

CHAPTER 8

Self-Control Theory: Research Issues

ALEX R. PIQUERO

INTRODUCTION

In the annals of criminological thought, there have been a handful of theories that have been proffered that have altered and shaped the theoretical imagination of criminologists. The most recent of these theories is Gottfredson and Hirschi's (1990) general theory of crime. Their theory places particular importance on the personal, individual characteristic of (low) self-control, or the tendency to pursue immediate gratification at the expense of consideration for long-term consequences. To Gottfredson and Hirschi, the higher order construct of self-control is comprised of six characteristics, all of which coalesce within the individual with (low) self-control: impulsivity, preference for simple tasks, risk seeking, preference for physical as opposed to mental activities, self-centeredness, and a quick or volatile temper. When (low) self-control combines with the ready stock of available opportunities for crime, the general theory of crime anticipates that the probability of all types of antisocial and criminal activity will increase in a generally linear fashion, and this interaction should be a principal ingredient of crime over and above most other traditional correlates of crime, which the theorists claim are simply manifestations or selection effects associated with self-control. Finally, the specified causal process is believed to be invariant across all demographic characteristics, over time, places, cultures, and crime types. In other words, self-control is the principal cause of crime regardless of its place in time, history, and context, and offenders are presumed to engage in all sorts of criminal acts, i.e., versatility is the norm and specialization is the rare exception.

ALEX R. PIQUERO • University of Maryland College Park, College Park, MD, USA

Formed in childhood as a result of parental socialization efforts (produced largely through monitoring of offspring behavior, recognition of deviance, and punishment of deviance), differences in self-control between persons are believed to be relatively constant throughout the life course. That is, although socialization continues to occur over the life course – and individuals could differ in their absolute levels of self-control, the differences in self-control that exist across persons at one age are believed to be approximately the same at other ages. Moreover, given these expectations, changes along the continuum of self-control (especially movement from lower to higher amounts) are expected to be difficult to achieve by more formal agents of social control or change. This leads to the hypothesis that the prospects for change (among offenders with low self-control) are quite bleak. Thus, the ideal set of policy prescriptions that emanate from the general theory of crime are aimed primarily at altering patterns of parental socialization in the first decade of life, the period of the life course where Gottfredson and Hirschi believe the options for change are highest. Responses by the formal criminal justice system after this period are believed to exhibit little effect in reducing criminal activity, with the sole exception, perhaps, of altering the situations and opportunities associated with certain forms of crime (i.e., situational crime prevention efforts such as target hardening).

Given the above set of statements, Gottfredson and Hirschi's theory represents what I would consider to be criminology's null hypothesis. To them, the explanations of crime are simple and the complexity associated with multiple causes at multiple periods of the life course for different types of people across any number of contexts is simply inconsistent with the facts of crime and criminals. Crimes are believed to be easy to carry out and criminals all share the same personal, individual characteristic in that involvement in crime in the pursuit of force and fraud provides immediate gratification that maximizes short-term interests at the forsaking of long-term consequences – to which criminals do not attend (i.e., self-control).

Given these strong statements it is not surprising to learn that the theory has attracted much attention and generated much discussion and of course, controversy. For example, the theory has been criticized for being tautological (Akers, 1991), for not paying close attention to issues of theoretical clarity, linkage, and conceptualization (Barlow, 1991), and its relation to other crime types (Geis, 2000), for not considering the relationship between self-control and Hirschi's early social control theory explanation (Taylor, 2001),¹ and for neglecting more enduring psychological (Wiebe, 2003) and biological characteristics (Cauffman, Steinberg, & Piquero, 2005).

Nevertheless, their book, *A General Theory of Crime*, has accumulated over 1,700 citations (Google Scholar, April 10, 2008). But has all the fuss and fury done much to advance our understanding of crime and criminals? In other words, is criminology in a better position in understanding crime and criminals now than it was before the theory was introduced? One's answer to this question, of course, is likely to be influenced both by their view of the theory as well as their interpretation of the impressive amount of empirical evidence that has accumulated around many of Gottfredson and Hirschi's critical hypotheses.

¹ To be sure, Gottfredson and Hirschi's general theory of crime does allow for social control (and bonds in particular) to be important within the general theory of crime, but only insofar as social control influences self-control prior to ages 8/10; thereafter, social control is deemed to be largely irrelevant in influencing both self-control and criminal activity.

