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SELF-CONTROL AND DELINQUENCY IN SOCIO-CULTURAL CONTEXT: FORMULATING AND ASSESSING AN ELABORATED ‘GENERAL THEORY OF CRIME’

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Foreword

This research is a collaborative work of two scholars who call attention to the critical role of the socio-cultural and institutional context for understanding crime and delinquency. Their point of departure is *A General Theory of Crime*, published in 1990, by Michael R. Gottfredson and Travis Hirschi. The theory introduced in their volume, commonly referred to as “self-control” theory, has had a profound impact on the field of criminology. The principal claim of the theory is that all types of crimes, delinquencies, and related behaviors can be explained with reference to a single individual propensity – low self-control. Moreover, the theory purports to be truly ‘general’ in the sense that it applies in the same way in all places, at all times.

The present research is designed to elaborate self-control theory to enhance its generality. Drawing upon insights in the field of cultural psychology, the authors argue that the conceptualization and measurement of self-control must be sensitive to the manner in which the ‘self’ is understood or construed, which depends in turn on the larger societal setting. The researchers formulate specific hypotheses about how different self-construals might condition the effects of self-control in different socio-cultural contexts, and they propose innovative measurement techniques to facilitate the assessment of these hypotheses. A pilot survey conducted with a sample of Korean adolescents yields findings that indicate the promise of the elaborated theory. This pilot study should pave the way for future cross-cultural research informed by the extended and elaborated ‘general theory of crime.’

The Korean Institute of Criminology, the leading national research institute in the area of criminology and criminal justice in Korea, will continue to support collaborative research among scholars around the world.

I wish to thank the co-authors, Seong-Jin Yeon and Steven F. Messner, for their efforts.

February, 2014

A handwritten signature in black ink, appearing to read 'Park Sang-oh', with a long horizontal stroke extending to the right.

President, Korean Institute of Criminology

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Chapter 1

Introduction

Introduction

The publication of *A General Theory of Crime* by Michael Gottfredson and Travis Hirschi (1990) over 20 years ago is without question one of the more influential developments in contemporary criminology. The claims of the theory are bold; indeed, many would say audacious. The authors put forth a theoretical argument that is, in Schulz's (2006:218) terms, "parsimonious to the extreme". The General Theory of Crime (hereafter GTC) alleges that crime (or at least "crimes" as defined by the authors) can be understood with reference to a single overarching propensity — low self-control, as manifested given the available opportunities in the environment. Moreover, the authors reject the notion that any restrictive scope conditions need be applied to the theory. In his more recent commentary on the distinguishing characteristics of the GTC, Michael Gottfredson (2006:83) proudly pronounces:

"... 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."

Given the broad sweep and scope of the theory, and its rejection of much of

the established theorizing in the discipline, it is not surprising that numerous critiques — theoretical and empirical — have emerged in the scholarly literature (discussed more fully below). Nevertheless, the impact of the GTC is indisputable. Engel (2012:1) has recently observed that the theory “has been tested on more than a million subjects.” In an otherwise scathing critique, Geis (2008:216) acknowledges “the intellectual ferment, discussion, and debate, and theoretical introspection and energy that ha[ve] emerged from the work of Gottfredson and Hirschi,” characterizing this as a “dazzling achievement.” John Hagan proved to be quite prescient when, in his endorsement of the book, he predicted that the arguments contained therein would set “an agenda that few will be able to ignore.”¹⁾

The purpose of the present research is to build upon the GTC but to rectify what we consider to be one of its most glaring inadequacies. The authors disdainfully dismiss the utility of cross-cultural criminology and embrace the task of generating a “culture-free theory of crime” (Gottfredson and Hirschi 1990:175). In our view, their approach in this regard is fundamentally misguided. It fails to appreciate the extent to which the very formulation of the GTC reflects the influence of culture. We concur with Marenin and Reisig’s (1995:502) observation in an early critique of the GTC that its core concepts, including that of self-control, “are saturated with culturally specific meanings.” Moreover, it seems much more plausible to us to expect that a truly ‘general’ theory of crime will explicitly incorporate rather than exclude cultural factors.

To this end, we set out to reformulate the GTC by incorporating insights from cultural psychology on the profound impact of the institutional setting on the very nature of the ‘self’ (Kitayama and Uskul 2011; Kitayama and Uchida 2005; Marcus and Kitayama 1991; see also Kobayashi et al. 2010). Researchers have demonstrated that individuals and groups assign different priority to independence and interdependence when ‘construing’ the self (Kitayama and Uskul 2011:423).

1) The endorsement from Hagan appears on the back cover of the 1990 Stanford University Press edition of the book.

We argue that understanding the relationship between self-control and delinquency requires explicit attention to distinctive psychological processes, i.e., the ways in which the self tends to be construed — the extent to which the ‘independent self’ is construed or the ‘interdependent self’ is construed. Moreover, we expect that the associated processes of self-control will vary in theoretically predictable ways between East Asian and Western contexts. This report reviews relevant literature, develops the theoretical arguments, and discusses the results of analyses of some of the measurement properties of core concepts in our proposed reformulation of the GTC based on data from a pilot study of Korean youths. The pilot study is intended to lay the foundation for a research project to assess the elaborated theory in a cross-national context.

Chapter 2

The Research Setting: The GTC, Critiques, and Empirical Assessments

The Research Setting: The GTC, Critiques, and Empirical Assessments

To set the stage for our elaboration of the GTC, we begin with a brief synopsis of its central theoretical claims and identify some of the more important criticisms that have been raised concerning the theory's basic structure. We then discuss the results of empirical assessments. In our review of the empirical literature, we devote particular attention to studies that have evaluated the applicability of the GTC within the context of Asian societies, and especially to the extensive research in South Korea.

I. The Structure of the GTC and Critiques

Gottfredson and Hirschi adopt a distinctive approach to theorizing when formulating the GTC. They begin by confronting head-on the longstanding issue in criminology of whether crime should be defined with reference to legal statutes or with reference to criteria that are alleged to be universal and that are therefore

of greater utility for scientific purposes (Henry and Lanier 2001). They follow the latter approach, reasoning that the acts of primary theoretical interest to criminologists share a set of common characteristics. These acts allegedly provide “immediate”, “easy or simple gratification”; they are by their nature “exciting, risky, or thrilling” while offering “meager long-term benefits”; and they often result in “pain or discomfort for the victim” (Gottfredson and Hirschi 1990:89). Stated in terms of the more general underlying attributes, crimes can be understood as “acts of force or fraud undertaken in pursuit of self-interest” (1990:15).

The explanation for crime put forth in the GTC then follows directly from the definition of the phenomenon. Gottfredson and Hirschi infer from the nature of criminal acts the characteristics of persons who are likely to commit them. They conceptualize these personal characteristics in terms of the overarching construct of low self-control. Specifically, persons lacking self-control “will tend to be impulsive, insensitive, physical (as opposed to mental), risk-taking, short-sighted, and nonverbal” (1990:90). Such individuals will be predisposed to commit crimes, although they will not be “compelled” to do so (1990:88). The commission of a criminal act also requires opportunity (1990:177).

Gottfredson and Hirschi further stipulate that low self-control can be manifested in multiple forms. Persons with low self-control will accordingly engage in other forms of ‘imprudent behaviors’ that are not technically crimes but that are analogous to them with respect to their intrinsic features, behaviors such as “accidents, smoking, and alcohol use” (1990:91; see also Reisig and Pratt 2011). Furthermore, within the domain of criminal behavior, offenders will exhibit versatility rather than specialization, contrary to the views of criminologists who have advanced subcultural and typological theories of crime. Perhaps the most sweeping claim put forth in the GTC is that low self-control renders irrelevant all other variables that have been linked with crime in alternative perspectives. Low self-control allegedly “absorbs” other candidate predictor variables, and it is, “for all intents and purposes, the individual-level cause of crime” (Gottfredson and Hirschi

1990:232)[original emphasis].

To explain the origins of low self-control, Gottfredson and Hirschi explicitly reject the notion that this propensity might be the product of any sort of “training, tutelage, or socialization” (1990:95). Rather, low self-control appears in the absence of something — effective child-rearing. Low self-control emerges when parents fail to monitor their children’s behavior, recognize improper behavior when it occurs, and punish the improper behavior (1990:97). Although Gottfredson and Hirschi acknowledge that other social institutions might be able in principle to cultivate self-control, they express skepticism that this is likely to occur in practice. They conclude instead that “self-control differences seem primarily attributable to family socialization practices” (1990:107). Moreover, self-control will purportedly be established early in life, and the resulting differences in self-control among a cohort will remain stable thereafter. Thus, while levels of criminal activity will tend to decline over the life course for everyone (the ‘aging out’ process), the relative standing of persons with respect to their propensities for crime will be constant.

As noted earlier, the publication of *A General Theory of Crime* succeeded in setting the agenda for much of the criminological research over subsequent decades. Nevertheless, the GTC has been subjected to serious and at times biting criticism. Several prominent criminologists have faulted Gottfredson and Hirschi for adopting a confrontational rhetorical style, one that is dismissive of alternative perspectives and characterized by a selective use of the evidence (Geis 2000; 2008; Schulz 2006:83). With respect to the substance of the theory, a major issue has been that of tautology. The dependent variable and the independent variable are not always clearly differentiated. In Geis’s (2008:207) words (see also Akers 1991), the theoretical answer provided in the GTC is the same as the question:

“Question: What causes acts that are marked by an absence of self-control?
Answer: A lack of self-control.”

Concerns over tautology have been particularly prominent in debates over the appropriate strategy for measuring self-control. Two general approaches have been adopted – attitudinal and behavioral. The attitudinal approach is reflected in the research by Grasmick et al. (1993), who introduced a 24-item scale reflecting survey respondents’ attitudes. The researchers report that the scale exhibits high reliability. The Grasmick et al. scale and variants of it have been used extensively in the empirical literature. The other approach operationalizes self-control on the basis of self-reports of actual behaviors that presumably reflect the lack of self-control (e.g., Keane et al. 1993). The problem that arises with this approach is the potential confounding of the measure of self-control with the phenomenon to be explained, such that one indicator of crime is used to predict another indicator of crime. Researchers have tried to circumvent problems of ‘overlapping’ measurement by excluding reports of criminal activity from the set of behavioral items included in the self-control measure. Several studies have conducted comparative assessments of the measurement properties of attitudinal versus behavior measures of self-control and their respective explanatory power, with inconsistent results (Tittle et al. 2004; Marcus 2003; Rocque et al. 2013).

Critics have also cited the underdeveloped concept of opportunity. Simpson and Geis (2008) note that despite its centrality to the theoretical argument, ‘opportunity’ is rarely mentioned in *A General Theory of Crime*. The authors thus fail to address important questions about differential exposure to opportunities, which might require consideration of a factor that has been self-consciously excluded from the theoretical model – motivation (Goode 2008:16). Moreover, the failure to develop a rigorous conceptualization of opportunity tends to render the theory non-falsifiable. Any empirical findings that fail to conform to theoretical expectations can be attributed to the mysterious role of differential opportunity. In this sense, opportunity can serve the dubious function of “an explanatory escape hatch” (Simpson and Geis 2008:59).

The adequacy of the treatment of the central explanatory concept – ‘self-control’ –

has been challenged as well. As Wikström and Treiber (2007:243) observe, Gottfredson and Hirschi never put forth an explicit definition of self-control:

“They tell us (mostly behaviourally) what characterizes people with low self-control (e.g. being impulsive, risk-taking, physical and insensitive), what differentiates people with high and low self-control (i.e. vulnerability to temptations of the moment), and why people with low self-control tend to engage in acts of crime (i.e. because they fail to consider negative and painful consequences of their actions), but never what (low) self-control actually is. They posit only that self-control is a trait (or a summary concept of traits) that develops, and stabilizes, early in life” [original emphases].

