reviews of the effects of justice system sanctions have not been supportive of the conclusion of large deterrent effects for criminal justice sanctions for some time now (Pratt 2009; Pratt et al. 2006). The recent conclusions of a panel of the National Research Council (2014) based on reviews of a large literature about deterrent and incapacitative sanctions in the USA concurs with these earlier reviews and make the point clearly:

“... one of our most important conclusions is that the incremental deterrent effect of increases in lengthy prison sentences is moderate at best. Also, because recidivism rates decline markedly with age and prisoners necessarily age as they serve their prison sentence, lengthy prison sentences are in inefficient approach to preventing crime by incapacitation unless the longer sentences are specifically targeted at very high-rate dangerous offenders” (p. 131).<sup>13</sup>

On the other hand, and in stark contrast to the difficulty in finding prevention effects from criminal justice sanctions, the literature on early childhood prevention is encouraging. A good deal of systematic research on the preventative effects of enhancing early childhood environments has been accumulating across disciplines, from education to criminology. For example, Webster-Stratton and Taylor (2001) review childhood prevention programs designed to promote parent and teacher competencies to prevent conduct problems that have evaluations published in peer-reviewed journals, with effects demonstrated in randomized controlled trials with alternative treatments. They discover a number of different successful programs, including intensive home visiting for poor mothers and behavioral parent skill training. Schindler and Black (2015) review programs that focus on the first 5 years of life and found programs that intensively target children’s social skills and self-regulation and those that target adult caregivers’ skills in behavior management are particularly promising. Greenwood’s (2006) careful

<sup>13</sup> Some police scholars find that saturation policing, often now referred to as “hot spot” policing has deterrent effects. Visibly placing large numbers of police in situations that have recently shown relatively high crime rates can increase the perception of certainty of sanctions and, as such, are best theorized as situational crime prevention. Altering the immediate cost/benefit of offending is of course consistent with our general theory (Gottfredson 2013). Such practices may well come with substantial negative collateral consequences, however, since they involve what may be negative police-citizen encounters for what typically will involve minor offenses (as the generality assumption of our general theory stipulates).

review provides a classification of six types of effective programs, ranging from home visits by nurses to parent training (see also, Eckenrode et al. 2001; Olds et al. 1998). Piquero et al. (2009, 2016) performed meta-analyses of studies of parenting undertaken with children under 5 years of age. In the 78 studies meeting their criteria for inclusion, and using self-report criteria for delinquency, they report a mean effect size of .37. In a companion review, Piquero et al. (2010) focused on self-control training in random design studies ( $n = 34$ ) that sought self-control improvement among young children. They conclude that not only was it possible to systematically alter self-control, but that these interventions reduced delinquency.

Some important experiments in education have focused on early interventions with parents, providing enhanced training associated with the creation of self-control. Some of these efforts find substantial effects not just for schooling but for the reduction of delinquency as well. An example from education for adolescents is provided by Fosco et al. (2013) employing a “family check-up model” designed to improve educational attainment. Their randomized controlled trial using family management training for adolescents showed increases in self-regulation and lower levels of antisocial behavior, deviant friendships, and substance abuse. Heckman (2006) finds an array of early childhood education research to bolster his argument that family environments variously foster skills essential to crime and health, as well as school and workplace success. Heckman reports analysis from randomized controlled experiments associated with Head Start programs that provided very young children from disadvantaged backgrounds (3–4 years old) with nurturing environments and then followed to age 40. The treated group had greater high school graduation rates, higher salaries, more home ownership, fewer out-of-wedlock births, and fewer arrests. He calculated that the benefits-cost ratio was 8 to 1, with advantages in education, criminal justice, and health. His general review leads him to stress early intervention, concluding that “on average, the later remediation is given to a disadvantaged child, the less effective it is” (Heckman 2007, p. 13251).<sup>14</sup>

These conclusions about the advantages of prevention for crime policy merit considerable discussion and study. Much more research that carefully describes and measures the interventions and study outcomes in controlled experimental designs are needed. Research from diverse countries and settings, with different child-rearing, schooling, and early child environments, is needed to test the plasticity of self-control education and the consequences of enhancements of preschool and early school efforts to strengthen noncognitive skills. Studies of the relative advantages of informal, parental, and school-based controls in contrast to formal sanctions in different cultural settings can provide critical knowledge about their generality. We have argued that such studies are, in effect, validation studies about the predictions of our general theory (Gottfredson 2006); as such, these studies could also provide critical evidence in our search for a global general theory of crime.