EXTANT RESEARCH

Defining, Conceptualizing, and Measuring Self-Control

Other than to say that the six characteristics that comprise self-control “come together” within persons, in the initial statement of the theory Gottfredson and Hirschi defined self-control in such a way that precluded any assistance with respect to the best way to operationally measure self-control in empirical research. Because of this, researchers were left to their own imagination as how best to measure the key construct in the general theory of crime. The first two empirical tests of the theory employed contrasting approaches to measuring self-control. Grasmick, Tittle, Bursik, and Arneklev (1993) used an attitudinal measure of self-control, based on commonly used personality assessments, to measure respondent’s self-control and found that the measure was significantly associated to crimes of force and fraud but that its effect was also contingent on opportunity. Keane, Maxim, and Teevan (1993) collected observations of seat belt use – a behavioral measure of self-control – assuming that using a seat belt was indicative of displaying high self-control and vice versa. These authors also found a linkage between refraining from seat belt use (reflecting low self-control) and drunk driving. In their reaction to these two studies, Hirschi and Gottfredson (1993) viewed the behavioral measure as a preferred operational measure of self-control, in part because of their assumption that an individual’s self-control may influence their responses to survey responses, as well as their view that some index of the behavioral problems engaged in by the individual (i.e., a variety index) provides the ideal measure of self-control (Hirschi & Gottfredson, 1995). That is, Hirschi and Gottfredson believe that the best indicator of self-control would consider involvement in problematic behaviors because it is an observable characteristic of what an individual actually physically does and not necessarily the individual’s attitudes or personality characteristics that may (or may not) be measured adequately.

Given the centrality of this issue to the key theoretical construct in the theory, it is no surprise to learn that the measurement of self-control has generated a significant amount of research (MacDonald, Morral, & Piquero, in press; Marcus, 2003). In an early study, Longshore, Turner, and Stein (1996) collected attitudinal information from a sample of offenders to examine the measurement invariance associated with self-control (i.e., whether a one-factor structure was equally viable for all respondents). Their evidence was not entirely consistent with Gottfredson and Hirschi’s hypotheses on this issue, but a replication by Piquero and Rosay (1998), using the same data, but with different model specifications (i.e., exclusion of correlated error terms not based on theoretical expectations, etc.) reached a somewhat more supportive set of results with respect to Gottfredson and Hirschi. Piquero, MacIntosh, and Hickman (2000) followed these two studies with an examination of self-control’s factor structure and built upon these efforts by assessing how an individual’s self-control influenced respondent’s self-reports to the Grasmick et al.’s attitudinal self-control survey scale. Using data collected on college students, they found that, consistent with Gottfredson and Hirschi, an individual’s self-control did influence their responses to the self-control instrument, and thus claimed that while attitudinal responses were not necessarily fatally flawed, the other methods of assessing self-control – including behavioral approaches and in particular third-party/external ratings of self-control – should be seriously considered. One other study by Tittle, Ward, and Grasmick (2003) deserves specific mention. Using a single data set, these authors directly compared the ability and strength of both attitudinal and behavioral measures of self-control in relation to acts of force/fraud. Their analysis uncovered

that both approaches appeared to equally predict such outcomes and in the end argued that the use of either approach provided a satisfactory assessment of the general theory of crime.²

Clearly, there is much variation in the measurement of self-control and it does not appear that researchers have come to full agreement (and perhaps never will) as to which approach, attitudinal or behavioral, should be the guiding approach for empirical assessments of Gottfredson and Hirschi's conception of self-control. Nevertheless, this has not precluded researchers from further development and conceptualization of different self-control measurement approaches. For example, following the psychological research by Muraven, Tice, and Baumeister (1998) which conceptualizes self-control like a muscle (which becomes more exhausted as it is used) and examines whether "self-control demands" throughout one's day (e.g., having to call on considerable self-control amid experienced stress) lead to a depletion of one's reserve of self-control. Tremblay (1995) conceptualizes self-control in a traditional manner, but uses data from third-party observations to measure it. And finally, Piquero and Bouffard (2007) consider self-control as set of inhibitions one carries wherever one happens to go and measure self-control using respondent's indication of the number and salience associated with the costs and benefits in crime-engendering situations.

Self-Control → Crime Linkage

Critical parts of the theory have been subjected to intense empirical scrutiny, especially the proposed link between self-control and antisocial/criminal activity. In general, this line of research, using an array of different conceptualizations and operationalizations of self-control and crimes of force/fraud, has routinely indicated a significant relationship indicating that (low) self-control relates to deviant outcomes in ways that were anticipated by the theorists (Pratt & Cullen, 2000; Tittle et al., 2003). Although the effects of self-control on force/fraud have not always been the largest in any statistical model, it is true that the significant effects of self-control emerge across many different demographic factors, cultures, and crime types – with the sole exception for prediction of white-collar/corporate crime (Piquero, Langton, & Schoepfer, 2008; Simpson & Piquero, 2002). In the end, however, while the jury is still out on how best to operationalize self-control, it does appear that through a myriad array of such approaches, whatever self-control is and however self-control is measured, does continually relate to a wide range of antisocial, deviant, delinquent, and criminal acts throughout the life course.