Along similar lines, Tittle et al. (2004:147) note that despite the extensive body of empirical research relating a wide variety of indicators of self-control to different forms of deviant behavior, “the actual nature of low self-control is uncertain.” These critics focus their attention on an important ambiguity in the conceptualization of self-control, pointing out that for the most part, Gottfredson and Hirschi’s references to the concept imply “... the lack of capability for controlling behavior” (2004:147) [original emphasis]. In some places, however, the authors “allude to another individual characteristic that bears upon self-control — desire to restrain behavior” (2004:147) [original emphases]. Tittle et al. argue that self-control ability and self-control desire are analytically distinct. More generally, these authors conclude that “the conceptualization of self-control set forth by Gottfredson and Hirschi appears to be incomplete” (2004:168).²⁾

A final development pertaining to the GTC that warrants mention is a proposed reformulation by Hirschi (2004). In this new formulation, Hirschi redefines self-control as “the set of inhibitions one carries with one wherever one happens

2) Another unresolved issue pertaining to the conceptualization and measurement of self-control is whether the various traits enumerated by Gottfredson and Hirschi indicative of low self-control constitute a higher order, unidimensional latent construct or a multidimensional construct. See Piquero (2008) for a review of the relevant research.

to go” (2004:543). The main import of this redefinition is to subsume what were previously theorized as ‘social bonds’ within the concept of self-control. Hirschi (2004:545) has also proposed a 9-item scale that is intended to capture his new conceptualization of self-control. In our view, this reformulation of the GTC is a step backward rather than forward because it confounds two factors that are highly relevant to crime but that are best kept analytically distinct — the controls that inhere in social relationships and the controls that reflect capabilities/traits of the individual (see Taylor 2001).³ Moreover, as Akers (2008:88) points out, Hirschi’s new measurement technique simply “reassembles some items originally designed as measures of social bonds (mainly attachment) and renames them ‘self-control responses’ and ‘measures of the social bond/self-control’.”

II. Empirical Assessments

The empirical literature assessing various claims of the GTC is truly voluminous. The bulk of the research has been conducted with data for samples from the U.S. and to a lesser extent from other Western nations. The number of such studies makes it impractical to provide a detailed accounting of all the findings that have been reported. Fortunately, two comprehensive meta-analyses have been conducted, along with a thorough narrative review. These sources provide a firm foundation for an overall summary of the findings that have been generated

3) Gottfredson (2006) appears to have adopted an ambivalent position on the utility of absorbing social bonds into self-control. He writes: “... the social bonds among parents and children, and self-control in the child, will be very difficult to discriminate empirically and, under some circumstances, may amount to the same thing” (2006:86). The first part of the statement indicates that the combining of bonds and self-control is based on measurement considerations, whereas the latter part is in accord with Hirschi’s equating of the two conceptually. Elsewhere, Gottfredson acknowledges a conceptual distinction while advancing the measurement justification: “although conceptually distinct, self and social controls cannot be separately measured during the crucial formative years and even later they can be studied by identical indicators as well” (2006:90).

in the Western literature.⁴⁾

Pratt and Cullen (2000) have conducted a meta-analysis that covers the early studies informed by the GTC. They report that low self-control consistently emerges as a robust predictor of crime and other analogous behaviors. This leads them to conclude that “future research that omits self-control from its empirical analyses risks being misspecified” (2000:952). The GTC does not receive unqualified support in their analysis. The impact of self-control is smaller in longitudinal surveys in comparison with cross-sectional surveys; self-control does not appear to be stable over the life-course (see also Na and Paternoster 2012); and variables drawn from other criminological perspectives exhibit non-trivial effects net of low self-control.

More recently, Engel (2012:1) has conducted a meta-analysis of the relationship between low self-control and crime that is based on results from “... 102 different publications that cover 966,364 original data points.” These studies have also been drawn from predominantly Western samples. Consistent with the earlier meta-analysis, Engel concludes that there is considerable support for the claim that low self-control is positively related to crime and analogous behaviors. At the same time, contrary to the claims of the GTC, the magnitudes of the effects of indicators of self-control are generally modest, and these effects are highly sensitive to the inclusion of other variables in the statistical models.

Schulz’s (2006:140-176) conclusions based on his narrative review of the empirical literature assessing the GTC are very much in accord with the meta-analyses. On the positive side, he asserts that “self-control theory warrants a measure of acceptance” (2006:174-175). He nevertheless echoes the overarching conclusion emerging from the meta-analyses that the original claims about the

4) The concept of ‘self-control’ has been applied in the psychological literature in a somewhat different manner than in the GTC. See Duckworth and Kern (2011) for a meta-analysis that reviews the literature in psychology along with the criminological literature.

GTC being a truly all-encompassing general theory of crime, a theory that privileges low self-control as the one-and-only individual-level determinant of crime, are overstated (2006: 175, 256).⁵⁾

Although the bulk of research assessing the GTC has been conducted with data for samples drawn from the U.S. and other Western nations, an appreciable body of literature has applied the theory within the context of Asian societies. These studies have typically been geared directly towards addressing the claim of universality. Does the GTC offer an explanation of crime that is truly general, one that applies even in a socio-cultural context that differs dramatically from that in which the theory was originally formulated?⁶⁾

The results of research based on data from Japan have been equivocal. An early study by Vazsonyi et al. (2004) is generally supportive of self-control theory. These researchers examine the measurement properties of the self-control construct and assess the relationship between self-control and diverse measures of deviance with samples of Japanese and U.S. adolescents. The authors report that self-control can be measured reliably in Japan, and that the effects on deviance are for the most part similar for the two samples.⁷⁾ A notable limitation of this study, how-

5) Research also indicates that while there is some 'versatility' of offending among criminals as stipulated in the GTC, specialization can be found as well, especially with respect to white-collar and organizational crimes. See Geis (2008) and Sullivan (2009).

6) Rebellon et al. (2008) have conducted a multilevel analysis of self-control and crime with data from the International Dating Violence Survey. The data come from 32 Western and non-Western national settings. The results offer mixed support for the GTC. Their measure of self-control is associated with violent crime in all settings and with property crime in 28 settings. However, consistent with other studies, self-control does not emerge as the only significant predictor of crime. In addition, the analyses indicate contextual effects that are not anticipated by the GTC, indicating the importance of cultural factors.

7) One exception to the overall pattern is the finding of a negative relationship between low self-control and alcohol use for Japanese youths. In a subsequent study, Vazsonyi and Belliston (2007) examine the effects of family process variables on self-control, and the effects of both family process variables and self-control on deviance with data from adolescents in Hungary, Japan, the Netherlands, Switzerland, and the U. S. The authors conclude that their analyses offer support for the claim that the etiological processes of deviant behavior apply across different socio-cultural

ever, is the absence of controls for other theoretically relevant predictors in the regression models.

In a more recent effort at a “culturally nuanced test” of self-control theory, Kobayashi et al. (2010) have raised questions about the generalizability of the theory to Japanese society. These researchers set out to replicate and extend the study by Vazsonyi et al. (2004), once again using survey data from students in Japan and the U. S. The results reaffirm the previous finding that indicators of specified dimensions of self-control load on a latent construct in both samples as predicted by the theory. In addition, low self-control is positively related to offending for both Japanese and U. S. youths. However, the researchers also discover that the regression coefficient for low self-control is considerably smaller in Japan than in the U. S., although the difference does not reach statistical significance. In addition, low self-control explains considerably less variance for the Japanese sample in comparison with the U. S. sample (6% versus 32%) (Kobayashi et al. 2010:124). The authors conclude that their study has “... offered at least tentative evidence that [self-control] theory might not be so capable of explaining criminal and deviant behavior among Japanese” (Kobayashi et al. 2010:124).

The limited research in China has also yielded mixed results with respect to claims for the universal applicability of the GTC. A study by Liu (2011) reports results that are largely in support of the theory. The study focuses primarily on the extent to which strain moderates the relationship between parental attachment and delinquency, but it also includes a measure of self-control among the predictor variables. In analyses of survey data for a sample of 7th and 8th graders in Fuzhou City, Liu finds the expected moderating effect. The results also reveal that self-control consistently yields a strong negative association with delinquency.

A recent study by Lu et al. (2013) similarly finds a good deal of support for

contexts, although their conclusion is stated in somewhat qualified terms with reference to the “pattern of associations” (2007:524).

the applicability of the GTC to contemporary Chinese society. The researchers administered the International Self-Report Delinquency survey (ISRD-2) to a sample of youths in Hangzhou, along with an abbreviated (12 item) version of the Grasmick et al. self-control scale. Their results indicate that self-control can be represented as a unidimensional construct and that the measure of self-control yields appreciable effects on delinquency net of social bonding factors and demographic controls. The authors conclude that the concept of self-control is applicable to Chinese society, although they acknowledge that only a “moderate” amount of variance is explained by the self-control and bonding measures (2013:47).

In addition, a study by Chui and Chan (2013) also provides support for some of the claims in the GTC about gender, self-control, and delinquency. These researchers focus primarily on whether the gender gap in delinquency can be attributed to gender differences in self-control. In their analyses of data from sample of youths aged 12-17 in Hong Kong, they find that males have lower levels of self-control and that various indicators of self-control predict delinquency in the expected manner. They also observe some gender differences in the effects of self-control, implying that the GTC is only “partially supported” (Chui and Chan 2013:23).

Other research, however, has raised questions about the extent to which the GTC can be readily ‘transported’ to Chinese society. In an early study, Wang et al. (2002) assess the effects of two elements of self-control — impulsivity and persistency — on drug use and deviant behavior for a sample of adolescents recruited from middle schools and drug treatment centers in a province in Southern China. They find that impulsivity has no effect on either drug use or deviant behavior once predictors from social bonding theory are controlled. The authors speculate that impulsivity might exert indirect effects on deviance, given that this variable exhibits negative associations with the bonding measures. The other aspect of self-control under investigation — persistency — has an unexpected positive effect on drug use. The researchers reach the general conclusion that, apparently, “... the

theory of self-control is not as universally applicable as Gottfredson and Hirschi have assumed” (Wang et al. 2002:64).

A study by Cheung and Cheung (2008) in Hong Kong has yielded similar findings and conclusions. These researchers assess the effects of a more comprehensive indicator of self-control than that used in the study by Wang et al. on a range of delinquent behaviors with data from a cross-sectional survey of secondary school students. The self-control measure exhibits the theoretically expected bivariate associations with the indicators of delinquency, but consistent with the prior study in Southern China, these associations become non-significant in the multivariate analyses with controls for variables representing constructs associated with other criminological theories (social bonding, differential association, strain, and labeling). The authors echo Wang et al.’s earlier hypothesis that self-control might contribute to the explanation of crime via indirect effects on other social variables (2008:426). Nevertheless, they conclude that their findings based on data for Hong Kong “... do not strongly bolster the general theory of crime’s claim that the impact of self-control is universal across cultures” (2008:428).

In a subsequent study, Cheung and Cheung (2010) consider the extent to which self-control might moderate the effects of strain on delinquency. They observe the expected moderation – the effects of some strains on crime are attenuated for respondents with high levels of self-control, but the results differ by gender. The authors note that the observed moderating effects detected in their data stand in “stark contrast” to those reported in Western research (2010:338). They speculate that this might be due to the greater collectivism and weaker individualism in Chinese culture, which may enhance the protective power of self-control for Chinese youths.

Two studies by Cretacci et al. (2009; 2010) have compared the applicability of the original conceptualization of self-control in the GTC with Hirschi’s revised conceptualization (discussed above) to the context of Chinese society. Using data drawn from a sample of university students in Beijing, the researchers estimate the

effects on delinquency of the commonly used Grasmick et al. measure of self-control (which is intended to operationalize the original conceptualization) with the effects of a measure based on Hirschi's reformulated social bond/self-control concept. The results reveal that the measure of the reformulated concept exhibits the expected relationship with delinquency, whereas the more conventional measure is unrelated to delinquency. Importantly, the researchers speculate that "self-control may take a different form in China" (Cretacci et al. 2010:232), and they urge researchers to consider the impact of Chinese culture on self-control in future studies (2010:233).⁸⁾

A fairly large body of research on self-control and delinquency based on samples of adolescents in Korea has accumulated (see Appendix A for a tabular summary of the Korean research). These studies typically have used low self-control as one of the predictors along with variables derived from other theories of delinquency. One of the initial efforts to test the GTC within the context of Korea was conducted with data from a convenience-sampling survey of 718 elementary school boys and girls (fifth grade) in 1996 (Min 1998). Self-control in the study is measured by students' self-reported survey responses as well as teachers' evaluations of the students. The self-control questionnaire items are adopted from Grasmick's attitude scale. The study finds that low self-control is strongly related to delinquent behavior, consistent with the GTC. In contrast, in another early study of South Korean youths, Hwang and Akers (2003) estimate the effects of indicators of six of the elements of low self-control on self-reported alcohol and tobacco use, along with measures derived from other criminological theories. They find that only one indicator of the elements of self-control exhibits a significant effect in the fully specified models. In addition, elimination of the entire set of

8) In a subsequent study, Cretacci and Cretacci (2012) examine the effects of effective parenting and social bonds on the development of self-control with data for high school students in the suburbs of a Chinese city. Consistent with the GTC, they find that effective parenting is associated with higher levels of self-control. They also observe independent effects of social bonds, indicating that parenting is not solely responsible for the development of self-control.

self-control measures results in only a trivial reduction in explained variance for both forms of substance abuse.