## Conclusions and Suggested Research Directions

Research about self-control convincingly demonstrates that relatively high self-control emerging from childhood, and its consequences, create considerable advantages that accumulate throughout life. It shows that self-control can actively be created, certainly during childhood and even through the adolescent period (even if, like many learned behaviors and cognitions it

<sup>14</sup> For a general discussion of evidence about interventions creating skills that improve self-control, see Heckman and Kautz (2014).

seems to become progressively more difficult to create with advanced ages). Conversely, low self-control creates important disadvantages throughout life. Because resources are key to the development of self-control, including those necessary for high-quality child environments, economic disadvantages present significant barriers to quality childhood experiences. Policy directed at enhancing childhood environments are therefore not only good policies enabling individual growth and development, but they are effective crime prevention policies as well. At the same time, evidence has accumulated that aspects of situations and opportunities are critical causes of delinquency and crime and that manipulation of some of these can have important effects on crime rates. Theories of crime that attend to both propensities and to events are better able to explain crime and to offer plausible strategies to ameliorate its harms to both individuals and to societies. Control theory claims that the interaction of these two causes (propensities and events) is required to explain crime and delinquency everywhere.

Studies of self-control and crime have also surfaced critical research needs that implicate global criminology. Among the most pressing are indicator studies for the measurement of both self-control and for early child environments. Existing research has tended to ignore indicator development, relying on commonly used measures that have some face validity, but which likely are not equally valid with all populations and which certainly do not measure self-control equally well over the life course. Culture and age-sensitive indicators are likely to greatly enhance our knowledge of the relevance of self-control in diverse settings. Continued studies of correlates of delinquency in different societies with different populations are also critical and are of greater scientific interest than are simple comparisons of rate or level differences among groups. Study of the relationship between self-control and specific illegal acts during and after changes in legal definitions or for societies with markedly different availability would help explore the nature of self-control under alternative opportunities for problem behaviors. For example, substance abuse would be expected to be higher for those with lower self-control even when the prevalence of use in the population changed in one society or among societies with different availability for specific substances. And there is considerable opportunity to learn more about these matters from studies that focus on acts that are in violation of criminal laws in one society, but which are not in another—our general theory suggests that levels of self-control will predict violations in settings in which long-term negative consequences attend the behavior in question.

In a significant way, then, global criminology helps set a research agenda for both the study and the prevention of many forms of disadvantage. At the same time, enhanced focus on experimental manipulations of early environments, a focus on parenting, development of sound measures of self-control and self-regulation, and, critically, work on the scale-up problem for childhood interventions that effectively attend to the development of self-control consistent with supporting the interests of parents and other caregivers seem fruitful strategies to advance. Such an emphasis, hand in hand with continued study and development of the “opportunity” or “event” side of crime causation, presents a sound, evidence-based approach to delinquency and crime. It provides an alternative to a singular focus on criminal justice efforts to prevent crime, such as greater use of incarceration that have struggled to find empirical support and which entail significant costs including significant negative collateral consequences.<sup>15</sup> Global criminology can provide greatly enhanced evidence about policy

<sup>15</sup> Research exploring the collateral consequences of incarceration for families and communities is further evidence to focus on less intrusive and more beneficial early prevention methods. See, e.g., Turanovic, Rodriguez, and Pratt 2012; Turney 2014; Turney and Waldman 2013).

deductions derived from general theories of crime, subjecting them to strong tests in culturally diverse settings, tests that every general theory should welcome.

## Compliance with Ethical Standards

**Conflict of Interest** The author declares that he has no conflict of interest.

**Ethical Approval** This article does not contain any studies with human participants or animals performed by any of the authors.

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