Sources of Self-Control

Much less studied has been the more distal causal process, i.e., explaining the sources of self-control, which Gottfredson and Hirschi attribute strictly to a process centered around parental

² To be sure, several commentators (Akers, 1991) criticize Gottfredson and Hirschi's insistence on the use of behavioral measures of self-control, primarily because of the notion that deviant behavior is used, in effect, to predict deviant behavior, and thus any such relationship is not surprising because the two measures are of the same underlying construct. This continues to be a source of contention in the literature, as critics, such as Akers, continue to believe that the use of deviant behavior to predict deviant behavior is tautological, while Gottfredson and Hirschi remain steadfast in their position that it is not.

socialization (monitoring of child behavior, recognition of child deviant behavior, and punishment of deviant behavior). Among the handful of studies that have examined this process, a few have shown effects consistent with Gottfredson and Hirschi but most studies do not contain the full array and type of parental socialization efforts articulated by the theorists; thus, any definitive statement regarding the parental socialization → self-control linkage awaits much more careful analysis. What has been identified as important in this line of research, and which was not anticipated by Gottfredson and Hirschi, is that there appear to exist *other* sources of self-control that do not fall under the sole purview of parental socialization efforts. In particular, researchers have identified other sources of self-control that influence self-control above and beyond the effect of parenting, including characteristics of neighborhoods and information social control (Pratt, Turner, & Piquero, 2004), as well as the influence of schools and teachers (Gottfredson, 2001; Turner, Pratt, & Piquero, 2005) in samples combining childhood and adolescent time periods (but well before the mid-teens).

Stability of Self-Control

One other ill-studied but certainly critical hypothesis is the stability of self-control. Recall that Gottfredson and Hirschi claim that, once established by the early teens, self-control is reasonably stable between persons over time, and largely impervious to change by any external socializing agent. Due to data constraints, however, this hypothesis has not received a sustained amount of attention. The data that do exist on this issue suggest that while there is some degree of stability across persons, there still appears to be a non-trivial amount of change within persons (i.e., there is significant change, within individuals, of their self-control, with most individuals gaining or improving their self-control (i.e., moving from lower self-control to higher self-control), but also some closing of the gap across persons over time (Arneklev, Grasmick, Tittle, & Bursik, 1998; Hay & Forrest, 2006; Mitchell & MacKenzie, 2006; Turner & Piquero, 2002; Winfree, Taylor, He, & Esbensen, 2006). To the extent that such efforts can be replicated, extended, and better studied, any definitive statement with respect to the stability hypothesis is premature.

Versatility of Offending

Prior to the delineation of the general theory, criminologists have long studied the range and types of criminal activity engaged in by offenders. This line of research has overwhelmingly showed that most offenders are versatile; that is, they engage in a wide range of antisocial, delinquent, and criminal activities and very few specialize in specific types of offenses (see reviews in Blumstein, Cohen, Roth, & Visher, 1986; Piquero, Farrington, & Blumstein, 2003).³ And although Gottfredson and Hirschi do allow for some very limited specialization due to opportunity structures, i.e., offenders who live near a shopping center have more opportunities to engage in theft, offenders view crime as a short-term solution to obtain the things they desire. Research

³ To be sure, there are some accounts of limited specialization among certain types of offenders and/or among offenders within a narrow range of offense types (Steffensmeier & Ulmer, 2005), but this is generally the exception and not the rule.

exploring Gottfredson and Hirschi's versatility thesis has routinely found that individuals with low self-control tend to engage in a wide range of imprudent behaviors as well as delinquent and criminal acts and evince little tendency toward specialization (Arneklev, Grasmick, Tittle, & Bursik, 1993; Evans, Cullen, Burton, Dunaway, & Benson, 1997).