Two studies by Lee (2005, 2006) are based on data for 1,113 middle and high school boys in Korea. Lee examines offline and online delinquent behaviors. Self-control is measured by 9 items from Grasmick et al.'s attitudinal scale. The results reveal that both offline and online delinquency are strongly related to low self-control, with the effect on online violence being stronger than the effect on offline violence. Delinquent friends also have an effect on offline violence, but not on online violence.

Other studies (Ki 2006, Lee 2010, Lee 2011, Ki 2011a, 2011b, 2011c) have found a strong effect of low self-control on various delinquent behaviors, such as minor and serious delinquency, online, and cell phone delinquency. Only one study by Kim and Hwang (2010) reports no significant effect of low self-control on cell phone delinquency (bullying, pornography, spam, etc.). This anomalous finding might be due to the fact that in their study only 3 items from Grasmick et al.'s scale are used to measure self-control.

Multiple studies of self-control and delinquency have emerged from the 2003 Korean Youth Panel Survey (KYPS). The KYPS was initiated with the general objective of examining adolescents' career preparation, school and leisure activities, and deviant behaviors. The design of the KYPS entailed national sample surveys of two panels conducted annually: 2nd graders of middle schools (i.e., 8th grade) beginning in 2003 and ending in 2008 (6 waves) and 4th graders of elementary schools beginning in 2004 and ending in 2008 (5 waves). In the KYPS, different variables from diverse theories of deviance, including the GTC, were included. Self-control was measured by six items, one from each of the six components in Grasmick et al.'s scale. Most of the studies that utilized the panel data used the six items of self-control in their analysis, although several studies omitted some items without any clear explanation for their exclusion.

Using the KYPS's middle school data collected in 2003, two studies by Min

(2005, 2006) find that low self-control is significantly related to status offenses and serious delinquency and that low self-control is the strongest factor associated with the dependent variables. However, the results of the 2006 study seem to have a multicollinearity problem because regression models include parent attachment and parental supervision, and regression coefficients for parental supervision are all close to zero across different models for different types of delinquency (2006: 41). In the 2005 study, parental supervision is not included to avoid the multicollinearity problem.

Two studies by Lee (2007a, 2007b) analyze the KYPS's middle school 3-wave data to examine the effect of informal labeling, low self-control, and delinquent peer association on delinquency. The effect of low self-control on delinquency in these two studies is only moderate, while the effect of delinquent peer association is stronger. Other important findings are that the effect of low self-control on delinquency is mediated by delinquent peer association, and that its effect is stronger for minor delinquency than serious delinquency. The results also indicate that low self-control has a direct effect on minor delinquency, but not on serious delinquency.

A study by Noh (2007) attempts to test the empirical relevancy of life-course theory and the GTC using virtually all KYPS data (i.e., 6-wave panel data with 8th grade students and 5-wave panel data with 4th grade students). Both status offenses and criminal behaviors are included as dependent variables. The results of structural equation modeling indicate that low self-control consistently has a significant effect on all the mediating variables in the model (attachment to parents, parental supervision, school performances, and delinquent peer association) for both elementary school students and middle school students. The effects of low self-control on status offenses and criminal behaviors, respectively, are generally significant in the model estimation. The effects on status offense and crime of such variables as attachment to parents, parental supervision, school performances, and delinquent peer association are mixed in different models.

A study by Lee (2008) yields only mixed support for the effect of low self-control on delinquency. Using data from KYPs middle school panel Lee finds different pathways to delinquent behaviors (runaway, smoking, drinking, and truancy) for early and late starters. For later starters, effective parenting has a significant effect on low self-control and delinquent peer association, respectively, and low self-control has a direct effect on delinquency. On the other hand, for early starters, the effect of parenting on delinquent peer association is only mediated by low self-control. Contrary to the GTC's prediction, there is no significant effect of low self-control on delinquency for early starters; the effect of low self-control on delinquency is mediated through delinquent peer association.

Another study by Park and Jung (2010), however, has yielded different results regarding the effect of low self-control on delinquency. They examine 11 delinquent behaviors (truancy, bullying, threatening, viewing pornography, robbery, theft, runaway, etc.) from 5-wave data for elementary students. The results from latent growth modeling analysis reveal that low self-control has a significant effect on delinquent behaviors among early starters, but it does not affect later starters' delinquent behavior. Another finding is that the more delinquent peers early starters acquire toward the second year, the more delinquent behavior they engage in, while low self-control seems to play a very limited, passive role toward delinquency involvement. For late starters the acquisition of delinquent peers after the second year precipitates their delinquency involvement. The opposing findings in Lee (2008) and Park and Jung (2010) are curious. They could be due to the different panels (middle school vs. elementary school), different delinquency items (4 items vs. 11 items), or different delinquency measures.

Kim (2010) uses the KYPs middle school panel for all 5 waves for his examination of 4 categories of delinquency — status offense (runaway, truancy, having sex), smoking and drinking, bullying, and serious delinquency. Results from OLS regression estimated separately by sex reveal only mixed support for the effect of low self-control on delinquency: strong support for smoking and drinking, mixed

support for bullying, and no support for serious delinquency. Another study by Jung (2010) finds that low self-control has a strong effect on cyber delinquency (spreading of false information online, illegal use of others' personal identification online, hacking). The length of internet use and strain from school performance also have effects on delinquency. Using the 5th wave data for elementary school students (i.e., 8th graders only), Jung and Chung (2012) also find that low self-control is strongly related to cyber delinquency.

A study by Na (2011) examines the interrelationship between informal social control and low self-control, focusing on the issue of whether informal social bonds have an effect on the formation of self-control. Using structural equation modeling, this study attempts to disentangle the effects of the two constructs over the five year period. The data came from panel surveys with elementary school students from grade 4 to 8. Self-control is measured by 6 items from Grasmick et al.'s scale. The results are contrary to key claims by Gottfredson and Hirschi in their GTC. The findings indicate that the long-term relationship between low self-control and informal social control is a dynamic process. Social bonds and informal social control had persistent effects on the process of self-control formation.

Another study by Moon et al. (2010), using Korean Youth Panel Survey data, finds that low self-control is significantly related to illegal downloading of computer software and illegal use of other's identification number. However, the effect of low self-control disappears when opportunity factors (hours of computer use and being a member of computer club) are included in the model.

The longitudinal design of the KYPS has facilitated assessments of the stability of self-control. A study by Yun and Walsh (2011) uses the 6-item scale from Grasmick et al. to examine the correlations of mean scores of self-control items across different waves and between 75th percentile and 25th percentile. The results of the comparison indicate that self-control remains reasonably stable over the 5 year period, and that non-delinquents score higher on self-control than delinquents (delinquents are those who committed at least one delinquent behavior during the

five year period). The study also finds that the magnitude of correlation coefficients between wave 1 and each of the ensuing years decreases over the years.

Another study (Jo and Zhang 2012) examines the stability of self-control using elementary students' data from the KYPS. The results find that the means of self-control across different waves are highly correlated. The results from the group modeling of the attitudinal measures reveal that four groups have distinct trajectories. The biggest group, which includes 50% of the adolescents, is comprised of those who started with average-level of self-control and remained stable during the four-year period. The second largest group (42.7%) is a "high decrease" group, i.e., those who started with high self-control and experienced a consistent decrease over time. The third group (7%) is low-increase group, and the fourth group (0.3%) is the "very sharp decrease" group. For behavioral measures, four unique groups are extracted: the high-stable group (88.6%), low-increasing group (6.5%) and high-decreasing group (4.9%). Overall, the analyses indicate considerable stability in self-control but also uncover evidence of change in both absolute and relative levels of self-control. The trajectories of self-control are not parallel to one another, contrary to the expectation based on the GTC. The finding of different degrees of stability for attitudinal and behavioral measures suggests that the two might not be measuring the same construct.

III. Conclusion

To summarize, the empirical literature on the linkage between low self-control and delinquency has blossomed since the publication of the GTC. The results of this research are far from consistent, which is perhaps not surprising given differences in samples, model specification, and the types of delinquent behaviors under examination. Nevertheless, the number of studies that claim to offer at least partial support for the theory is impressive. At the same time, it is clear that the GTC has not identified the individual-level cause of crime and delinquency, and that the extent to which, and the ways in which, the theory can be applied across diverse socio-cultural settings remains an open question.

The main limitation of the research to date, in our view, is that it has focused mainly on assessing the applicability of the GTC ‘as is,’ as originally formulated and implemented. Researchers have devoted extensive attention to the measurement of self-control and to the estimation of the impact of self-control on crime and delinquency as part of theory testing, but they have generally neglected the relevance of the cultural context in their hypothesis formulation. To borrow language from Kobayashi et al. (2010:113), these tests have not been “culturally nuanced.” While the extensive efforts at theory testing have without question been valuable, we maintain that the discipline will be well served by efforts to elaborate the theory itself, and that a crucial aspect of such elaboration is situating self-control more securely within salient features of the socio-cultural context.⁹⁾

9) See Bennett (1980) for an insightful discussion of the distinction between two forms of comparative criminological inquiry: the “evaluative approach,” which is oriented towards evaluating the generalizability of criminological theories and identifying their scope conditions, and the “generative approach,” which attempts to account for scope conditions by means of novel conceptualizations and the formulation of elaborated, more encompassing theoretical frameworks.

Chapter 3

The Independent Self and the Interdependent Self: Situating Self-Control in Socio-Cultural Context

The Independent Self and the Interdependent Self: Situating Self-Control in Socio-Cultural Context

The basis for our reformulation of the GTC is the work on the “culture-psychology interface” by Kitayama and colleagues (Kitayama and Uskul 2011; Kitayama and Uchida 2005; Markus and Kitayama 1991; see also Kim et al. 2003). The fundamental insight to emerge from this research is that while the ‘self’ is an intrinsic feature of human psychology, the way in which the self is understood or ‘construed’ varies depending on how personal agency is exercised. Moreover, two distinct forms of agency can be differentiated — ‘independent agency’ and ‘interdependent agency.’

Each form of agency entails the activation of distinctive sets of meanings and an associated construal of the self. When independent agency is exercised, “the self is defined primarily in terms of attributes that are internal to it such as his or her own goals, desires, needs, personality traits, and abilities...” (Kitayama and Uchida

2005:139) This type of construal of the self is grounded in beliefs about “the wholeness and uniqueness of each person’s configuration of internal attributes” (Markus and Kitayama 1991:226). The independent construal of the self tends to be oriented toward “self-actualization,” “realizing oneself,” “expressing oneself,” and “developing one’s capabilities” (Markus and Kitayama 1991:226).

The exercise of interdependent agency, in contrast, involves a different process. “Goals, desires, and needs of others in a relationship are just as important as one’s own” (Kitayama and Uchida 2005:139). This form of agency gives rise to the interdependent construal of the self. When the self is construed in this manner, “the self becomes most meaningful and complete when it is cast in the appropriate social relationship” (Markus and Kitayama 1991:227).

To illustrate the distinction between the two forms of self-construal, Kitayama and Uchida (2005:137) describe the behavior of two hypothetical students, one in the U. S. and one in Japan. The American student works hard in all of his courses because he wants to be admitted to medical school and pursue a career in medicine. In this manner he constructs his ‘self’ on the basis of the exercise of independent agency. A Japanese student also studies hard in all of her courses, but she does so because she believes that academic success is the proper way to return her obligations to her parents who have sacrificed to send her to college. Her ‘self’ is in this instance constructed with reference to interdependent agency.