Invariance Across Persons, Time, Culture, and Place

With respect to the invariance thesis, there have only been a small number of empirical studies thus precluding any sort of summary statement, especially with respect to the time-invariance thesis – simply because the theory has not been around long enough to be assessed over a long period of time. Nevertheless, studies do tend to suggest that self-control differences explain crime – to somewhat different degrees of success – fairly well across race/ethnicity (Vazsonyi & Crosswhite, 2004), sex (Burton, Cullen, Evans, Alarid, & Dunaway, 1998), and age (Burton, Evans, Cullen, Olivares, & Dunaway, 1999). Moreover, there appears to be good predictive ability for self-control to also explain acts of force and fraud in different places and cultures (Tittle & Botchkovar, 2005; Vazsonyi & Belliston, 2007; Vazsonyi, Pickering, Junger, & Helsing, 2001). In short, the current state of the evidence suggests that there is a relationship between self-control and crime and that it appears (to varying degrees of strength) significant across the main demographic characteristics.

The Role of Opportunity

Finally, the accumulated evidence with respect to the general theory of crime has tended to focus primarily on the role of self-control and has largely neglected the role of opportunity in influencing criminal activity. Although this is, in large part, due to the problem of defining, operationalizing, and measuring opportunity (and collection of such data in criminological data sets), it still represents a key portion of their theory. Some of the evidence on this hypothesis does show that opportunities are an important component of the causal process articulated in the theory (Longshore, 1998), but the theorists have largely abandoned this portion of the theory because of their view that opportunities for some type of crime are routinely available (Gottfredson & Hirschi, 2003).

GOTTFREDSON AND HIRSCHI'S THEORETICAL ADJUSTMENTS AND RESTATEMENTS

As could be expected, the original statement of the theory, the ensuing empirical research, and the theorists' reaction to this line of research have generated much discussion and controversy, and while the theory and its central tenants remain largely unchanged, there have been two important modifications. First, as noted above, Gottfredson and Hirschi have largely abandoned the portion of their theory concerning the role of ubiquitous opportunities for crime and how it interacts with (low) self-control to produce crimes of force and fraud. Gottfredson and Hirschi (2003) now suggest that "...opportunities for *particular crimes* may vary immensely over time and place" (p. 10, emphasis in original). Yet, empirical research on this aspect of their theory suggests

that opportunities do moderate some aspect of the self-control → crime linkage and that some individuals differentially perceive opportunities compared to other individuals (Smith, 2004). Moreover, in the more criminological and decision-making research areas, evidence indicates that the nature and type of particular opportunities vary across time and space (Cohen & Felson, 1979; Cornish & Clarke, 1987). And in addition to the difficulties associated with defining and operationalizing opportunity, this remains a source of controversy with respect to the general theory.

The second modification made to the theory concerns the definition and operationalization of self-control. Recently, Hirschi (2004) redefined self-control to be broader and more contemporaneous offering it as the tendency to consider a wide range, both in terms of number and potential salience, of potential costs when considering a criminal act, things that were not explicitly or outwardly specified in the original statement of the theory nor in its few suggestions for measurement and operationalization. Specifically, self-control is now defined as the “set of inhibitions one carries with one wherever one happens to go” (Hirschi, 2004, p. 543). He also suggested that self-control is influenced by the extent to which the individual is socially bonded, such that those with fewer social bonds anticipate comparatively fewer costs and find those costs less salient.

In an early empirical assessment of this reconceptualized version of self-control, Piquero and Bouffard (2007) collected information on perceptions of the number and salience of the costs and benefits associated with hypothetical offending situations and found evidence in support of Hirschi’s proposed redefinition.⁴ The “new” measure of self-control was significantly related to hypothetical offending intentions, and this new measure appeared to have more predictive ability (in relation to offending intentions) than traditionally used self-control measures.

But this restatement, which amounts to conceptualizing self-control as a more situationally based measure, now allows aspects of opportunity to somehow moderate the influence of self-control on crime. In this regard, because certain situations may elicit high self-control reactions (i.e., more costs and relevant salience), while other situations may elicit low self-control reactions (i.e., less costs and salience) (Piquero & Tibbetts, 1996), it becomes especially important to assess why individuals may or may not exhibit self-control in certain situations (Mischel, Shoda, & Rodriguez, 1989). For example, persons with lower self-control (offenders) may sometimes refrain from crime when a crime opportunity is presented to them, whereas persons with higher