According to Kitayama and Uchida (2005), people everywhere are capable of exercising both forms of agency, and they do so on occasion. However, there is systematic variation across cultures in the way in which agency is commonly manifested or “brought on-line” (2005:158). The style of independent agency tends to be “dominant” and “widespread” in European-American cultures, whereas the style of interdependent agency is “quite dominant in East Asian cultures” (2005:157).¹⁰⁾ Kitayama and Uskul summarize the findings from research over the course of the

10) See Kitayama and Uskul (2011) for a review of recent research relating cultural differences in independence and interdependence to underlying neurological conditions.

past two decades that has systematically compared people in Western cultures with those in East Asian cultures with respect to the dimensions of independence and interdependence. This body scholarship shows that:

“... as compared to interdependent Easterners, Westerners are more likely (a) to define the self in terms of personal (versus relational or collective) attributes in a context-general fashion ... (b) to seek the self’s uniqueness (versus similarity with ingroup members) ... (c) to perceive another person’s behavior as internally motivated even in the presence of situational constraints ... (d) to focus their attention on a focal object in lieu of its context, instead of holistically attending to the entire scene ... (e) to use linguistic (as opposed to spatial) code in problem solving ... and to be more linear in reasoning ... (f) to experience personal (versus social) happiness ... (g) to focus on positive (versus negative) features of the self ... (h) to show greater self-serving or self-enhancing bias ... (i) to seek to influence (rather than to adjust to) the social surrounding ...; and (j) to place significance on personal (versus public) decisions and choices ...” (Kitayama and Uskul 2011:424; [the quotation omits the references to the literature cited by the authors]).

These arguments about the relevance of different forms of agency for the construal of the ‘self’ raise serious questions about the adequacy of GTC, especially when considered in varying socio-cultural contexts. The theory is predicated on two underlying premises: (1) that ‘self-control’ is a singular entity (albeit one with specified sub-dimensions which cluster together), and (2) that ‘self-control’ becomes activated in the same manner for all persons. We propose that each of each of these premises might be challenged, leading to two promising reformulations of the GTC.

The possibility that ‘self-control’ as conventionally conceptualized might not always operate in the same manner has been raised by Kobayashi et al. (2010) in their “culturally nuanced test” of the GTC. They observe that the concept of self-control as developed in the GTC represents a characteristic that is internal to

the individual. They further reason that the “congruency” between such an internal characteristic and overt behavior is likely to vary depending on the socio-cultural context and the corresponding dominant style of self-construals. Specifically, they hypothesize that such congruency is likely to be stronger in individualistic cultures such as the U.S., where independent self-construals are more likely than in collectivistic cultures such as Japan, where interdependent self-construals are likely.

Kobayshi et al. do not measure different forms of self-construals in their analyses, essentially taking the national context as the proxy for them. However, as noted above, the capacity to engage in both independent and interdependent agency is universal; what varies is the relative reliance on the respective forms. Accordingly, we build on the reasoning of Kobayashi et al. to develop the hypothesis of contingent effects. The positive effect of low self-control as conventionally conceptualized on delinquency should be amplified by the person’s reliance on independent self-construals and mitigated by the person’s reliance on interdependent self-construals. These hypothesized interactions are depicted diagrammatically in Figure 1.

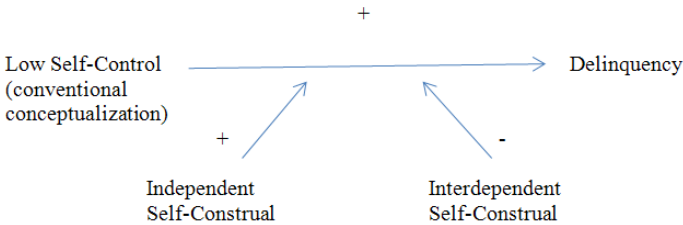


Figure 1 Analytic Model of Contingent Effects of Conventional Conceptualization of Self-Control

The model of contingent effects also implies a prediction about cross-national differences that cannot be directly assessed with the single-nation pilot study. Given the premise that independent self-construals are likely to be more prevalent in the U. S. than in Korea, measures of the conventional conceptualization of low self-control should be more robust predictors of delinquency in the U. S. (although the hypothesized individual-level interactions should be present in both contexts).

In addition to this model of contingent effects, we also propose a more radical reformulation of the GTC that entails a reconceptualization of 'self-control' itself. Rather than assume a single capacity for controlling the self, it might prove useful to conceptualize (and measure) two forms of self-control that correspond to the respective forms of the construal of the self: independent self-control and interdependent self-control. Both forms of self-control can be conceptualized as the personal capacity to bring about desired outcomes, but these outcomes are oriented towards different alignments of behavior with the individual person's needs and goals versus those of others in the individual's relational networks. We accordingly conceptualize independent self-control as the person's capacity to exert agency in the service of the independent self. Interdependent self-control is conceptualized analogously as the person's capacity to exert agency in the service of the interdependent self.

We hypothesize that low levels of both forms of self-control are likely to be positively related to delinquency, but the salience of each form is likely to vary depending on the socio-cultural context and, more specifically, the societal emphasis on individualism vs. collectivism. Low independent self-control is likely to be a particularly salient predictor of delinquency in individualist societies such as the U. S., whereas low interdependent self-control is likely to be of greater importance in more collectivistic societies such as Korea. Figure 2 displays these hypotheses about cross-national interaction effects.

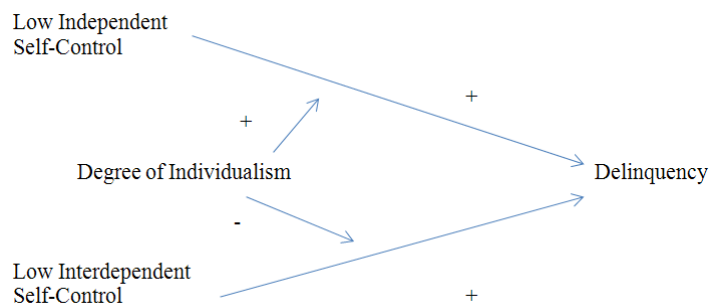


Figure 2 Analytic Model of Interactions between the Socio-cultural Context and Different Forms of Low Self-Control

Chapter 4

Methods: The Pilot Study

Methods: The Pilot Study

The purpose of the pilot study is to conduct an assessment of our reformulation of the GTC in order to pave the way for a larger comparative study to be conducted in Korea and the U. S. The contingent effects analytic model can be implemented with data for a single nation, whereas the model of cross-national interactions requires comparative data. The data from the pilot study are nevertheless valuable for determining the feasibility of operationalizing concepts and for preliminary investigations of the relationships among variables. Our primary focus in this initial report based on data from the pilot study is the measurement of the various concepts of self-control and self-construals. Subsequent analyses will examine associations with delinquency and covariates. Accordingly, we include in the survey instrument many items that have been shown to be relevant to the explanation of delinquency.

A significant difficulty arises when attempting to measure the construals of the self as is commonly done and the newly proposed concepts of independent self-control and interdependent self-control. The items used to measure self-construals in previous Korean research encompass two analytically distinct domains:

an orientation toward oneself or toward others, and the exercise of agency in accordance with a given type of self-construal. Consider the following four items intended to capture the independent self that are taken from Kim et al. (2003:95):

- (1) I voice my opinions in group discussions.
- (2) My personal identity, independent of others, is very important to me.
- (3) I prefer to be self-reliant rather than dependent on others.
- (4) I act as a unique person.

Items #2 and #3 indicate an orientation — expressions of what is important and what is preferred. Items #1 and #4, in contrast, refer to the exercise of agency — the capacity to align behavior with the self as it has been construed.

We have accordingly implemented a design with two modules that were administered to subsamples. One module includes the self-construal items and the Grasmick et al. self-control items. This module can be used to assess the contingent effects analytic model using well-established measurement procedures. The other module includes measures of the newly proposed independent and interdependent self-control. The data from this module can be used to assess the model based on a dualistic conceptualization of self-control. Some of the items from the Grasmick et al. scale can be readily interpreted as indicators of independent self-control (i.e., items reflecting “impulsivity”). Thus, while all the items from the Grasmick et al. scale are included in this module, some will be treated as capturing independent self-control in the analyses. Given the overlap, the Grasmick et al. scale will not be entered in the same statistical models predicting delinquency that include the measure of independent self-control. This module permits an assessment of whether the proposed distinctive forms of self-control can in fact be differentiated empirically. Both modules include measures of all other variables.

Although this initial report focuses on measurement properties associated with self-control, the next phase of the research will entail analyses of relationships with delinquency. It has thus been essential to include in the pilot study measures of

delinquency and theoretically relevant covariates. Practical constraints preclude the consideration of the full array of potential determinants of delinquency that have appeared in the literature. We nevertheless include indicators of the following social domains that are associated with major criminological perspectives to ensure that the statistical models are not severely under-specified in the analyses of delinquency: parental attachment/supervision, teacher attachment, peer delinquency, stress/strain, community integration/supervision, delinquent labeling by others, and basic demographics. The specific questionnaire items are enumerated in the attached questionnaire.

I . Measurement

The most commonly used measure of low self-control as conventionally conceptualized is the Grasmick et al. 24-item scale (a shortened, 6-item version was used in the KYPS). The scale encompasses 6 subdimensions: risk-seeking, simple tasks, temper, physical activity, impulsivity, and self-centeredness. Although some of these subdimensions are questionable on theoretical grounds, we include all 24-items to provide us with maximum flexibility in comparing our reformulated version of the GTC with alternative, more conventional applications.

The measurement of independent and interdependent self-construals is based on prior work in Korea by Kim et al. (2003). Drawing upon earlier self-construal scales, they administered a series of Likert-type items to a sample of university students in Korea. These items focused mainly on the importance to the respondent of various aspects of the self (e.g., establishing a personal identity, being self-reliant, maintaining relationships with group members in contrast with personal accomplishments, sacrificing self-interests). They conducted factor analyses of the responses and detected two factors that could be interpreted as indicating independent self-construals and interdependent self-construals. We have incorporated

7 items from each factor to include on our questionnaire.

To operationalize our proposed new conceptualizations of interdependent self-control, we essentially adapt the measures intended to capture interdependent self-construals but rework them to indicate the capacity to bring behavior in line with the interdependent self. We use four items from the impulsivity domain of the Grasmick et al. scale to capture our conceptualization of independent self-control, along with a fifth item that is taken from the self-control scale of Tangney et al. (2004).

The measures of the covariates have been taken from the Korean Youth Panel Survey. We have adapted 5 items of parental attachment from 6 items in the KYPS, and selected 3 items of parental supervision from 4 item scale. Measures for attachment to teachers and attachment to school have also been taken from the KYPS. Community integration has been measured by items such as “My neighbors see each other often” and “My neighbors believe one another.” Community supervision has been measured by the questions, such as “Adult neighbors will scold me if I smoke or drink in my neighborhood” and “If I am being battered by other students, adult neighbors will call the police or stop that.”

The measurement of peer related variables have been also taken from the KYPS—(1) the number of friends and the frequency of seeing one another, and (2) the number of delinquent friends and the frequency of their delinquent behavior (smoking, truancy, physical assault, and extorting money or thing).

Deviant labeling (“Others think that I am a problem kid” and “Others think that I am a juvenile delinquent”) and stress from various sources (school performance, conflict with parents, and annoying friends) has been also measured. See Appendix B for the wording and response sets for all items.

Delinquency has been measured on 15 delinquent behaviors including status offenses (smoking, drinking, truancy, etc.) and serious delinquent behavior (physical assault, stealing money, sexual assault, etc.). Respondents have been asked the total number of offenses committed in the past one year.

II. Data Collection

Data were collected from a representative sample of middle school students in the city of Seoul. In Seoul there are 379 middle schools that are under the auspices of 11 District Educational Bureaus for secondary schools. As shown in Table 1, the number of schools in the districts ranges from 23 to 45. We randomly selected 20 schools from those 11 school districts: two schools each from large school districts and one school from small school districts. The list of twenty schools and the number of respondents are presented in Table 2. Two second grade classes from each of those schools were randomly selected.¹¹⁾ The survey was self-administered in an anonymous way.

11) The number of students in each school was 50 students. When the number of students was not fulfilled and some students were not participating with sincerity in the survey, a replacement class was selected for obtaining the assigned 50 students in each school. The response rate was 91.24%. The data were collected during the period of November 13-18, 2013.

Table 1 School Districts and Sample Size

District Educational Bureau	Districts	# of Middle Schools	Ratio of # School	# of Schools Sampled	School Names
GangNam	GangNam	23			SuSeo
	SeoCho	15			isu
	subtotal	38	10.0%	2	
GangDong	GangDong	18			SeongNae
	SongPa	26			IlSin Girls
	subtotal	44	11.6%	2	
GangSeo	GangSeo	21			DukWon
	YangCheon	19			ShinMok
	subtotal	40	10.6%	2	
NamBu	GuRo	12			KaeWoong
	GeumCheon	9			
	YeongDeungPo	11			SeonYoo
	subtotal	32	8.4%	2	
DongBu	DongDaeMun	15			Kyunghee Girls
	JungNang	14			JoongRang
	subtotal	29	7.7%	2	
DongJak	GwanAk	16			InHun
	DongJak	16			DaeBang
	subtotal	32	8.4%	2	
BukBu	NoWon	26			SangGyung
	DoBong	13			ChangBook
	subtotal	39	10.3%	2	
SeoBu	MaPo	14			GyeongSeong
	SeoDaeMun	13			JungAng Girls
	EunPyeong	18			
	subtotal	45	11.9%	2	
SeongDong	GwangJin	12			GwangJang
	SeongDong	11			
	subtotal	23	6.1%	1	
SeongBuk	GangBuk	13			YoungHoon
	SeongBuk	18			JongAm
	subtotal	31	8.2%	2	
JungBu	YongSan	9			YongGang
	JongNo	9			
	JungGu	8			
	subtotal	26	6.9%	1	
Seoul	Total	379	100.0%	20	

Table 2 Schools Sampled

	# of cases	%	Cum. %
SuSeo	50	5	5
Isu	50	5	10
SeongNae	50	5	15
Ilsin Girls	50	5	20
DukWon	50	5	25
ShinMok	50	5	30
KaeWoong	50	5	35
SeonYoo	50	5	40
Kyunghee Girls	50	5	45
JoongRang	50	5	50
InHun	50	5	55
DaeBang	50	5	60
SangGyung	50	5	65
ChangBook	50	5	70
GyeongSeong	50	5	75
JungAng Girls	50	5	80
GwangJang	50	5	85
YoungHoon	50	5	90
JongAm	50	5	95
YongGang	50	5	100
Total	1000	100	

Chapter 5

Results

To explore the measurement properties of the key concepts, we conducted principal component factor analysis for the respective items of self-control and self-construals. Table 3 presents the summary of confirmatory factor analysis for Grasmick et al.'s 24 item scale for Module A.¹²⁾ The analysis extracted 6 factors. We applied varimax rotation in all factor analyses to clarify clustering along the respective dimensions. As expected, the loadings on the rotated factors show that the items are grouped under 6 different factors and that the items under each of the factors have high loadings. These factors conform to those detected in other studies based on different samples. Table 4 presents the means and the standard deviations of scales based on each of these six factors that underlie the Grasmick et al. scale.

In Table 5, the summary of confirmatory factor analysis for the items in Grasmick et al.'s scale for Module B is presented. The results show the exact same patterns of factor loadings for the six factors. The means and the standard deviations for the scales based on data from Module B are also very similar to those for Module A (see Table 6).

12) The scales were created by summing z-scores for the constituent items.

Table 3 Summary of Factor Analysis for Grasmick et al.'s Scale (Module A)

	Factor loadings					
	1	2	3	4	5	6
zG_rs1	0.101	0.819	0.072	-0.066	0.036	0.072
zG_rs2	0.131	0.822	0.115	0.129	0.029	0.102
zG_rs3	0.039	0.753	0.144	0.125	-0.026	0.159
zG_rs4	0.238	0.743	0.083	0.027	0.039	0.059
zG_st1	-0.031	0.119	0.063	0.205	0.715	0.108
zG_st2	0.029	0.064	0.122	0.194	0.738	0.132
zG_st3	0.056	-0.101	-0.007	0.201	0.619	0.014
zG_st4	-0.153	0.010	0.143	0.043	0.670	0.218
zG_temp1	0.129	0.000	0.009	0.165	0.176	0.750
zG_temp2	0.071	0.190	0.379	0.115	0.087	0.539
zG_temp3	-0.034	0.213	0.295	-0.027	0.052	0.687
zG_temp4	0.040	0.100	0.142	0.123	0.192	0.697
zG_pa1	0.868	0.164	0.007	0.031	-0.040	0.069
zG_pa2	0.879	0.115	-0.017	0.049	-0.006	-0.003
zG_pa3	0.875	0.059	0.023	0.081	-0.019	0.000
zG_pa4	0.814	0.153	-0.016	0.070	-0.011	0.123
zG_imp1	0.004	0.075	0.190	0.577	0.236	0.084
zG_imp2	0.173	-0.021	0.184	0.702	0.125	0.172
zG_imp3	0.053	0.078	0.035	0.802	0.158	0.039
zG_imp4	0.023	0.069	0.160	0.782	0.192	0.076
zG_sc1	-0.039	0.038	0.692	0.202	0.161	0.164
zG_sc2	-0.028	0.209	0.731	0.017	0.158	0.027
zG_sc3	-0.001	0.059	0.773	0.140	0.029	0.148
zG_sc4	0.074	0.115	0.650	0.255	-0.040	0.311

* Principal component factor analysis with varimax rotation

Table 4 Means and Standard Deviations of Grasmick et al.'s Scale (Module A)

	N	Mean	Std.
Risk Seeking	500	1.89	0.62
Simple Tasks	500	2.47	0.52
Temper	500	1.89	0.54
Physical Activity	500	2.63	0.73
Impulsivity	500	2.26	0.58
Self-Centeredness	500	1.91	0.51

(1:strongly disagree, 2:disagree, 3:agree, 4:strongly agree)

Table 5 Summary of Factor Analysis for Grasmick et al.'s Scale (Module B)

	Factor loadings					
	1	2	3	4	5	6
zG_rs1	0.050	0.775	−0.036	0.117	0.025	−0.058
zG_rs2	0.123	0.778	0.060	0.202	0.122	0.008
zG_rs3	0.013	0.781	0.060	0.146	0.121	−0.055
zG_rs4	0.262	0.785	0.059	0.018	0.018	−0.047
zG_st1	−0.068	−0.157	0.272	0.284	0.055	0.601
zG_st2	−0.059	−0.086	0.313	0.443	0.065	0.525
zG_st3	0.195	−0.012	0.062	−0.166	0.179	0.746
zG_st4	−0.135	0.003	0.153	0.071	0.128	0.680
zG_temp1	0.153	0.020	0.063	0.724	0.057	0.057
zG_temp2	−0.123	0.288	0.147	0.582	0.240	0.063
zG_temp3	−0.032	0.189	0.064	0.719	0.217	0.031
zG_temp4	0.091	0.179	0.061	0.691	0.207	0.040
zG_pa1	0.814	0.111	0.088	0.068	0.043	−0.052
zG_pa2	0.857	0.072	0.009	−0.017	−0.108	−0.012
zG_pa3	0.841	0.040	0.147	0.010	−0.034	0.032
zG_pa4	0.807	0.169	−0.063	0.061	−0.006	−0.014
zG_imp1	−0.017	0.089	0.676	0.087	0.121	0.157
zG_imp2	0.087	0.033	0.731	0.130	0.129	0.147
zG_imp3	0.059	−0.017	0.839	−0.031	0.067	0.091
zG_imp4	0.071	0.049	0.755	0.151	0.201	0.112
zG_sc1	−0.008	0.028	0.054	0.132	0.719	0.125
zG_sc2	−0.077	0.011	0.152	0.053	0.723	0.120
zG_sc3	−0.020	0.170	0.179	0.205	0.701	0.057
zG_sc4	0.009	0.106	0.144	0.263	0.730	0.076

* Principal component factor analysis with varimax rotation

Table 6 Means and Standard Deviations of Grasmick et al.'s Scale (Module B)

	N	Mean	Std.
Risk Seeking	500	1.93	0.62
Simple Tasks	500	2.51	0.50
Temper	500	1.85	0.55
Physical Activity	500	2.65	0.68
Impulsivity	500	2.25	0.61
Self-Centeredness	500	1.88	0.48

(1:strongly disagree, 2:disagree, 3:agree, 4:strongly agree)

As explained above, the items for self-construals were included in the questionnaire administered only in Module A, whereas the items for the “dualistic” conceptualization of self-control — independent and interdependent — were included only in Module B. Table 7 reports the results of the factor analysis for the self-construal items. Consistent with prior research in Korea, the factor loadings identify two factors that conform to the underlying conceptualization. The items selected to represent interdependent self-construal all rank highly on one dimension, while the items representing independent self-construal rank highly on the other dimension. Scales based on these results have high reliability. Cronbach's alpha for the independent self-construal scale is .779, and for the interdependent self-construal scale, .797. Table 8 reports the means and standard deviations for scales based on these factor analyses.

Table 7 Summary of Factor Analysis for Self–Construals

	Factor loadings	
	1	2
zindS_1	0.105	0.711
zindS_2	0.049	0.678
zindS_3	0.006	0.628
zindS_4	0.235	0.451
zindS_5	0.086	0.719
zindS_6	0.087	0.687
zindS_7	0.213	0.606
zintS_1	0.612	0.338
zintS_2	0.654	0.303
zintS_3	0.687	–0.038
zintS_4	0.509	0.144
zintS_5	0.731	–0.008
zintS_6	0.758	0.075
zintS_7	0.638	0.109

* Principal component factor analysis with varimax rotation

Table 8 Means and Standard Deviations for Self–Construals

	N	Mean	Std.
Independent Self–construal	500	2.78	0.48
Interdependent Self–construal	500	2.83	0.43

(1:strongly disagree, 2:disagree, 3:agree, 4:strongly agree)

Turning attention to the proposed “dualistic” conceptualization of self-control, the results of the factor analyses in Table 9 are partially consistent with expectations. The four items adopted from the Grasmick self-control scale selected to represent independent self-control cluster together (these are the ‘impulsivity items’ that were included in Table 5), but the newly proposed item for independent self-control does not load highly on either factor. With respect to interdependent self-control, the

evidence suggests a dimension that is distinct from independent self-control, and this dimension is best captured by four of the five items (only one with loading below .500). One item appears more closely related to another dimension, and in a 3-factor solution, this item ‘stands alone’ on a third factor. Another cannot be clearly aligned with either dimension.

Table 9 Summary of Factor Analysis for Self-Control Scale

	Factor loadings	
	1	2
zG_imp1	.687	.228
zG_imp2	.769	.088
zG_imp3	.831	.017
zG_imp4	.807	.084
zindSC_1	-.112	.178
zintSC_1	.116	.499
zintSC_2	.214	.725
zintSC_3	-.013	.665
zintSC_4	.173	.647
zintSC_5	.135	.767

The factor loadings indicate that it will be useful to formulate additional items to replace some of those originally proposed for the different forms of self-control. For present purposes, we computed a scale based on the four items with high loadings on independent self-control and a scale based on the three items with high loadings on interdependent self-control. The reliabilities are high – Cronbach’s alpha for independent self-control = .791; for interdependent self-control, .705. Table 10 reports the means and standard deviations for these self-control scales.

Tables 11 and 12 report the correlation matrices for items in the self-construal and self-control scales.