⁴ Specifically, participants were presented with seven blank lines for which they were asked to develop a list of up to seven “bad things” (costs) that might occur if they engaged in the offending behavior depicted in each scenario, a method which follows Hirschi’s suggestion that the number of consequences to which an individual attends when making decisions to offend is related to that individual’s self-control. Also, because Hirschi suggests that self-control is also a function of the salience of the consequences that the individual considers, individuals were asked to provide data on the salience of potential inhibiting factors associated with criminal activity. After the listing of any relevant costs, participants were asked to indicate “*How important* each one of these things would be *when making your decision* whether or not to (offense behavior) under the circumstances in the story.” These items were rated using a similar 0% (Not Important) to 100% (Very Important) scale. Given Hirschi’s statements about the relevance of both the number of costs attended to and their salience, the redefined self-control measure took the number of costs generated by the respondents and multiplied them by the average salience applied to these groups of costs (i.e., all costs) by the participants, thereby providing a measure that focuses on the inhibiting/costs factors (i.e., where higher scores are indicative of higher self-control) that can be quite broad (depending on the respondent’s nomination) and is contemporaneous because the data are obtained immediately after the individual is asked to rate their likelihood of engaging in the hypothetical criminal act.

self-control may sometimes engage in deviance when a crime opportunity presents itself. Thus, Hirschi's redefinition now allows opportunity (masked as situational factors) to be a relevant consideration in the crime-production process, and while this is not inconsistent with the general theory's friendliness toward the rational choice perspective, it does allow for opportunity (situations) to be more important than perhaps the theorists had originally assumed.

OUTSTANDING ISSUES AND DIRECTIONS FOR THE FUTURE

It is clear that Gottfredson and Hirschi's general theory of crime has generated a significant amount of theoretical and empirical attention and controversy. It has also spurred the development of further criminological thought, especially as researchers have sought to empirically assess the theory's central hypotheses and whether it provides an improved understanding of crime and criminals. At the same time, there exist several outstanding issues with respect to the theory's development and where future theoretical and empirical research is needed for further refinement and improved explanation. In this section, several of these issues and research directions are identified with the intent of providing some much-needed theoretical refinement and identification of important empirical research.

Conceptualization of Self-Control

The first of these issues regards conceptualization of the theory's key construct, self-control. When Gottfredson and Hirschi initially developed their theory, they unfortunately did not attend much to conceptual, definitional, and measurement matters with respect to self-control. In fact, the theorists did very little to help researchers other than to take a construct that was largely and historically under the purview of psychology and infuse it into the criminological discussion. Since then, while Hirschi (2004) has done some lifting with respect to proposing a (new) more concrete theoretical definition of self-control, providing an operational definition of the construct, and then conducting a preliminary empirical investigation of the new definition, much more effort is needed. Along these lines, several researchers have made some headway in this regard, including the work of Baumeister, Muraven, and their colleagues who investigate how self-control, choice, and decision making interrelate generally, and how self-control can become depleted in particular (Muraven et al., 1998; Muraven, Pogarsky, & Shmueli, 2006), by showing how under various circumstances individual's self-control is taxed and its strength can bend or break depending on certain situations.

One very recent and potentially exciting conceptualization of self-control was developed by Wikström and Treiber (2007). These authors propose an alternative conception of self-control that builds on Wikström's (2006) earlier situation action theory of crime. Akin to Hirschi's (2004) redefinition of self-control, and in particular Piquero and Bouffard's empirical operationalization of Hirschi's redefined self-control, Wikström and Treiber offer that self-control is best conceptualized as a situational concept (a factor in the process of choice) rather than as an individual characteristic as conceived in the general theory. In this regard, the authors can be seen as challenging the very premise of Gottfredson and Hirschi's original general theory of crime. It may no longer be self-control theory per se, but rather self-control becomes a significantly modified concept that, while remaining important, exists within an entirely different theoretical perspective.

This is accomplished by noting that the core individual trait influencing an individual's ability to exercise self-control is executive capability and that there are important environmental influences on an individual's ability to exercise self-control. Unlike the original and updated conceptualizations of self-control proposed by Gottfredson and Hirschi and now Hirschi, Wikström and Treiber suggest that the ability to exercise self-control is a relevant factor in crime causation only in situations where an individual considers (deliberates) whether or not to engage in an act of crime. To them, whether or not individuals engage in crime in most circumstances is not a question of their ability to exercise self-control but rather a question of their morality.

A related, modified conceptualization of self-control has been developed by Tittle, Ward, and Grasmick (2004), who distinguish between an individual's capacity for self-control and their own interest in restraining themselves. According to Tittle et al. (2004), "Some people may have a strong capacity for self-control but may not always want to exercise it, while others may have weak self-control ability but have such a keen interest in controlling their deviant impulses that they end up conforming" (p. 146). This conceptualization leads to the hypothesis that

People who simultaneously lack the capacity for strong self-control and who possess little desire to control themselves may be especially prone to criminal conduct, while those with strong capability for self-control and with great interest in exercising self-control may be especially unlikely to offend. Logically, then, self-control ability and interest in exercising self-control should interact in producing misbehaviors (Tittle et al., 2004, p. 146).

In a preliminary empirical investigation of this hypothesis, Tittle and his colleagues used data from the Oklahoma City Survey and measured both self-control capability and the desire to practice self-control, the former which was measured using the earlier-referenced Grasmick et al.'s (1993) self-control scale, and the latter which was measured with items tapping various theories, including social learning, social control, social bond, and rational choice. Their analysis indicated that (1) both the capacity and the desire to exercise self-control exhibited independent, cumulative, and interactive relationships with each other; (2) depending on the measure of crime and deviance, self-control capability was stronger when the individual's interest in exercising self-control was low, but its effect was reduced when desire to exercise self-control was high; and (3) combinations of capacity and desire to exercise self-control were particularly important (i.e., the magnitude of the coefficient for self-control ability decreased as the magnitude of self-control desire increased, and the coefficient for self-control ability became smaller (less negative), moving from low scores on self-control desire to higher scores, even becoming more significant for some crime indexes at the higher level of self-control desire (Tittle et al., 2004, pp. 163–164). In short, the distinction between one's desire to exercise self-control and their ability in doing so is one that will provide fruitful insight into crime decision-making patterns. Further assessment of the hypothesis that strong desire to exercise self-control may help "override" the potential influence of weak self-control ability in producing crime may provide some important knowledge about offenders' decision-making process.

The Role of Opportunity

One originally important component of the general theory of crime was the role of opportunity. As noted earlier, that portion of the theory was neglected in several respects including its theoretical development and operational/measurement strategy. After remaining silent on its importance, Gottfredson and Hirschi (2003) claimed that because opportunities for some sort of

deviance/crime were readily apparent, consideration of opportunity in empirical research with respect to assessing the general theory was unnecessary. Recently, Hirschi (2004) brought back opportunity into the picture and focused on how key aspects of the situation may influence an individual's decision making. It is difficult to not conceive of situations and situational factors as being somehow part of how individuals (differentially) perceive opportunities (i.e., not all individuals perceive the opportunity to steal from a store in a shopping mall) or the larger, more objective opportunity structures (i.e., shopping malls contain many stores). And while it is obvious that an offender needs some sort of opportunity (however perceived as big or small) in order to offend, neglecting this dimension does not appear to be a productive course for any serious criminological theory. Of course, there has been great difficulty associated with defining and conceptualizing opportunity, and other researchers have recognized such problems as well, but this does not detract from the theory's consideration of it – especially since the theorists have noted its importance. There has been some work undertaken in this regard within the context of assessing the general theory, but clearly more work remains. More importantly, what is needed is some headway with respect to measure both perceived and objective opportunities and how self-control relates to them.

The Role of Moderators

The original statement of the theory provided that the influence of self-control on deviance/crime was largely direct, with some interaction afforded to opportunities in producing crime outcomes. Since then, several researchers have examined the conditions under which self-control provides a better explanation of crime, and this has led to some important insight that could not be gleaned from the linear-based hypothesis. For example, aside from the distinction regarding ability/desire as an important moderation hypothesis, others have specified that (low) self-control appears to have better predictive power when situations are conducive to crime, when individuals are less morally restrained, and when unstructured social groups/activities are present. More refined theoretical and empirical articulation of these moderating conditions is likely to provide better specification of the theory's hypothesis, better predictive power, and ultimately will produce many more research opportunities than simple, linear-based assessments of which another one is not necessary.

Selection/Causation

Recall that Gottfredson and Hirschi's theory is a dynamic one up until self-control is formed by the end of childhood such that the causes of self-control can be altered and the individual characteristic of self-control can change. After this point, Gottfredson and Hirschi strongly assert that any other "correlate of crime," such as the influence of delinquent peers and other informal and formal social control agents is not causal but instead spurious. Yet, there exists much theoretical and empirical controversy with respect to this issue.

For example, to the extent that researchers included a measure for self-control – and assuming that self-control was measured well and to the specification of the original theorists – what are we to make of a finding that other correlates of crime, like delinquent peers or being married, still relate to deviance/crime over and above self-control? For example, whether measured

using attitudinal, behavioral, or criminal propensity markers, several studies using a range of samples, measures, and outcomes continue to find that while self-control is an important correlate of offending, other correlates are important as well and some exert even stronger effects on crime outcomes (Horney, Osgood, & Marshall, 1995; Pratt & Cullen, 2000). And while Hirschi and Gottfredson (1995) view such findings as evidence of self-selection and not social causation, i.e., persons with low self-control self-select into crime-engendering situations, they seek out antisocial peers, they do not marry but when they do they marry persons like them. This does not seem like a satisfying response to the collection of findings that continually show such effects even after carefully considering and measuring self-control. To the extent that this issue can be resolved, it remains a source of controversy.