Table 10 Means and Standard Deviations for Self–Controls¹³⁾

	N	Mean	Std.
Independent Self–control	500	2.248	0.608
Interdependent Self–control	500	1.932	0.472

Table 11 Correlation Coefficients for Self–Construal Scales

	zindS_1	zindS_2	zindS_3	zindS_4	zindS_5	zindS_6	zindS_7	zintS_1	zintS_2	zintS_3	zintS_4	zintS_5	zintS_6	zintS_7
zindS_1	1	0.372**	0.321**	0.264**	0.623**	0.344**	0.282**	0.299**	0.266**	0.087	0.134**	0.108*	0.099*	0.169**
zindS_2		1	0.340**	0.292**	0.369**	0.316**	0.361**	0.301**	0.229**	0.007	0.124**	0.027	0.115*	0.104*
zindS_3			1	0.168**	0.337**	0.450**	0.285**	0.108*	0.125**	0.052	0.1778**	0.110*	0.094*	0.039
zindS_4				1	0.319**	0.187**	0.234**	0.246**	0.281**	0.176**	0.094*	0.128**	0.141**	0.178**
zindS_5					1	0.346**	0.260**	0.266**	0.255**	0.108*	0.122**	0.091*	0.100*	0.135**
zindS_6						1	0.530**	0.185**	0.210**	0.031	0.202**	0.092*	0.167**	0.145**
zindS_7							1	0.297**	0.283**	0.063	0.150**	0.137**	0.247**	0.218**
zintS_1								1	0.601**	0.332**	0.193**	0.304**	0.401**	0.351**
zintS_2									1	0.370**	0.264**	0.372**	0.384**	0.332**
zintS_3										1	0.226**	0.477**	0.326**	0.293**
zintS_4											1	0.370**	0.355**	0.268**
zintS_5												1	0.492**	0.282**
zintS_6													1	0.520**
zintS_7														1

** $p < .01$ * $p < .05$

Table 12 Correlation Coefficients for Self–Control Scales

	zG_imp1	zG_imp2	zG_imp3	zG_imp4	zindSC_1	zintSC_1	zintSC_2	zintSC_3	zintSC_4	zintSC_5
zG_imp1	1	0.433**	0.459**	0.412**	−0.050	0.179**	0.279**	0.098*	0.243**	0.261**
zG_imp2		1	0.495**	0.512**	−0.014	0.082	0.234**	0.075	0.163**	0.189**
zG_imp3			1	0.606**	−0.036	0.101*	0.168**	0.075	0.174**	0.105*
zG_imp4				1	0.011	0.203**	0.203**	0.097*	0.151**	0.155**
zindSC_1					1	0.202**	0.034	0.099*	−0.086	0.042
zintSC_1						1	0.298**	0.256**	0.196**	0.166**
zintSC_2							1	0.291**	0.341**	0.571**
zintSC_3								1	0.334**	0.340**
zintSC_4									1	0.446**
zintSC_5										1

** $p < .01$ * $p < .05$

13) Means and Standard deviations are presented for 4 independent self-control items and 5 inter-dependent self-control items.

Chapter 6

Summary and Conclusions

Summary and Conclusions

Gottfredson and Hirschi's General Theory of Crime has had a profound impact on the discipline of criminology. It has generated a voluminous body of literature, encompassing probing exegeses, theoretical critiques, and empirical assessments. This literature has fostered a widespread consensus in the field that the core concept of the theory — low self-control — warrants serious consideration in any effort to understand the causes of delinquency. At the same time, the empirical evidence about the extent to which, and the ways in which, the theory can be applied beyond the terrain in which it was originally formulated — Western society — remains an open question. Our research is grounded in the premise that a truly general theory of crime will systematically incorporate salient features of the socio-cultural context.

We have accordingly proposed ways to elaborate the GTC that build upon insights from the field of cultural psychology. Specifically, we have argued that theorizing about the consequences of self-control needs to be sensitive to the different ways in which the 'self' is construed in different societies. Our theorizing has yielded analytic models that highlight potential moderating effects of self-construals on the self-control/delinquency relationship, and possible effects of newly conceptualized

forms of self-control that reflect the varying ways in which the self can be construed.

The overarching purpose of the pilot study is to assess the potential utility of our elaboration of the GTC. In this initial report, we have focused on measurement properties of key concepts. The results indicate that the widely used Grasmick et al. scale of self-control captures theoretically interpretable attitudinal dimensions for the sample of Korean youths. In addition, our analyses reveal that the two dimensions of self-construal identified by Kim et al. in their study of Korean university students – interdependent and independent – can be detected in middle school students as well. The results for the newly proposed distinct forms of self-control are mixed but suggestive. Consistent with expectations, a confirmatory factor analysis yields two empirically distinct dimensions that can be readily interpreted as reflecting a form of independent self-control and a form of interdependent self-control. A few of the original items, however, do not align with the underlying dimensions. These findings suggest that the operationalization of the concepts can be improved with the formulation of additional items.

In addition to refining the measurement of key concepts for future data collection, a primary task for further analyses of the data from the pilot study is to explore the inter-relationships among the various conceptualizations of self-control, self-construals, and indicators of different forms of delinquency. These analyses will include covariates to permit an assessment of the distinctive contribution to the explanation of delinquency yielded by our proposed theoretical models. We plan to assess the specific hypotheses implied by these models, and we will also consider possibilities for more complex causal chains, whereby various forms of self-construals and self-control operate in conjunction with other predictors of delinquency via mediating and/or moderating processes. We are hopeful that the insights to be gained from the analyses of the pilot study will provide the foundation for a large-scale research project to examine the ways in which the influence of the individual property of self-control on delinquency is conditioned by the larger socio-cultural context.

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Appendix 1

EMPIRICAL STUDIES ON SELF-CONTROL IN KOREA

AUTHOR	SAMPLE	SELF-CONTROL	DELINQUENCY	RESULTS (self-control)
Min, S. 1998	718 elementary school boys and girls (5th grade)	Selected from Grasmick scale (self-report and teachers' evaluation of students)	10 delinquent behavior (drunkenness, gambling, seeing porno, truancy, cheating on exam, etc.)	Strong support
Lee, S. 2005	1,113 middle and high school boys and girls	9 items from Grasmick (not sure what they are except two)	Cyber delinquency (12 items)	Strong support (and interaction of low self-control and perceived fun)
Lee, S. 2006	525 middle school boys	9 items from Grasmick (not sure what they are except two)	Offline violence (minor assault and aggregated assault) and online violent behavior (calling name, distributing false information and blaming others)	Strong support
Ki, K. 2006	546 high school boys	12 items from Grasmick	Minor and serious delinquency	Strong support for both minor and strong delinquency
Kim & Hwang, 2010	3,603 middle and high school students	3 items from Grasmick (temper, violent, anger)	Cell phone delinquency (bullying, pornography, spam, etc)	Not support
Lee, S. 2010	715 middle school students	12 items from Grasmick	Online and offline delinquency (10 behaviors, respectively)	Strong support (self-control effect was stronger in online delinquency than offline)

Self-Control and Delinquency in Socio-Cultural Context

AUTHOR	SAMPLE	SELF-CONTROL	DELINQUENCY	RESULTS (self-control)
Lee, S. 2011	715 middle school students	12 items from Grasmick	Delinquency in offline, online, and cell phone media	Strong support
Ki, K. 2011a	2,056 elementary, middle, and high school students ('08 KIC survey)	6 items from Grasmick	Minor and serious delinquent behaviors (20 behaviors)	Strong support
Ki, K. 2011b	2,056 elementary, middle, and high school students ('08 KIC survey)	6 items from Grasmick	Minor and serious delinquent behaviors (20 behaviors)	Strong support
Ki, K. 2011c	1,128 elementary school boys and girls	6 items from Grasmick	11 minor delinquency such as smoking, drinking, cheating on exam, truancy, runaway, watching pornos, malicious comment and illegal downloading on internet, spitting or littering, nucence, traffic violation; serious 11 delinquency (vandalism, bullying, sexual harassment, assault, theft, robbery etc)	Strong support
Min, S. 2005	KYPS (3,449 2nd graders of middle school)	6 items from Grasmick plus 2 behavioral items	5 status offenses (smoking, drinking, truancy, runaway, sexual intercourse); 5 criminal behaviors (physical assault, group fighting, robbery, theft, threat); bullying	Strong support
Min, S. 2006	KYPS (3,449 2nd graders of middle school); 2-wave data	6 items from Grasmick plus 2 behavioral items	Same as above; and computer-related delinquency	Strong support

AUTHOR	SAMPLE	SELF-CONTROL	DELINQUENCY	RESULTS (self-control)
Lee, S. 2007a	KYPS (3,125 students from 3-wave data for middle school)	6 items from Grasmick	17 behaviors (12 delinquent behaviors plus 5 cyber delinquency)	Weak support
Lee, S. 2007b	KYPS (3, 125 students from 3-wave data for middle school)	6 items from Grasmick	Minor delinquency (smoking, drinking, truancy) Serious delinquency (physical assault, theft, robbery)	Moderate effect on minor delinquency (effect of delinquent peer was stronger); no direct effect of self-control on serious delinquency, only mediated by delinquent peer association)
Noh, S. 2007	KYPS (2,947 students, 6-wave data with 8th grade and 3,697 students, 5-wave data with 4th grade)	6 items from Grasmick	6 behaviors (truancy, drinking, smoking, violence, robbery, theft)	Moderate support (for both elementary and middle school students)
Lee, S. 2008	KYPS (Middle school panel, 1st-4th waves)	6 items from Grasmick	4 delinquent behavior (runaway, smoking, drinking, truancy); Response category 0-4 (4= all four delinquency involved)	Mixed support (self-control was significant for later starters only; not significant for early starters, low self-control was mediated through delinquent peer association)
Park & Jung, 2010	KYPS (Elementary panel, 4th - 8th grade, all 5 waves)	6 items from Grasmick	11 delinquent behaviors (truancy, bullying, threatening, viewing porno, robbery, theft, runaway, etc.); response category (0-5 for each behavior, then add them up across 11 behaviors)	Mixed support (self-control effect was significant for early starters; not significant for later starters)

Self-Control and Delinquency in Socio-Cultural Context

AUTHOR	SAMPLE	SELF-CONTROL	DELINQUENCY	RESULTS (self-control)
Kim, S. 2010	KYPS (middle school panel, 8th – 12th grades, all 5 waves)	5 items from Grasmick	4 categories: status offense (runaway, truancy, having sex); smoking and drinking; bullying; serious delinquency	Analyzed by sex: mixed support for status offenses; strong support for smoking and drinking; mixed support for bullying; no support for serious delinquency
Jung, H. 2010	KYPS (middle school panel, 8th – 12th grades, all 5 waves)	4 items from Grasmick (impulsivity, simple task, temper, risk taking)	Delinquency in cyber space (online spreading of false information, illegal use of others' personal identification online, hacking)	Strong support
Na, C. 2011	KYPS (elementary panel, 4th – 8th grade, all 5 waves)	5 item from Grasmick scale	The effect of social bonds on the formation of self-control	Informal social bonds on self-control is a dynamic process
Jung & Chung, 2012	KYPS (5th year data for elementary school, i.e., 8th graders)	4 items from Grasmick scale	Cyber delinquency	Strong support
Hwang & Akers, 2003	High school students in Busan (1999)	6 dimensions of Grasmick scale	Tobacco and alcohol use	The self-control was not measured as a single construct; impulsivity had a consistent effect.
Moon et al, 2010	KYPS	6 items from Grasmick	Computer crime (illegal download of software and illegal use of others' personal identification online)	Moderate support; low self-control effect disappears when opportunity factors were introduced in the model
Yun & Walsh, 2011	KYPS	6 items from Grasmick	Various delinquent behaviors	Self-control remained reasonably stable; non-delinquents scored higher than delinquents on self-control scale

AUTHOR	SAMPLE	SELF-CONTROL	DELINQUENCY	RESULTS (self-control)
Gover et al., 2011	University students	23 items from Grasmick	Dating violence	Significant self-control effect on victimization risk of physical and psychological abuse
Jennings et al., 2011	University students		Dating violence	Low self-control was associated with victimization of dating violence
Jo & Zhang, 2012	KYPS	13-item behavioral scale and 6 item scale from Grasmick	Stability of self-control across different waves	Considerably stable level of self-control, but also evidence of change in levels of self-control. Different degrees of stability for attitudinal and behavioral measures were also found

Appendix 2

QUESTIONNAIRE ITEMS

I . MEASURES OF SELF-CONTROL AND SELF-CONSTRUALS

A. Grasmick et al. (1993) Self-Control Scale (24 items)

Risk Seeking:

- (1) I like to test myself every now and then by doing something a little risky.
(나는 약간의 위험부담이 있는 일로 나 자신을 시험하는 것을 좋아한다)
- (2) Sometimes I will take a risk just for the fun of it. (나는 단지 재미 삼아서 위험한 일을 하곤 한다)
- (3) I sometimes find it exciting to do things for which I might get in trouble.
(나는 내가 곤란해질 수도 있는 일에서 재미를 느낀다)
- (4) Excitement and adventure are more important to me than security. (나는 안전함 보다는 흥미진진하고 모험스런 활동을 즐긴다)

Simple Tasks

- (5) I frequently try to avoid projects that I know will be difficult. (나는 힘들 것 같은 일은 자주 피하려 한다)

- (6) When things get complicated, I tend to quit or withdraw. (나는 일이 복잡해지면 포기하는 편이다)
- (7) The things in life that are easiest to do bring me the most pleasure. (나는 쉬운 일을 할 때 즐겁다)
- (8) I dislike really hard tasks that stretch my abilities to the limit. (나는 내 능력 밖이라고 생각되는 일을 싫어한다)

Temper

- (9) I lose my temper pretty easily. (나는 화를 쉽게 잘 낸다)
- (10) Often when I'm angry at people, I feel more like hurting them than talking to them about why I am angry. (나는 화를 낼 때는 화난 이유를 설명하기 보다는 상대방에게 상처를 주는 것을 좋아하는 것 같다)
- (11) When I'm really angry, other people better stay away from me. (나는 화가 나면 물불을 가리지 않아서 다른 사람들이 내 곁에 있으려 하지 않는다)
- (12) When I have a serious disagreement with someone, it's usually hard for me to talk calmly about it without getting upset. (나는 의견이 크게 다르면 흥분하여 차분히 이야기하는 것이 어렵다)

Physical Activity

- (13) If I had a choice, I would almost always rather do something physical than something mental. (나는 정적인 일보다는 신체적인 활동을 선택한다)
- (14) I almost always feel better when I am on the move than when I am sitting. (나는 앉아 있을 때보다 움직일 때 기분이 더 좋다)

(15) I like to get out and do things more than I like to read or contemplate ideas. (나는 읽고 생각하는 것보다 밖에 나가서 활동하는 것이 더 좋다)

(16) I seem to have more energy and a greater need for activity than most other people my age. (나는 친구들보다 에너지가 넘쳐서 더 많이 활동해야 하는 것 같다)

Impulsivity

(17) I don't devote much thought and effort to preparing for the future. (나는 미래를 준비하려고 생각이나 노력을 많이 하지 않는다)

(18) I often do whatever bring me pleasure here and now, even at the cost of some distant goal. (나는 내일은 어떻게 될지라도 오늘 즐거운 일을 우선 하고 본다)

(19) I'm more concerned with what happens to me in the short run than in the long run. (나는 장래 보다는 가까운 날의 일에 더 관심이 많다)

(20) I much prefer doing things that pay off right away than in the future. (나는 장래 보다는 바로 지금 보상받는 일을 더 좋아한다)

Self-Centeredness

(21) I try to look out for myself first, even if it means making things difficult for other people. (나는 다른 사람을 힘들게 하더라도 나 자신을 먼저 챙긴다)

(22) I'm not very sympathetic to other people when they are having problems. (나는 어려움을 겪고 있는 사람에 대해서 그리 동정적이지 않다)

(23) If things I do upset people, it's their problem not mine. (내가 다른 사람을 흥분시켜도 나의 책임이 아니고 그 사람의 문제일 뿐이다)

- (24) I will try to get the things I want even when I know it's causing problems for other people. (다른 사람들이 곤란해질 것을 알아도 내가 원하는 것을 얻으려 한다. - 새로 작성된 설문지에서는 제외되어 있음)

B. Self-Construals, adapted from Kim et al. (2003)

Independent Self-construal

- (25) I voice my opinions in group discussions. (나는 집단 토의에서 내 의견을 잘 말한다)
- (26) My personal identity, independent of others, is very important to me. (다른 사람들과 구별되는 나만의 정체성은 매우 중요하다)
- (27) I act as a unique person, separate from others. (나는 다른 사람과 별개로, 독특한 사람으로서 행동한다)
- (28) I have an opinion about things: I know what I like and what I don't like. (나는 내가 무엇을 좋아하고 무엇을 싫어하는지 잘 안다)
- (29) Speaking up in a work/task group is not a problem for me. (나는 조별모임에서 큰 소리로 의견을 낼 수 있다)
- (30) I enjoy being unique and different from others. (나는 다른 사람들과 다른 특별한 사람이 되는 것을 좋아한다)
- (31) I enjoy being admired for my unique qualities. (나는 다른 사람들과 다른 특성으로 칭찬받는 것을 좋아한다)

Interdependent Self-construal

- (32) I am careful to maintain harmony in my group. (나는 집단의 조화를 위해 노력한다)
- (33) I often consider how I can be helpful to specific others in my group. (내가 속한 집단 사람에게 어떻게 하면 도움이 될 수 있을지를 자주 생각한다)
- (34) I would sacrifice my self-interests for the benefit of my group. (나는 집단의 이익을 위해서 내 이익을 포기할 수 있다)
- (35) It is important for me to consult close friends and get their ideas before making decisions. (나는 어떤 결정을 내리기 전에 친한 친구들에게 상담을 하는 것을 중요시하는 편이다.)
- (36) I try to meet the demands of my group, even if it means controlling my own desires. (나는 내가 원하는 것을 포기하더라도 집단의 요구를 만족시키려 노력한다)
- (37) The security of being an accepted member of a group is very important to me. (나는 집단의 일원으로서 얻는 안도감을 중요시하는 편이다.)
- (38) My happiness depends on the happiness of those in my group. (내가 속한 집단이 행복해야 나도 행복하다)

C. Distinctive Forms of Self-Control Reflecting Different Self-Construals

Independent Self-Control (the first 4 items are taken from the “impulsivity” domain of the Grasmick et al. scale; they are not numbered because they are re-

dundant; the remaining item is adapted from Tangney et al. [2004]).

I don't devote much thought and effort to preparing for the future. (나는 미래를 준비하려고 생각이나 노력을 많이 하지 않는다)

I often do whatever brings me pleasure here and now, even at the cost of some distant goal of mine. (나는 내일은 어떻게 될지라도 오늘 즐거운 일을 우선 하고 본다)

I'm more concerned with what happens to me in the short run than in the long run. (나는 장래 보다는 가까운 날의 일에 더 관심이 많다)

I much prefer doing things that pay off right away than in the future. (나는 장래 보다는 바로 지금 보상받는 일을 더 좋아한다)]

(39) I tend to blurt out whatever is on my mind. (나는 생각하는 것들을 다 말해 버리는 편이다)

Interdependent self-control

(40) I often act in ways that threaten the harmony within my group. (나는 집단의 화합을 위협하는 행동을 자주 한다)

(41) No matter how hard I try, it seems like I can't be helpful to others who I am close to. (나는 아무리 노력해도 친한 사람들에게 도움이 되지 못하는 것 같다)

(42) I am often unsuccessful when I try to sacrifice my own interests for the benefit of others. (나는 종종 다른 사람을 위해 내 이익을 포기하는게 쉽지 않다)

(43) I rarely consult with close friends before making decisions. (나는 어떤 결정을 내리기 전에 친한 친구들과 의논하는 경우가 거의 없다)

(44) It isn't easy for me to be accepted as a valued member of my group. (나는 집단에서 가치 있는 구성원으로 인정받는 게 쉽지 않다)

II. SELF-REPORTED DELINQUENCY

Total Number of Delinquency Offenses (Respondent)

How many times did you commit the following behavior? (number of offences in the past 1 year) (학생은 지난 1년 동안 아래와 같은 일들을 해 본 적이 있습니까? 있다면 몇 번이나 있습니까?)

(45) Smoking, number of times a year / number of times a day (담배 피우기(지난 1년간 ____회/하루에 ____회))

(46) drinking (술 마시기)

(47) truancy (무단결석)

(48) runaway (가출 경험)

(49) having sex (성관계경험)

(50) physical assault (다른 사람을 심하게 때리기)

(51) group fighting (패싸움)

(52) extort other's money or thing (남의 돈이나 물건을 뺏기(뺑 뜯기))

(53) stealing money or thing (남의 돈이나 물건을 훔치기)

(54) having sexual relations with adults for money (원조 교제)

(55) teasing or taunting someone (남을 심하게 놀리거나 조롱하기)

(56) threatening (남을 협박하기)

(57) bullying (다른 친구를 집단 따돌림(왕따)시키기)

(58) sexual assault (성폭행하기)

(59) sexual harassment (성희롱하기)

III. CONTROL VARIABLES

A. Peer Delinquency

Frequency of meeting intimate friends

(60) How many intimate friends do you have? (매우 친한 친구들이 몇 명 정도 있습니까?)

(61) How often do you meet them? (그 친구들과는 얼마나 자주 만나는지 보기의 번호를 적어주십시오)

- Almost every day (거의 매일)
- every 2 or 3 days (2~3일에 한번 정도)
- once a week (일주일에 한번 정도)
- once every 2 or 3 weeks (2~3주에 한번 정도)
- once a month (한 달에 한번 정도)
- once in several months (몇 달에 한번 정도)

Total Number of Delinquency Offenses Committed by intimate friends

(62) How many of your intimate friends are suspended or expelled from school?
(그 친구들 중에서 학교에서 근신, 정학 또는 퇴학 등의 처벌을 받은 경험이 있는 친구는 몇 명이나 됩니까?)

(63) How many of your intimate friends are caught by police? (그 친구들 중에 경찰서에 잡혀간 적이 있는 친구는 몇 명이나 됩니까?)

(64) How many of your intimate friends commit the following behavior?
(그 친구들 중에서 지난 1년 동안 아래와 같은 행동을 한 친구는 얼마나 됩니까? 왼쪽의 항목을 읽어보고, 그 친구들 중 몇 명 정도가 그런 행동을 했는지를 오른쪽에서 해당되는 것에 표시하십시오.)

- drinking (술 마시기)
- smoking (담배 피우기)
- truancy (무단결석)
- physical assault (다른 사람을 심하게 때리기)
- extort money or thing (남의 돈이나 물건을 뺏기(뺑 뜯기))

B. Deviant Labeling by Others (used in KYPs III)

- (70) Others think that I am a problem child. (주위사람들은 나를 문제아라고 생각한다)
- (71) Others think that I am a juvenile delinquent. (주위 사람들은 나를 비행청소년이라고 생각한다)

C. Stress/Strain

- (72) My parents pressure me about grades. (성적 때문에 부모님으로부터 스트레스를 받는다)
- (73) I am under stress because parents and I have conflicts of opinion. (부모님과 의견충돌이 있어서 스트레스를 받는다)
- (74) I am under stress because my parents want to interfere in my life too much. (부모님의 지나친 간섭으로 스트레스를 받는다)
- (75) I am under stress because friends are taunting me. (친구에게 놀림이나 무시를 당해서 스트레스를 받는다)

D. Parental Attachment / Parental Supervision

- (76) I am trying to spend much time with my parents. (부모님과 나는 많은 시간을 함께 보내려고 노력하는 편이다)
- (77) My parents always show love to me. (부모님은 나에게 늘 사랑과 애정을 보이신다)
- (78) My parents and I understand each other pretty well. (부모님과 나는 서로를 잘 이해하는 편이다)
- (79) I tend to tell my parents about what happened to me or my thoughts. (나는 내 생각이나 밖에서 있었던 일들을 부모님께 자주 이야기하는 편이다)
- (80) I talk with my parents a lot. (부모님과 나는 대화를 자주 나누는 편이다)
- (81) When I am out, my parents almost always know where I am. (내가 외출했을 때 부모님은 내가 어디에 있는지 대부분 알고 계신다)
- (82) When I am out, my parents almost always know whom I am with. (내가 외출했을 때 부모님은 내가 누구와 함께 있는지 대부분 알고 계신다)
- (83) When I am out, my parents almost always know when I am going to come back. (내가 외출했을 때 부모님은 내가 언제 돌아올지를 대부분 알고 계신다)

E. Attachment to teacher

- (84) I can tell my problems to teachers. (나는 선생님께 내 고민을 털어 놓고 이야기 할 수 있다)

(85) Teachers care about me. (선생님은 나에게 사랑과 관심을 보여 주신다)

(86) I want to be a person like teachers in the future. (나는 장래에 선생님과 같은 사람이 되고 싶다)

F. Community Integration / Community Supervision

(87) My neighbors see each other often. (우리 동네 사람들은 서로 자주 만나는 편이다)

(88) My neighbors believe each other. (우리 동네 사람들은 서로 믿고 지내는 편이다)

(89) Adult neighbors will scold me if I smoke or drink in my neighborhood. (우리 동네에서 내가 담배를 피우거나 술을 마신다면 동네 어른들이 나를 꾸짖을 것이다)

(90) If I am being battered by other students, adult neighbors will call the police or stop that. (우리 동네에서 내가 다른 아이들에게 폭행을 당하고 있다면 동네 사람들이 말리거나 경찰서에 신고할 것이다)

G. Sociodemographic Variables

(91) Birthday: year month

(92) Sex;

(93) Grade:

Appendix 3

No information herein gathered cannot be used other than statistical purposes and its anonymity is protected per Statistics Act 13:14.