Effect of Self-Control in Other Life Domains

Gottfredson and Hirschi's original statement was one designed to explain crime; yet, they did note that (low) self-control would likely be an important correlate across other life domains. For example, the authors noted that the effects of (low) self-control would infiltrate other life domains including social relationships (peers, significant others, spouses), the employment arena, health and eating habits, emotional reactions, premature and unnatural death, accidents, victimization, and so forth. On this hypothesis, some research has amassed suggesting that (low) self-control influences these non-crime outcomes. For example, low self-control has been associated with increased risk of victimization (Schreck, 1999), the risk of premature and unnatural death (Piquero, MacDonald, Dobrin, Daigle, & Cullen, 2005), increased negative emotionality in the context of anger (Piquero, Gomez-Smith, & Langton, 2004), and a high risk of accidents (Junger, 1994). It will be important going forward to further unpack the wide range of potential outcomes of low self-control, perhaps transcending the theory's originally main focus of the crime outcome.

Self-Control and the Life Course

One of the interesting aspects of Gottfredson and Hirschi's theory has been their unwavering insistence that longitudinal data are unnecessary for understanding crime and criminals. In fact, this viewpoint along with the theorists' long-standing view of the age/crime relationship likely underpins their hypothesis that self-control is assumed to be relatively stable across persons, with little to no meaningful change in self-control – especially change that could be attributed to some sort of social control agent. Their hypothesis that self-control is the cause of deviance/crime at all ages also presumes that its effects (on deviance/crime) are relatively consistent at various stages of the life course; in other words, self-control is important for understanding deviance/crime at age 10, 20, 30, and so on.

This hypothesis is actually one that cuts across and stands in contrast with some of the more life course/developmental criminological theories that have risen in popularity since publication of the general theory of crime. For example, Sampson and Laub's (1993) age-graded informal social control theory anticipates (and finds) that social controls vary over the life course, both with respect to their emergence and importance and with how they relate to crime. Other developmentally/group-based theories of crime also presume that while there is indeed strong

stability in individual characteristics and antisocial behavior over time, there is also a significant amount of change both across and within persons that are not trivial enough to dismiss.

Thus, while Hirschi and Gottfredson (1995) see the life course perspective as providing little insight into criminology's understanding of crime and criminals, there is sufficient evidence documenting that self-control is not as stable as originally believed and that it is not impervious to change. For example, while researchers have found that there is rank-order stability in self-control over time, there is non-trivial movement – both within and across persons – in self-control over time, with some persons moving from lower to higher self-control and others moving from higher to lower self-control, and these self-control changes emerge across a wide range of samples and ages. At the same time, the extent to which these changes are short lived is unknown, as data constraints covering the full life course have precluded a complete assessment of the stability of self-control hypothesis.

Crime Types

Based on a century of research on criminal careers showing that offenders do not specialize in crime types, Gottfredson and Hirschi subsequently argued that all forms of deviance/crime shared the same characteristic: they provided short-term gains and were generally easy to commit. Because all acts shared this characteristic and because offenders were versatile, the theorists saw little value in specifying unique causes of crime and across types of crime, instead preferring the general hypothesis that the causes of *all* crimes at *all* times were the same, i.e., self-control. They even went so far as to suggest that some crime types were so ill-frequently committed that they were not only beyond explanation but also not in need of explanation, including in particular corporate crime.⁵

It has indeed been the case that self-control is related to a wide range of deviant and criminal acts. On this score then, one can see Gottfredson and Hirschi's view that there is little to be gained by specifying unique causes of crime types. Yet, and depending upon one's definition of what a general theory is and how it should be evaluated (i.e., should self-control be the main and strongest cause of all crime types or simply be related to all crime types?), it is not entirely clear that self-control is the principal cause of all crime types, at all ages, for all persons. In fact, there seems to exist some important variation along these lines and with respect to key deviance/crime outcomes. Moreover, the theory has not yet been subject to much empirical scrutiny with respect to how the theory predicts deviance/crime in traditionally understudied areas like medical deviance and corporate crime. It is precisely these crime types that appear to offer some unique insight into how the theory under-predicts certain crimes. For example,