QUESTIONNAIRE (Module 1)

ID				
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Juvenile Delinquency in the Socio-Cultural Context

The Korean Institute of Criminology is a government sponsored research institute and contributes to national criminal justice and crime prevention policies on the basis of the research on the extent and causes of crime and delinquency.

The institute is now conducting a survey on juvenile delinquency in order to examine the factors affecting the level of juvenile delinquency including self-control and family organization. The data will be used to better understand the nature of the phenomenon and derive policy implication from the results.

This survey is anonymous and your responses are used only for statistical data purposes without any personal identification. Please answer all questionnaire items.

November, 2013

Korean Institute of Criminology

Project manager: Seong-Jin Yeon 02- 3460-5132

Survey manager: Ho Young Kim 010-5410-5771

1. The following questions are about your usual thoughts or behaviors. Read each question carefully and choose one number that suits you best.

	strongly disagree	disagree	agree	strongly agree
1) I like to test myself every now and then by doing something a little risky.	1	2	3	4
2) Sometimes I will take a risk just for the fun of it.	1	2	3	4
3) I sometimes find it exciting to do things for which I might get in trouble.	1	2	3	4
4) Excitement and adventure are more important to me than security.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
5) I frequently try to avoid projects that I know will be difficult.	1	2	3	4
6) When things get complicated, I tend to quit or withdraw.	1	2	3	4
7) The things in life that are easiest to do bring me the most pleasure.	1	2	3	4
8) I dislike really hard tasks that stretch my abilities to the limit.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
9) I lose my temper pretty easily.	1	2	3	4
10) Often when I' m angry at people, I feel more like hurting them than talking to them about why I an angry.	1	2	3	4
11) When I' m really angry, other people better stay away from me.	1	2	3	4
12) When I have a serious disagreement with someone, it' s usually hard for me to talk calmly about it without getting upset.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
13) If I had a choice, I would almost always rather do something physical than something mental.	1	2	3	4
14) I almost always feel better when I am on the move than when I am witting.	1	2	3	4
15) I like to get out and do things more than I like to read or contemplate ideas.	1	2	3	4
16) I seem to have more energy and a greater need for activity than most other people my age.	1	2	3	4

	strongly disagree	disagree	agree	strongly agree
17) I don't devote much thought and effort to preparing for the future.	1	2	3	4
18) I often do whatever brings me pleasure here and now, even at the cost of some distant goal.	1	2	3	4
19) I'm more concerned with what happens to me in the short run than in the long run.	1	2	3	4
20) I much prefer doing things that pay off right away than in the future.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
21) I try to look out for myself first, even if it means making things difficult for other people.	1	2	3	4
22) I'm not very sympathetic to other people when they are having problems.	1	2	3	4
23) If things I do upset people, it's their problem not mine.	1	2	3	4
24) I will try to get the things I want even when I know it's causing problems for other people.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
25) I voice my opinions in group discussions.	1	2	3	4
26) My personal identity, independent of others, is very important to me.	1	2	3	4
27) I act as a unique person, separate from others.	1	2	3	4
28) I have an opinion about things: I know what I like and what I don't like.	1	2	3	4
29) Speaking up in a work/task group is not a problem for me.	1	2	3	4
30) I enjoy being unique and different from others.	1	2	3	4
31) I enjoy being admired for my unique qualities.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
32) I am careful to maintain harmony in my group.	1	2	3	4
33) I often consider how I can be helpful to specific others in my group.	1	2	3	4
34) I would sacrifice my self-interests for the benefit of my group.	1	2	3	4
35) It is important for me to consult close friends and get their ideas before making decisions.	1	2	3	4
36) I try to meet the demands of my group, even if it means controlling my own desires.	1	2	3	4
37) The security of being an accepted member of a group is very important to me.	1	2	3	4
38) My happiness depends on the happiness of those in my group.	1	2	3	4

2. How many times did you commit the following behavior in the past 1 year?

	Commitment	Never
1) Smoking (Choose one form which is more suitable for you.)	① ____ times a day ② ____ times a week ③ ____ times a month ④ ____ times a year	()
2) drinking (Choose one form which is more suitable for you.)	① ____ times a day ② ____ times a week ③ ____ times a month ④ ____ times a year	()
3) truancy	____ times a year	()
4) runaway	____ times a year	()
5) having sex	____ times a year)	()
6) physical assault	____ times a year	()
7) group fighting	____ times a year	()
8) extorting other' s money or thing	____ times a year	()
9) stealing money or thing	____ times a year	()
10) having sexual relations with adults for money	____ times a year	()
11) teasing or taunting someone	____ times a year	()
12) threatening	____ times a year	()
13) bullying	____ times a year	()
14) sexual assault	____ times a year	()
15) sexual harassment	____ times a year	()

3-1. How many intimate friends do you have? (friend(s))

3-2. How often do you meet them? Please circle one.

Ex.	① Almost every day ② every 2 or 3 days ③ once a week ④ once every 2 or 3 weeks ⑤ once a month ⑥ once in several months
-----	---

3-3. How many of your intimate friends have been suspended or expelled from school? (friend(s))

3-4. How many of your intimate friends have been caught by police?
(friend(s))

3-5. How many of your intimate friends have committed the following behaviors?
Write the number of friends for each behavior.

	Commitment	Never
1) Drinking	_____ friend(s) a year	()
2) smoking	_____ friend(s) a year	()
3) truancy	_____ friend(s) a year	()
4) physical assault	_____ friend(s) a year	()
5) extort money or thing	_____ friend(s) a year	()

4. The following questions are about how you think others see you. Read each question carefully and choose one number that suits you best.

	strongly disagree	disagree	agree	strongly agree
1) Others think that I am a problem child.	1	2	3	4
2) Others think that I am a juvenile delinquent.	1	2	3	4

5. The following questions are about usual stresses you are under. Read each question carefully and choose one number that suits you best.

	strongly disagree	disagree	agree	strongly agree
1) My parents pressure me about grades.	1	2	3	4
2) I am under stress because my parents and I have conflicts of opinion.	1	2	3	4
3) I am under stress because my parents want to interfere in my life too much.	1	2	3	4
4) I am under stress because friends are taunting me.	1	2	3	4

6. The following questions are about you and your parents. Read each question carefully and choose one number that suits you best.(If you don't have parents, answer about your guardians who live together now.)

	strongly disagree	disagree	agree	strongly agree
1) I am trying to spend much time with my parents.	1	2	3	4
2) My parents always show love to me.	1	2	3	4
3) My parents and I understand each other pretty well.	1	2	3	4
4) I tend to tell my parents about what happened to me or my thoughts.	1	2	3	4
5) I talk with my parents a lot.	1	2	3	4
6) When I am out, my parents almost always know where I am.	1	2	3	4
7) When I am out, my parents almost always know whom I am with.	1	2	3	4
8) When I am out, my parents almost always know when I am going to come back.	1	2	3	4

7. The following questions are about relationships of you and your teachers.
Read each question carefully and choose one number that suits you best.

	strongly disagree	disagree	agree	strongly agree
1) I can tell my problems to teachers.	1	2	3	4
2) Teachers care about me.	1	2	3	4
3) I want to be a person like my teachers in the future.	1	2	3	4

8. The following questions are about your community. Read each question carefully and choose one number that suits you best.

	strongly disagree	disagree	agree	strongly agree
1) My neighbors see each other often.	1	2	3	4
2) My neighbors believe each other.	1	2	3	4
3) Adult neighbors will scold me if I smoke or drink in my neighborhood.	1	2	3	4
4) If I am being battered by other students, adult neighbors will call the police or stop that.	1	2	3	4

※ Please fill out all blanks below.

School	()Middle School	Class	Second Grade ()Class
Sex	1. Male 2. Female	Birthday	() Year () month
Address	()Dong ()Gu, Seoul Korea		

Appendix 4

No information herein gathered cannot be used other than statistical purposes and its anonymity is protected per Statistics Act 13:14.

QUESTIONNAIRE (Module 2)

ID				
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Juvenile Delinquency in the Socio-Cultural Context

The Korean Institute of Criminology is a government sponsored research institute and contributes to national criminal justice and crime prevention policies on the basis of the research on the extent and causes of crime and delinquency.

The institute is now conducting a survey on juvenile delinquency in order to examine the factors affecting the level of juvenile delinquency including self-control and family organization. The data will be used to better understand the nature of the phenomenon and derive policy implication from the results.

This survey is anonymous and your responses are used only for statistical data purposes without any personal identification. Please answer all questionnaire items.

November, 2013

Korean Institute of Criminology

Project manager: Seong-Jin Yeon 02- 3460-5132

Survey manager: Ho Young Kim 010-5410-5771

1. The following questions are about your usual thoughts or behaviors. Read each question carefully and choose one number that suits you best.

	strongly disagree	disagree	agree	strongly agree
1) I like to test myself every now and then by doing something a little risky.	1	2	3	4
2) Sometimes I will take a risk just for the fun of it.	1	2	3	4
3) I sometimes find it exciting to do things for which I might get in trouble.	1	2	3	4
4) Excitement and adventure are more important to me than security.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
5) I frequently try to avoid projects that I know will be difficult.	1	2	3	4
6) When things get complicated, I tend to quit or withdraw.	1	2	3	4
7) The things in life that are easiest to do bring me the most pleasure.	1	2	3	4
8) I dislike really hard tasks that stretch my abilities to the limit.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
9) I lose my temper pretty easily.	1	2	3	4
10) Often when I' m angry at people, I feel more like hurting them than talking to them about why I an angry.	1	2	3	4
11) When I' m really angry, other people better stay away from me.	1	2	3	4
12) When I have a serious disagreement with someone, it' s usually hard for me to talk calmly about it without getting upset.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
13) If I had a choice, I would almost always rather do something physical than something mental.	1	2	3	4
14) I almost always feel better when I am on the move than when I am witting.	1	2	3	4
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	strongly disagree	disagree	agree	strongly agree
17) I don't devote much thought and effort to preparing for the future.	1	2	3	4
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23) If things I do upset people, it's their problem not mine.	1	2	3	4
24) I will try to get the things I want even when I know it's causing problems for other people.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
[Items #21–24 from the "Self-centeredness" component of the Grasmick et al. scale plus the following item.]				
25) I tend to blurt out whatever is on my mind.	1	2	3	4
	strongly disagree	disagree	agree	strongly agree
26) I often act in ways that threaten the harmony within my group.	1	2	3	4
27) No matter how hard I try, it seems like I can't be helpful to others who I am close to.	1	2	3	4
28) I am often unsuccessful when I try to sacrifice my own interests for the benefit of others.	1	2	3	4
29) I rarely consult with close friends before making decisions.	1	2	3	4
30) It isn't easy for me to be accepted as a valued member of my group.	1	2	3	4

2. How many times did you commit the following behavior in the past 1 year?

	Commitment	Never
1) Smoking (Choose one form which is more suitable for you.)	① ____ times a day ② ____ times a week ③ ____ times a month ④ ____ times a year	()
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4) I tend to tell my parents about what happened to me or my thoughts.	1	2	3	4
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6) When I am out, my parents almost always know where I am.	1	2	3	4
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FORMULATING AND ASSESSING AN ELABORATED
'GENERAL THEORY OF CRIME'**

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