⁵ It is important to note here the distinction between corporate and white-collar crime. Gottfredson and Hirschi do indeed deal with white-collar crime, but their conceptualization of white-collar crime is one that is reliant on the FBI's Uniform Crime Reporting definition, i.e., fraud, embezzlement, forgery, etc. And while they have dealt with white-collar crime specifically in their own research, specialist researchers in the white-collar crime area have criticized the theorists for their misunderstanding and misapplication of the term. To be sure, there is a wide array of crime types under the white-collar and especially corporate umbrella including price fixing, environmental pollution, collusion, etc., and this line of research indicates that not only do these crime types exert a significant toll on victims and society, but their causes do not appear consistent with those found in the general theory.

given that there needs to be some modicum of (high) self-control⁶ necessary to occupy such high-level positions that require significant education (which is also likely correlated with self-control), how does the theory explain why some doctors become addicted to drugs, why some doctors prescribe illegal prescriptions, why some CEO's engage in price fixing, collusion, and other forms of deviance. Simply taking the easy way out and saying that these types of crime are so infrequent as to render their empirical examination uninteresting or irrelevant to the larger study of most crime is not a satisfying response. As a general theory of crime, the theory must be held to a standard such that it explains a full range of crime types, however, frequently or infrequently they are committed.

Self-Control and Public Policy

At first glance, it may not be readily apparent how the general theory of crime, with its focus on an individual characteristic, has any relevance or import for public policy. After all, Gottfredson and Hirschi claim that self-control, as the principal cause of crime, cannot be altered once it is developed by the beginning of the second decade of life. The theorists however, do allude to two key policy proscriptions that emerge with respect to their conception of crime and criminals.

First, they do believe that self-control is dynamic in the first 10 years of life. Because of this, self-control can be altered (increased) through effective socialization. This implies that consistent with the family-training models and programs produced by Gerald Patterson, David Olds, Richard Tremblay and others, early-childhood prevention programs that target parental socialization, training, and education such that it alters how they socialize their children to have higher self-control, can be one avenue of instilling self-control among children and subsequently reducing the incidence of deviance/crime (e.g., Tremblay et al., 1992).

Second, Gottfredson and Hirschi do pay particularly more attention to the formal social control-based public policy efforts that do *not* work in preventing crime as opposed to the few that do work, including rehabilitation programs for offenders, increasing the police force, and increasing the use of incapacitation. Their review of the evidence of these efforts in curtailing crime is that in general, such efforts do little to alter the progression of criminal careers at the individual level or crime rates at the aggregate level. Thus, the public policy implications emanating from the general theory appear to be more reliant on moving away from the current, short-term fixes of crime and more onto the longer term crime prevention efforts.⁷

At the same time, there is another public policy implication that emerges from their theory generally, and in regard to Hirschi's redefined view of self-control in particular, and that is the notion of situational crime prevention (Cornish & Clarke, 1987). Based on routine activities theory, which shares common ground with the general theory's friendliness toward rational

⁶ Certainly not low self-control.

⁷ In a study that has not drawn much attention, Gottfredson and Hirschi (1995) do indicate that aside from strengthening parental socialization efforts in the first few years of life (which is the most direct and relevant aspect of their theory that allows for modifications of self-control), one public policy effort that can aid in crime prevention would focus on preventing teenage pregnancy, i.e., increasing condom use. The argument here is that increased condom use is likely to lead to fewer teenage pregnancies, which in turn will lead to fewer teenage parents who are ill-equipped to be effective socializing agents of their children.

choice conceptions of decision making, situational crime prevention focuses on making crime-engendering situations and opportunities more difficult. Thus, to the extent that offenders perceive some crime situations and opportunities as more difficult they may bypass that particular opportunity and refrain from committing that specific crime. Many situational crime prevention efforts and programs have been studied, and several have shown promise in reducing crime. Whether offenders pick up on these cues at the point of decision making has not been assessed in sufficient detail, but the cost associated with these programs, given their modest reductions in crime, seems to warrant further scrutiny as one policy approach that may work under some circumstances.

CONCLUSION

There is no denying that Gottfredson and Hirschi's general theory of crime has become a central theory in criminology. Its original delineation and publication in 1990 has invigorated the theoretical discourse surrounding crime and criminals and has certainly led to the development of more intense thought and empirical research on the causes and patterning of deviance/crime. On this alone, criminologists are indebted to the theorists, while at the same time the theorists themselves have much to consider and ponder moving ahead. The identification of the controversial issues and directions for future research identified above was not meant to serve as a dartboard backdrop with the theory at the bull's-eye; instead, it was meant to encourage the continued dialogue that we should all be in the business of carrying out on the day to day: what are the causes of crime and what is our conception of the criminal. Just as Gottfredson and Hirschi developed their theory with these two questions, so too should we all follow.

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